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Personality Factors That Influence Administrative Assistants' Participation in Continuing Education and Training

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2017

Abstract

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MEd, University of Central Florida, 1999

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

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Abstract

Administrative assistants (AAs) provide critical office support for modern businesses, yet many do not participate in the continuing education and training (CE&T) required for rapidly changing technologies and new office procedures. The purpose of this non-experimental quantitative correlational study was to investigate whether a significant predictive relationship exists between AAs' general self-efficacy (GSE), locus of control (LOC), and their participation in CE&T activities. The primary research question examined whether a significant predictive relationship existed among these variables, factoring in generation cohort and education level. Bandura's self-efficacy theory and Rotter's LOC theory provided the theoretical foundations. Volunteer AAs (n = 125) from the International Association of Administrative Professionals (IAAP) answered online survey questions from the New General Self-efficacy Scale, the Adult Nowicki-Strickland Internal-External scale, and the Adult Training and Education Survey. Data analysis was descriptive and inferential, included regression and correlational analysis, and revealed no significant relationship between AAs' GSE, LOC, and their participation in CE&T activities even when examining generation cohort and education level variables. Future researchers may conduct a similar study with a larger heterogeneous sample or a descriptive qualitative design that improves the understanding of the AA perspective. Because no significant relationships were identified within this IAAP branch, the findings in this study were unique and contradicted prior comparable research. Positive social change is maintained for those who participate with IAAP by successfully instilling virtues of lifelong learning of the administrative membership.

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Dedication

Achieving a doctorate is not something that can be accomplished in isolation. As a passionate lifelong learner, I would like to dedicate this research to God and Jesus Christ; my husband, Michael; my children and their spouses; my grandchildren; my parents; and grandparents.

I must begin my dedication by "giving thanks always and for everything to God the Father in the name of our Lord Jesus Christ" (Ephesians 5:20). I thank Him for giving me the patience and the persistence to complete the process. I also pray that He will guide the future course of my work so that others may recognize the importance of pursuing their dreams as lifelong learners.

To Michael – I know that when we got married, my working toward a Ph.D. was an inconceivable idea. Now, after more than 45 years together, I thank you for always being by my side. Thank you for giving me the freedom to pursue this goal, even though you did not quite understand why I wanted it.

To Steven, Heather, Scott, and Karina – thank you for supporting and encouraging me. Thank you for understanding when I could not visit you as often as I would have liked. Thank you for being a source of inspiration as I watched you grow and mature into adults. Thank you for being my children.

To Emerson, Anna, and Henrietta (and any future grandchildren) – I hope my dissertation will inspire you to be all that you can be. As you grow, I promise to love you always and to be there to help you develop a true love of lifelong learning.

Finally, I dedicate this research study to the memory of my parents, Charles Brown Friend and Evelyn Mason Friend, and to my grandparents, Charles and Dora Friend and Bill and Rose Mason. I hope you are proud of what your little girl has achieved.

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Acknowledging the people who have helped me achieve this goal is a monumental task. First, I would like to thank my dissertation committee. Dr. Susan Jespersen, my mentor and first dissertation chair who started me down this path and Dr. Lilburn Hoehn (RIP), my first methodologist. Dr. Karla Phlypo, my mentor and final dissertation chair, thank you for encouraging and supporting me. Dr. Thomas Spencer, my final methodologist, thank you for taking on this job at the last minute and for keeping me out of statistical trouble. Dr. Kenneth Sherman, thank you for helping me make this a quality document. Also thanks to Dr. Yow for your help with the statistical analyses.

I would like to thank all my siblings and their spouses who continued to encourage, applaud, push, and pray for me as I completed this journey: Carol and Donald Short; Charles and Karen Friend, Bill and Maureen (RIP) Friend; Mike and Ann Friend; and Bob Friend. Thanks also to all my nieces and nephews who cheered for me. I also have to thank my husband's siblings: Linda and Ken Ruddock, Roger and Marian Schmitt, and Brian and Laurel (RIP) Schmitt. All of you have been supportive and nurturing when I sometimes struggled.

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Finally, I want to acknowledge the individuals from the International Association of Administrative Assistants who participated in my dissertation study: the IAAP Certification Manager, the IAAP branch manager, and the branch members who participated in the study.

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Chapter 1: Introduction to the Study

Maintaining a well-educated and well-trained workforce is critical to organizations in the 21st century. All employees require additional continuing education and training (CE&T) that help them improve their job performance. Although organizations provide some CE&T opportunities for their professional and managerial staff, administrative assistants (AAs) may not participate in these opportunities (Foster, 2013). One of the most significant reasons concerns AAs whose specific general self-efficacy (GSE) and locus of control (LOC) personality traits may inhibit them from seeking out such CE&T opportunities (Head, Van Hoeck, & Garson, 2015).

In this study, I investigated the relationship of AAs' GSE, their LOC, and their pursuit of CE&T opportunities. To effect positive social change, the results of this study will help managers, supervisors, and human resource professionals better understand why AAs may not actively engage in CE&T opportunities. I used the results of the study to create training, coaching, and mentoring materials that may help AAs improve their GSE, LOC, and their participation in CE&T activities. I also wrote an article for *OfficePro*, the official magazine for the International Association of Administrative Professionals (IAAP), published in the March/April 2017 edition.

In Chapter 1, I have provided the problem and purpose statements, background information on the major theoretical and conceptual foundations, and the particular population involved. This chapter also includes the research questions and hypotheses, the nature of the study, operational definitions, assumptions, and the scope and limitations of the study. Chapter 1 includes the significance of the research, its propensity

for positive social change, and the assumptions made about the specific research constructs and the population used.

Background of the Study

Although no one knows exactly when the profession of secretary began, early Roman literature revealed that political leaders and other influential men employed educated men as scribes who took dictation and acted as trusted advisors. These scribes often spoke multiple languages and were well known for their superior penmanship (Onifade, 2009). As world trade rapidly expanded during the 15th and 16th centuries, the secretarial profession gained in prominence and remained a prestigious male profession until the early 20th century (Garfield, 1986). The rise in the scientific management of business and office mechanization caused a change in the secretarial profession from a primarily male-oriented one to a primarily female-oriented job, and the status of the secretary plummeted as secretaries were no longer required to be highly educated (Garfield, 1986).

Van Horn and Schaffner (2003) noted that the jobs labeled *administrative assistant*, *office manager*, and *executive assistant* have replaced the title *secretary* as new technologies and responsibilities required that AAs be knowledgeable in a wider variety of skills. As employers began to recognize the need for computer-literate and technologically savvy AAs, however, the need for CE&T of this population increased. Some researchers (Judge & Kammeyer-Mueller, 2011; Schwoerer, May, Hollensbe, & Menci, 2005; Wei-Tao, 2006) have noted that AAs do not actively pursue CE&T opportunities.

The U.S. Department of Labor, Bureau of Labor Statistics (BLS, 2017b) found that secretarial and AA positions are among some of the fastest growing occupations in the United States primarily due to the changing nature of the job description. Between 2014 and 2024, the U.S. Department of Labor, BLS (2017a) has projected the job outlook for this population to grow by 12%, which is faster than the national average for all other professions. As the tools businesses use to run their organizations rely more on technology, secretaries and AAs are required to be proficient in an ever-increasing array of both software and hardware products. Many of the primary responsibilities of the job include managing multiple calendars, event planning, knowledge management, project management, editing and proofreading documents, negotiating with vendors, as well as using a variety of office equipment (IAAP, 2016). Other critical job responsibilities for AAs include the dissemination of information via mail, e-mail, telephone, websites, and other team collaboration software. AAs may also undertake additional duties that often include training new employees, maintaining office equipment, and other tasks previously reserved for managers and supervisors (U.S. Department of Labor, BLS, 2017b).

To work as an entry-level AA, individuals must have a high school diploma or a General Education Development (GED) certificate. Entry-level AAs must also have some basic office skills, including word processing, e-mail, answering the phone, and taking messages (U.S. Department of Labor, BLS, 2017b). Although community colleges and technical schools offer 2-year programs in office administration (IAAP, 2016), AAs may

not participate in CE&T activities unless they believe they are capable of acquiring new skills and are more internally motivated to accept these new challenges.

Although some researchers have examined the relationship between GSE, LOC, and the CE&T of certain professional personnel (Judge, Bono, Erez, & Locke, 2005; Noe & Wilk, 1993), none examined this relationship for AAs. In this study, I investigated the relationship between AAs' GSE, LOC, and their participation in CE&T opportunities using the New General Self-Efficacy (NGSE) scale, the Adult Nowicki-Strickland Internal-External (ANSIE) scale, and the Adult Training and Education Survey (ATES). The results of this study revealed no significant correlations between IAAP AAs' GSE, their LOC, and their participation in CE&T activities.

Problem Statement

In the United States, approximately 4 million AAs (IAAP, 2016; U.S. Department of Labor, BLS, 2017b) provide office support for a broad range of management, professional, and executive staff. Individuals who work as AAs must have a high school diploma as well as basic office and computer skills. To become more proficient, to work in specific industries (i.e., law and medicine), or to advance to another level (such as office managers or executive secretaries; U.S. Department of Labor, BLS, 2017b), AAs must have additional CE&T. As more employers recognize that rapidly changing technologies and increasing global competition have changed the responsibilities and job descriptions of AAs, they also recognize that AAs need additional training in a wider variety of skills (Foster, 2013). In 2012, organizations spent approximately $164.2 billion on CE&T for employees; however, AAs used only a fraction of those training dollars

(Miller, 2013). The general management problem is that although numerous CE&T opportunities exist, AAs are not improving their knowledge, skills, and abilities (KSAs) by participating in these activities at the same rate as professional staff (Parlalis, 2011). The specific management problem is that when AAs do not update and improve their KSAs by participating in in CE&T activities (Head et al., 2015), they diminish their economic value as well as their efficiency and productivity (Duncan, 2011). Managers and supervisors need to know whether personality factors, such as GSE and LOC, may contribute to AAs' lack of participation in CE&T activities and how to help AAs improve these personality factors in order to enhance their participation.

Research on GSE (Ebstrup, Eplov, Pisinger, & Jørgensen, 2011; Esfandagheh, Harris, & Oreyzi, 2012; Luszczynska, Gutiérrez-Doña, & Schwarzer, 2005; Pillai, Goldsmith, & Giebelhausen, 2011) and LOC (Cheng, Cheung, Chio, & Chan, 2013; Frazier et al., 2011) exists for professional populations, such as managers and supervisors, nurses and doctors, and lawyers. No researchers, however, have examined GSE and LOC against AAs' pursuit of CE&T opportunities.

Purpose of the Study

The purpose of this non-experimental quantitative correlational study was to investigate whether a significant predictive relationship exists between AAs' GSE, LOC, and their participation in CE&T activities. The first predictor variable, GSE, is commonly defined as people's belief in their overall competence to achieve success in a variety of situations and their ability to accomplish tasks from myriad contexts (Eden, 1984; Judge et al., 2005; Judge & Kammeyer-Mueller, 2011). The second predictor variable, LOC, is

defined as the tendency of individuals to believe either control over their lives resides within them or control over their lives resides with others or the situation (Rotter, 1954, 1966). The first criterion variable, education, is defined as learning that is highly structured, sponsored by an institution (i.e., college or university), and is classroom based (McGuire & Gubbins, 2010), while the second criterion variable, training, is defined as learning activities provided to employees by an organization to improve job performance (Bilanakos, 2013; Hui & Smith, 2002; Noe & Wilk, 1993). I used a quantitative descriptive correlational design to explore the knowledge gap to determine whether there is a significant relationship between AAs' GSE, their LOC, and their participation in CE&T opportunities, which may include in-house training, online training, online education, and the acquisition of certifications and degrees. Two demographic variables, generation cohort and education level, were also examined to determine whether they have an effect on AAs' participation in CE&T activities.

Research Questions and Hypotheses

The results of this study provided a better understanding of whether there is a significant relationship between AAs' GSE, their LOC, and their participation in CE&T activities. The following research questions and hypotheses directed the research.

Research Question 1: To what extent does a significant relationship exist between AAs' GSE and LOC?

$H_0$1: $\beta 1 = 0$ There is no significant relationship between AAs' GSE and LOC.

H_a1: $\beta 1 \neq 0$ There is a significant relationship between AAs' GSE and LOC.

Research Question 2: To what extent does a significant predictive relationship exist between AAs' GSE and their participation in CE&T activities?

$H_0$2: β1 = 0: There is no significant predictive relationship between AAs' GSE and their participation in CE&T activities.

H_a2: β1 ≠ 0: There is a significant predictive relationship between AAs' GSE and their participation in CE&T activities.

Research Question 3: To what extent does a significant predictive relationship exist between AAs' LOC and their participation in CE&T activities?

$H_0$3: β1 = 0: There is no significant predictive relationship between AAs' LOC and their participation in CE&T activities.

H_a3: β1 ≠ 0: There is a significant predictive relationship between AAs' LOC and their participation in CE&T activities.

Research Question 4: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials)?

$H_0$4: β1, β2, β3 = 0: There is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AA's generational cohort (Baby Boomers, GenX, Millennials).

H_a4: β1, β2, β3 ≠ 0: There is a significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials).

Research Question 5: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation in CE&T activities as controlled by AAs' education level (high school, some college, BA/BS, Masters, Ph.D.)?

$H_0$5: β1, β2, β3, β4, β5 = 0: There is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AA' education level (high school, some college, BA/BS, Masters, Ph.D.).

H_a5: β1, β2, β3, β4, β5 ≠ 0: There is a significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AAs' education level (high school, some college, BA/BS, Masters, Ph.D.).

Research Question 6: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials)?

$H_0$6: β1, β2, β3 = 0: There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their generational cohort (Baby Boomers, GenX, Millennials).

H_a6: β1, β2, β3 ≠ 0: There is a significant relationship between AAs' LOC and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials).

Research Question 7: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.)?

$H_0$7: β1, β2, β3, β4, β5 = 0: There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.).

H_a7: β1, β2, β3, β4, β5 ≠ 0: There is a significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.).

Hypothesis 1 ($H_0$1) was analyzed using the Spearman rank correlational statistical method, a nonparametric measure that is appropriate when attempting to determine the degree of a relationship between two variables (Goulão, 2014; McDonald, 2015; Rea & Parker, 2014). Hypotheses 2 ($H_0$2) and 3 ($H_0$3) were analyzed using a linear regression model (analogous to logistics regression in SPSS 24), which is used to explain the relationship between one predictor variable (GSE or LOC) and the CE&T criterion variables (Elzamly & Hussin, 2014; Olusegun, Dikko, & Gulumbe, 2015; Rubin, 2013). Hypotheses 4 through 7 ($H_0$4 through $H_0$7) were statistically analyzed using multiple regression analysis, which is used to determine whether a correlation exists between a criterion variable (CT&E), a combination of one or more predictor variables (GSE or LOC), and one or more demographic variables (generation cohort or education level; Dikko, & Gulumbe, 2015; Rubin, 2013; Simon & Goes, 2011).

Theoretical Foundation

The GSE (Chen et al., 2001; Judge, 2009; Scherbaum et al., 2006) and LOC (Rotter, 1966) constructs provided the theoretical framework for this study. Some researchers have considered GSE to be a generalized and stable personality trait (Judge,

2009; Luszczynska, Gutiérrez-Doña, et al., 2005). Individuals with this personality trait have more confidence in their overall ability to accomplish tasks or achieve goals (Eden, 1984; Luszczynska, Scholz, & Schwarzer, 2005; Pillai et al., 2011; Sadri, 2011; Scholz, Gutiérrez-Doña, Sud, & Schwarzer, 2002; Schwarzer & Jerusalem, 2004; Wei-Tao, 2006). Esfandagheh et al. (2012) stated that understanding employees' GSE could help explain why certain individuals participate in CE&T opportunities more readily than others.

Rotter (1966) defined LOC as the belief in whether individuals can control their destiny by their own actions or whether external forces, such as supervisors, family members, and friends, control their fate. People tend to exhibit either an external or an internal LOC. Individuals with an external LOC tend to believe that the environment and the situations in which they find themselves have more influence over whether they succeed or fail a given task. Individuals with an internal LOC, however, tend to accept that their own actions are more likely to contribute to their successes or failures (Joo, Joung, & Sim, 2011; Rotter, 1966).

Pillai et al. (2011) found that individuals whose GSE is low tend to have a more external LOC. Employees with a combination of low GSE and an external LOC do not typically volunteer for additional assignments, nor do they seek out CE&T activities (Holmquist, Gable, & Billups, 2013; Jaidev & Chirayath, 2013; Sharma & Nasa, 2014). To determine whether a significant correlation exists between GSE, LOC, and whether AAs participate in CE&T, I used the research questions to guide the study. I used the NGSE scale to measure GSE, the ANSIE to measure LOC, and the ATES, a

questionnaire that detailed an individual's participation in CE&T activities, to examine the relationship between these variables.

Conceptual Framework

In this study, I conceptualized AAs' lack of participation in CE&T activities by examining two specific personality traits that may contribute to the lack of participation. First, some researchers have found a relationship between employees' GSE (Eden, 1984; Judge, 2009; Pillai et al., 2011; Sadri, 2011; Wei-Tao, 2006) and their participation in CE&T activities. Second, other researchers have examined workers' LOC (Cheng et al., 2013; Frazier et al., 2011) and their participation in CE&T activities. Figure 1 shows the conception of how AAs' GSE and LOC may contribute to their lack of participation in CE&T activities.

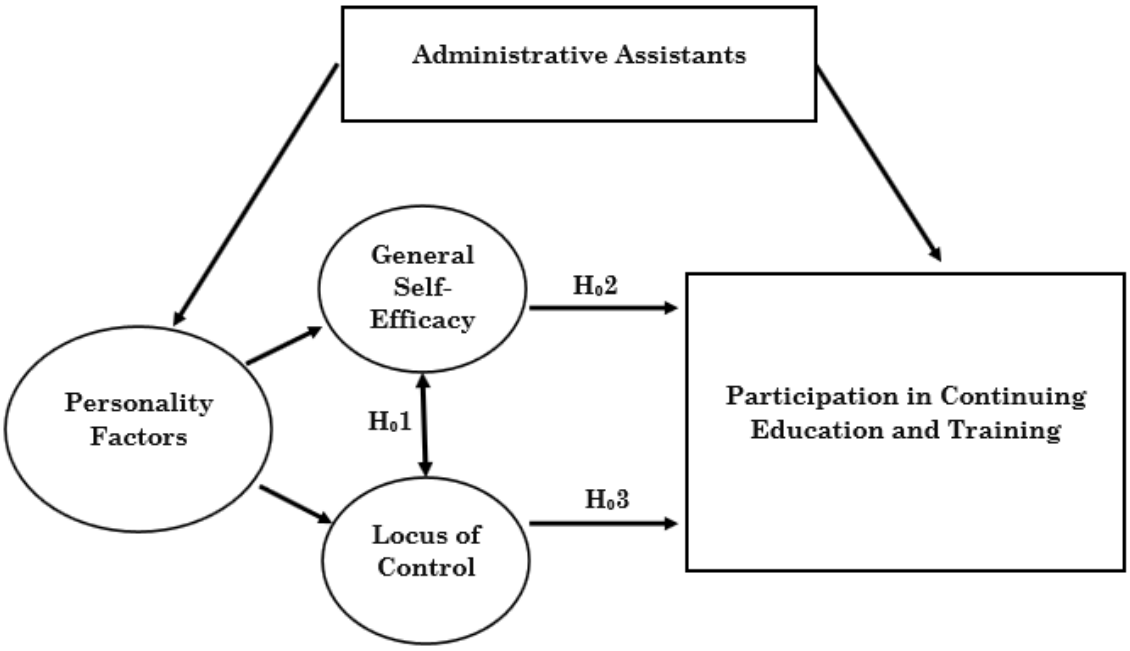

Figure 1. Conceptual model of AAs' GSE, their LOC, and their participation in CE&T activities.

A relationship may also exist between the demographic variables of generation cohort and education level and whether AAs participate in CE&T activities. Costanza, Badger, Fraser, Severt, and Gade (2012) maintained that the rapid development of new technologies requires employees of all ages to participate in CE&T. Employees' education level may also play a role in whether AAs participate in CE&T. Farrell and Hurt (2014) recognized that individuals with varying degrees of postsecondary education may be more likely to participate additional CE&T activities. Figure 2 reveals the conceptual model of how AAs' generation cohort and education level may contribute to their lack of participation in their participation in CE&T activities.

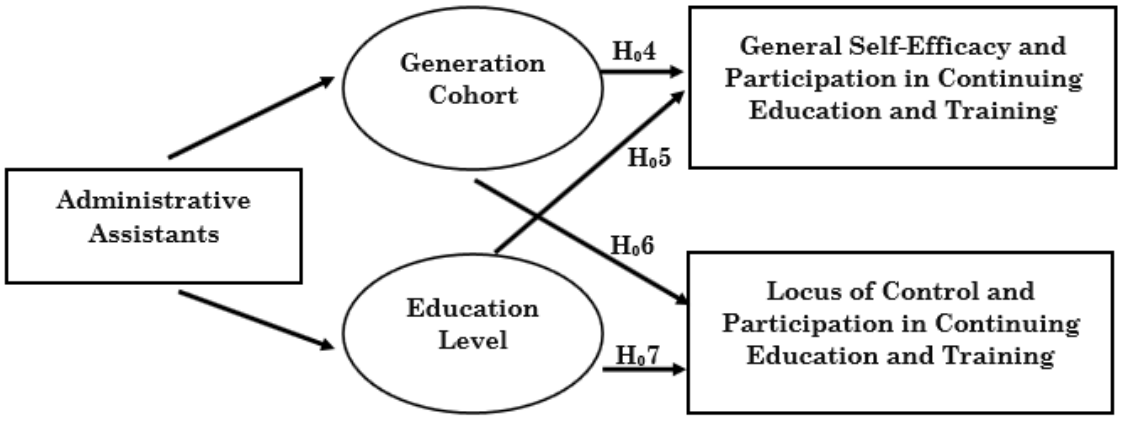

Figure 2. Conceptual model of AAs' generation cohort and educational level and their participation in CE&T activities.

Due in large part to rapidly changing technologies and a more global economy, businesses have recognized the need for well-educated and highly trained employees (Bilanakos, 2013; Foster, 2013; Miller, 2013). As modern workplaces introduce newer technologies, employees must keep up with the changing nature of their jobs, which requires CE&T. Although organizational leaders recognize the need to update the KSAs

of their professional staff, researchers have noted that AAs do not participate as readily in CE&T programs (Bui & Baruch, 2010; Ignat & Clipa, 2010; König, Debus, Häusler, Lendenmann, & Kleinmann, 2010). Although some researchers have studied the reasons why professional staff may or may not participate in CE&T activities (Bui & Baruch, 2010; Judge et al., 2005; Noe & Wilk, 1993), no previous studies have been conducted using the AA population.

Researchers have noted a relationship between professional staff's GSE and their participation in CE&T activities (Jaidev & Chirayath, 2013; Sharma & Nasa, 2014). Other researchers have examined the relationship between professional staff's LOC and their participation in CE&T activities (Cheng et al., 2013; Sprung & Jex, 2013). Ebstrup et al. (2011) examined both the GSE and LOC concepts and the relationship to professional staff's participation in CE&T.

By using three specific measurement instruments, I connected this study's framework to the study approach and research questions. First, the NGSE instrument revealed whether respondents believed they have a high or low level of GSE. Second, the ANSIE determined whether respondents had a more internal or external LOC. The third instrument, the ATES, provided information about whether AAs participated in CE&T activities. An examination of the data revealed whether any significant relationships existed. The ATES also included several demographic questions that examined whether there was a significant relationship between the generation cohort and education level variables and AAs' participation in CE&T activities.

Nature of the Study

In this study, I used a quantitative research method and a descriptive correlational design. Bhattacherjee (2012) and McDonald (2015) defined descriptive research as research that identifies and describes one or more variables and participants. Researchers use these variables to determine whether a significant relationship exists between the variables and whether a significant relationship exists between the variables and the participants. When conducting a descriptive, correlational study, Rea and Parker (2014) recommended using a survey for several reasons. First, researchers are able to collect a greater amount of data that may be more applicable to everyday life. Second, a correlational design offers future scholars a starting place when investigating a phenomenon or relationship or when expanding the research by conducting a qualitative or mixed methods study. Finally, a correlational design enables researchers to determine the strength and direction of the studied relationship, which may allow future researchers to narrow the findings and examine the variables using an experimental design.

I employed a Likert-type, a forced-choice, and a multiple-choice questionnaire that were accessible online. The NGSE and the ANSIE instruments measured the predictor variables: GSE and LOC. The NGSE is a Likert-type questionnaire that measures an individual's degree of GSE. The NGSE uses a scale with the following five responses: 1. *Not at all like me*; 2. *Somewhat not like me*; 3. *Somewhat like me/Somewhat not like me*; 4. *Somewhat like me*; and 5. *Totally like me*.

The ANSIE is a forced-choice questionnaire that determines the degree to which individuals consider themselves either internally or externally motivated. Participants

responded to each ANSIE statement with either a *Yes* or *No*. The ATES measures the criteria variables: participation in CE&T activities. This multiple-choice questionnaire determined in what type of CE&T activities respondents participated and over what period of time. I correlated the responses to this survey with each of the variables.

Demographics variables were also examined in order to reveal participants' generation cohort and education level. Tarique (2014) found that younger workers may have a higher degree of GSE and may participate in more CE&T activities than older participants may. Van Rooij (2012) examined training trends that suggested that employees with some postsecondary education participate more readily in CE&T activities.

Members of the IAAP organization took the survey using an online electronic survey instrument. The IAAP Certification Manager (personal communication, December 22, 2015) agreed to allow members of IAAP to participate. After receiving permission from the IAAP Certification Manager, I contacted the branch director for one IAAP branch to see if she would be willing to submit the online survey to her branch members. This branch is located in the Midwest region of the United States around the Great Lakes area. Individuals from this IAAP branch received the online survey and were invited to participate.

Generational cohort and education level were also examined to determine whether they had a controlling effect and whether trends could be determined as to AAs' pursuit of additional CE&T. Some researchers have suggested that Millennial and GenX AAs may tend to have a higher level of GSE and a greater internal LOC. These factors could

cause them to engage in CE&T activities that would make them more promotable (Tarique, 2014). Van Rooij (2012) also found that Baby Boomer AAs who have a high level of GSE and a greater internal LOC may also readily participate in CE&T opportunities. Individuals who have some postsecondary education may also have a higher level of GSE and a greater internal LOC that may enable them to seek out additional CE&T opportunities (van Rooij, 2012). Chapter 3 contained additional information concerning the particular target population and sample, research questions and hypotheses, and the research design.

Although a causal-comparative research design may also have been an appropriate choice for this research, I did not select this design for two reasons. First, in a causal-comparative study, the researcher seeks to determine a cause and effect relationship (Simon & Goes, 2012). In this study, I was not looking for cause and effect but rather an examination of the relationship that might exist among the variables, GSE and LOC, and whether these variables play a role in AAs' participation in CE&T activities. Second, a causal-comparative research study attempts to find an explanation for differences that exist between two or more groups. In this study, I examined the relationships between the variables for a single group of AAs.

A correlational research design was more appropriate than a comparative design for this study because I sought to determine whether a relationship existed for one group of AAs' GSE, LOC, and their participation in CE&T activities. I also examined two demographic variables, generation cohort and education level, to determine whether these factors had a controlling effect on the predictor and criterion variables. In order to

complete a comparative study, two or more groups would have to participate. Time and resource constraints prohibited this.

Operational Definitions of Key Terms

Some of the titles given to employees in an organization who provide a variety of office services include *AAs, secretaries, clerical workers,* and *administrative support staff* (U.S. Department of Labor, BLS, 2017b). The responsibilities of these individuals include typing, filing, answering the phone, managing calendars and appointments, as well as other duties as needed to maintain the well-run daily operations of the office. For the purpose of this study, the term *administrative assistant* will replace all other office worker titles including, but not limited to, *secretary*, *clerical worker*, and *administrative support staff*.

Education: Classroom-based, institutionally sponsored, and highly structured learning (McGuire & Gubbins, 2010). This definition is included to distinguish the difference between *CE&T* and *development* activities.

General self-efficacy (GSE): A stable personality trait in which individuals believe in their overall competence to accomplish whatever they set out to achieve (Scherbaum et al., 2006).

Generational cohorts: A group of individuals who were born within the same approximate time period, who are influenced by specific historic and social events, who tend to share some common life experiences, and who tend to have some of the same ideas, beliefs, and behaviors (Lester, Standifer, Schultz, & Windsor, 2012).

Locus of control (LOC): The extent to which individuals believe that they control their own behavior versus the extent to which individuals believe that chance, fate, luck, or other people control their behavior (Rotter, 1966).

Training and development: Educational activities that organizations offer their employees designed to improve employee performance and job satisfaction (Hui & Smith, 2002; Noe & Wilk, 1993).

Assumptions

Quantitative research begins with basic assumptions that most researchers follow. One philosophical assumption of a quantitative study concerns the positivism paradigm, which emphasizes objective, empirical data and strict scientific methods that provide the information from which researchers can acquire knowledge (Gelo, 2012; McCusker & Gunaydin, 2015). A second assumption of quantitative studies stresses that researchers act independently from that which they are researching (Creswell, 2013; McCusker & Gunaydin, 2015). In this study, an IAAP branch director (personal communication, January 29, 2016) distributed a survey via an online Web instrument so that I had no direct contact with the survey respondents.

This research study relied heavily on the assumption that GSE, LOC, and participation in CE&T activities can be accurately measured. Additional assumptions of this study included the following:

- Participants will be able to follow directions.
- Participants are able to read and understand the items in the survey instruments.

- Participants will respond truthfully to the self-reported survey questions.
- The data collection instruments are valid and reliable.

Scope and Delimitations

I used the data to assess the significant correlation between AAs' GSE, LOC, and their participation in CE&T opportunities. Because there are approximately 4.2 million AAs in the United States (U.S. Department of Labor, BLS, 2017a), this study was limited to the members of IAAP. As of 2015, there were 9,993 members of IAAP in the United States (IAAP Director, Programs & Services, personal communication, April 8, 2015).

A volunteer sample was taken from a restrictive population and was derived from one specific IAAP branch (IAAP Certification Manager, personal communication, December 22, 2015). These individuals were asked to complete a three-part survey. The first 10 items used a Likert-type scale; the second 40 items were *Yes/No* responses; and the final 44 questions were multiple choice. The entire survey took between 20 and 25 minutes to complete.

The participants of this study were members of an IAAP branch located in the Midwestern region of the U.S. who volunteered to participate. The branch director sent an e-mail to the 715 members of this IAAP branch and included a link to the online survey. In her e-mail, she described the study and asked for volunteers to participate. Seven local area networks from two Midwestern states near the Great Lakes make up this IAAP branch (IAAP Branch Director, personal communication, January 19, 2016).

Sekaran and Bougie (2013) defined generalizability as a way of applying the research findings of a study's sample to a larger, specific population. In this study,

members of the Midwestern branch of IAAP participated. The participants from IAAP represented a broad range of demographics (i.e., rural, suburban, urban; government, private; profit, not-for-profit). While the results may be generalizable to the IAAP organization, they may not be generalizable to all AAs in the United States.

Limitations

Although this research study was prepared with great care, some unavoidable limitations do exist. First, the research was conducted using a sample from one branch in the IAAP organization. Although the target population included 715 members, only 125 responded to the survey. While this is sufficient to generalize to the larger IAAP population, to generalize to the wider population of AAs in the United States, a larger sample from a variety of sources would be needed.

A second possible limitation involved the ATES instrument. Although this instrument was prepared by the Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA) and has been certified by the U.S. Department of Education National Center for Education Statistics (NCES) (Bielick et al, 2013), its use has not been independently validated. Additional studies using the ATES instrument outside the Department of Education may be needed in order to more fully determine the reliability of this instrument.

Third, participants of this study were self-reporting information based on an online questionnaire. One limitation of this method was that respondents could not ask questions about the wording of the survey. Some questions may have be misinterpreted or

left blank. The significant correlations that were found in this study may conceal or disregard other underlying relationships.

One potential bias that could affect the study outcomes concerns the study sample. Because only AAs who are members of IAAP took the survey, an inclusive bias may have occurred as the sample was chosen for expediency. A response bias could occur because members of IAAP may have given responses based on what they think the organization wanted to hear. Although these biases cannot be eliminated, they were accounted for in the final analysis.

Significance and Social Change Implications

In this study, an examination of IAAP AAs' GSE, LOC, and their participation in CE&T activities will help training and development practitioners understand some of the reasons why AAs may not participate in CE&T activities. CE&T professionals will be able to provide specific guidance to AAs that will encourage them to participate more fully in CE&T activities. Managers and supervisors will also benefit from this study as they seek to support AAs in their participation in CE&T activities.

While some researchers have found a significant correlation between GSE, LOC, and participation in CE&T activities (Judge et al., 2005; Noe & Wilk, 1993; Schwoerer et al., 2005), no researchers have studied these constructs with an AA population. The results of this study contributed to the current body of knowledge by helping training and development professionals in developing new ways to approach AAs' understanding of and participation in CE&T activities. Because of this study, managers and supervisors

may become more aware of the need for specific professional development programs for AAs that target raising their GSE and enhancing their external LOC.

The information in this study might reveal significant findings that could lead to positive social change for AAs. First, if AAs do not participate in CE&T activities due to low GSE and an external LOC, then the results of this study will help to inform managers and supervisors. Jaidev and Chirayath (2013) noted a significant correlation between GSE and learning goal orientation and found that a high level of GSE may facilitate individuals' motivation to learn. With this knowledge, managers and supervisors will be better able to help AAs improve their GSE and LOC.

Second, the role of the AA has changed dramatically over the last few years. While new technologies and software programs may streamline the everyday activities of AAs, these individuals must be trained on how to use these new tools. Researchers have consistently noted that some company's policies do not provide for CE&T funding for AAs (Erickson, Danis, Kellogg, & Helander, 2008; Schwoerer et al., 2005; Taylor, 2014). This lack of funding seems to stem from the philosophy that administrative work is routine and does not require additional CE&T (Erickson et al., 2008). As technology becomes more pervasive and complex, AAs are required to know how to use a wide variety of technologies.

Positive social change occurs when an alteration in one or more aspects of society leads to the betterment of individuals, communities, and societies as a whole. In this study, positive social change may occur in two specific areas. First, the results may show a significant correlation between AAs' low GSE, external LOC, and their participation in

CE&T activities. Workshops specifically aimed at improving AAs' low GSE and external LOC may help this population to participate more readily in CE&T activities.

Second, by showing a significant correlation between AAs' low GSE, external LOC, and their participation in CE&T activities, CE&T professionals may be able to influence managers and supervisors to provide additional funding for AAs' participation in CE&T activities. This change in policy could allow AAs to be better trained and able to pursue advancements in their careers and could lead to better organizational morale as AAs become better qualified and more promotable within the organization.

Summary and Transition

Both the U.S. Department of Labor, BLS (2017b) and IAAP (2016) have found that AAs make up a large segment of America's workforce. These individuals are responsible for a wide array of office procedures and technologies, yet often they do not receive the additional CE&T needed to improve their skills or ensure they are promotable. Although there may be many reasons for AAs lack of participation in CE&T activities, a lack of information exists as to whether there is a relationship between AAs' GSE, LOC, and their participation in CE&T activities.

As organizations seek to keep the best employees, encouraging individuals to have a high degree of GSE and an internal LOC may lead to workers who are constantly striving to improve themselves. Although research into employee GSE and LOC has been extensive, no studies have examined these constructs with the AA population. Researchers have not determined whether (a) a relationship exists between AAs' GSE and their LOC; (b) a relationship exists between AAs' GSE and their participation in

CE&T activities; and (c) a relationship exists between AAs' LOC and their participation in CE&T activities. In this study, I sought to bridge this knowledge gap by using a quantitative research method and a descriptive correlational research design informed by seminal theories and current research. I examined AAs' GSE, LOC, and participation in CE&T activities using the NGSE, ANSIE, and the ATES.

Chapter 1 included the problem statement and the purpose, the research questions and hypotheses, a theoretical and a conceptual framework, and the nature of the study. This chapter also included operational definitions of key terms, the assumptions, scope, and limitations of the study, as well as the significance of the study, and the implications for social change. Chapter 2 contains the theoretical foundations for GSE and LOC, a literature review of current research, and reviews of empirical studies related to GSE, LOC, and CE&T participation.

Chapter 2: Literature Review

Approximately 4.1 million AAs in the United States (IAAP, 2016) provide office support to a broad range of management, professional, and executive staff. For AAs to become more proficient in their current skills, be promoted, or work in specific industries (i.e., medicine, law, accounting), they must have additional CE&T (U.S. Department of Labor, BLS, 2017b). Some organizations provide opportunities for AAs to participate in specialized training or to earn certificates or college degrees (Dierkes & Anderson, 2007). The general management problem is that although numerous CE&T opportunities exist, AAs are not improving their KSAs by participating in these activities at the same rate as professional staff (Parlalis, 2011). The specific management problem is that when AAs do not update and improve their KSAs by participating in CE&T activities (Head et al., 2015), they diminish their economic value as well as their efficiency and productivity (Duncan, 2011). The purpose of this non-experimental quantitative correlational study was to investigate and determine whether a significant relationship exists between AAs' GSE, LOC, and their participation in CE&T activities. Two demographic variables, generation cohort and education level, were also examined to determine whether they have a controlling effect on AAs participation in CE&T activities.

Chapter 2 contains an overview of the search strategies used, including online sources, specific databases, as well as local libraries. This chapter also includes an examination of the theoretical foundations and a review of the study's foundational concept. In the literature review, I established the need for further research to ascertain whether a relationship exists between the two personality factors, GSE and LOC, and

whether AAs engage in CE&T activities in the workplace. Two demographic variables were also examined to determine whether there is a relationship between AAs' generation cohort and education level and their participation in CE&T activities. This chapter included a summary and conclusions section.

Literature Search Strategy

The literature search strategy included the seminal literature of Bandura (1977a, 1977b, 1992, 1994, 1997,1999) and Rotter (1954, 1966). Specifically, Bandura's (1977a, 1977b, 1992, 1994, 1997, 1999) continuous work in social cognitive theory and self-efficacy helped to provide the foundation for examining the GSE concept. Rotter's (1954, 1966, 1990) work examined an individual's internal and external LOC.

In addition to the seminal literature, academic resources included Walden University's online library and The Johns Hopkins University Applied Physics Laboratory's online library. Specific databases searched included ABI/INFORM Complete, Academic Search Complete, Business Source Complete, Educational Resource Information Center (ERIC), Google Scholar, and PsyARTICLES.

Additional information obtained from Safari Books Online, the U.S. Department of Labor BLS, and the U.S. Department of Education NCES helped to provide additional statistical information not found from other sources. Local libraries, including the Library of Congress, provided the opportunity to locate several sources available in print only.

Descriptive terms used in the search included the following: *AAs, clerks, executive assistants, secretaries,* and *support staff*; *training and development, professional development*, *continuing education,* and *lifelong learning*; *self-efficacy* and

general self-efficacy; and *locus of control*. Demographic search terms included *age-related employees, multigeneration workers, generational cohorts,* and *education level*. Two additional search terms added during the course of the initial research, *mentoring* and the *Pygmalion effect,* allowed for a more complete examination of the GSE concept. Additional combinations of search terms included *AAs and general self-efficacy, AAs and locus of control, AAs and training, AAs and human resource development, general self-efficacy and locus of control,* as well as *AAs, general self-efficacy,* and *locus of control*. The following constraints limited the database searches: specific search term(s), full text, scholarly (peer-reviewed) articles, publication years 2000 through 2016, and in English. Appendix A contains the number of hits for each of the databases and search terms.

Although comprehensive database searches revealed numerous research articles for each of the primary terms used (*AAs, general self-efficacy,* and *locus of control*), only one article (Latham & Pinder, 2005) contained all three major search terms. The ProQuest Dissertations and Theses Full Text database returned no results for this combination of search terms. The lack of substantive research of this combination of topics meant that a significant gap in the literature existed.

Two major strategies helped me to find the material that would help inform the literature review. First, an extensive search included the relevant databases, but limited the search terms, to include *general self-efficacy and locus of control, administrative assistant and general self-efficacy,* as well as *administrative assistant and locus of control*. These searches yielded a wide variety of articles from which to choose. No specific studies were found that examined the GSE and LOC attributes of AAs.

The second strategy involved extrapolating material from articles in which the *general self-efficacy, locus of control, CE&T,* and *administrative assistant* components were studied using a broader range of populations, including teachers, managers, supervisors, nurses and other health care workers, as well as military personnel. As seen in Appendix A, these search strategies yielded a prodigious amount of reference material related to the research purposes.

Theoretical Foundation

Three primary theories, Bandura's (1977a, 1977b, 1992, 1994, 1997, 1999) self-efficacy theory, GSE (Chen et al., 2001; Eden, 1984; Judge, 2009; Scherbaum et al., 2006), and Rotter's (1966) LOC theories form the theoretical foundations for this study. Bandura developed his self-efficacy theory based upon his work in social cognition. Some scholars (Chen et al., 2001; Judge, 2009; Scherbaum et al., 2006) have determined that self-efficacy beliefs can be a stable, more generalized personality trait that may relate to individuals' overall belief in their competency, known as the GSE theory. Rotter's (1954) social learning theory of personality provided the framework for the LOC theory.

Self-Efficacy

Bandura (1977a) defined self-efficacy as the strength of people's belief in their ability to master a challenging task or reach a goal through their behaviors and emphasized that a person's degree of self-efficacy determines how hard and how long the individual will continue to try to achieve the goal, even in the face of obstacles or negative experiences. Individuals may develop and strengthen their self-efficacy in several ways. First, individuals may improve their self-efficacy by mastering a

challenging task or activity. Second, individuals' self-efficacy may improve through the vicarious experiences of others who they see as similar to themselves taking on a difficult task or reaching a particular goal. Third, other people may persuade individuals that they have what it takes to succeed. Finally, some physiological elements may also play a role in improving self-efficacy beliefs (Bandura, 1977a, 1997). For example, people with low self-efficacy may interpret their reactions to stress as a sign that they are not capable of achieving a challenging task and may infer from their physical fatigue or their pain level that the goal they set is not reachable (Bandura, 1977a, 1977b; 1997).

Bandura's social learning theory and self-efficacy. The concept of self-efficacy grew out of Bandura's (1977a, 1977b, 1992, 1994, 1999) social learning theory, which focused on five primary ideas. First, while direct experience may influence human behaviors, they are also influenced when individuals observe the behaviors of others. Bandura's (1977a, 1992, 1994, 1997) theory noted four influences on changes in indivudals' level of self-efficacy, including mastery experiences; vicarious learning; social persuasion; and through psychological, physiological, and emotional encouragement. Mastery experiences may improve individuals' self-efficacy because success in one endeavor may help them to try additional challenges. Vicarious learning experiences may also help to improve self-efficacy when individuals observe others successfully perform tasks and then envision their own successful performance. Social persuasion also provides a way of influencing others and helps to strengthen self-efficacy through both positive and negative feedback. Through the psychological, physiological, and emotional encouragement of others, individuals' self-efficacy may be improved as

they become inspired or motivated to improve or further develop their skills (Bandura, 1977a, 1992, 1994, 1997; Lester, Hannah, Harms, Vogelgesang, & Avolio, 2011).

The second primary concept of social learning theory, to organize and remember ideas and experiences, occurs when people use both verbal and imaginal symbols to communicate. Verbal symbols that make up an individual's language help to facilitate cognitive development by transmitting and storing large amounts of information in the brain. Visual symbols build upon verbal symbols by recreating information in the form of pictures in the mind. Through both language and visual images, observational learning may help to enhance self-efficacy (Bandura, 1977a).

Third, Bandura (1977a) found that when people value the outcome of a modeled behavior, they are more likely to adopt that modeled behavior and may be more inclined to model others' behavior when the influence comes from people who are significant or valued by the individual. Bandura also noted that when individuals observe positive consequences, they may be more apt to embrace those behaviors. Because social learning theory assumes that based on the consequences (external, vicarious, and self-generated) of the behavior (Bandura, 1977a), people must choose to self-generate both positive and negative consequences as a way of controlling their own behavior.

Fourth, social learning theory included the idea of a reciprocal relationship between learners and their environment, in that the learner will influence the environment, which in turn influences the learner. Bandura's (1977a) theory helps to explain cognitive, behavioral, and environmental influences upon human development in a way that facilitates individuals' understanding of behavior as a reciprocal process. In

other words, both personal factors and the environment influence people's behaviors, and conversely, people's behaviors influence individual factors and the environment. In this theory, personal and environmental factors act interdependently with behavior. Bandura (1977a, 1978, 1986, 2002) posited that human beings have unlimited potential, but in order to achieve a desired goal, people must believe in their ability to do so.

GSE

Scherbaum et al. (2006) and Judge (2009) defined GSE as a personality trait in which individuals believe in their overall competence to accomplish whatever they set out to achieve. These researchers recognized that the GSE theory may explain why individuals with a high GSE have the internal resources they need to deal with challenges and difficult situations. Other researchers (Brusso, Orvis, Bauer, & Tekleab, 2012; Sharma & Nasa, 2014) noted that the GSE theory also helps to explain some individuals' ability to persevere across a wide variety of academic courses, even those courses in which the individual does not feel competent.

Bandura (1977a) and Pajares (1997) both argued that the concept of self-efficacy is domain specific. Bandura (1997) maintained that no all-purpose self-efficacy scale could be accurate and asserted that any self-efficacy measurement scale must be geared toward a specific domain or trait, such as math self-efficacy, career self-efficacy, or work self-efficacy (Latham & Pinder, 2005). Other researchers (Chen et al., 2001; Eden, 1984; Judge, 2009; Luszczynska, Gutiérrez-Doña, et al., 2005; Luszczynska, Scholz, et al., 2005; Scholz et al., 2002; Schwarzer & Jerusalem, 2004; Wei-Tao, 2006), however, have refuted Bandura's (1977) strict definition. Pajares also conceded that even Bandura

recognized a number of conditions in which an individual domain-specific self-efficacy could be generalized and applied to other activities.

Some researchers (Ebstrup et al., 2011; Gati et al., 2011; Jaidev & Chirayath, 2013; Pillai et al, 2011; Scherbaum et al., 2006) found evidence that suggested that GSE is a more stable personality trait that enables individuals to have confidence in their own personal competence regardless of the tasks or challenges encountered. When organizations want to improve productivity, increase job satisfaction, decrease absenteeism, and reduce turnover rate (Judge et al., 2005), improving workers' GSE plays an important role in helping employees accept new challenges. As companies experience rapid global economic changes and new technologies, employee training becomes a critical component of maintaining an effective workforce. Some studies, conducted in a variety of cultures, have suggested that individuals' GSE will have an effect on training outcomes (Bilanakos, 2013; Brusso et al., 2012). Esfandagheh et al. (2012) found that trainees who exhibited a strong degree of GSE had a greater desire to participate in training activities, even when the activity was more difficult or out of the learner's comfort zone. Brusso et al. (2012) maintained that trainees with low GSE likely experience more anxiety and less desire to participate in challenging activities.

LOC

Although not labeled LOC, Rotter (1966) examined this concept in terms of the rewards or reinforcements that individuals receive for a given behavior. For some individuals, these rewards and reinforcements are internally driven while for others, these rewards and reinforcements must come from external sources. Rotter (1990) later defined

LOC as the extent to which individuals believe they control their own behavior versus the extent to which these individuals believe that chance, luck, fate, or other people control their behavior.

Rotter (1966) initially titled the concept of LOC as the "generalized expectancies for internal versus external control of reinforcement" (p. 1). In this seminal work, Rotter (1966) recognized that human behavior is often reinforced by either rewards or punishments. Rotter (1990) proposed that an individual's LOC was contingent upon internal or external factors.

External LOC. Individuals with a high degree of external LOC believe that their success or failure is due to factors beyond their control, and they tend to believe that their environment and situational factors are more influential over their success or failure within the organization. Individuals with an external LOC accept that luck and other external factors, rather than their own efforts, often drives their success or failure, often leading to feelings of a loss of personal power or helplessness (Joo et al., 2011). Ng, Sorensen, and Eby (2006) found that individuals with an external LOC tend to avoid challenging tasks and are less proactive in managing their work experiences.

Internal LOC. Joo et al. (2011) found that individuals with a high degree of internal LOC are more likely to attribute their success or failure within an organization to their own behaviors and actions. These individuals often see a strong relationship between the amount of work and effort they put into a project and their success or failure. People with a high degree of internal LOC believe they are responsible for what happens in their own lives and are more likely to work harder in order to achieve success (Joo et

al., 2011). Researchers have also found that ndividuals with an internal LOC may develop skills that increase their willingness to take on challenging tasks and are more proactive in managing their work life (Joo et al., 2011; Hortop, Wrosch, & Gagné, 2013; Ng et al., 2006; Sprung & Jex, 2012).

Conceptual Framework

With the increasing use of technology in the modern business environment, AAs must keep up to date on a wide variety of office tools and procedures. As employers demand that AAs improve, as well as increase their knowledge and technical skills, training, professional development, and continuing education become critical to their professional growth. IAAP (2016) has posited that many AAs do not take advantage of the training and educational opportunities offered to them by their employers. One possible reason is that AAs may have low GSE (Chen et al., 2001; Scherbaum et al., 2006; Judge, 2009) or an external LOC (Rotter, 1966) that inhibits their pursuit of these opportunities. Figure 3 graphically depicts the interconnectedness of the relationship between AAs' GSE, their LOC, and their participation in CE&T activities.

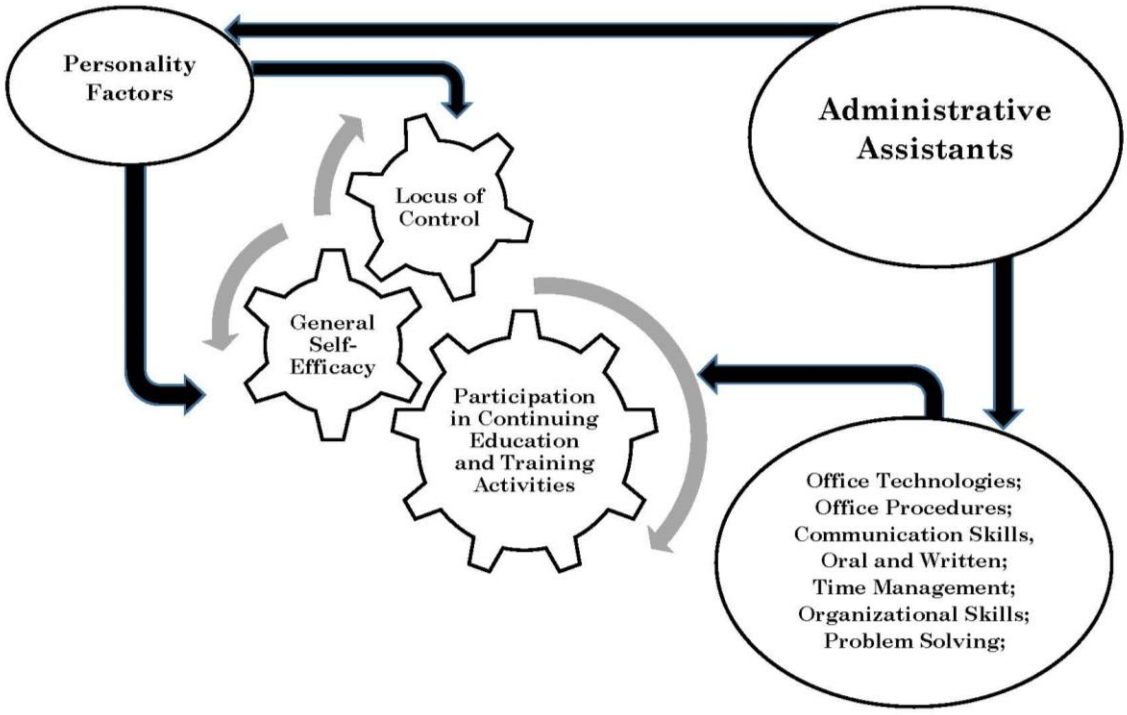

Figure 3. Relationship between AAs' GSE, their LOC, and their participation in CE&T activities.

A review of the current literature revealed little to no evidence of research in the relationship between AAs' GSE (Chen et al., 2001; Judge, 2009; Scherbaum et al., 2006) with their pursuit of CE&T. An examination of current literature discovered scant data on the relationship between AAs' LOC (Rotter, 1966) and their pursuit of CE&T. The role that GSE (Chen et al., 2001; Judge, 2009; Scherbaum et al., 2006) and LOC (Rotter, 1966) play in an AA's participation in CE&T remains a knowledge gap for those organizations interested in helping AAs improve their abilities.

Researchers (Bilanakos, 2013; Foster, 2013; Miller, 2013) have recognized that global competition has illustrated the need for a more highly trained and well-educated workforce. Rapidly changing technologies have caused a paradigm shift in the duties and

tasks for which modern AAs are responsible (Dierkes & Anderson, 2007; Duncan, 2011; Parlalis, 2011). In order to keep up with the increasingly complex nature of their jobs, AAs must participate in training and educational activities. An examination of the seminal theories and current research in which the concepts of GSE (Chen et al., 2001; Judge, 2009; Scherbaum et al., 2006) and LOC (Rotter, 1966) and their possible affect on the pursuit of CE&T revealed that most of the studies (Bui & Baruch, 2010; Ignat & Clipa, 2010; König et al., 2010) focused on the CE&T of professional staff (i.e., managers/supervisors, teachers, nurses, doctors, lawyers) while overlooking the needs of AAs.

Judge and Kammeyer-Mueller (2011) hypothesized that the GSE and LOC constructs strongly relate across a wide variety of tasks. Other researchers (Esfandagheh et al., 2012; Sadri, 2011) found that GSE had a positive relationship to individuals' participation in CE&T activities. These researchers maintained that GSE is a universal trait that is an innate characteristic of all individuals.

Other researchers (Hortop et al., 2013; Hrbáčková, Hladík, & Vávrová. 2012; Razmefar, 2014) have hypothesized that a strong correlation existed between individuals' LOC and their academic achievement. Taylor (1985) found that internally motivated adults are more likely to participate in and complete CE&T activities. One assumption of these studies involved the idea that adults with a more external LOC would show improvement in their academic performance when their LOC attribute shifted to a more internally motivated attribute. While some researchers assume that internally motivated

individuals participate more frequently in workplace training, there are limited studies that support that idea (Sprung & Jex, 2012).

Some demographics, specifically generation cohort and education level, may also have a correlation to AAs' participation in CE&T. Recognizing that the modern workforce employs individuals from multiple generations, Costanza et al. (2012) identified substantive and meaningful generational differences in the way each generational cohort approaches CE&T. Although each generation of workers may approach the idea of CE&T differently, researchers have observed that individuals with some post-secondary education or training may be more likely to pursue additional CE&T opportunities (Cekada, 2012; Farrell, 2014; Twenge, Campbell, Hoffman, & Lance, 2010). Figure 4 shows the conceptual model underscoring the interconnectedness between AAs' generation cohort, education level, and their participation in CE&T activities.

Understanding generational differences is an important concept when examining the relationship between AAs' generation cohort, education level, and their pursuit of CE&T opportunities. Foster (2013) posited that the socio-historical change among generations and their attitudes toward CE&T rests primarily on the rapid development and continually changing nature of technology. These technological advances have not only altered people's conception of the nature of work, they have also underscored the need for a new definition of CE&T.

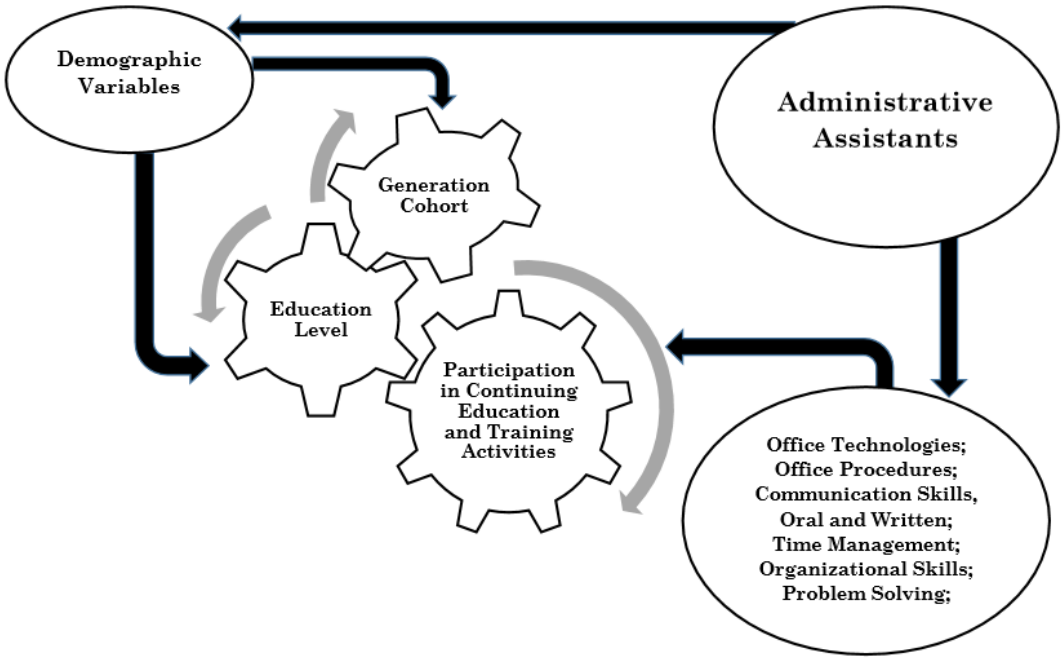

Figure 4. Relationship between AAs' generation cohort, education level, and their participation in CE&T activities.

Organizational managers and supervisors face a tremendous challenge as they attempt to lead a multi-generational workforce effectively since the work values of each generation has evolved (Lester et al., 2012). Popularly titled *Generational Cohorts*, these groups consist of individuals who were born in the same time period and have been influenced by the same historical and social events. Four distinct generational cohorts currently participate in the workforce: Traditionalists, Baby Boomers, Generation Xers, and Millennials (Lester et al., 2012; Twenge et al., 2010)

Although few researchers have examined generational distinctions in the workplace, Twenge et al. (2010) found significant differences in workplace values. One of the most distinct differences in work values among the multi-generational workforce is evident in each generational cohorts' beliefs about their internal or external LOC (Lutz,

2012). Lyons, Ng, and Schweitzer (2011) also found significant differences among generational beliefs about GSE. Age-related beliefs about AAs' LOC, GSE may also play an important role in whether individuals participate in CE&T activities.

AAs' education level may also play an important role in determining whether they participate in CE&T activities. Lyons et al. (2011) found that for both traditionalists and baby boomers, opportunities for CE&T were more important than for Millennials. Although GenXers have spent more time pursuing formal education degrees than their predecessors have, they were the least likely to consider CE&T a priority, even as they become ready to take on more supervisory and managerial roles in the workplace,

As organizations in the 21st century seek ways to improve the quality and productivity of their employees, they need to address ways in which they can encourage support staff employees' participation in CE&T activities. To accomplish this task, organizations need to determine whether there is a relationship between AAs' GSE (Chen et al., 2001; Glavin & Berger, 2012), LOC (Rotter, 1966), and their pursuit of CE&T.

Literature Review

An examination of Bandura's (1977a, 1977b, 1992, 1994, 1999) self-efficacy theory, Rotter's (1966) LOC theory, and the GSE theory (Chen et al., 2001; Luszczynska, Gutiérrez-Doña et al., 2005) provided the foundation for exploring whether these factors have a relationship between AAs and their pursuit of CE&T. A thorough understanding of these seminal theories will allow for an in-depth look at current theories and how they may relate to AAs. Knowledge of these theories will enable an investigation of the relationship between GSE, LOC, and individuals' pursuit of CE&T opportunities.

Using the self-efficacy theory (Bandura, 1977b, 1992, 1994, 1999), the GSE theory (Chen et al., 2001; Scherbaum et al., 2006; Judge, 2009), and the LOC theory (Rotter, 1966), my study will include an examination to determine whether these factors may contribute to AAs' pursuit of continuing education or their participation in additional training. While studies exist (Ignat & Clipa, 2010; Judge, 2009; Judge et al., 2005; Noe & Wilk, 2003) that explored this question for other populations, no studies have been found that discussed the relationship between the GSE (Chen et al., 2001; Scherbaum et al., 2006; Judge, 2009) and LOC (Rotter, 1966) of AAs and their pursuit of CE&T. Therefore, this study will not only build upon current research, but will also add information to what is already known.

Secretaries, Clerks, AAs, and Executive Assistants

History. Although no one knows the exact origin of the role of a secretary (now commonly called *administrative assistant*), the job was considered so important that heads of state, royalty, and elite business owners made use of secretarial services (Eagle, 2006). Some ancient Greek and Roman texts suggest that the job fell to an *Amaneus* or *Ad Manum Servus* (an educated male slave or freedman; Seager, 2013) who was trusted to write letters, arrange meetings, and keep the confidences of the master. More importantly, these men were expected to speak multiple languages and to have excellent penmanship (Onifade, 2009). Also called *Scribes*, these men used chisels to inscribe upon stone and styluses to write upon clay, wax, or wood tablets prior to the invention of parchment and reed pens (Seager, 2013). Eventually, a variation of shorthand was part of the training in order to allow the scribes to write quickly and accurately (IAAP, 2016). In

ancient Rome, one shorthand system that was popular was the *Notae Tironianae* (Tironian Notes), invented by Cicero's secretary, Tiro, to record his speeches (Ager, 2017). Julius Caesar reportedly used this system during the Gallic campaigns as he dictated letters while on horseback to two secretaries at a time (Ager, 2017).

As the responsibilities of the secretarial position grew, so did its importance. Ancient Greek, Roman, and Egyptian scribes were among the best-educated men of their day and were encouraged to study for the priesthood, politics, or administration. In an ancient Egyptian text, one writer encouraged boys to "set your heart on being a scribe so you can direct the whole world" (Garfield, 1986, p. 113). In the 15th century, most official scribes were members of the clergy, from where the word *clerk* is derived. As new skills, such as double-entry bookkeeping, allowed clerks to gain in prominence and status, men in these positions moved away from the church, achieving success and security as they worked not only for the upper class but also for the rising merchant class. In 1870, Sir Isaac Pittman founded the first Pittman Secretarial School to train professional men in the skills necessary for jobs as secretaries (Garfield, 1986).

During the Industrial Revolution, with the invention of the typewriter and women entering the workforce during World War I, the job of the secretary slowly shifted to a predominately female one (Eagle, 2006; Garfield, 1986; IAAP, 2016; Kilcoyne & Redmann, 2006). Other factors also contributed to the feminization of the secretary. With the business boom during the Industrial Revolution, men filled the growing mining, construction, automotive, and other highly industrial jobs. As employers began to consider clerical work routine, non-technical, and with limited educational requirements,

women started to occupy these positions. With the widespread use of the typewriter, employers believed that the small fingers of women were better able to use the equipment. Companies further began to recognize that by having a soft-spoken woman greet customers and business contacts, answer phones, and organize the office, men could run their organizations with more efficiency (Eagle, 2006; Garfield, 1986; IAAP, 2016; Kilcoyne & Redmann, 2006).

This feminization of the secretarial job also had its downside. Schools began to devise specific classes designated for boys and girls. Boys attended auto mechanics or construction classes while girls concentrated on home economics and typing. Clerical work became more of job geared specifically for women. College degrees were not required for this position, salaries reflected this change in attitude, and secretaries were not expected to pursue additional training or education (Eagle, 2006; Garfield, 1986; IAAP, 2016; Kilcoyne & Redmann, 2006).

According to *The Oxford English Dictionary*, the term *secretary* comes from the Latin word s*ecretum,* which means *secret*. The word secretary also referred to an individual who was entrusted with the secrets of the employer (Garfield, 1986), indicating the level of trust and responsibility inherent in the position. Eagle (2006) found that many national and international government titles, such as the Secretary General of the United Nations and the United States' Secretary of State (Eagle, 2006), reflect this significance.

Onifade (2010) noted that trying to define the modern secretary or AA concisely is like trying to describe what one does as a parent. The list of job tasks is just too broad

and depends in some cases on the specific industry. The IAAP website (2016) defined administrative professionals as individuals who are responsible for the overall administrative work in an office and who may coordinate a variety of activities and tasks for one or more employees in the same office. IAAP (2016) also found that AAs may be charged with other coordinating tasks as needed by the specific office environment.

The U.S. Department of Labor, BLS (2017b) defined AAs as office employees who are responsible for the daily operations of the office by typing, filing, answering the phone, and other duties, such as running errands or assisting the boss, as required by the job. Other job functions include creating reports and spreadsheets, maintaining databases, making travel and event arrangements, monitoring budgets, as well as overseeing office equipment maintenance and replacement. Some AAs may act in a purely support role, while others may manage an entire office.

Approximately 77% of administrative support personnel hold job titles that include *Administrative Assistant*, *Executive Assistant*, *Executive Secretary*, *Office Manager*, *Secretary*, *Administrative Secretary*, *Administrative Coordinator*, and *Administrative Manager*. Other job titles, including *Financial Manager*, *Legal/Medical Secretary, Clerk, Typist, Receptionist*, make up the remaining 23% of administrative support personnel (Dierkes & Anderson, 2007). Whatever title these individuals hold, AAs are multi-faceted individuals who take on a broad range of jobs in the modern office (Eagle, 2006; Garfield, 1986; IAAP, 2016; Kilcoyne & Redmann, 2006).

Background. According to IAAP (2016), more than 4.2 million AAs work in the United States and is one of the single largest job segments in the country. The roles and

responsibilities expected of AAs are extensive, vary widely, and as technology continues to advance, continue to evolve. The American Society of Administrative Professionals (ASAP, 2015) recognized that organizations depend on AAs to maintain an efficient and well-run office. ASAP (2014) also found that AAs serve as information and communications coordinators, event coordinators, and project or office managers. AAs are also expected to be proficient in a wide range of office equipment and technology, including fax machines, photocopiers, scanners, video conferencing, and computers and are expected to keep up with the latest software and other businesses processes (ASAP, 2014; IAAP, 2016).

Job requirements and training. Entry-level positions as an AA require individuals to be high school graduates and have a basic knowledge of English grammar, computer word processing, and office skills. Other skills, such as knowledge of database and spreadsheet applications, slide presentations, as well as e-mail and calendar functions, may also be required. More specialized positions, such as in law firms or medical offices, may require additional knowledge of industry-specific terminology, practices, and procedures. AAs also must have good organizational skills, appropriate writing skills, and effective interpersonal skills (ASAP, 2014; Eagle, 2006; Garfield, 1986; Glavin & Berger, 2012; IAAP, 2016; Kilcoyne & Redmann, 2006).

AAs who want to advance to positions with more responsibilities need to enhance their skills through training and continuing education. Glavin and Berger (2012) found that many organizations have certification requirements for individuals who want to be promoted and provide a number of ways for their employees to complete these

requirements. Most community colleges offer programs for either degree-seeking or certificate-seeking students in office technology skills that include a variety of courses from basic writing, keyboarding, spreadsheets, grammar and editing, as well as accounting (ASAP, 2014; Eagle, 2006; Garfield, 1986; Glavin & Berger, 2012; IAAP, 2016; Kilcoyne & Redmann, 2006).

A nationally recognized professional organization for administrative professionals, IAAP (2016) recommends the Certified Administrative Professional (CAP) certification. Individuals need to study the *CAP Exam Guide* (IAAP, 2016), which can be obtained from the IAAP website, to achieve CAP Certification. Additional study materials, including the *Official (ISC)2 Guide to the CAP CBK, Second Edition* (Howard, 2013), *The CISSP and CAP Prep Guide: Platinum Edition* (Krutz & Vines, 2007), or the *CAP Certified Authorization Professional Exam* (ExamREVIEW, 2014), may be acquired online or from any bookstore.

Another nationally recognized professional organization for administrative professionals, ASAP (2014) established the Professional Administrative Certificate of Excellence (PACE) program. PACE provides practical and timely training opportunities, specifically in five key competencies that are critical for AAs. These key competencies include interpersonal communication, office and digital technologies, project and task management, management skills, and career development. PACE certifications can be earned in a variety of ways, including

- Classes (nondegree) from local colleges or continuing education programs;
- Webinars or online classes that are part of an organized education program;

- Workshops, seminars, and professional conferences or conventions;
- In-house training programs; or
- Courses approved by the International Association of Continuing Education and Training (IACET; ASAP, 2014).

The American Management Association (AMA, 2017) recommends the Administrative Excellence Certificate, which individuals may earn by taking seminars with topics ranging from business writing, fundamentals of finance, time management, organizational skills, management skills, as well as leadership skills. Another widely respected organization, the American Society of Employers (ASE, 2017), also offers an Administrative Assistant Certification, which includes four core and four elective courses.

In addition to on-the-job training and industry certifications, multitude opportunities exist for enhancing an AA's credentials. Colleges now offer Associate of Arts degrees specifically designed for the modern AA employee. A variety of courses and training are also available online from a wide range of sources. Numerous books exist that provide additonal guidance for AAs, including the *Administrative Assistant's and Secretary's Handbook* (Stroman, Wilson, & Wauson, 2012), *Administrative Assistant: The Training Course* (Morgan, 2015), *The Innovative Admin* (Perrine, 2012), *The Definitive Personal Assistant & Secretarial Handbook: A Best Practice Guide*(France, 2012), and *The Administrative Professional: Technology & Procedures* (Fulton-Calkins, Rankin, & Shumack, 2011), among others. All of these venues can help AAs become more proficient.

Job outlook. According to the U.S. Department of Labor, BLS (2017b), the job outlook for occupations in the office and administrative career group is robust despite a slow economy, and several reasons for this trend exist. First, although many office workers increasingly take care of their supervisors' correspondence, AAs will continue to fulfill other duties. Planning and coordinating events and meetings, organizing files, and greeting customers are a few of these soft skills.

Second, the rapid growth of the healthcare and social services industry, due in part to changes in health care regulations and the aging baby-boom population, will require the employment of additional medical AAs. Third, technological advances will also transform the job outlook for AAs, as the increased use of computers will require greater knowledge of various software, new security measures, and the analysis of electronic data (U.S. Department of Labor, BLS, 2017b).

The projected job growth for AAs between 2014 and 2024 will average around 14%. For AAs who improve their office management and leadership skills, job growth is expected to be around 20%. For AAs in the medical field, the projected job outlook for new jobs is expected to grow by about 32% (U.S. Department of Labor, BLS, 2017b).

Education, and Training and Development

According to the U.S. Department of Labor, BLS (2017b), AAs must have a minimum education and basic computer skills in order to work in this field. Entry-level requirements include having a high school diploma, knowledge of basic office protocols, and minimal computer skills. In many cases, job-specific skills require on-the-job

training; however, some professions (i.e., legal, medical, as well as other occupations) necessitate additional CE&T that is industry specific.

Education. Dewey (2012) originally defined education in 1916 as the acquisition of knowledge and skills, or a deeper understanding of a subject under the guidance of others. In modern American society, this learning typically occurs in a school, college, or university. Although defined in myriad ways, education is generally meant as learning that is classroom-based (either online or in brick and mortar buildings), is sponsored by an institution, and is highly structured (McGuire & Gubbins, 2010). Knowles, Holton, and Swanson (2015) found a distinct difference between the education of children and the education of adults.

Adult education. Although the roots of adult education attribute their beginnings to ancient Chinese, Hebrew, Greek, and Roman teachers, it was not until the twentieth century that scholars and researchers systematically examined how adults learn. This lack of research on adult learning was primarily due to the misconception that once adults reached a particular stage, their cognitive abilities began to decline (Alexander & Goldberg, 2011; Knowles et al., 2015). Prior to the twentieth century, scholars assumed that adults learned new information and skills as part of their daily activities (Merriam, Caffarella, & Baumgartner, 2007).

Although there is no monolithic definition of adult education, Knowles et al. (2015) defined it as a social system in which adults and the institutions and associations that are concerned with the education of adults work toward the common goal of providing educational opportunities for adults. Hatcher and Bowles (2013) asserted that

adult education programs must improve both the materials and the methods of adult learning. Zafft (2008) found that the National Reporting System, an accountability system used by the Office of Adult and Vocational Education, U.S. Department of Education, defined adult education as a post-secondary education in which participants attend college-level classes and earn a certificate, an associate degree, or a baccalaureate.

Training and development. Traditionally defined as educational activities an organization provides its employees, training and development activities are designed to improve employee performance and job satisfaction (Alexander & Goldberg, 2011; Hui & Smith, 2002; Noe & Wilk, 1993). Often training and development activities are part of a more comprehensive human resources development (HRD) organizational philosophy in which individual employees engage in activities that will enhance their particular job performance (Bilanakos, 2013; Hatcher & Bowles, 2013). Employers may encourage AAs to take general courses in word processing, database and spreadsheet applications, or slide presentations, or may have workshops that improve AAs' knowledge of firm-specific accounting and reporting software or of the organization's specialized practices and procedures. Managers and supervisors may recommend that AAs take courses in time management, conflict resolution, career development, and other soft skills.

AAs' Career Growth and Training Concerns

In an increasingly competitive global marketplace, the lack of attention to career concerns (Phipps, Prieto, & Ndinguri, 2013) and the lack of training and continuing education (Kilcoyne & Redmann, 2006) of AAs could be a potential problem. Organizational changes, including reductions in force and downsizing, often mean that

administrative staff are being asked to take on more responsibility. These new responsibilities often include creating and maintaining budgets, overseeing collaborative, content and knowledge management systems and other electronic storage sites, conducting research and gathering information from a variety of sources, as well as training new employees. Unfortunately, the changing nature of AAs' job expectations often requires them to take on these additional duties without any additional training (Kilcoyne & Redmann, 2006; Phipps et al., 2013).

Tuition reimbursement programs. CE&T for AAs represents a win-win situation for both employee and employer. Duncan (2011) stated that the return on investment for training AAs can be significant, and many companies provide support for ongoing CE&T by offering their employees tuition reimbursement or tuition assistance programs. Although not an exhaustive list, Table 1 shows a sample of companies that offer tuition assistance and their tuition policies. As more and more companies use tuition assistance and reimbursement benefits as a way of attracting and retaining employees (Lamoureux & Kowske, 2013; Moskowitz et al., 2014), they may also offer these benefits as a way of promoting qualified individuals within the organization.

Table 1

Samples of Companies That Offer Tuition Reimbursement or Tuition Assistance

Company	Policy
AETNA	Tuition assistance programs and internships
Apple	Tuition reimbursement for both undergraduate and graduate degrees
Boeing	Offers full tuition reimbursement for college or continuing education credits
Chevron	Tuition assistance that provides reimbursement for up to 75% of college courses
Dell	Tuition reimbursement is part of their comprehensive talent management program and includes company-sponsored learning and development programs
Disney	Offers 100% tuition reimbursement for full-time employees
FedEx	Provides tuition reimbursement of up to $2500 per year
Gap	Offers tuition assistance program to full-time employees who are pursuing approved college studies related to their jobs
General Mills	Provides a wide range of tuition reimbursement opportunities
Google	Provides tuition reimbursement to employees who pursue a degree that is relevant to their job, maximum of $12,000 annually
Home Depot	Offers 50% tuition reimbursement at accredited colleges, universities, and technical schools
Hilton Worldwide	Offers tuition reimbursement to all full-time employees
IBM	Provides full tuition costs for full-time employees
Lockheed Martin	Provides up to $7500 a year for degreed programs relevant to job function. Graduate engineering program limit is $15,000 per year
Met Life	Offers full tuition reimbursement
Publix	A Florida-based supermarket chain that offers tuition reimbursement to both full and part-time employees
Staples	Offers $750 tuition reimbursement for the 1st year; $1500 the 2nd year; $2000 the 3rd year. Available to both full and part-time employees

(table continues)

Company	Policy
UPS	Provides $3000 per calendar year with a maximum of $15,000
Walmart	Offers both full and part-time employees up to $3,000 a year
Yahoo	Provides $5000 a year in tuition reimbursement assistance

Note: Information compiled from Can't pay for college? Top companies that foot the bill (2014). [Online comment forum]. Retrieved from http://www.affordablecollegesonline.org/ financial-aid/top-company-college-tuition-reimbursement-programs/; Griffiths, L. (2011, Nov 7). Fortune 500 companies that will pay for your college tuition. [Online forum comment]. Retrieved from http://voices.yahoo.com/fortune-500-companies-will-pay-college-10347401.html?cat=3; Muir, C. (2014, Jan 28). 33 companies that can save you from college debt. [Online comment forum]. Retrieved from http://www.collegeplus.org/blog/33-companies-that-can-save-you-from-college-debt; Tuition reimbursement: 10 companies that help employees pay for college. (2012, May 15). [Online comment forum]. Retrieved from http://www.huffingtonpost.com/2012/05/10/tuition-reimbursement-10-companies-that-pay_n_1507188.html; White, M. G. (2014). Companies that help employees pay for college. [Online comment forum]. Retrieved from http://college.lovetoknow.com/ Companies_That_Help_Employees_Pay_for_College

Lamoureau and Kowske (2013) found that approximately "87% of U.S. organizations offer tuition assistance to their employees" (p. 3). These researchers estimated that even among smaller companies (fewer than 1000 employees), 77% offer tuition assistance. For large organizations (more than 10,000 employees), approximately 97% offer tuition assistance (Silber & Chien, 2014). For organizations to offer tuition reimbursement for employees is particularly encouraging for AAs seeking to improve their skills or move into better positions within their organizations.

The *2013/2014 Benefits USA* survey breaks these numbers down even further. In 2013, approximately 21.1% of hourly workers used tuition assistance programs; administrative workers used 26.3%; technical/professional workers used 28.1%; and management workers used 27.4% (Compdata Surveys, 2014). These numbers represent a significant increase in tuition reimbursement benefits offered to employees (Lamoureau & Kowske, 2013).

Human resources development. Most organizations in the United States support the learning and training of their employees through organized HRD activities, which may include in-house or off-site workshops, online training, conferences, and continuing education courses (Miller, 2013). ASTD's study revealed that in 2011 U.S. companies spent over $156 billion on employee training and development (Miller, 2013). The billions of dollars spent on employee training and development indicates that companies are increasing their investment by providing training, professional development, continuing education, and lifelong learning opportunities for their employees (Compdata Surveys, 2014).

The concept of HRD is an ambiguous term and has been widely used across economic, business, trade, and government organizations (Hatcher & Bowles, 2013; Foster, 2013). HRD is also a broad term, often encompassing all aspects of training, professional development, continuing education, and lifelong learning (Hatcher & Bowles, 2013; Stewart, 2014), and each component is critical to learning in the workplace in the 21st century. While these ideas may seem synonymous, they each have distinct and sometimes conflicting definitions.

Nadler (1984) defined HRD as a learning experience that is organized and occurs during a specific time period that helps employees improve some aspect of their job performance or increases their likelihood of job growth. Other researchers defined HRD as more of a process that helps employees develop and improve their individual skills and teamwork or that improves a collective work process or the overall performance of the system (Hatcher & Bowles, 2013). While Nadler (1984) emphasized specific training

activities for the individual, Hatcher and Bowles (2013) definition has a broader focus and included not only the process of training and development for the individual, but also the development of the whole company as a learning organization.

McPheat (2008) recognized that training and development budgets are often cut first during economic downturns as companies view training as an expense that can be reduced or eliminated during hard economic times. In a study conducted by MTD Training, approximately 61% of training professionals surveyed saw their training budgets cut between the 2007 and 2008 fiscal years (McPheat, 2008). Laff (2008) argued that as more companies recognize the importance of CE&T for their staff, corporate leaders have developed creative ways to maintain their CE&T programs. Organizations have continued their training programs by integrating training into daily performance, offering in-person or online opportunities for volunteer trainers who are often company employees who are experts in their field, and providing time for supervisors and other leaders to mentor less experienced members of their organization (Hatcher & Bowles, 2013). Stewart (2011) asserted that many modern companies have refused to eliminate training and development programs for their employees and continue to maintain their commitment toward educational agendas.

Participation in training and education. As part of its study, ASTD found that many employees participate in organizational learning and development opportunities (Miller, 2013), with each employee averaging 31 hours of training in 2011. Miller (2013) stated that in 2012, organizations spent over $164.2 billion on employee training and development programs, of which approximately 61% was spent in-house, 28% spent

externally, and 14% for tuition assistance. Miller (2013) also found that most of the learning and development monies were spent on managerial, supervisory, and leadership skills, and on professional or industry-specific content. This finding means that of the huge amount of money spent on training and development, only a fraction of these monies were spent on AAs' CE&T.

Training and educational concerns. To increase worker productivity, businesses and organizations must provide a variety of post-high school CE&T opportunities through on-the-job training, employer-funded tuition reimbursement, as well as in-house and off-site training courses, conferences, and workshops. There are growing apprehensions, however, that these opportunities may not be as readily available as in previous years (Stanley, 2014; U.S. Department of Labor, BLS, 2017b). Although every occupational group faces training and educational concerns, according to IAAP (2016), AAs are increasingly worried about the lack of training opportunities that help them stay abreast of rapidly changing technologies. As AAs assume more office managerial responsibilities, they recognize a need for additional training in management and leadership skills (Alexander & Goldberg, 2011).

Noe and Wilk (1993) noted that one of the biggest problems in developing and sustaining employee CE&T activities lies with the employees. In order for these activities and programs to be successful, employees must want to participate and must actively pursue CE&T experiences. Employers must provide the type of working conditions and support that allows employees to participate in CE&T activities. Some researchers revealed that employers who actively encourage employees' interest in CE&T, increase

employee participation in these activities (Alexander & Goldberg, 2011; Costanza et al., 2012; Noe & Wilk, 1993)

Another CE&T problem for organizations revolves around the increasing number of inexperienced employees, particularly individuals immediately out of college, who enter the workforce and may take the place of retiring, experienced workers. Farrell and Hurt (2014) argued that in order for organizations to successfully manage this transition, supervisors, managers, and training and development professionals must understand the new and varied training design preferences of younger workers. McGuire and Gubbins (2010) maintained that a more activity-based, hands-on style of learning must replace the old formal, traditional way of learning in order to capture the attention of these populations. Given that many younger workers have grown up using increasingly sophisticated technologies, organizational training settings will have to incorporate more technology-savvy learning opportunities and include a virtual environment (Farrell & Hurt, 2014).

New and younger employees are not the only ones who require ongoing training. Since more and more older workers are choosing to stay in the workplace beyond the current retirement age of 65, these individuals will also need continuous and updated training, particularly as new technologies become more prevalent (Costanza et al., 2012; Farrell & Hurt, 2014; Wei-Tao, 2006). For these older workers, organizations must devise ways to deliver training to a wide age range of employees who have varying training preferences and training needs.

Budget constraints and the changing general age group of workers are two of the problems facing the pursuit of training and education for AAs. These two areas of concern may be compounded by an individual's low GSE and external LOC. Although some studies have examined the effect of budget constraints (IAAP, 2016; Laff, 2008; McPheat, 2008; Stewart, 2011) and the changing demographics of workers (Farrell & Hurt, 2011; IAAP, 2016; McGuire & Gubbins, 2010; Stanley, 2014), no current studies have examined how GSE and LOC factors may also affect the pursuit of CE&T of AAs.

AAs' Self-Efficacy and Motivation

Bandura's (1977a, 1977b, 1978, 1992, 1994, 1997) foundational work in social cognitive theory and self-efficacy has created a considerable knowledge base that practitioners have used in the workplace to help improve employee performance. Numerous studies have consistently demonstrated that the self-efficacy beliefs of workers contributes substantially to their level of motivation on the job (Judge, 2009; Judge, Jackson, Shaw, Scott, & Rich, 2007; Jones, 2013; König et al., 2010; Lunenburg, 2011; Van Der Roest, Kleiner, & Kleiner, 2011). Researchers have noted that people's self-efficacy beliefs also help to determine their level of motivation, which may be revealed by both the level of effort they exert and how long they are willing to persevere in a given task (Pajares, 2003; Rothes, Lemos, & Gonçalves, 2013; Wen & Lin, 2014). Other researchers have found that both mentoring (Ehigie, Okang, & Ibode, 2011; Lester et al., 2011; Murphy, 2012; Srivastava & Thakur, 2013) and the Pygmalion effect (Eden, 1984; Karakowsky, DeGama, & McBey, 2012; Lunenburg, 2011; Whiteley, Sy, & Johnson, 2012) can help to improve people's belief in their ability to achieve a desired goal.

Mentoring. Mentoring is an element of observational learning that addresses the purposeful influence of significant others on the level of self-efficacy of the individual. Researchers defined mentoring as a personal relationship between two people in which a more experienced person acts as a guide, role model, or sponsor to provide support for a less experienced person's personal and professional growth (Ehigie et al., 2011; Lester et al., 2011; McDonald & Westphal, 2013; Murphy, 2012; Srivastava & Thakur, 2013). Ehigie et al. (2011) recognized that mentoring enables organizations to improve employee technical and leadership skills, provide a broader understanding of the organizational culture, and increase job satisfaction and performance, and may be most effective when direct influence comes from individuals who are significant or valued by the person being mentored.

Srivastava and Thakur (2013) discovered that many organizational leaders perceive mentoring to be a form of training and development and may be either formal or informal programs. Formal mentoring programs pair less experienced individuals with more experienced individuals based on the needs of the mentee. These needs may include helping the mentee develop a specific skill set (i.e., improving presentation skills or learning a technical skill), enhancing the mentee's socialization and integration into the company, or facilitating the building of a network outside the mentee's immediate project or group. The paired individuals then agree on which competencies the less experienced person would like to improve. These competencies may take the form of specific technical skills, an introduction to and greater understanding of the corporate culture, or a

general improvement in soft skills, such as time management, stress relief, work-life balance (Srivastava & Thakur, 2013).

Liang and Gong (2013) stated that informal mentoring programs frequently accomplish many of the same goals and often occur when an organization does not have a formal mentoring program. Informal mentoring often develops due to the recognized competence of an individual, as well as a perceived ability of that individual to get along with others (Liang & Gong, 2013) and occurs when less experienced individuals purposely seek the expertise and guidance of a more experienced individual for many of the same reasons they would participate in a formal mentoring program. Experienced individuals within the organization may also select a protégé in whom they perceive a high degree of potential and motivation (Liang & Gong, 2013; Wen & Lin, 2014). Desimone et al. (2014) found that informal mentoring plays a critical role, not only in improving technical skills and helping new employees to adapt to the corporate culture, but may also provide emotional support and reduce feelings of isolation.

Pygmalion effect. Although originally conceptualized by Merton in 1957 (Karakowsky et al., 2012; Poornima & Chakraborty, 2010), another aspect of observational learning derived from Bandura's (1977b, 1992, 1997, 2002) social learning theory involves the Pygmalion effect (Cherian & Jacob, 2013; Lunenburg, 2011). Often called a self-fulfilling prophecy (Eden 1984; Poornima & Chakraborty, 2010; Whiteley et al., 2012), the Pygmalion effect is a theory that postulates that workers will improve their performance when a supervisor exhibits a positive attitude and has high expectations

(Karakowsky et al., 2012). That is, when leaders raise their expectations of their followers, follower performance usually improves (Whiteley et al., 2012).

Derived from ancient Greek mythology, Pygmalion was a sculptor who created an ivory statue of a beautiful woman. He was so enamored with his creation that he prayed to Aphrodite, the goddess of love and beauty, for a wife just like the statue. Aphrodite, curious to see this beautiful sculpture, went to Pygmalion's home. Believing that the statue was a tribute to her, Aphrodite granted Pygmalion's request and breathed life into the statue (Livingston, 1969; Poornima & Chakraborty, 2010).

Throughout the 19th and 20th centuries, the story was transformed into more modern versions, i.e., Morris's poem "The Earthly Paradise," Gilbert's comedic play *Pygmalion and Galatea*, and Boucicault's melodrama *Grimaldi or the Life of an Actress* (Shaw, 2005). The adaptation of Shaw's (1913) play, *Pygmalion*, by Lerner (1985) into the play, *My Fair Lady*, ultimately inspired the idea that the transformation of one individual could occur based on how that individual is treated by another (Poornima & Chakraboorty, 2010).

While myriad studies have examined the Pygmalion effect in an educational context (Karakowsky et al., 2012), Eden (1984) acknowledged that studies into its applicability in a management context have been slow to be realized. While Merton (1957) explored the concept of the self-fulfilling prophecy as early as 1948 (Karakowsky et al., 2012; Poornima &Chakraborty, 2010), Livingston (1969), one of the first researchers to study this phenomenon, examined numerous case studies of the Pygmalion effect in business and found that when managers raise their expectations, productivity is

also likely to be raised. Thus, the Pygmalion effect has implications for understanding the self-efficacy concept in the workplace and for improving worker performance.

Although self-efficacy beliefs affect motivation, Bandura (1997) recognized that these self-efficacy beliefs may vary due to individual personal qualities, prior experiences, and social support. Jungert, Koestner, Houlfort, and Schattke (2013) found that positive feedback is an effective influence on motivation and can help to improve self-efficacy beliefs. Likewise, progressive mastery of difficult tasks (Judge & Hurst, 2007), setting and achieving difficult goals (Lunenburg, 2011), and having a supportive work environment (Wong, Lau, & Lee, 2012) also contributes to improving self-efficacy beliefs, which may help to improve employee motivation (Wen & Lin, 2014).

Van Der Roest et al. (2011) argued that biological factors, including nutrition and fitness, may also play a role in improving self-efficacy beliefs, which can enhance employee motivation. These researchers found that a high protein, low carbohydrate diet coupled with a regular exercise routine helped to raise serotonin levels, improve dopamine levels in the brain, and increase alpha wave activity, thereby improving self-efficacy beliefs. According to Van Der Roest et al. (2011), employers who provide good nutritional options and opportunities for exercise will not only help to improve worker self-efficacy but will also contribute toward improving worker motivation and performance.

AAs' Self-Efficacy and CE&T

While few studies have explored the direct affect of self-efficacy on workplace CE&T (Noe & Wilk, 1993), several studies suggest that an individual's degree of self-

efficacy may have some controlling effects on the degree of training success (Orpen, 1999). Specifically, researchers have found that self-efficacy beliefs may help to predict an individual's motivation to learn (Pajares, 2003; Wen &Lin, 2014). Several researchers have found that when training professionals recognized the important of self-efficacy to people's underlying training motivation, training efforts tended to be more successful (Yusuf, 2011; Wen & Lin, 2014).

Researchers from diverse theoretical organizations and fields have found strong support for the relationship between self-efficacy and adults' participation in CE&T activities. Using the Pearson product moment correlation (PPMC) coefficient, Goulão (2014) found a statistically significant relationship between the self-efficacy of adults and their participation in educational activities in an academic setting, although the introduction of feedback, mentoring, and coaching actions mitigated some of the researchers' findings. Participants showed an increase in their self-efficacy beliefs, for example, when they felt they had performed well on an academic task (Lent, Cinamon, Bryan, Jezzi, Martin, & Lim, 2009). Similarly, trainees attributed an increase in their self-efficacy beliefs to the positive observations of others and upon receiving direct and immediate feedback (Lent et al., 2009). Other researchers found an improvement in both sales trainees' (Schwoerer et al., 2005) and teachers' (Rhodes & Fletcher, 2013) self-efficacy beliefs when paired with mentors and coaches.

AAs and GSE

Bandura (1977a, 1987, 1997, 1999) and others (Scholz et al., 2002) maintained that self-efficacy is task or domain specific. Scholars (Chen et al., 2001; Ebstrup et al.,

2011; Luszczynska, Gutiérrez-Doña, et al., 2005; Schwoerer et al., 2005; Wei-Tao, 2006) argued that self-efficacy can be measured as a more general construct. Ebstrup et al. (2011) and Wei-Tao (2006) asserted that GSE reflects individuals' beliefs in their ability to achieve success across a wide array of situations or tasks. Other scholars have argued that while GSE affects individuals' expectations that they can succeed in new situations, they also recognized that GSE develops and changes as a result of prior experiences (Ebstrup et al., 2011; Pillai et al., 2011; Sadri, 2011; Wei-Tao, 2006).

AAs' GSE and Motivation

As a relatively new concept, GSE and its relationship to motivation have not been widely studied. Measured by the GSE scale (GSES) developed in 1979 by Schwarzer and Jerusalem (2004), the GSES has been found to be highly reliable in a variety of settings (Ebstrup et al., 2011). Scholz et al. (2002) in their multi-country study found a strong relationship between GSE and its effect on human motivation. Other research findings suggest that individuals with a high degree of GSE tend to be more motivated to accept new challenges even when their task-specific self-efficacy is low (Luszczynska, Gutiérrez-Doña, et al., 2005; Pajares, 1997; Phipps et al., 2013; Schwoerer et al., 2005; Wei-Tao, 2006).

AAs' GSE and CE&T

The focus on employee participation in CE&T activities has intensified as companies experience rapid technological changes and increased global competition (Esfandagheh et al., 2012; Wei-Tao, 2006). In an effort to make the most of training and education dollars, training and development specialists have examined some factors,

including GSE, that can affect training outcomes (Phipps et al., 2013; Schwoerer et al., 2005).

Wei-Tao (2006) noted that the increasing age of the workforce and the rapid deployment of new technologies mean that training will play a critical role in how well the older population is able to adapt. Studies have demonstrated that individuals with a high degree of GSE have an increased motivation to learn and tend to be more successful in both work and training pursuits (Phipps et al., 2013; Luszczynska, Gutiérrez-Doña, et al., 2005; Wen & Lin, 2014). To create meaningful CE&T opportunities for the older worker, employers will need to be aware of workers' GSE in order to mediate training apprehension, and ensure that new training programs result in effective training outcomes (Esfandagheh et al., 2012).

AAs' LOC

Internal versus external LOC**.** Fong and Aldalalah (2010) reiterate the above definitions and argue that both internal and external LOC play a large role in how individuals view their surrounding environment and react to current events. Studies with different populations, i.e., students (Fong & Aldalalah, 2010) and adults (Wang, Bowling, & Eschleman, 2010), reveal similarities in that individuals with a more developed internal LOC have a higher degree of self-confidence, are more independent, are better able to motivate themselves, and are better problem solvers. Fong and Aldalalah (2010) recognized that these individuals often have more positive attitudes toward work and are better able to make definitive decisions.

Fong and Aldalalah (2010) also found that individuals who rely on external reinforcements generally have a more negative view of their own abilities. These individuals are often more likely to obey the rules; accept information given to them as fact without question, are easier to persuade, and are more likely to be unable to motivate themselves. Some researchers (Joo et al., 2011; Ng et al., 2006) have concluded that people with an external LOC are more likely to drop out of school or stay in dead-end careers, often become clinically depressed, and have greater feelings of helplessness.

AAs' LOC and Motivation

Although researchers have widely studied the concepts of LOC and motivation in the workplace (Ng et al., 2006), no study has specifically examined this relationship for AAs. Some researchers combined the LOC construct with similar traits as part of a core self-evaluation process (Judge, 2009; Ng et al., 2006). Myriad other topics, such as job satisfaction, job performance, and organizational behavior, have been examined in connection with the LOC concept, but Severino, Aiello, Cascio, Ficarra, and Messina (2011) noted that few studies have examined LOC and motivation as a broader construct.

AAs' LOC and CE&T

Although no specific researchers have studied the effect of AAs' LOC on their CE&T pursuits, some research has been conducted examining this paradigm using various other populations (Bilanakos, 2013; Noe & Wilk, 1993; Sprung & Jex, 2012). Noe and Wilk (1993) found that employees' internal LOC can be increased when employers provide realistic information about the types of CE&T opportunities that are available. Bilanakos (2013) noted that when employers offer both general and firm-

specific CE&T opportunities, employees are more likely to participate, especially when coupled with a supportive working environment. Sprung and Jex (2012) observed that employees who engage in CE&T activities may increase in their intrinsic motivation, which results in a positive value-added effect upon employees overall productivity and organizational behavior.

McGuire and Gubbins (2010) recognized that changes in CE&T approaches might influence employees' motivation to participate. They warn that employers must acknowledge newer approaches to employee CE&T that include more informal, flexible, and learner-centered activities. For employees who are already highly intrinsically motivated to learn, specific CE&T approaches do not present a problem. For employees who are not highly intrinsically motivated or who are extrinsically motivated, employers will need to continually invest in CE&T activities that also serve to motivate (Sprung & Jex, 2012).

Relationship between GSE and LOC

Most researchers who examine people's GSE and their LOC acknowledge that some relationship exists between these concepts. Cascio, Botta, and Anzaldi (2013) found that individuals' beliefs in the the degree to which they may control a situation or task may mitigate the belief in their capability of performing complex tasks. Others observed that individuals with a high degree of GSE and an internal LOC have greater academic successes and tend to take more personal responsibility for their own professional growth than do individuals with a low degree of GSE and an external LOC (Ignat & Clipa, 2010; McGuire & Gubbins, 2010). Still other researchers have consistently recognized a strong

correlation between adult learners' GSE and their intrinsic and extrinsic motives for enrolling in CE&T endeavors (Rothes et al., 2013).

Generation Cohorts and Pursuit of CE&T

As America's workforce continues to age, the challenge for organizational leaders is how to manage a diverse, multi-generational workforce. One of the biggest challenges for managers and supervisors is how best to offer CE&T activities for members of different generational cohorts. Generational cohorts are defined as a group of individuals who were born in the same time period and have been influenced by the same historical and social events. Four distinct generational cohorts currently participate in the workforce: Traditionalists, Baby Boomers, Generation Xers, and Millennials (Lester et al., 2012; Twenge et al., 2010).

With the rapid growth and expansion of technology, supervisors and managers must decide how best to train all employees. Much of the literature on multi-generational CE&T (Hoffman & Reindl, 2011; Lester et al., 2012; Twenge et al., 2010; van Rooij, 2012) acknowledges the differing requirements of each generational cohort. Table 2 shows the characteristics of each generational cohort and their approaches to CE&T.

Table 2

Generational Cohort Titles, Birth Date Range, General Characteristics, and Approaches to CE&T

Generational Cohort Title	Birth Date Range	General Characteristics	Approaches to CE&T
Traditional (also known as the Silent Generation)	1925 – 1946	• Lived through the depression but most were too young to fight in WWII • Most men joined the military; fought in either Korea or Vietnam • Valued stability and the lessons of history • Loyal to workplace • Believed seniority was key to career advancement • Respected authority, disciplined work habits • Need formal, written feedback	• Prefer traditional teacher-led, classroom-style • Prefer formal, structured training – do not expect to be entertained • Prefer printed texts and materials • Responds well to subject matter experts, presentations, & lectures • Rely on prior experiences • Training needs to be logical • Must see value in learning a new subject or skill • Resistant to many technological changes

(table continues)

Generational Cohort Title	Birth Date Range	General Characteristics	Approaches to CE&T
Baby Boomers	1947 – 1964	• Grew up with relative economic prosperity • Strong nuclear family with stay-at-home mom • Were strongly influenced by the Vietnam War, civil rights and women's movements, JFK, MLK, and Robert Kennedy assassinations • Do not trust authority • Results driven • Competitive, hardworking, and independent • May be argumentative • Tend to value work priorities over family; extended work week beyond 40 hours • Need formal, written feedback	• Prefer face-to-face interactions, but are open to new technology approaches • Prefer small classes with time for discussions or problem-solving exercises • Prefer printed texts and materials • Do not expect to be entertained • Training must relate specifically to work situation • Prefer independent assignments versus teamwork • Must see value in new subject or skill, particularly relating to technology

(table continues)

Generational Cohort Title	Birth Date Range	General Characteristics	Approaches to CE&T
Generation X (GenX)	1965 – 1981	• Lives were mirrored in popular media • Latchkey kids with divorced parents • Influenced by AIDS, end of cold war, the *Challenger* incident, & economic uncertainty • Independent and less committed to work organization • Seek work-life balance • Resistant to rules and formal hierarchy • Aware and accepting of diversity • Well versed in technology • Want to work independently but need continuous verbal feedback from supervisors	• Prefer informal, casual, relaxed training environment • Like training to be fun with opportunities to role play • Prefer training materials that are visually stimulating • Prefer online training and other technology-based training • Must see the benefit of the training to specific work application • Like to train independently • Want to avoid face-to-face interactions • Value continuous learning but will change jobs after learning a new skill

(table continues)

Generational Cohort Title	Birth Date Range	General Characteristics	Approaches to CE&T
Millennials (also known as GenY or GenMe)	1982 – 2000	• Grew up using technology • Have helicopter parents • Influenced by 9/11 • Were taught to be confident & have high self-esteem • Grades and college were emphasized, along with math and science • Are group oriented and prefer to be with other millennials • Believe every minute should be scheduled • Avid job hoppers • Constantly connected to media, i.e., Facebook, Twitter, iPods • Civic minded yet conform to the mainstream	• Prefer online, fast-paced training or technology - based • Need a fun, team-oriented approach • Need constant and instantaneous feedback • Want training that applies directly to the workplace, but allows a work-life balance • Place a high importance on training that leads to personal self-improvement • Often have lower levels of GSE and need to be told to attend training

Note: Information compiled from "Actual Versus Perceived Generational Differences at Work: An Empirical Examination," by S. W. Lester, R. L. Standifer, N. J. Schultz, and J. M. Windsor, 2012, *Journal of Leadership & Organizational Studies, 19*(3); *Generational Career Shift: Summary Report of Key Findings* by S. T. Lyons, E. S. Ng, and L. Schweitzer, 2011, Retrieved from https://www.researchgate.net/publication/281276277; "Generational Differences in Work Values: A Review of Theory and Evidence," by E. Parry and P. Urwin, 2011, *International Journal of Management Review, 13*(1). "Training a Multigenerational Workforce: Understanding Key Needs & Learning Styles," by T. L. Cekada, 2012, *Safety Management*.

As more millennials enter the workforce, organizational leaders will need to understand both the commonalities and the differences among the generational cohorts in order to provide CE&T activities that meet the needs of each individual. Some researchers have examined the link between individuals' generation cohort and their pursuit of CE&T (Cekada, 2012; Costanza et al., 2012; Farrell & Hurt, 2014; Lyons et al., 2011; Lester et al., 2012; Parry & Urwin, 2010; Twenge et al., 2010; van Rooij, 2011). No researchers have examined the link between AAs' generation cohort and their pursuit of CE&T.

Level of Educational Attainment and Pursuit of CE&T

In the U.S., organizations acknowledge a growing demand for CE&T opportunities, as new technologies inundate the workplace (Foster, 2013). The National Research Council (2012) found this demand for CE&T focused on two major areas. First, workers without high school diplomas or GEDs and those who have no post-secondary degrees or certifications want to pursue CE&T to improve their KSAs so they will be more promotable and improve their resumes. Second, employees who already have post-secondary degrees or certifications want to pursue CE&T not only to build knowledge and skills for their careers but also to enhance their personal interests.

The U.S. Department of Education NCES (2017) has collected data that details the number of adults who participate in CE&T activities and found that the participation rate is higher for individuals in professional or managerial professions. Additional data suggests that adults in the 18-24 age bracket were more likely to participate in CE&T activities than those who were older than 55. Worth and Stephens (2011) found that both

full-time and part-time attendance at community colleges increased 24.1% between 2007 and 2009, and that adults are returning to college in significant numbers. While these findings are notable, no researchers have examined whether individuals' current education level may enhance their desire to pursue additional CE&T.

Empirical Research Related to the Study

Some researchers have examined the relationship between GSE, LOC, and other variables, e.g., career decision-making, work motivation, job performance, job satisfaction, as well as other factors (Burns, Jasinski, Dunn, & Fletcher, 2012; Cherian & Jacob, 2013; Frazier et al., 2011; Judge, 2009; König et al., 2010; Lunenburg, 2011; Whiteley et al., 2012). Few researchers have examined participants' CE&T pursuits (Cascio et al., 2013; Goulão, 2014; Rothes et al., 2013). Researchers who have undertaken such investigations have generally used these constructs with professional populations, that is, managers and supervisors, health care workers, educators and students, with special populations, or with other populations that exhibit specific behaviors, such as smoking cessation, alcoholism, and other health concerns. To date, no researchers have examined these constructs with the AA or support staff population.

Researchers, who have examined the GSE construct, often use Bandura's (1977a, 1992, 1994, 1997) seminal work in self-efficacy, defined as the degree to which individuals believe in their ability to accomplish tasks and reach goals, as the foundation for their studies. Although Bandura maintained that self-efficacy was domain specific, more current research characterized it as a more global construct (Chen et al., 2001; Luszczynska, Gutiérrez-Doña, et al., 2005; Pillai et al., 2011; Scholz et al., 2002). In

1979, Jerusalem and Schwarzer developed the General Self-efficacy Scale to distinguish between self-efficacy and GSE.

Summary and Conclusions

Numerous studies exist in which researchers have examined the GSE and LOC constructs (Ebstrup et al., 2011; Frazier et al., 2011; Judge & Kammeyer-Mueller, 2011; Severino et al., 2011; Luszczynska, Gutiérrez-Doña, et al., 2005; Pillai et al., 2011). Few researchers have examined these constructs with regards to individuals' CE&T pursuits (Cherian & Jocob, 2013; Esfandagheh et al., 2012; Gati et al., 2011; Latham & Pinder, 2005). No studies have been found in which researchers investigated GSE, LOC, and AAs' pursuit of CE&T opportunities. This study filled an important gap in the literature by exploring whether a relationship existed between AAs' GSE and LOC personality traits and their willingness to pursue CE&T activities. This study will have positive social change implications if the results help to enable AAs to improve their GSE and LOC, which in turn, would empower them to pursue CE&T opportunities.

This chapter included an overview of three major theoretical fundamentals, including the self-efficacy (Bandura, 1977a, 1977b, 1978, 1992, 1994, 1997), GSE (Chen et al., 2001; Eden, 1984; Scherbaum et al., 2006; Judge, 2009), and LOC (Rotter, 1966) constructs. The literature review included examinations of these constructs in a variety of studies using widely divergent populations, an overview of AAs, and a review of the CE&T opportunities that may be available to this population. Chapter Three will include a rationale for the research design, the specific methodology for the study, the variables

and the measurement instruments to be used, and an explanation of any ethical concerns and the plans to alleviate them.

Chapter 3: Research Method

The purpose of this non-experimental quantitative correlational study was to investigate and determine whether there is a relationship between the personality factors of GSE and LOC and AAs' participation in CE&T activities. The first predictor variable, GSE, is defined as people's belief in their overall competence to achieve success in a variety of situations and their ability to accomplish tasks from myriad contexts (Eden, 1984; Judge et al., 2005; Judge & Kammeyer-Mueller, 2011). The second predictor variable, LOC, is defined as the tendency of individuals to believe either that control over their lives resides within them or that control over their lives resides with others or the situation (Rotter, 1954, 1966). The criterion variable, continuing education, is defined as learning that is highly structured, sponsored by an institution (i.e., college or university), and is classroom based (McGuire & Gubbins, 2010), while the other criterion variable, training, is defined as learning activities provided to employees by an organization to improve job performance (Bilanakos, 2013; Hui & Smith, 2002; Noe & Wilk, 1993). Two demographic variables, generation cohort and education level, were also examined to determine whether they have a controlling effect on AAs participation in CE&T activities.

Chapter 3 includes a description of the research design and an explanation of the rationale for using this design. Chapter 3 also contains an explanation of the methodology. The methodology section includes a description of the population, an explanation of the sampling strategy and procedures, and the procedures used for recruitment, participation, and data collection. The methodology section contains an

overview of the instruments used and the operationalization of the constructs. Chapter 3 also contains a discussion of the external and internal threats to validity, as well as the ethical procedures, a summary of the design and methodology, and a transition to Chapter 4.

Research Design and Rationale

In this study, I investigated whether a significant relationship exists between IAAP AAs' GSE, LOC, and their participation in CE&T activities. The predictor variables were GSE and LOC. The criteria variables were CE&T activities. The demographic variables were generation cohort and education level.

Although a qualitative research method would have been an appropriate choice for this study, I used a quantitative method. The quantitative research method remains consistent with researchers' (Beretvas, Suizzo, Durham, & Yarnell, 2008; Bielick et al., 2013; Luszczynska, Gutiérrez-Doña, et al., 2005; Luszczynska, Scholz, et al., 2005; Nowicki & Duke, 1974) strategies that help to advance knowledge about the relationship between AAs' GSE, LOC, and their participation in CE&T activities. Mis (2012) found that quantifying topics, such as GSE and LOC, require careful consideration. To measure GSE and LOC, specific instruments were designed (Beretvas et al. 2008; Bielick et al.; Chen et al., 2001; Duke & Nowicki, 1974; Halpert & Hill, 2013) that provide efficient methods for conducting quantitative research. Mis noted that using these instruments allows researchers to gather information from either large or geographically diverse populations. To be effective, the quantitative method relies on the identification and operational defining of variables, the use of unbiased and validated standards, and the

employment of statistical procedures that convert closed-ended questions to numeric data.

A review of the works of Bhattacherjee (2012), McDonald (2015), Rea and Parker (2014), and Simon and Goes (2012) helped to identify the research design for this study. In order to examine whether a significant relationship existed between the variables, I concluded that a correlational research design was the most appropriate research design for this type of study. I measured the predictor variables (Bhattacherjee, 2012) and tested their relationship to the criterion variables using the Spearman rank correlational statistical method (Goulão, 2014; McDonald, 2015; Rea & Parker, 2014). I also examined whether the descriptive demographic variables, generation cohort and education level, may have a significant relationship to AAs' participation in CE&T activities. In this study, I used a quantitative method and a non-experimental, descriptive, correlational research design.

The correlational research design allowed me to determine whether a significant relationship existed between AAs' GSE, LOC, and their participation in CE&T activities. Both the NGSE scale (Chen et al., 2001) and the ANSIE scale (Duke & Nowicki, 1974; Halpert & Hill, 2011) have functioned as reliable and validated methods of establishing these personality traits (Judge, 2009; Ng et al., 2006; Scherbaum et al., 2006). I addressed the research questions using these measures.

Another possible research design for this study included a causal-comparative design. Researchers have defined causal-comparative research as quasi-experimental design that attempts to determine whether a cause-effect relationship exists between two

or more variables. A causal-comparative study also seeks to determine whether there are differences between two or more participating groups (McDonald, 2015; Rea & Parker, 2014; Simon & Goes, 2012). I did not choose this design because I was looking to determine whether a relationship exists between AAs' GSE, LOC and their participation in CE&T activities. I also examined whether AAs' generation cohort or education level may play a role in their participation in CE&T activities. To determine whether this relationship exists, I used a single group of AAs; therefore, a comparative analysis would not be possible.

A correlational research design was more appropriate than a comparative design for this study because I sought to determine whether a relationship exists for one group of AAs' GSE, LOC, and their participation in CE&T activities. I also examined two demographic variables, generation cohort and education level, to determine whether these factors have a controlling effect on the predictor and criterion variables. In order to complete a comparative study, two or more groups would have to participate. Time and resource constraints prohibited this.

Methodology

This section includes an outline of the processes I used to collect and analyze data. The data collection plan includes a description of the specific population, an overview of the population sample strategies and procedures, as well as the procedures for participation and data collection. The methodology section also contains a discussion of the measurement instruments and the operationalization of constructs.

Population

The general population for this study was AAs from the United States. AAs perform a wide variety of duties that enable the efficient functioning of an organization. Some of these job functions include typing, filing, answering the phone, creating and maintaining reports, spreadsheets, and databases, as well as making travel and event arrangements, processing and monitoring budgets, and supervising office equipment maintenance and replacement (ASAP, 2014; IAAP, 2016). Because there are approximately 4 million AAs in the United States (U.S. Department of Labor, BLS, 2017b), IAAP provided a smaller, more manageable population from which to draw participants.

Founded in 1942 as the National Secretaries Association, IAAP (2016) is a not-for-profit professional organization designed to help AAs connect with others in the field and participate in training activities and conferences. IAAP provides a variety of high quality and affordable professional development and certification opportunities, and many of these activities are available on-demand across a variety of multimedia avenues. IAAP has recommended that AAs attain the CAP certification and provides numerous resources for helping AAs achieve this certification. Out of the approximately 4 million AAs in the United States (U.S. Department of Labor, BLS, 2017b), there are 9,993 IAAP members in the United States (IAAP Director, Programs & Services, personal communication, April 8, 2015).

Sampling and Sampling Procedures

The sampling strategy involved examining the specific procedures for how the sample was drawn, describing the sampling frame, calculating an appropriate sample size, and identifying specific subgroups within IAAP. Due to time and financial constraints, a volunteer sample from a restrictive population was drawn. This population involved only one specific branch of IAAP. The IAAP Certification Manager selected the branch to be surveyed. I contacted the branch director to ensure that she agreed to participate in the study.

The steps in the sampling strategy included determining the target population, contacting IAAP to establish an accessible population, clarifying the eligibility criteria, generating a sampling plan, and enlisting participants for the sample. The general population consisted of approximately 4 million AAs working within the United States (U.S. Department of Labor, BLS, 2017b). To reduce this population to a more manageable number, a target sample from IAAP was selected. The IAAP organization volunteered to submit the survey to members of its organization in one branch. Because there were 9,993 IAAP members in the United States (IAAP Director, Programs & Services, personal communication, April 8, 2015), additional eligibility criteria were established. To be eligible to take part in this study, participants had to be current members of IAAP and belong to one specific Midwestern branch.

I used a volunteer sample from one Midwestern IAAP branch, which consisted of 715 members. To determine sample size, I used the SurveyMonkey Sample Size Calculator that used following equation

$$\frac{\frac{z^2 \times p(1-p)}{e^2}}{1+\left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

where N = population size; z = 1.96 (for a 95% confidence level); and Margin of error = e (Rea & Parker, 2014). In this study, 251 responses were needed.

Procedures for Recruitment, Participation, and Data Collection (Primary Data)

Recruiting participants for this study involved contacting the IAAP certification manager. This individual agreed to submit the study's online survey to the IAAP branch. To be eligible to be included in the study, AAs had to be current members of IAAP and a member of this Midwestern IAAP branch. This IAAP branch had 715 members who were given the opportunity to voluntarily participate in the study. The IAAP branch director distributed the survey link via e-mail to branch members.

In addition to the NGSE scale (Chen et al., 2001), the ANSIE scale (Duke & Nowicki, 1974; Halpert & Hill, 2011), and the ATES (Bielick et al, 2013), general demographic information was also collected. Demographic information included generation cohort and education level and was collected via the ATES. To help ensure anonymity, no specific geographic information was collected.

Using an online survey tool, participants received an e-mail inviting them to participate in the survey. All 715 individuals of the Midwestern IAAP branch were invited to participate. An informed consent notice was prominently displayed at the beginning of the survey. The informed consent notice contained a brief description of what the study was about, an overview of what the survey would ask, and a concise

explanation of withdrawal procedures. The informed consent notice apprised participants that their answers were confidential and their participation was voluntary. The informed consent notice also contained the following statement: *By clicking Yes, you agree that you are willing to answer the questions in this survey*.

Two additional participant safeguards were included in the survey. First, each of the survey questions in the ATES had a *not applicable*, a *no response*, or *prefer not to answer* option. Second, at the end of the survey, participants had the opportunity to withdraw from the survey by simply closing their browser and not saving their answers. Once participants saved their responses, answers were included in the results of the study. If, however, participants saved their responses and then decided they wanted to withdraw from the study, they could e-mail me and request that their answers be removed. No one took advantage of this option. These measures helped to ensure that participants voluntarily participated in the study.

Data were collected using the online survey tool, SurveyMonkey. Responses were collected via the SurveyMonkey tool. The online survey tool also tracks to see whether invitees have responded to the survey. To help ensure an acceptable response rate, the IAAP Branch Director issued the initial invitation to participate in the study. At the end of the first week, the IAAP Branch Director also sent a reminder e-mail for those who had not yet participated. The IAAP Branch Director sent additional e-mail reminders at the beginning of Week 3, and a final e-mail reminder 2 days prior to the end of the survey period. All data collected after this 30-day period were not included in the final analysis.

At the completion of the survey, participants were informed that they had completed the survey. No follow-up procedures were required. I will conduct a workshop at the IAAP 2017 Summit that will inform participants of the study results. An article describing the study and the results will appear in the March/April 2017 issue of *OfficePro*, which is IAAP's quarterly magazine. I may also participate in additional workshops and seminars and write supplementary articles based on the results of the study.

Instrumentation and Operationalization of Constructs

I used an online survey, which has a number of time and resource advantages. First, online survey formats (such as SurveyMonkey, Google Forms, Zoomerang, and SurveyGizmo) reduce the cost of mailing questionnaires and decrease the amount of time the researcher needs to wait for responses. Second, the online format means that respondents can complete the survey on their own time and feel more comfortable supplying sensitive information since the secure server creates a protected environment. Since it allows the researcher to target specialized and specific populations, the online format increases the number of individuals who may participate in the study (Rea & Parker, 2014).

There are also some time and resource disadvantages to using a quantitative online survey instrument. One of the primary disadvantages concerns the probability of a low response rate (Rea & Parker, 2014). If participants receive the online survey via e-mail, they may easily forget to respond. To solve this problem, researchers need to send multiple e-mail reminders in order to boost the response rate. Rea and Parker (2014)

recommend a minimum of three follow-up reminders in order to receive an appropriate number of responses. Because some respondents may have poor Internet connectivity or may not have the computer capability of opening the survey instrument, proper planning can account for and overcome these disadvantages.

I used three specific measurement instruments in this study. The NGSE scale (Schwarzer & Jerusalem, 2004), the ANSIE scale (Nowicki & Duke, 1974), and the ATES (Bielick et al, 2013) were combined into a single survey format using an online survey tool. The combined surveys consisted of 94 items and took between 20 and 30 minutes to complete.

Schwarzer and Jerusalem (2004) developed the original German version of the GSES in 1979 to assess a generalized sense of self-efficacy. The original GSES contained 20 items, but was reduced to 10 items in 1981 and renamed the NGSE (Chen et al., 2001; Scholz et al., 2002). Chen et al. (2001) found that the NGSE has consistently high content and predictive validity, is unidimensional, and its measures are internally stable and consistent. Luszczynska, Gutiérrez-Doña, et al. (2005) found that the NGSE has been translated into 33 different languages and has been used internationally for more than two decades. Schwarzer has granted permission to use this survey instrument (Schwarzer & Jerusalem, 2004), and the e-mail is attached in Appendix B.

In this study, the NGSE was used to determine whether a relationship exists between AAs' GSE and their participation in CE&T opportunities. The NGSE scale, designed primarily for adult populations, is typically self-administered and requires approximately three minutes to complete. This instrument consists of 10 items. Sample

items include such statements as *I can always manage to solve difficult problems if I try hard enough* and *I can usually handle whatever comes my way* (Schwarzer & Jerusalem, 2004). Participants respond to each item using a rating scale ranging from 1 (*not at all true*), 2 (*sometimes not true*), 3 (*neither true or untrue*), 4 (*sometimes true*), and 5 (*always true*). Item responses are then added together to obtain a total.

Although the reliability and validity of the NGSE have been well documented (Scherbaum et al., 2006; Wu, 2009), some researchers have questioned its unidimensionality (Luszczynska, Scholz, et al, 2005; Schwoerer et al., 2005). Recognizing perceived cultural and gender differences, Scholz et al. (2002) examined the NGSE to ensure that a culturally sensitive version of the instrument existed. Although Luszczynska, Scholz, et al. (2005) found the NGSE to be highly reliable and valid, their findings also suggested that studies have not examined multiple countries that vary widely in social, economic, and cultural environments. Scherbaum et al. (2006) noted that some criticism of the NGSE related to its measurement as conclusions about GSE could affect other variables and suggest that the NGSE needs rigorous item response theory analyses in order to prove the construct validity. Despite this assessment, I used the NGSE to determine if there is a significant correlation between GSE and AAs' pursuit of CE&T opportunities.

In samples from 25 nations, the Cronbach's alphas reliability score ranged from .76 to .90, with the average falling in the high .80s for the NGSE (Scholz et al, 2002; Schwarzer & Jerusalem, 2004; Teo & Kam, 2014). Multiple studies have confirmed the high construct validity of the NGSE (Chen et al., 2001; Luszczynska, Gutiérrez-Doña, et

al., 2005; Luszczynska, Scholz, et al., 2005; Pillai et al., 2011; Scholz et al., 2002). Scholz et al. (2002) also found that the NGSE is a unidimensional and universal concept. Löve, Moore, and Hensing (2012) determined that the international research community has used the NGSE measure for more than two decades and is suitable for a broad range of applications.

The population used for the Chen et al. (2001) study included undergraduates from a large mid-Atlantic university. To determine test-retest reliability, Chen et al. administered the NGSE to the same group on three different occasions. Results indicated high test-retest coefficients, $r_{t1\text{-}t2} = .65$; $r_{t2\text{-}t3} - .66$; $r_{t1\text{-}t3} = .62$ (p. 69), and researchers concluded that the NGSE maintained a high predictive validity, as well as a high construct validity, and is a suitable measure for organizational research (Chen et al., 2001).

Other researchers have used the NGSE in a variety of research studies and have applied the NGSE in a variety of fields, including medical, psychological, educational, and organizational/human resources (Schwarzer & Jerusalem, 2004). Researchers have conducted studies using myriad countries, including the United States (Chen et al., 2001), Germany, (Schwarzer & Jerusalem, 2004; Teo & Kam, 2014), Denmark (Ebstrub et al., 2014), Sweden (Löve et al., 2012), and in approximately 25 other countries (Scholz et al., 2002).

Developed by Rotter (1966), the Internal-External (I-E) scale was a 29-item, forced-choice questionnaire that sought to determine the extent to which individuals believe they are in control of the events in their own lives (Schjoedt & Shaver, 2012).

Most current researchers use some version of Rotter's I-E scale to measure the LOC construct (Judge et al., 2005; Severino et al., 2011) and recognize both the reliability and validity of Rotter's I-E scale (Huizing, 2015; Wang et al., 2010). Most researchers have found that Rotter's I-E scale has been used in numerous countries and with myriad populations (Beretvas et al, 2008; Halpert & Hill, 2011). Schjoedt and Shaver (2012) underscored that researchers have continued to use the LOC concept because understanding individuals' beliefs and motivations remain an important consideration in human behavior.

Although Rotter's (1966) I-E scale remains the most recognized measure of LOC, Duke and Nowicki (1974) developed a LOC scale specifically for adults that attempted to deal with some of the limitations of the Rotter scale. They found that one of the most significant problems with the Rotter scale was the extent to which the subjects' reading ability and social class tended to influence individual test item answers (Finch, Spirito, Kendall, & Mikulka, 1981; Halpert & Hill, 2011). To mitigate these problems, Duke and Nowicki developed the ANSIE. In their reliability generalization study, Beretvas et al. (2008) found the ANSIE to be reliable and valid, but one surprising result indicated that there was a possibility for some gender differences that favored male over female LOC reliability. Other researchers who have examined the ANSIE have not noted this problem (Finch et al., 1981).

The measurement instrument used in this study is the ANSIE scale (Nowicki & Duke, 1974). Based in part on Rotter's (1966) internal versus external control of reinforcements scale, Nowicki and Strickland (as cited in Finch et al., 1981) developed

the ANSIE scale to refine some elements found in Rotter's IE scale. Using a 40-item scale that required *Yes/No* responses, Nowicki and Strickland modified their Children's Nowicki-Strickland I-E (CNSIE) scale to fit an adult's reading level more accurately and reduce the degree to which the subject's social desirability might influence the responses (Halpert & Hill, 2011). As such, the ANSIE provides researchers with a LOC assessment that better fits the needs of both student and nonstudent adults (Halpert & Hill, 2013). Beretvas et al. (2008) confirmed the validity and reliability of the ANSIE's internal consistency. Nowicki (personal communication, August 9, 2015) has given permission for the ANSIE to be used in this study, and a copy of the e-mail is attached in Appendix B.

In this study, the ANSIE was used to determine whether a relationship existed between AAs' LOC and their participation in CE&T opportunities. This instrument consisted of 40 forced-choice items, with dichotomous responses (*Yes/No*). Sample items include such questions as *Do you believe some people are just born lucky*, *Do you believe that wishing can make good things happen*, *Do you feel than when good things happen, they happen because of hard work*, and *Are you the kind of person that believe that planning ahead makes things turn out better* (Nowicki & Duke, 1974). Responses were scored against a scoring key (Nowicki, personal communication, August 9, 2015).

A wide range of samples used a variety of adult populations (college students and educators, medical and psychology patients and practitioners, and workplace managers and supervisors; April, Dharani, & Peters, 2012; Cheng et al., 2013; Ng et al. 2006; Wang et al., 2010) to determine the reliability and validity of the ANSIE. Cronbach's

alphas reliability scores for the ANSIE ranged from .74 to .86 (April et al, 2012; Beretvas et al., 2008; Duke & Nowicki, 1974; Halpert & Hill, 2013; Ng et al., 2006). Results from multiple studies provided significant support for the construct validity of the ANSIE and positive correlations with the Rotter scale confirmed these findings (April et al, 2012; Beretvas et al., 2008; Ng et al., 2006). Finch et al. (1981) found the ANSIE to be multidimensional across a wide range of adult age groups and construct variables.

Since Rotter's (1966) initial I-E scale, numerous studies have found the LOC construct to be highly operationalized (Ng et al., 2006). The ANSIE has been translated into multiple languages, including Arabic, Chinese, Finnish, Norwegian, Spanish, Swedish, and Russian, as well as some African languages (Beretvas et al., 2008; Cheng at al., 2013). Some researchers have questioned the cross-cultural application of any LOC measurement. Cheng et al. (2013) also found that individuals in Western countries (i.e., the United States, Canada, Great Britain, Israel) tend to have more individualistic customs, which emphasize self-reliance and self-sufficiency. As such, LOC indicators for people in these more individualistic countries would lean toward the internal. By contrast, Cheng et al. maintained that LOC indicators for individuals who live in more collectivist societies (i.e., China, Japan, Korea, and most Middle Eastern countries), which emphasize a greater unity and connectedness to others and the subjugation of the individual to the group, would tend to be more external.

The GEMEnA (U.S. Department of Education NCES, 2017) consists of individuals from several federal office, including

- U.S. Department of Commerce, Bureau of the Census,

- U.S. Department of Labor, BLS,
- Council of Economic Advisors,
- U.S. Department of Education, NCES,
- National Center for Science and Engineering Statistics, National Science Foundation,
- Office of Management and Budget, Office of Statistical and Science Policy, and
- U.S. Department of Education, Office of the Under Secretary.

GEMEnA (U.S. Department of Education NCES, 2017) generates ways to measure a variety of educational data. One of their projects included the development of the National Adult Training and Education Survey (NATES). Using a rigorous survey-item development design structure, GEMEnA created NATES to determine in what CE&T activities working adults participate (Bielick et al., 2013).

GEMEnA (U.S. Department of Education NCES, 2017) developed the NATES tool to investigate a range of educational topics about working adults. As such, NATES helped determine the overall educational level of adults in the United States, as well as frequency with which these adults participate in training and educational activities in order to achieve certifications and licenses. GEMEnA's development of the instrument used best-practice survey development principles in order to determine how many adults participate in CE&T activities designed to improve their KSAs at work (Bielick et al., 2013).

GEMEnA (U.S. Department of Education NCES, 2017) initially developed the NATES Pilot Study between September 2010 and January 2011 (Bielick et al, 2013) to determine whether adults in the U.S. obtain certifications, licenses, certificates, or other credentials while working. GEMEnA developed the questions for the NATES instrument consistent with best practice survey development principles (Bielick et al, 2013). Questions on the survey examined such items as the level of effort required (including time involved) work-related assessment requirements, type of institution or organization awarding the credential, and industrial- or occupational-specific credential. Additional survey questions investigated whether the certification, license, certificate, or other credentials were a job requirement or gained the worker promotion status or a raise in income. GEMEnA also conducted an extensive literature review to determine the perceived market value of specific certifications, licenses, certificates, or other credentials (Bielick et al, 2013). GEMEnA (U.S. Department of Education NCES, 2017) revised the survey instrument after its initial pilot program in 2009 and found that the wording of the instrument increased the validity and reliability of the survey by reducing misunderstandings of the terms CE&T.

In this study, I used the current version of the NATES (Hudson, personal communication, August 10, 2015), now titled the ATES, to determine in what type, if any, of CE&T activities adult workers participate. The survey consists of 45 multiple-choice items. Sample items include such questions as *What is the highest degree or level of school have you completed?*, *What type of professional certificate, a state or industry license, or organizational certification do you currently possess?*, and *Which one of the*

following best describes the MOST RECENT activity you engaged in to earn your continuing education or other professional development credits for this certification or license (U.S. Department of Education NCES, 2017). In addition to survey items detailing the type and amount of CE&T activities, demographic information, such as generation cohort and education level, was also collected. All item responses have a *Not Applicable* choice to help reduce non-responsiveness.

In order to validate the survey items for the ATES Pilot Study, GEMEnA underwent a rigorous process of survey item development. In the first step, GEMEnA examined previous measurement instruments from federal data collections with a history of reliable and valid information on individuals with post-secondary degrees. These instruments contained items that helped researchers examine the relationship between workers, their access to education, their educational attainment, and their employment potential. GEMEnA concluded that there were no data collection instruments for determining in what additional CE&T American workers were engaged. In 2009, GEMEnA created a short set of survey items specifically to examine (a) whether workers voluntarily participated in obtaining certifications, licenses, and educational certificates; (b) the level of effort workers spent on obtaining certifications, licenses, and educational certificates; and (c) in what other CE&T activities workers participated (Boivin & O'Rear, 2012).

The second step in developing the ATES included questioning a series of focus groups and conducting individual cognitive interviews. These focus groups and individual interviews provided input that enabled GEMEnA to reword some of the test

items in order to clarify the meaning of specific words and phrases. The focus groups and individual interviews helped GEMEnA refine and reduce the number of test items. The pilot study included demographic items, such as age, gender, marital status, employment status, race/ethnicity, income, pulled from two prior NCES studies (Boivin & O'Rear, 2012).

GEMEnA conducted the ATES Pilot Study using both mailed questionnaires and telephone interviews. The random sample consisted of a 3,730 working adults from throughout the United States. GEMEnA also included a seeded sample of 340 adults from three community colleges who volunteered to participate. GEMEnA recognized that the seeded sample was not a representative sample and used the seeded sample to assess underreporting, over-reporting, and non-responsive answers. GEMEnA reports a mail survey response of 52%. The telephone interview responses rates were 44% (unweighted) and 42% (weighted; Boivin & O'Rear, 2012).

To validate the ATES Pilot Study further, GEMEnA compared it to the Princeton Data Improvement Initiative (PDII). Although GEMEnA noted some differences, the committee concluded that these differences were small and did not change the intent of the items on the survey. GEMEnA then compared the ATES Pilot Study to the U.S. Census Bureau's Survey of Income and Program Participate. While GEMEnA found some statistical significance between these two surveys, given the variations in test timing and interview mode, they determined that the difference was reasonably small and did not affect the outcome of the ATES Pilot Study (Boivin & O'Rear, 2012). Appendix C provides additional sources of information about the ATES Pilot Study.

After the ATES Pilot Study, GEMEnA redesigned both the survey items and the mail selection process. In 2012, GEMEnA created a new version of the ATES that yielded improved response rates (Boivin & O'Rear, 2012). The 2012 ATES version used a random sample of 18,750 working adults from the United States, as well as a convenience sample (seeded) of 1,250 volunteers who pre-identified their certifications, licenses, certificates, or other credentials. The seeded sample provided the necessary information upon which to compare the responses from the random sample and evaluate the under-reporting, over-reporting, and nob-responsiveness (Bielick et al, 2013). L. Hudson, Education Statistician for NCES (personal communication, August 10, 2015), provided me the current version of the ATES and stated that the newest instrument she sent "has undergone further cognitive testing that has not yet been documented, [and that they] have not assessed test-retest reliability." Appendix C provides additional documentation for the ATES Pilot Study versions.

The Data Analysis Plan

To investigate the relationship between AAs' GSE, their LOC, and their participation in CE&T activities, the Statistical Package for the Social Sciences (SPSS) software was used. SurveyMonkey now offers a way to export survey data directly into SPSS. All responses from this survey were migrated from SurveyMonkey to SPSS electronically. The SPSS software also provides a vehicle for data cleaning as a way of identifying and eliminating data entry and other errors. The SPSS data cleaning process involved checking for and deleting duplicate data entries and performing a descriptive statistical analysis to determine whether the data makes sense. First, *the Identify*

Duplicate Cases in SPSS helped to eliminate data entry errors where a case has been entered accidently more than once. Second, when converting data from SurveyMonkey to SPSS, the SurveyMonkey program provided a descriptive analysis tool to ensure that the data makes sense. These descriptive statistics show whether the minimum and maximum values fall within each question's expected range by using bar charts, histograms, or scatterplots to identify outliers and nonsense values. Third, to help clean up the files, SurveyMonkey highlights duplicate column labels that need to be renamed.

The following research questions and hypotheses will guide the research.

Research Question 1: To what extent does a significant relationship exist between AAs' GSE and LOC?

$H_0$1: $\beta 1 = 0$ There is no significant relationship between AAs' GSE and LOC.

H_a1: $\beta 1 \neq 0$ There is a significant relationship between AAs' GSE and LOC.

Research Question 2: To what extent does a significant predictive relationship exist between AAs' GSE and their participation in CE&T activities?

$H_0$2: $\beta 1 = 0$: There is no significant predictive relationship between AAs' GSE and their participation in CE&T activities.

H_a2: $\beta 1 \neq 0$: There is a significant predictive relationship between AAs' GSE and their participation in CE&T activities.

Research Question 3: To what extent does a significant predictive relationship exist between AAs' LOC and their participation in CE&T activities?

$H_0$3: $\beta 1 = 0$: There is no significant predictive relationship between AAs' LOC and their participation in CE&T activities.

H_a3: $\beta1 \neq 0$: There is a significant predictive relationship between AAs' LOC and their participation in CE&T activities.

Research Question 4: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials)?

$H_0 4$: $\beta1, \beta2, \beta3 = 0$: There is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AA's generational cohort (Baby Boomers, GenX, Millennials).

$H_a 4$: $\beta1, \beta2, \beta3 \neq 0$: There is a significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials).

Research Question 5: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation in CE&T activities as controlled by AAs' education level (high school, some college, BA/BS, Masters, Ph.D.)?

$H_0 5$: $\beta1, \beta2, \beta3, \beta4, \beta5 = 0$: There is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AA' education level (high school, some college, BA/BS, Masters, Ph.D.).

$H_a 5$: $\beta1, \beta2, \beta3, \beta4, \beta5 \neq 0$: There is a significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AAs' education level (high school, some college, BA/BS, Masters, Ph.D.).

Research Question 6: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials)?

$H_0$6: β1, β2, β3 = 0: There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their generational cohort (Baby Boomers, GenX, Millennials).

H_a6: β1, β2, β3 ≠ 0: There is a significant relationship between AAs' LOC and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials).

Research Question 7: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.)?

$H_0$7: β1, β2, β3, β4, β5 = 0: There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.).

H_a7: β1, β2, β3, β4, β5 ≠ 0: There is a significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.).

Several statistical tests were used to test the hypotheses that included descriptive and inferential statistics. The first step to understanding each data set was to look at each variable, one at a time, using univariate statistics (Creswell, 2013). Univariate analysis involved both descriptive and inferential statistics and was conducted for two purposes.

The first purpose was to answer the research question that required a description of the characteristic of a single variable (i.e., generation cohort, education level). The second purpose was to examine how each characteristic varied before including two or more variables in the analysis. Descriptive statistics was used to describe the sample and was reported in terms of frequency and percentage.

The statistical analysis models for the research questions above included the correlation (Spearman rank) and regression. Correlation gives the degree of strength of the relationship, while regression gives the form of the relationship between two random variables. Regression analysis produces a regression function, which helps to extrapolate and predict results while correlation may only provide information on what direction it may change (McDonald, 2015; Rea & Parker, 2014).

A correlation analysis is an appropriate way to determine whether a possible linear association exists between two variables, and there are three possible types of correlation analyses: Pearson product moment correlation, Kendall rank correlation, and Spearman correlation. The Spearman rank correlation coefficient is a non-parametric measure and is appropriate when attempting to determine the degree of a relationship between two variables and is typically represented as the letter r. When interpreting the results of the Spearman rank correlation analysis, a positive r value reveals a positive relationship between two variables, whereas a negative r value reveals a negative relationship (Bhattacherjee, 2012; McDonald, 2015; Rea & Parker, 2014; Simon & Goes, 2012.

A linear regression analysis is appropriate when evaluating a bivariate relationship between variables since it may help to explain or predict phenomena (McDonald, 2015; Rea & Parker, 2014). Regression goes beyond correlation by adding the prediction (Creswell, 2013). Regression analysis produces a regression function, which helps to extrapolate and predict results while correlation may only provide information on what direction it may change (Creswell, 2013). The linear regression model was used in this study to determine whether the predictor variables had a predictive relationship on AAs' participation in CE&T activities. While correlation was used in $H_0$1 to measure the degree to which GSE and LOC were related, regression was used to determine the relationship between GSE and participation in CE&T activities ($H_0$2) and to determine the relationship between LOC and participation in CE&T activities ($H_0$3).

Results were interpreted using a 95% confidence level and a 5% confidence interval. To begin an interpretation of the Spearman rank correlation coefficient, bar charts graphically displays the results of each variable. The bar charts revealed the frequency of the categorical variables and identified any outliers. The results were interpreted using the SPSS software. Based on the SPSS output, I was able to determine whether there was a significant relationship between variables and the degree of the relationship, if any.

Some researchers (Bhattacherjee, 2012; McDonald, 2015) recommend using a one-tailed test to confirm the statistical significance of the Spearman rank correlation analysis results. Others (Rea & Parker, 2014) found that a two-tailed test provides more

statistically significant results. A two-tailed test of significance helped to account for all possible outcomes, provided more unbiased results, and helped to reduce type 1 errors.

In addition to the Spearman rank correlation and the two-tailed test, I conducted a linear regression analysis to determine which predictor variable, GSE or LOC, best predicted AAs' participation in CE&T activities. An automatic procedure used by SPSS, the regression analysis performs a multiple regression, removing the weakest correlated variable each time. By the time the regressions were completed, the results showed the variable that best explains the relationship (Olusegun, Dikko, & Gulumbe, 2015).

I used the linear regression statistical test for RQ2, $H_0$2 and RQ3, $H_0$3 to determine whether one or more of the predictor variables, GSE or LOC, best predicted AAs' participation in CE&T activities. Hypotheses 4 through 7 ($H_0$4 through $H_0$7) were statistically analyzed using multiple regression analysis, which is used to determine whether a correlation exists between a criterion variable and a combination of one or more predictor variables and one or more controlling demographic variables (Dikko, & Gulumbe, 2015; Rubin, 2013; Simon & Goes, 2011). In this study, I used one predictor variable (GSE or LOC), one control variable (generation cohort or education level, and one criterion variable (CE&T).

Threats to Validity

When constructing a research project, researchers must take great care to ensure the validity of the study since, even in the most rigorous study designs, threats to validity do exist. Researchers define validity in research as the extent to which the study measures what it is supposed to measure (Bhattacherjee, 2012; Creswell, 2013; Sekaran & Bougie,

2013). A number of things can affect the validity of a study, including how the data is collected, the level of effort required by the participants, and the format and structure of the study design. In this study, external, internal, and construct threats to validity were considered:

External Validity

Researchers define external validity as the extent to which the results of a study can be generalized to a larger population (Bhattacherjee, 2012; Creswell, 2013; Edmonds & Kennedy, 2013; Sekaran & Bougie, 2013). In a quantitative study, the external threats to validity pose a problem because researchers want to ensure that the results can be generalized from the sample population to a larger population. Researchers also wanted to ensure that the results could be generalized from divergent populations, in different settings, or across a span of time (Edmonds & Kennedy, 2013; Sekaran & Bougie, 2013).

In this study, a potential external threat may exist. The sample was drawn from an IAAP branch located in the Midwestern United States. The 715 members of this branch represent a cross-section of the IAAP organization, which includes large, medium, and small companies, as well as urban, suburban, and rural areas of the United States. Since individuals from the IAAP branch already belong to their professional organization, they may have a greater degree of self-efficacy and a greater internal LOC. The results from this Midwestern IAAP branch should generalize to the IAAP organization as a whole.

Internal Validity

Internal validity in research refers to the degree to which the predictor variable may contribute to a change in the criterion variable (Bhattacherjee, 2012; Creswell, 2013;

Sekaran & Bougie, 2013). Specifically, internal validity applies to research that seeks a causal relationship between two or more variables (Edmonds & Kennedy, 2013). This study was nonexperimental; therefore, the goal was to predict whether a significant relationship exists between AAs' GSE, LOC, and their participation in CE&T activities.

Since this study was nonexperimental, few of the typical threats to internal validity apply. For example, any of the typical internal threats that deal with time, (i.e., history, maturation, testing, instrumentation) do not apply. In addition, this study did not have a control group, so diffusion and special treatments do not apply. Since no treatment is being applied to the sample, no changes were recorded among the participants

However, since the survey will be given to a specific IAAP branch, selection bias may be considered an internal threat. This threat may come because all the individuals who participate have already been preselected since they specifically belong to an IAAP branch. However, because all of the participants are volunteers and none of them are known to me, the selection bias should be diminished.

Construct Validity

Researchers (Bhattacherjee, 2012; Edmonds & Kennedy, 2013; Sekaran & Bougie, 2013) defined construct validity as the degree to which the measurement instrument accurately measures the construct that it is supposed to measure. In this study, I used three specific measurement instruments, the NGSE, the ANSIE, and the ATES.

Researchers have established a high construct validity for the NGSE (Chen et al., 2001; Luszczynska, Gutiérrez-Doña, et al., 2005; Luszczynska, Scholz, et al., 2005; Pillai et al., 2011; Scholz et al., 2002). The NGSE has been used to determine an individual's

GSE. In this study, I used the NGSE to help examine whether there is a relationship between GSE and AAs' participation in CE&T activities.

Similarly, researchers have confirmed the ANSIE construct to be valid (Beretvas et al., 2008; Cheng at al., 2013; Ng et al, 2006). The ANSIE instrument measures the degree of an individual's internal or external LOC. In this study, I used the ANSIE to determine whether there is a relationship between LOC and AAs' participation in CE&T activities.

The one instrument in which some construct validity may be questioned concerns the ATES. Developed by GEMEnA (U.S. Department of Education NCES, 2017), the ATES underwent a rigorous survey development process used to establish the CE&T activities in which working adults may participate. A series of pilot programs further helped to refine the questions, the order in which they were asked, and the number of questions on the survey (Bielick et al., 2013). GEMEnA's (U.S. Department of Education NCES, 2017) meeting notes describe continuous improvement in the overall survey construct. Based on GEMEnA's feasibility study in 2014, the final ATES instrument was used as part of a national study beginning in 2016 (U.S. Department of Education NCES, 2017).

Ethical Procedures

The IAAP Certification Manager (personal communication, December 22, 2015) agreed to submit this study's survey to a specific branch of IAAP located in the Midwest. A formal letter of cooperation is located in Appendix B. The survey was submitted via an e-mail link to SurveyMonkey. All participants were volunteers and were anonymous.

Data was collected via SurveyMonkey and entered into SPSS for analysis. To ensure privacy, the SurveyMonkey Privacy Policy states that the user owns all data and that all data are held on a secure server located in the U.S. The SurveyMonkey Privacy Policy and Security Statement may be found on their website. All data will be kept on my home computer and will be password protected. No one will have access to the information but me. Since no names will be associated with any of the survey entries, all data will be strictly confidential.

Only I will have access to the original data; however, a compilation of results will be distributed to IAAP in a couple of ways. First, an article about the study will appear in their magazine, *OfficePro*. Second, workshops presented at the IAAP 2016 Summit will include compiled results, as well as the conclusions and recommendations from the study. All data will be destroyed 5 years after the completion of the study. To destroy the data, I will delete all the information from the hard drive by sending the files to the recycle bin and then permanently delete the files by emptying the recycle bin. All backup files on a separate thumb drive will be eliminated by destroying the thumb drive.

Summary

The purpose of this non-experimental quantitative correlational study was to investigate and determine whether a significant relationship exists between AAs' GSE, LOC, and their participation in CE&T activities. Chapter 3 contained an introduction to the methodology that I used in this study. Chapter 3 also included an overview of the research design and provided a cogent rational for using this design. The specific methodology for this study was provided and included the population and the sampling

procedures. Chapter 3 included an overview of the precise measurement instruments used in the study and examined the external, internal, and construct threats to validity. Chapter 3 contained a summary of the ethical procedures that were used to ensure confidentiality and the ethical treatment of participants.

Chapter 4 contains an overview of the data collection process, the descriptive statistics and other statistical analyses, as well as all appropriate graphs and charts. Chapter 5 includes an interpretation of the survey findings and a discussion of the limitations of the study. This section outlines additional recommendations for further research and describes the potential impact for positive social change at both the individual and the institutional level.

Chapter 4: Results

The purpose of this non-experimental quantitative correlational study was to investigate and determine whether a significant relationship exists between AAs' GSE, LOC, and their participation in CE&T activities. Two demographic variables, generation cohort and education level, were also examined to determine whether they have a controlling effect on AAs' participation in CE&T activities. The following general research questions and hypothesis statements provided the direction of the study:

Research Question 1: To what extent does a significant relationship exist between AAs' GSE and LOC?

$H_0$1: β1 = 0 There is no significant relationship between AAs' GSE and LOC.

H_a1: β1 ≠ 0 There is a significant relationship between AAs' GSE and LOC.

Research Question 2: To what extent does a significant predictive relationship exist between AAs' GSE and their participation in CE&T activities?

$H_0$2: β1 = 0: There is no significant predictive relationship between AAs' GSE and their participation in CE&T activities.

H_a2: β1 ≠ 0: There is a significant predictive relationship between AAs' GSE and their participation in CE&T activities.

Research Question 3: To what extent does a significant predictive relationship exist between AAs' LOC and their participation in CE&T activities?

$H_0$3: β1 = 0: There is no significant predictive relationship between AAs' LOC and their participation in CE&T activities.

H_a3: $\beta1 \neq 0$: There is a significant predictive relationship between AAs' LOC and their participation in CE&T activities.

Research Question 4: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials)?

$H_0 4$: $\beta1, \beta2, \beta3 = 0$: There is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AA's generational cohort (Baby Boomers, GenX, Millennials).

$H_a 4$: $\beta1, \beta2, \beta3 \neq 0$: There is a significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials).

Research Question 5: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation in CE&T activities as controlled by AAs' education level (high school, some college, BA/BS, Masters, Ph.D.)?

$H_0 5$: $\beta1, \beta2, \beta3, \beta4, \beta5 = 0$: There is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AA' education level (high school, some college, BA/BS, Masters, Ph.D.).

$H_a 5$: $\beta1, \beta2, \beta3, \beta4, \beta5 \neq 0$: There is a significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AAs' education level (high school, some college, BA/BS, Masters, Ph.D.).

Research Question 6: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials)?

$H_0$6: β1, β2, β3 = 0: There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their generational cohort (Baby Boomers, GenX, Millennials).

H_a6: β1, β2, β3 ≠ 0: There is a significant relationship between AAs' LOC and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials).

Research Question 7: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.)?

$H_0$7: β1, β2, β3, β4, β5 = 0: There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.).

H_a7: β1, β2, β3, β4, β5 ≠ 0: There is a significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.).

The statistical analysis models for the research questions employed a correlation (Spearman rank), a linear regression, and a multiple regression. Each of the hypotheses was examined using a 95% confidence level and a 5% confidence interval. In Chapter 4, I

have provided a review of the data collection; the study results, including both demographic and descriptive statistical analyses; and a summary.

Data Collection

Data were collected from individuals who were members an IAAP branch located in the Midwestern United States using SurveyMonkey. After receiving IRB approval (# 08-18-16-0081652), data collection began on August 22, 2016 and closed on September 28, 2016. At the end of the 28 business days, 125 out of approximately 715 members of this IAAP branch completed the survey, an estimated 17% return. Multiple attempts were made to increase this low response rate, including two e-mail reminders from the branch director and one e-mail reminder from the IAAP Certification Manager.

The response rate of 131 individuals was unusually low. Two reasons may exist for the low participation rate. First, the length of the survey (94 questions) may have discouraged some participation. Second, participation may be been reduced due to the timing of the survey as a large number of the members of this IAAP branch had just returned to work from the annual IAAP conference. Of the 131 responses, only 125 were used in the analysis because six responses were discarded due to incomplete answers.

Demographics

The 125 individual volunteers represented the larger IAAP population in that they were all over 18 years of age, were all members of IAAP and one specific Midwestern branch, and were all employed as AAs. All participants lived and worked in Illinois or Wisconsin. Of the 125 respondents, four were between the ages of 18 and 30; eight were between 31 and 40; 34 were between 41 and 50; 63 were between 51 and 60; and 16 were

over 60. Baby boomers made up a preponderance of the respondents at 59.8%, while 30.3% were GenXers, and 4.5% were millennials. In the United States, the average age of AAs is 43.6 years, which means that the preponderance of AAs nationally consists of GenXers (U.S. Department of Labor, BLS, 2017b).

IAAP AAs for this study consisted of 66% (n = 85) female and 36% (n = 40) male, while nationally, men only make up about 5% of the total U.S. population of AAs (IAAP, 2016). The majority of participant incomes were between $30,000 and $60,000 (59.1%), 31.1% of participant incomes ranged between $60.000 and $100,000, and 4.5% of participants preferred not to answer that question. Nationally, AA salaries range between $33,000 and $79,000, with a mean annual salary of $56,000 (U.S. Department of Labor, BLS, 2017b). In this study, 45.5% of respondents worked for a for-profit company; 24.2% worked for a not-for-profit company; and 19.7% worked for a local, state, or federal government organization.

Study Results

For this study, there were nine demographic related questions. These included categorical data of the following: wages and salaries, chief job activity, gender, age, level of education, marital status, ethnicity, generational category, and language. The demographic questions were developed into an online electronic survey using SurveyMonkey. The amount of time to take this survey ranged between 20 and 30 minutes. An assessment of each demographic category (categorical data) is presented in Figure 5 through Figure 9.

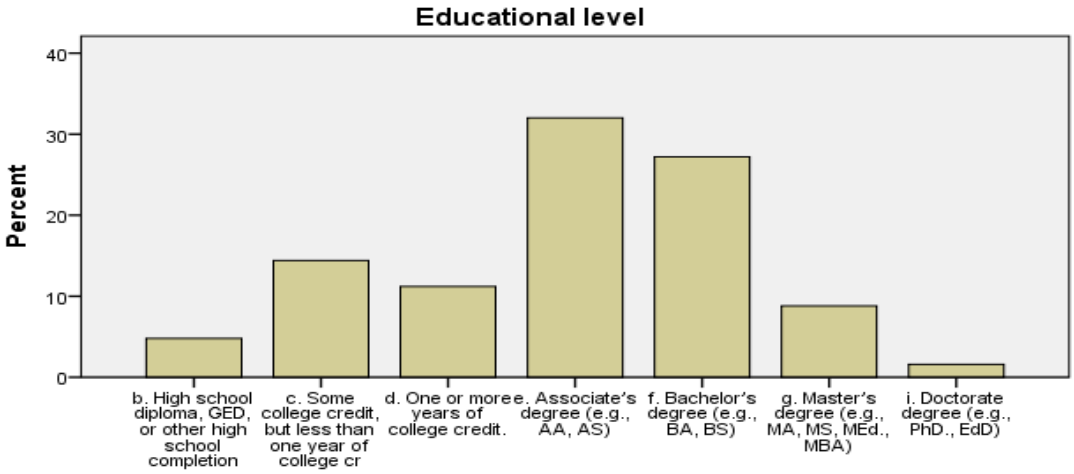

Figure 5. Education level.

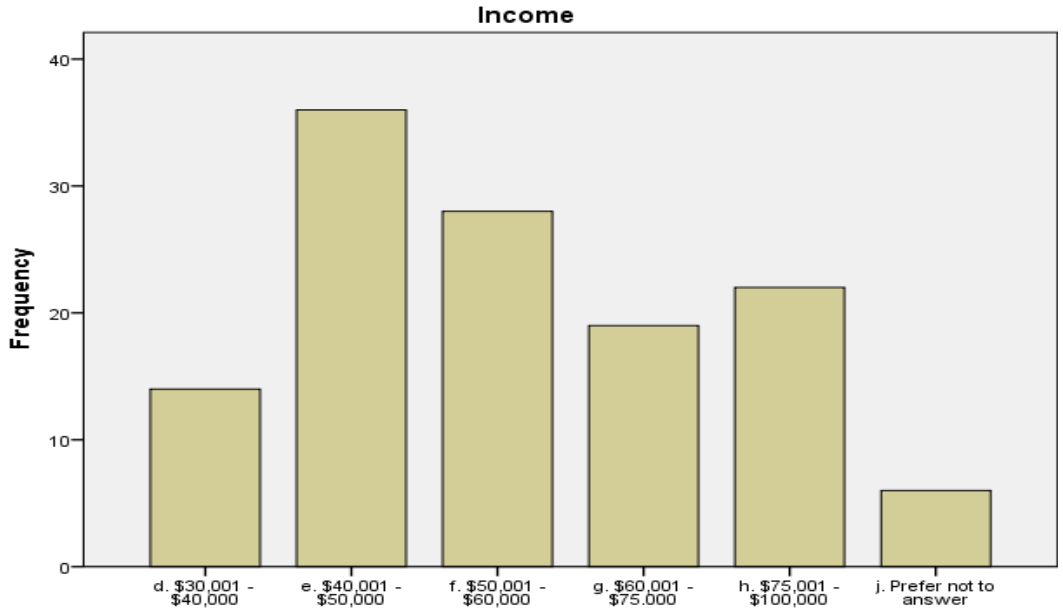

Figure 6. Income.

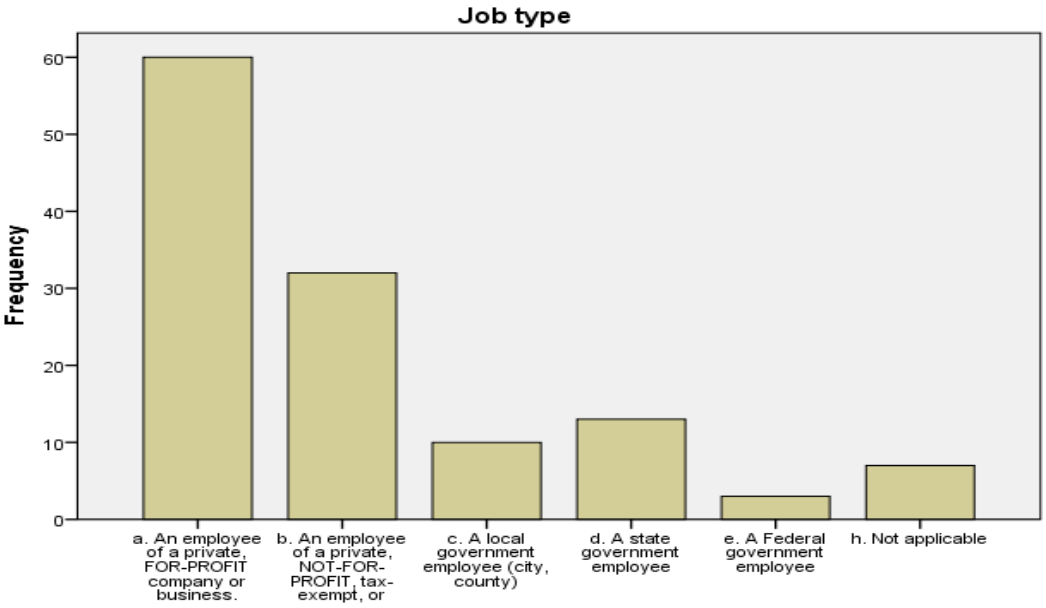

Figure 7. Job type.

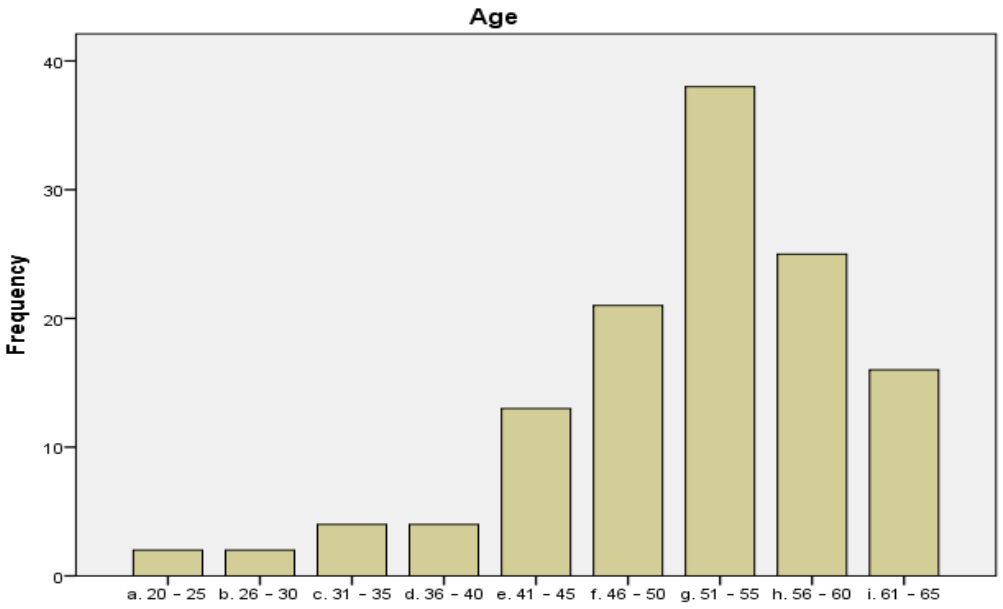

Figure 8. Age.

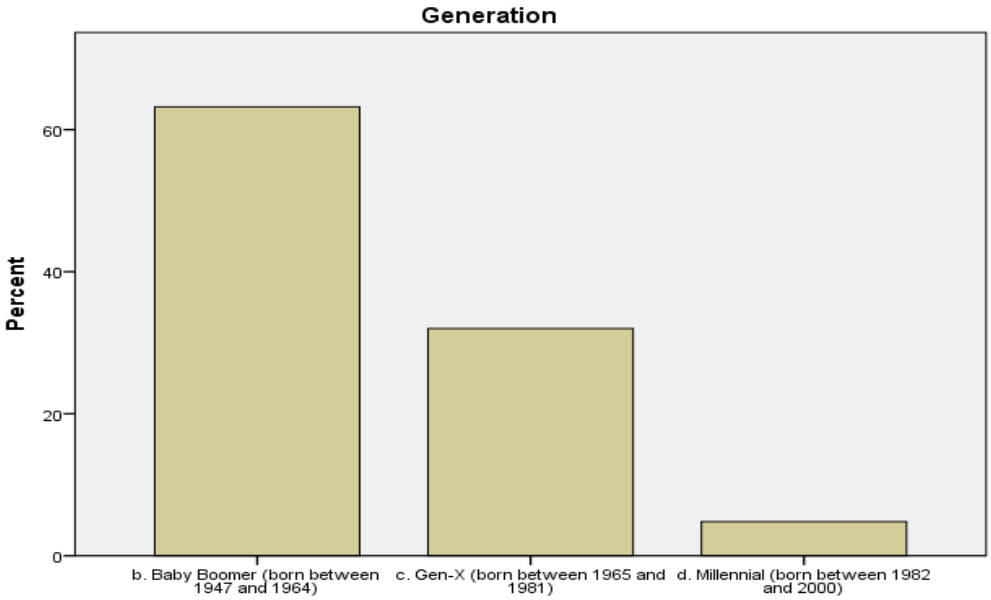

Figure 9. Generation cohort.

Figure 5 through Figure 9 provide a snapshot of the visual demographic profile of the participants, reported in frequency and percentages. The key demographic variables of this study included generation cohort and education level. As shown in Figure 5, more than half of the participants reported having an associate's degree or higher: associate's degree (30%), bachelor's degree (26%), master's degree (8.3%), and doctorate degree (2%). The average income ranged between $40,000 and $60,000 (Figure 6), and a majority (60%) worked in for-profit private businesses (Figure 7). The majority (76%) of participants ranged in ages between 46 and 65 (Figure 8), and nearly 60% identified with the Baby Boomer generation (Figure 9). An overwhelming majority of the 125 participants reported being married (88%). As for ethnicity, 105 (84%) selected White, and the remaining 16% designated themselves as either Black/African Americans (15) or Native American/Native Alaskans (5).

Instrumentation. The GSE is comprised of 10 Likert-type scale items. Participants were asked to rate each item according to the following scale: 1. *Not at all like me*; 2. *Somewhat not like me*; 3. *Sometimes like me/Sometimes not like me*; 4. *Somewhat like me*; 5. *Totally like me*. Respondents' scores are added and range from 10 to 50 points. Low scores tend to indicate that individuals believe they are less able to accomplish difficult tasks, while those with high scores believe that they can accomplish whatever task they undertake. The mean and standard deviation for each item was computed. The sample as a whole was normally distributed (M = 4.15, SD = 4.85; Table 3). The Cronbach's alpha for the 10 GSE scale items in this study was .890, which demonstrates high reliability.

Table 3

GSE Summary Item Statistics

Descriptive Statistics for GSE

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
GSE1	125	3.00	5.00	4.3840	.59275	.351
GSE2	125	1.00	5.00	3.2160	.76816	.590
GSE3	125	2.00	5.00	3.9200	.76832	.590
GSE4	123	3.00	5.00	4.3821	.63401	.402
GSE5	125	3.00	5.00	4.4480	.62805	.394
GSE6	125	3.00	5.00	4.5280	.56191	.316
GSE7	122	2.00	5.00	4.1066	.80090	.641
GSE8	125	3.00	5.00	4.1440	.70372	.495
GSE9	125	2.00	5.00	4.2160	.66701	.445
GSE10	125	3.00	5.00	4.3840	.66942	.448

The respondents' scores ranged from 29 to 48, which indicated that the majority of the respondents of this survey tend to view themselves as more highly self-efficacious. Figure 10 shows a scatterplot of the range of respondent GSE scores with the mean at 42.

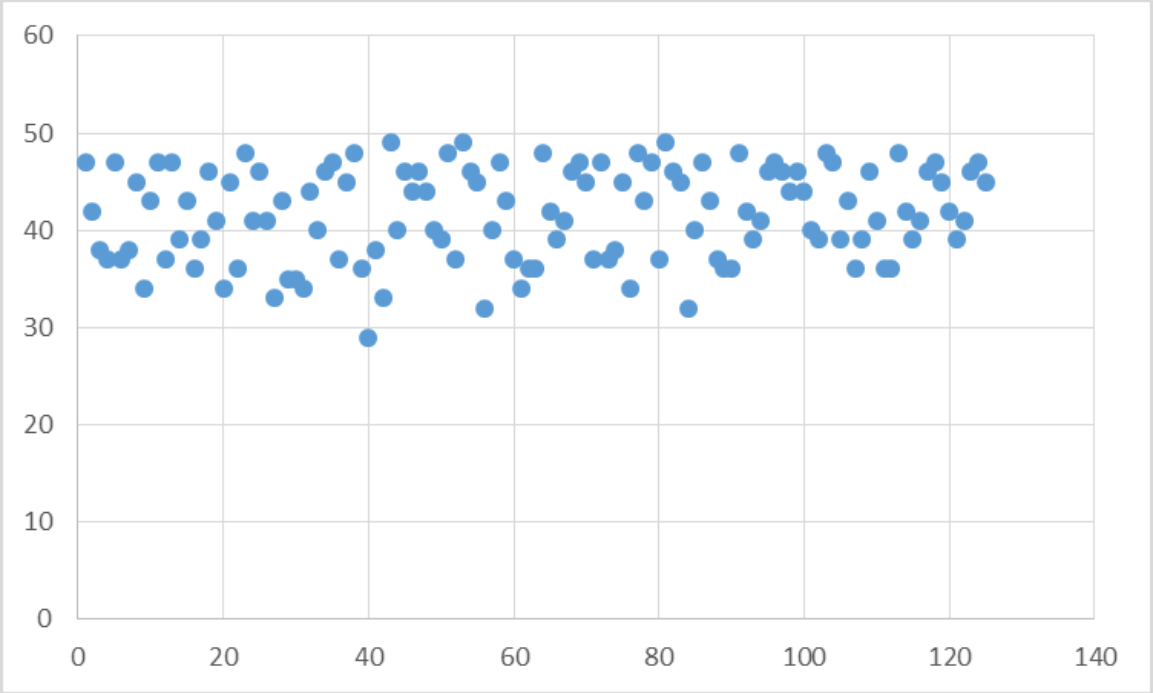

Figure 10. Range of respondent GSE scores.

The LOC is comprised of a 40-item scale that required Yes/No responses. I conducted a binomial test to determine the proportion of people in one of two categories: Yes = 1; No = 0. Respondents' scores are added and ranged from 10 to 28. Respondents with scores from 0 – 8 tend to have an internal LOC. Respondents with scores from 9 – 16 often see themselves as partially in control of their lives, while those with scores between 17 and 40 tend to see life and events as largely out of their control. Figure 11 shows the range of LOC scores.

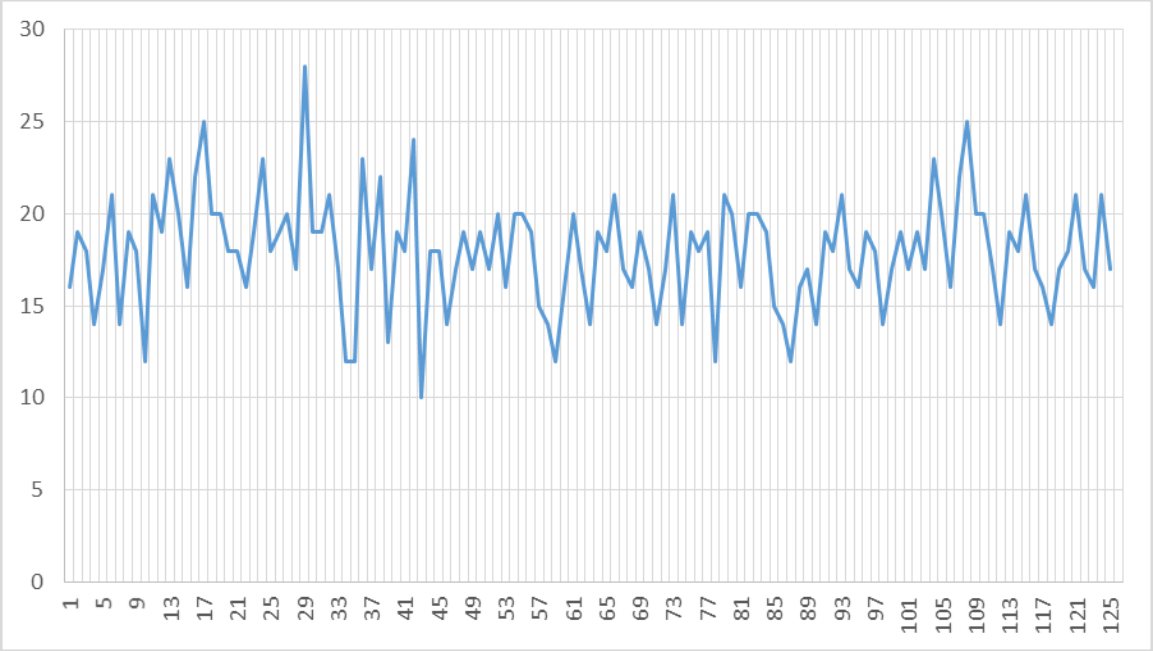

Figure 11. Range of respondent LOC scores.

As shown in Figure 11, two outliers appear to be in the LOC dataset. In statistics, an outlier is a data point that significantly differs from the other data points in a sample. In other words, there is an indication that an error may have occurred in the measurements. The two datasets were different in terms of data type, GSE (ordinal) and LOC (categorical). Rather than omit the outliers from the data set, I chose to use a nonparametric test to test the hypothesis. Because SPSS assumes that the variable that specifies the category is numeric, I recoded the variable so that I could perform the binomial test (Yes = 1; No = 0). Appendix D contains an additional analysis of the LOC items.

The third component of the survey was The NATES, which consisted of 44 questions, of which only four applied to the variable of CE&T. These four questions were multiple choice and could have more than one response. Typical questions included those

like *"What kinds of courses, training, or instruction (in-person or online) did you take in order to prepare for a certification or license (mark all that apply)"?* The NATES questions can be found in Appendix B. The remaining questions addressed demographics relevant to the educational background of participants.

Inferential Statistics

Once the data were reviewed and the descriptive characteristics identified, several statistical tests were run to test the following null hypothesis aligned with the research questions.

Hypothesis 1. The first hypothesis ($H_0$1) tested whether a relationship exists between two different sets of variables, AAs' GSE (ordinal) and LOC (categorical/Y/N responses). Because I had two data sets with different measures of variables, I used the, Spearman rank correlation analysis, a nonparametric correlations test (See Table 4).

Table 4

Correlation

			GSE	LOC
Spearman Rank	GSE	Correlation Coefficient	1.000	-.162
		Sig. (2-tailed)	.	.072
		N	131	125
	LOC	Correlation Coefficient	-.162	1.000
		Sig. (2-tailed)	.072	.
	Total Responses	N	125	125

As shown, Spearman rank correlation coefficient, r, is 1.0, and that it is not statistically significant (p = 0.072), which is greater than .05. Because there is no statistical significant relationship between the GSE and LOC (H_a1: $\beta 1 \neq 0$), the correct conclusion is to fail to reject the null hypothesis. I also conducted a univariate analysis

for $H_0$1 to determine the effect of LOC on GSE. The results were consistent with the previous findings displayed in Table 4. The effect of LOC on GSE was not significant $F(17,107) = -1.64$, where R-squared = .207. The Sig. value is 0.066 and is >.05; therefore, I fail to reject the null hypothesis.

Hypothesis 2. The linear regression model (analogous to logistics regression in SPSS 24) was used to test $H_0$2. I used a linear regression analysis to determine whether the predictor variable, GSE, predicted AAs' participation in CE&T activities. An automatic procedure used by SPSS, the regression analysis performs a multiple regression, removing the weakest correlated variable each time. By the time the regressions were completed, the results showed the variable that best explains the relationship (Olusegun, Dikko, & Gulumbe, 2015). Although a correlation analysis would have measured the association between GSE and participation in CE&T activities, I chose to use the linear regression model to determine whether GSE had a predictive relationship to AAs' participation in CE&T activities.

As shown in Table 5, the regression analysis was not significant, $F(1,128) = .060$. The Sig. value is 0.807 and is >.05. Because of this, I concluded that there is no significant relationship between AAs' GSE and their participation in CE&T activities ($H_0$2: $\beta 1 = 0$) and fail to reject the null hypothesis. There is no need for additional post hoc tests.

Table 5

Regression for GSE/CE&T

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.116	1	.116	.060	.807[b]
	Residual	248.638	128	1.942		
	Total	248.754	129			

[a.] Criterion Variable: CE&T

[b.] Predictor Variable: (Constant) GSE

I also conducted a univariate analysis for $H_0$2 to determine the effect of CE&T on GSE. The results were consistent with the previous findings displayed in Table 5. The effect of CE&T on GSE was not significant $F(22, 107) = .860$, $p = .644$, where R-squared = .150; therefore, I fail to reject the null hypothesis.

Hypothesis 3. The third hypothesis $H_0$3 stated that there is no significant predictive relationship between AAs' LOC and their participation in CE&T activities. For $H_0$3, the LOC variables and CE&T variables were both categorical/interval. Although a correlation analysis would have measured the association between LOC and participation in CE&T activities, I chose to use the linear regression model to determine whether LOC had a predictive relationship to AAs' participation in CE&T activities.

As shown in Table 6, the regression analysis was not significant, $F(1,123) = .953$. The Sig. value is 0.331 and is > .05. Because of this, I concluded that there is no statistically significant relationship between the AAs' LOC and their participation in CE&T activities ($H_0$3: $\beta 1 = 0$). I fail to reject the null hypothesis. There is no need for additional post hoc tests.

Table 6

Regression for LOC/CE&T

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1.687	1	1.687	.953	.331[b]
	Residual	217.730	123	1.770		
	Total	219.417	124			

[a.] Criterion Variable: CE&T

[b.] Predictor Variable: (Constant) LOC

Further univariate testing of $H_0$3 indicated that the results were consistent with the regression findings displayed in Table 6. The effect of CE&T on LOC was not significant $F(20, 104) = .1.25$, $p = .230$), where R-squared = .194 (Adjusted R Squared = .039); therefore, I fail to reject the null hypothesis.

Hypothesis 4. The fourth hypothesis ($H_0$4) stated that there is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by their generation cohort (Baby Boomer, Gen X, Millennial). A multiple regression linear statistical test was run to test the hypotheses. The test results are presented in Table 7.

Table 7

GSE, CE&T, and Generation Cohort

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.068	2	.034	.140	.869[b]
	Residual	29.496	122	.242		
	Total	29.564	124			

[a.] Criterion Variable: CE&T

[b.] Predictor Variable: (Constant) GSE

[c.] Demographic Variable: Generation Cohort

As shown in Table 7, the results indicated there was no significant difference between AAs' GSE and their participation in CE&T as controlled by their generation cohort (Baby Boomer, GenX, Millennial). GSE, $F(2, 122) = .140$, $p = .869$. The findings suggested that there is no significant relationship between AA's GSE and participation in CE&T activities as controlled by their generation cohort. Therefore, I fail to reject the null hypothesis. Because no significant relationship was found, a stepwise regression was not indicated.

Hypothesis 5. The fifth hypothesis ($H_0 5$) stated that there is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.). A multiple regression linear statistical test was run to test the hypotheses. The test results are presented in Table 8.

Table 8

GSE, CE&T, and Education Level

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.520	2	.260	1.092	.339[b]
	Residual	29.044	122	.238		
	Total	29.564	124			

[a.] Criterion Variable: CE&T

[b.] Predictor Variable: (Constant) GSE

[c.] Demographic Variable: Education Level

Table 8 shows there is no significant relationship ($H_0$5: β1, β2, β3. β4, β5 = 0; H_a5: β1, β2, β3, β4, β5 ≠ 0) between participant's GSE and their participation in CE&T activities as controlled by their education level (high school, some college, BS, Masters, Ph.D.). GSE, $F(2, 122) = 1.092$, $p = .339$. Therefore, I fail to reject the null hypothesis. Because no significant relationship was found, a stepwise regression was not indicated.

Hypothesis 6. The sixth hypothesis ($H_0$6) stated that there is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their generation cohort (Baby Boomer, GenX, Millennial). A multiple regression linear statistical test was run to test the hypotheses. The results are displayed in Table 9.

Table 9

LOC, CE&T, and Generation Cohort

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.006	2	.003	.474	.624[b]
	Residual	.716	122	.006		
	Total	.722	124			

[a.] Criterion Variable: CE&T

[b.] Predictor Variable: (Constant) GSE

[c.] Demographic Variable: Generation Cohort

Table 9 shows that variables were not statistically significantly related $F(2, 122) = .474$, $p = .624$. The findings suggested there was no significant relationship ($H_0$6: β1, β2, β3 = 0) between participant's LOC and their participation in CE&T activities as controlled by their generation cohort (Baby Boomers, GenX, Millennial). Therefore, I fail to reject the null hypothesis. Because no significant relationship was found, a stepwise regression was not indicated.

Hypothesis 7. The seventh hypothesis ($H_0$7) stated that there is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.). A multiple regression linear statistical test was run to test the hypotheses. The results are displayed in Table 10.

Table 10

LOC, CE&T, and Educational Level

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.006	2	.003	.474	.624[b]
	Residual	.716	122	.006		
	Total	.722	124			

[a.] Criterion Variable: CE&T

[b.] Predictor Variable: (Constant) LOC

[c.] Demographic Variable: Educational Level

Table 10 shows that the predictor variables are not statistically significantly. The findings $F(2, 122) = .474$, $p = .624$ suggested that there was no significant relationship between participant's LOC and their participation in CE&T activities as controlled by their education level ($H_0 7$: β1, β2, β3, β4, β5 = 0). Therefore, I fail to reject the null hypothesis. Because no significant relationship was found, a stepwise regression was not indicated.

Summary

The purpose of Chapter 4 was to provide the results from the data collection and analysis of this quantitative descriptive correlational study. The primary research question examined whether a significant relationship exists between AAs' GSE, LOC, and their participation in CE&T activities. The demographic variables and two controlling variables, generation cohort and education level, were also examined to determine whether they have a controlling effect on AAs' participation in CE&T activities. Descriptive and inferential statistics were applied to address the research

questions. A summary of the research questions, statistical tests, and output are presented in Table 11.

Table 11

Summary of Findings

Research Questions	Hypothesis	Statistical test	Output
RQ1: To what extent does a relationship exist between AAs' GSE and LOC?	There is no significant relationship between AAs' GSE and LOC.	Correlation Multiple Regression Descriptive	There is no statistical significant relationship between the GSE and LOC. The null hypothesis failed to be rejected.
RQ2: To what extent does a significant relationship exist between AAs' GSE and their participation in CE&T activities?	There is no significant relationship between AAs' GSE and their participation in CE&T activities.	Correlation Multiple Regression Descriptive	There is no statistically significant relationship between the AAs' GSE and their participation in CE&T activities. The null hypothesis failed to be rejected.
RQ3: To what extent does a significant relationship exist between AAs' LOC and their participation in CE&T activities?	There is no significant relationship between AAs' LOC and their participation in CE&T activities.	Correlation Multiple Regression Descriptive	There is no statistically significant relationship between the AAs' LOC and their participation in CE&T activities. The null hypothesis failed to be rejected.
RQ4: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation in CE&T activities as controlled by their generational cohort?	There is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by their generation cohort.	Correlation Multiple Regression Descriptive	There is no significant relationship between participant's GSE and participation in CE&T as controlled by generation cohort. The null hypothesis failed to be rejected.

(table continues)

Research Questions	Hypothesis	Statistical test	Output
RQ5: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation CE&T activities as controlled by their educational level?	There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their educational level.	Correlation Multiple Regression Descriptive	There is no significant relationship between participant's LOC and participation in CE&T as controlled by their educational level. The null hypothesis failed to be rejected.
RQ6: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation in CE&T activities as controlled by their generational cohort?	There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their generation cohort.	Correlation Multiple Regression Descriptive	There is no significant relationship between participant's LOC and participation in CE&T as controlled by generation cohort. The null hypothesis failed to be rejected.
RQ7: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation CE&T activities as controlled by their educational level?	There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their educational level.	Correlation Multiple Regression Descriptive	There is no significant relationship between participant's LOC and participation in CE&T as controlled by their educational level. The null hypothesis failed to be rejected.

The results of the first research question ($H_0$1) denoted no significant correlation between GSE and LOC; therefore, the null hypothesis was not rejected. This is not consistent with previous studies that demonstrated a link between the GSE and LOC of workers and how long they are willing to persevere in new or difficult tasks (Judge, 2009; Judge et al, 2007; Jones, 2013; König et al., 2010; Lunenburg, 2011; Pajares, 2003; Rothes, Lemos, Gonçalves, 2013; Van Der Roest, Kleiner, & Kleiner, 2011; Wen & Lin, 2014).

The results of the second research question ($H_0$2) indicated that no significant predictive relationship existed between AA's GSE and their participation in CE&T

activities; thus, the null hypothesis was not rejected. This is not consistent with previous findings in that some studies have found that individuals with a high degree of GSE tend to participate in CE&T activities more frequently than do individuals with a lower degree of GSE (Esfandagheh et al., 2012; Phipps et al., 2013; Schwoerer et al., 2005; Wei-Tao, 2006).

The results of the third research question ($H_0$3) suggested that no significant predictive relationship between AAs' LOC and their participation in CE&T activities; thus, the null hypothesis was not rejected. This is not consistent with previous findings. Researchers found that by improving employees external LOC, workers were more likely to engage in CE&T activities, which also led to increased productivity and improved job satisfaction (Bilanakos, 2013; McGuire & Gubbins , 2010; Noe & Wilk, 1993; Sprung & Jex, 2012).

The results of the fourth research question ($H_0$4) revealed no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by their generation cohort (Baby Boomer, GenX, Millennial). The null hypothesis is not rejected. These findings are not consistent with previous studies in which researchers found that training and development specialists must understand the differing requirements among the generational cohorts in order to provide CE&T activities that meets the needs of each individual (Cekada, 2012; Costanza et al., 2012; Farrell & Hurt, 2014; Lyons et al., 2011; Lester et al., 2012; Parry & Urwin, 2010; Twenge et al., 2010; van Rooij, 2011).

The results of the fifth research question ($H_0$5) indicated no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.). The null hypothesis fails to be rejected. These findings are not consistent with previous research that found that adults with some college educational experiences continue to participate in additional CE&T activities while employed (Worth & Stephens, 2011).

The results of the sixth research question ($H_0$6) revealed no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their generation cohort. The null hypothesis is not rejected.

The results of the seventh research question ($H_0$7) revealed no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level. The null hypothesis is not rejected.

Chapter 5 consists of an in-depth interpretation of the findings, including how the findings of this study confirm, disconfirm, or extend the knowledge of individuals' GSE, LOC, and their participation in CE&T activities. Chapter 5 also contains a review of the limitations of this study, recommendations for future research, and the implications for positive social change. A conclusion provides a compelling message that captures the key essence of this study.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this non-experimental quantitative correlational study was to investigate and determine whether a significant relationship exists between AAs' GSE, LOC, and their participation in CE&T activities. The participants were 125 AAs from one specific Midwestern branch of IAAP who volunteered to participate in the study. Data analysis consisted of a series of statistical tests, including both descriptive and inferential statistics. The overall findings indicated there was a statistical significant relationship between the GSE and LOC. There was no statistically significant relationship found between the AAs' GSE and their participation in CE&T activities. There was also not a statistically significant relationship found between the AAs' LOC and their participation in CE&T activities. The findings revealed no statistically significant relationship between AAs' GSE and LOC as controlled by their generational cohort and education level. A complete discussion and interpretation of the findings are presented in the following sections preceded by the research questions and hypothesis statements.

Interpretation of Findings

Research Question 1: To what extent does a relationship exist between AAs' GSE) and LOC?

$H_0$1: There is no significant relationship between AAs' GSE and LOC.

H_a1: There is a significant relationship between AAs' GSE and LOC.

The literature review explained the role and responsibilities of the AA, the concept of self efficacy, and LOC theory. To reiterate, the U.S. Department of Labor BLS (2017b) defined AAs as office employees who are responsible for the daily

operations of the office by typing, filing, answering the phone, and other duties as required by the job. Other responsibilities include supportive roles while managing an entire office. Scherbaum et al. (2006) and Judge (2009) defined GSE as a personality trait in which individuals believe in their overall competence to accomplish whatever they set out to achieve. As conceptualized, the GSE theory reveals an individuals' ability to persevere across a wide variety of academic courses, even those courses in which the individual does not feel competent (Brusso et al., 2012; Sharma & Nasa, 2014).

The results of the data analysis revealed there is no statistical significant (p >.05) relationship between the GSE and LOC. This means that there is little, if any, likelihood that a relationship exists between the GSE and LOC that is caused by something other than random chance. The null hypothesis failed to be rejected. These findings were not consistent with previous literature. Most researchers who examined people's GSE and their LOC acknowledged that some relationship exists between these concepts. The literature review was clear that when organizations want to improve productivity, increase job satisfaction, decrease absenteeism, and reduce turnover rate, improving workers' GSE plays an important role in helping employees accept new challenges (Judge et al., 2005).

Cascio et al. (2013) found that individuals' beliefs in the degree to which they may control a situation or task may mitigate the belief in their capability of performing complex tasks. Others observed that individuals with a high degree of GSE and an internal LOC have greater academic successes and tend to take more personal responsibility for their own professional growth than do individuals with a low degree of

GSE and an external LOC (Ignat & Clipa, 2010; McGuire & Gubbins, 2010). Still other researchers have consistently recognized a strong correlation between adult learners' GSE and their LOC motives for enrolling in CE&T endeavors (Rothes et al., 2013). For these reasons, it is important to examine other variables that may impact these findings.

Research Question 2: To what extent does a significant predictive relationship exist between AAs' GSE and their participation in CE&T activities?

$H_0 2$: $\beta 1 = 0$: There is no significant predictive relationship between AAs' GSE and their participation in CE&T activities.

$H_a 2$: $\beta 1 \neq 0$: There is a significant predictive relationship between AAs' GSE and their participation in CE&T activities.

The data analysis revealed that there was no statistically significant relationship between the AAs' GSE and their participation in CE&T activities. The null hypothesis failed to be rejected. These findings were not consistent with previous research. The focus on employee participation in CE&T activities has intensified as companies experience rapid technological changes and increased global competition (Esfandagheh et al., 2012; Wei-Tao, 2006). In an effort to make the most of CE&T dollars, training and development specialists have examined some factors, including GSE, that can affect training outcomes (Phipps et al., 2013; Schwoerer et al., 2005).

Pillai et al. (2011) noted that employees with a combination of low GSE and an external LOC do not typically volunteer for additional assignments, nor do they seek out CE&T activities (Holmquist et al., 2013; Jaidev & Chirayath, 2013; Sharma & Nasa, 2014). Wei-Tao (2006) maintained that the increasing age of the workforce and the rapid

deployment of new technologies mean that training would play a critical role in how well the older population is able to adapt. Studies have demonstrated that individuals with a high degree of GSE have an increased motivation to learn and tend to be more successful in both work and training pursuits (Luszczynska, Gutiérrez-Doña, et al., 2005; Phipps et al., 2013; Wen & Lin, 2014). To create meaningful CE&T opportunities for the older worker, employers will need to be aware of workers' GSE in order to mediate training apprehension and ensure that new training programs result in effective training outcomes (Esfandagheh et al., 2012).

Research Question 3: To what extent does a significant predictive relationship exist between AAs' LOC and their participation in CE&T activities?

$H_0$3: $\beta 1 = 0$: There is no significant predictive relationship between AAs' LOC and their participation in CE&T activities.

H_a3: $\beta 1 \neq 0$: There is a significant predictive relationship between AAs' LOC and their participation in CE&T activities.

The results of this study revealed that there was no statistically significant relationship between AAs' LOC and their participation in CE&T activities. The findings were not consistent with previous studies. Although no specific researchers have studied the effect of AAs' LOC on their CE&T pursuits, Sprung and Jex (2012) observed that employees who engage in CE&T activities may increase in their intrinsic motivation, which results in a positive value-added effect upon employees overall productivity and organizational behavior. Bilanakos (2013) noted that when employers offer both general and firm-specific CE&T opportunities, employees are more likely to participate,

especially when coupled with a supportive working environment that encourages workers to be more intrinsically motivated.

Previous studies affirmed that when employees' internal LOC is high, they are more likely to participate in CE&T activities, particularly when employees are made aware of their own LOC implications (Bilanakos, 2013; Noe & Wilk, 1993). Bilanakos (2013) also maintained that employees are more likely to participate in CE&T activities when both general and organization-specific opportunities are presented within a support environment. Other researchers have also observed that employers who actively encourage their employees to participate in CE&T activities found a positive value-added effect upon job satisfaction and productivity (McGuire & Gibbins, 2010; Sprung & Jex, 2012).

McGuire and Gubbins (2010) recognized that changes in CE&T approaches might influence employees' motivation to participate. They warn that employers must acknowledge newer approaches to employee CE&T that include more informal, flexible, and learner-centered activities. For employees who are already highly intrinsically motivated to learn, specific CE&T approaches do not present a problem. For employees who are not highly intrinsically motivated or who are extrinsically motivated, employers will need to continually invest in CE&T activities that also serve to motivate (Sprung & Jex, 2012).

Research Question 4: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials)?

$H_0$4: There is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AA's generational cohort (Baby Boomers, GenX, Millennials).

H_a4: There is a significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials).

The data analysis revealed there is no significant relationship between participant's GSE and participation in CE&T activities as controlled by their generation cohort. Therefore, the null hypothesis failed to be rejected. The premise is that as America's workforce continues to age, the challenge for organizational leaders is how to manage a diverse, multigenerational workforce. One of the biggest challenges for managers and supervisors is how best to offer CE&T activities for members of different generational cohorts. Generational cohorts are defined as a group of individuals who were born in the same time period and have been influenced by the same historical and social events (Lester et al., 2012; Twenge et al., 2010). Much of the literature on multigenerational CE&T (Hoffman & Reindl, 2011; Lester et al., 2012; Twenge et al., 2010; van Rooij, 2012) acknowledged the differing requirements of each generational cohort.

Research Question 5: To what extent, if any, does a significant relationship exist between AAs' GSE and their participation in CE&T activities as controlled by AAs' education level (high school, some college, BA/BS, Masters, Ph.D.)?

$H_0$5: There is no significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AA's education level (high school, some college, BA/BS, Masters, Ph.D.).

H_a5: There is a significant relationship between AAs' GSE and their participation in CE&T activities as controlled by AAs' education level (high school, some college, BA/BS, Masters, Ph.D.).

The data analysis revealed there is no significant relationship between participants' GSE and participation in CE&T activities as controlled by their level of education attainment. Therefore, the null hypothesis failed to be rejected. Esfandagheh et al. (2012) and Wei-Tao (2006) found that as companies participate in technological changes and increased global competition, the need for employee participation in CE&T activities has increased. To improve employee participation in CE&T activities, some researchers have begun to examine factors, including GSE, that may affect employees' participation in CE&T activities (Phipps et al., 2013; Schwoerer et al., 2005).

Wei-Tao (2006) noted that the increasing age of the workforce and the rapid deployment of new technologies mean that training would play a critical role in how well the older population is able to adapt. Studies have demonstrated that individuals with a high degree of GSE have an increased motivation to learn and tend to be more successful in both work and training pursuits (Luszczynska, Gutiérrez-Doña, et al., 2005; Phipps et al., 2013; Wen & Lin, 2014). To create meaningful CE&T opportunities for the older worker, employers will need to be aware of workers' GSE in order to mediate training

apprehension and ensure that new training programs result in effective training outcomes (Esfandagheh et al., 2012).

Research Question 6: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation in CE&T activities as controlled by AAs' generational cohort (Baby Boomers, GenX, Millennials)?

$H_0$6: There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their generational cohort (Baby Boomers, GenX, Millennials).

H_a6: There is a significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their generational cohort (Baby Boomers, GenX, Millennials).

The data analysis revealed that there is no significant relationship between participant's LOC and participation in CE&T activities as controlled by their generational cohort. Therefore, the null hypotheses failed to be rejected.

Research Question 7: To what extent, if any, does a significant relationship exist between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.)?

$H_0$7: There is no significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.).

H_a7: There is a significant relationship between AAs' LOC and their participation in CE&T activities as controlled by their education level (high school, some college, BA/BS, Masters, Ph.D.).

The data analysis revealed that there is no significant relationship between participant's LOC and participation in CE&T activities as controlled by their education level. Therefore, the null hypothesis failed to be rejected.

While the findings for H_06 and H_07 are notable, it is inconclusive whether participants' LOC and their participation in CE&T activities were controlled by the individuals' generation cohort and educational attainment in this study. No other studies were found to confirm or reject these findings. The U.S. Department of Education NCES (2017) has noted that the number of adults who were more likely to participate in CE&T activities usually ranged in the 18- to 24-year-old (Millennial) age bracket compared to those who were older than 55 (Baby Boomer). Worth and Stephens (2011) found that both full-time and part-time attendance at community colleges increased 24.1% between 2007 and 2009, and that adults are returning to college in significant numbers.

Although all seven null hypotheses failed to be rejected, this study contributes to the GSE, LOC, and CE&T body of knowledge in several ways. First, no other study has examined AAs' GSE, LOC, and their participation in CE&T activities. While much of the GSE and LOC literature focused on management, professional, and executive staff, this study looked specifically at the AA population.

Second, in this study, I examined AAs who were members of IAAP, a specific professional development organization. The results may indicate that AAs who belong to

IAAP have a higher degree of GSE and a more internal LOC that contributes to their ongoing participation in CE&T activities. For other organizations who want to improve the CE&T participation of their AAs, this study may help training and professional development personnel justify AAs' membership and involvement in a professional organization.

Third, given the current trend toward a multi-generational workforce, this study examined whether there are variations in how the differing generations of AAs approach CE&T. Although there was no significant relationship in this study between IAAP AAs' GSE, LOC, and their participation in CE&T activities as controlled by their generational cohort, this also suggests that there may be a correlation between membership and involvement in IAAP and AAs' GSE, LOC, and their participation in CE&T activities.

Fourth, this study investigated whether there was a relationship between AAs with diverse education levels and their participation in CE&T activities. No significant relationship was found between IAAP AAs' GSE, LOC, and their participation in CE&T activities as controlled by their education level. This similarly implies that there may be a correlation between members and involvement in IAAP and AAs' GSE, LOC, and their participation in CE&T activities.

Finally, this study provides a model upon which future studies could be conducted. One way to do this would be to conduct the study using two or more IAAP branches. A comparative analysis of IAAP AAs may yield different results. Another way to use this study's model involves using AAs who do not belong to IAAP.

Limitations of the Study

Although this study was prepared with great care, some limitations do exist. First, the research was conducted using a single branch from the IAAP organization. Due to the small response rate, no generalizations to the larger IAAP organization can be made. This also means that no generalization of the results can be applied to the larger population of AAs in the United States.

The second limitation involved the use of the ATES instrument. Although prepared by GEMEnA and certified by the U.S. Department of Education NCES (2017), this instrument was not compatible with the NGSE and the ANSIE, so the results had to be coded differently in order to provide results that could be compared. Another limitation of the study came from the 45-question length of the ATES instrument. Although only 4 of the questions from the ATES instrument were used in this study, GEMEnA required that all 45 questions be included in this study's questionnaire (S. Boivin, personal communication, August 9, 2015; L. Hudson, personal communication, August 10, 2015). A more targeted study using only the 4 questions needed for this analysis may have encouraged a greater response rate.

The final limitation occurred because participants were self-reporting. Some individuals were unresponsive on a few of the questions. The low response rate also limited the conclusions that could be drawn.

Recommendations

The purpose of this non-experimental quantitative correlational study was to address the lack of research evidence into whether a significant relationship exists

between AAs' GSE, LOC, and their participation in CE&T activities. While the findings from numerous prior studies indicated that there were statistically significant relationships between respondents' GSE, LOC, and their participation in CE&T activities, those studies concentrated on professional staff, including managers and supervisors from the medical, legal, and other highly technical fields (Bilanakos, 2013; Cheng et al., 2013; Judge et al., 2005; Phipps et al., 2013; Wen & Lin, 2014). This study specifically focused on the AA population from IAAP and found no statistical significance between GSE, LOC, and participation in CE&T activities.

Based on the findings in this study and in keeping with the continuing education goals and values of the organization (IAAP, 2016) that participated in this study, IAAP leaders should recognize that their CE&T programs appear to provide the kinds of CE&T activities that IAAP members need. Although the sample size was small, the data suggests that the IAAP organization has gone a long way toward encouraging their members to participate in CE&T activities. IAAP leaders should recognize that with today's tight CE&T budgets, they will not need to spend additional monies on GSE and LOC awareness and improvement, but rather concentrate their training dollars on other CE&T opportunities.

Another practical contribution of this study is that it provides IAAP with empirical data on their members' participation in CE&T activities. This information is important given that no other study has been conducted that specifically investigated the personality factors of AAs that might influence their participation in CE&T activities. IAAP leaders can use this information to design initiatives and create CE&T programs

that focus on other factors that might encourage even greater AA participation in CE&T activities. To understand these phenomena further, IAAP leaders may want to use different criteria to examine whether there may be other possible reasons for AAs' participation or lack of participation in CE&T activities.

IAAP leaders can also use the information in the study by allowing me to participate in their professional conferences and leadership academy, as well as write articles for their professional magazine. Participation in IAAP's annual conference and leadership academy would include disseminating the results of the study to a national IAAP audience. Writing articles for *OfficePro*, IAAP's professional magazine, would increase the dissemination of the study's results to an even wider audience.

Recommendations for Future Research

Since the sample size was small for this study, a future study should be conducted using a larger population of AAs. This could be done in a number of ways. First, a future study could involve the entire IAAP organization from within the U.S., which consists of approximately 10,000 members (Director, Programs & Services, personal communication, April 8, 2015). This study could take place at their annual summit, although this would also have its limitations, since only committed members of the organization regularly attend.

Second, a qualitative study of IAAP AAs' GSE, LOC, and their participation in CE&T activities may also yield greater results. Interviews could be conducted in two ways. Individual interviews could be conducted at IAAP's annual summit; however, the same limitation would apply since only committed members of the IAAP organization

regularly attend. To get a more representative sample, individuals from throughout the IAAP organization could volunteer to participate. This type of study might be more representative of IAAP, but would also be more costly since the interviewer would have to travel to wherever the participants were located and those who are likely to volunteer are more likely to be committed to the IAAP organization.

Third, a qualitative study of a more generalized AA population may also yield different results concerning their GSE, LOC, and participation in CE&T activities. GEMEnA (U.S. Department of Education NCES, 2017) originally developed the NATES instrument for their nationwide study. Using this instrument in an interview setting might reveal additional insights into how and why AAs participate in CE&T activities.

Fourth, an ex post facto study of the IAAP participants using different demographic variables may underscore other reasons why IAAP members might participate in CE&T activities. An ex post facto study would examine some of the demographic variables, such as gender, length of employment, current title or job classification, salary, ethnicity, or primary spoken language, that were collected but not used for this specific research study. These demographic variables may provide additional insights into AAs' participation or lack of participate in CE&T activities. An ex post facto study comparing different IAAP branches from varying locations around the U.S. may also provide insights into how this organization motivates AAs to participate in CE&T activities.

Implications for Social Change

Three primary implications for social change resulted from the findings of this study. First, the results of this study contradict previous research studies that show a significant relationship between GSE, LOC, and participation in CE&T activities. In most of these prior studies, however, only professional staff participated, while in this study, only AAs from IAAP were surveyed. These findings reveal a paradigm shift and require a more thorough reevaluation of the relationship between GSE, LOC, and participation in CE&T activities while employing a wider variety of participants from both professional and administrative staff.

Second, positive social change occurs when an alteration in one or more aspects of society leads to the betterment of individuals, communities, organizations, and societies as a whole. In this study, however, the results show that no significant relationship exists between IAAP AAs' GSE, LOC, and their participation in CE&T activities. This means that no change need occur within the IAAP organization regarding improving AAs' GSE and LOC since they already appear to participate in CE&T activities. These findings are unique and point to the distinctive characteristics of the IAAP organizations and its leaders.

The third implication of this research is that it provides an informed perspective to IAAP members specifically and AAs in general that will encourage individuals to think about their own GSE and LOC and whether, personally, there may be a relationship to their participation in CE&T activities. This research may also encourage AAs to make better decisions regarding their own participation in CE&T activities. Finally, the

findings in the study suggest that the IAAP organization should continue to foster CE&T so that its members can be ready for the continually evolving and global business environment.

Conclusions

Prior research indicated that a significant relationship existed between professional employees' GSE, LOC, and their participation in CE&T activities. (Bilanakos, 2013; Cheng et al., 2013; Judge et al., 2005; Phipps et al., 2013; Wen & Lin, 2014). To determine whether this relationship held true for AAs, this non-experimental quantitative correlational study investigated whether a significant relationship existed between AAs' GSE, LOC, and their participation in CE&T activities, which may include in-house training, online training, online education, and the acquisition of certifications and degrees. A quantitative descriptive correlational design was used to explore this knowledge gap. The findings show no significant relationship between AAs' GSE, their LOC, and their participation in CE&T activities. Additional findings also revealed no significant relationship between AAs' GSE, LOC, and their participation in CE&T activities when controlled by their generation cohort or education level.

This study is distinctive for two main reasons. First, it is one of only a few studies to investigate the AA population specifically. While other studies have examined the GSE and LOC variables with professional staff, including those in the medical, legal, and technology arenas, no study has specifically used an AA population to evaluate these variables and the relationship to CE&T activities. The findings in this study indicate that AAs may participate in CE&T activities for reasons other than their GSE or LOC.

Second, the results of this study directly contradict the findings of prior research. Recently, the focus on employee participation in CE&T activities has intensified as companies experience rapid technological changes and increased global competition (Esfandagheh et al., 2012; Wei-Tao, 2006). In an effort to make the most of CE&T dollars, training and development specialists have found that workers' GSE can affect training partcipation (Phipps et al., 2013; Schwoerer et al., 2005). Other researchers have found that employees with a more internal LOC participate in CE&T activities more readily (Bilanakos, 2013; Noe & Wilk, 1993; Sprung & Jex, 2012). In this study, no relationship was found between AAs' GSE, LOC, and their participation in CE&T activities.

Since much of the research on GSE and LOC focused on populations other than AAs, this study adds some insight into how organizations may want to approach CE&T activities for their AAs. Future research may include conducting a similar study with a larger heterogeneous sample or a descriptive qualitative design that improves the understanding of the AA perspective. Because no significance was identified within IAAP, the findings in this study are unique and contradict prior comparable research. As IAAP continues to create greater CE&T opportunities for improving the lifelong learning experiences for its members, positive social change will continue to occur.

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Appendix A: Databases and Descriptive Search Terms

Database	Search Term	# of Hits
ABI/INFORM Complete	1. Administrative Assistant	5
	2. Clerk	54
	3. Executive Assistant	0
	4. Secretary	1289
	5. Support Staff	72
	6. Training	17,168
	7. Training and Development	1039
	8. Professional Development	1650
	9. Continuing Education	340
	10. Lifelong Learning	263
	11. Self-Efficacy	963
	12. General Self-Efficacy	31
	13. Locus of Control	266
	14. Mentoring	1099
	15. Pygmalion Effect	8
	16. Generational Differences in Learning	10
	17. Generational Cohort Theory	1172
	18. AAs and General Self-efficacy	0
	19. AAs and Locus of Control	0
	20. AAs and Training	0
	21. AAs and Human Resource Development	1
	22. General Self-Efficacy and Locus of Control	0
	23. AAs, General Self-Efficacy, and Locus of Control	2
		0

Database	Search Term	# of Hits
Academic Search Complete	1. Administrative Assistant	890
	2. Clerk	25,262
	3. Executive Assistant	458
	4. Secretary	123,840
	5. Support Staff	11.613
	6. Training	548,345
	7. Training and Development	6715
	8. Professional Development	50,562
	9. Continuing Education	31,586
	10. Lifelong Learning	15,117
	11. Self-Efficacy	34,039
	12. General Self-Efficacy	944
	13. Locus of Control	10,079
	14. Mentoring	3660
	15. Pygmalion Effect	47
	16. Generational Differences in Learning	0
	17. Generational Cohort Theory	2
	18. AAs and General Self-efficacy	
	19. AAs and Locus of Control	1
	20. AAs and Training	
	21. AAs and Human Resource Development	4
	22. General Self-Efficacy and Locus of Control	349
	23. AAs, General Self-Efficacy, and Locus of Control	10
		239
		1

Database	Search Term	# of Hits
Business Source Complete	1. Administrative Assistant	289
	2. Clerk	7972
	3. Executive Assistant	208
	4. Secretary	39,221
	5. Support Staff	3255
	6. Training	144,938
	7. Training and Development	7586
	8. Professional Development	12,578
	9. Continuing Education	5065
	10. Lifelong Learning	3329
	11. Self-Efficacy	8773
	12. General Self-Efficacy	360
	13. Locus of Control	4080
	14. Mentoring	1224
	15. Pygmalion Effect	43
	16. Generational Differences in Learning	0
	17. Generational Cohort Theory	9
	18. AAs and General Self-efficacy	1
	19. AAs and Locus of Control	7
	20. AAs and Training	173
	21. AAs and Human Resource Development	5
	22. General Self-Efficacy and Locus of Control	140
	23. AAs, General Self-Efficacy, and Locus of Control	1

Database	Search Term	# of Hits
Educational Resource Information Center (ERIC)	1. Administrative Assistant	2
	2. Clerk	14
	3. Executive Assistant	0
	4. Secretary	193
	5. Support Staff	272
	6. Training	12,813
	7. Training and Development	330
	8. Professional Development	5155
	9. Continuing Education	1952
	10. Lifelong Learning	1002
	11. Self-Efficacy	2322
	12. General Self-Efficacy	33
	13. Locus of Control	366
	14. Mentoring	1155
	15. Pygmalion Effect	3
	16. Generational Differences in Learning	0
	17. Generational Cohort Theory	200
	18. AAs and General Self-efficacy	
	19. AAs and Locus of Control	0
	20. AAs and Training	
	21. AAs and Human Resource Development	0
	22. General Self-Efficacy and Locus of Control	0
	23. AAs, General Self-Efficacy, and Locus of Control	0
		2
		0

Database	Search Term	# of Hits
Google Scholar*	1. Administrative Assistant	12
	2. Clerk	40,399
	3. Executive Assistant	5300
	4. Secretary	125,000
	5. Support Staff	23,300
	6. Training	988,000
	7. Training and Development	19,300
	8. Professional Development	48,100
	9. Continuing Education	25,900
	10. Lifelong Learning	29,200
	11. Self-Efficacy	92,800
	12. General Self-Efficacy	5780
	13. Locus of Control	19,600
	14. Mentoring	201,000
	15. Pygmalion Effect	14,300
	16. Generational Differences in Learning	24
	17. Generational Cohort Theory	101
	18. AAs and General Self-efficacy	
	19. AAs and Locus of Control	4
	20. AAs and Training	
	21. AAs and Human Resource Development	52
	22. General Self-Efficacy and Locus of Control	2390
	23. AAs, General Self-Efficacy, and Locus of Control	76
*Included books, articles, and other materials, as well as materials written in other languages.		1330
		1

Database	Search Term	# of Hits
PsycARTICLES	1. Administrative Assistant	24
	2. Clerk	263
	3. Executive Assistant	4
	4. Secretary	462
	5. Support Staff	159
	6. Training	12,236
	7. Training and Development	306
	8. Professional Development	547
	9. Continuing Education	394
	10. Lifelong Learning	112
	11. Self-Efficacy	3373
	12. General Self-Efficacy	192
	13. Locus of Control	1108
	14. Mentoring	98
	15. Pygmalion Effect	3
	16. Generational Differences in Learning	0
	17. Generational Cohort Theory	1
	18. AAs and General Self-efficacy	
	19. AAs and Locus of Control	0
	20. AAs and Training	
	21. AAs and Human Resource Development	3
	22. General Self-Efficacy and Locus of Control	14
	23. AAs, General Self-Efficacy, and Locus of Control	2
		61
		0

Appendix B: Permissions and Measurement Instruments

Permission from IAAP Certification Manager for IAAP to participate in this study.

International Association of Administrative Professionals
10502 N. Ambassador Dr.
Suite 100
Kansas City, MO 64153

December 23, 2015

Dear Rose Schmitt,

Based on my review of your research proposal, I give permission for you to conduct the study entitled Factors That Influence Administrative Assistants Participation in Continuing Education and Training within the IAAP. As part of this study, I authorize you to send your research questionnaire to a predetermined group of IAAP members. Individuals' participation will be voluntary and at their discretion.

We understand that our organization's responsibilities include: Disseminating the research questionnaire link to the IAAP member group. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

[redacted]

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

Permission from GEMEnA to use the Adult Training and Education Survey

Rose Schmitt

From: [redacted]
Sent: Wednesday, August 19, 2015 1:06 PM
To: Rose Schmitt
Subject: RE: Doctoral research

Hi Rose, sorry for the delay in responding. I was on vacation last week and have been in meetings all this week. The GEMEnA website has just been updated and can be accessed at nces.ed.gov/surveys/gemena. All of the materials on the website are in the public domain, including the survey items themselves, and you and anyone else has permission to use them. They were paid for with taxpayer dollars (yours and mine included!) [redacted]

From: Rose Schmitt [mailto:rose@roseschmitt.com]
Sent: Sunday, August 09, 2015 5:38 PM
To: [redacted]
Subject: Doctoral research

Dear [redacted]
Several months ago I contacted you about permission to use the Adult Training and Education Survey as part of my doctoral research. At that time, you informed me that I did not need specific permission, and you sent me several websites with the documentation I need for using the study.

However, recently my computer crashed, and I lost all my prior e-mails. Would you please send me the documentation website URLs again? Also, even though you said I don't need specific permission, my college is requiring some kind of confirmation that I have permission to use the study. An e-mail communication would suffice.

Thank you very much.

Respectfully,
Rose Friend Schmitt
PhD Candidate, Management: Leadership and Organizational Change
Walden University
321.693.7741.

The National Adult Training and Education Survey

1. What is the highest degree or level of school you have completed? (Mark one)
   a. Elementary or high school, but no high school diploma or GED.
   b. High school diploma, GED, or other high school completion.
   c. Some college credit, but less than one year of college credit.
   d. One or more years of college credit.
   e. Associate's degree (e.g., AA, AS)
   f. Bachelor's degree (e.g., BA, BS)
   g. Master's degree (e.g., MA, MS, MEd., MBA)
   h. Professional degree beyond a bachelor's degree (e.g., MD, DDS, DVM, JD)
   i. Doctorate degree (e.g., Ph.D.., EdD)

2. Did you complete your high school requirements through a regular high school program or through the GED or other high school equivalency? (Mark one)
   a. Regular high school diploma
   b. GED or other high school equivalency

3. Do you have a professional certification or a state or industry license (e.g., CAP, OM, IT, PMP)
   a. Yes
   b. No

4. Thinking of all the certifications and licenses you have, did you get any of them for work-related reasons, or were they all for personal interest?
   a. One or more for work-related reasons
   b. All for personal interest

5. When did you receive your most recent work-related certification or license?
   a. Within the last year
   b. Within the last two years
   c. Five years ago
   d. Ten years ago
   e. Not applicable

6. Who issued this certification or license?
   a. Federal, state, or local government
   b. Professional or trade association (e.g., IAAP, Project Management Institute)
   c. Business or company (e.g., Microsoft, 3M, Xerox)
   d. Other
   e. Not applicable

7. Why did you get this certification or license (Mark yes or no for each)

YES	NO	a.	To get a job in a new field
YES	NO	b.	To get a promotion or pay raise
YES	NO	c.	To stay current in my field or expand my skills
YES	NO	d.	To start my own business
YES	NO	e.	To meet an employer requirement
YES	NO	f.	Other
YES	NO	g.	Not applicable

8. Did you have to pass a test or exam or demonstrate your skills to get this certification or license?
    a. Yes
    b. No
    c. Not applicable

9. What kinds of courses, training, or instruction (in-person or online) did you take in order to prepare for this certification or license? (Mark all that apply)
    a. I did not need any courses, training, or instruction.
    b. I took vocational or occupationally focused high school courses.
    c. I took courses from a vocational or trade school, community or technical college, or other college or university.
    d. I took courses from a private company or my employer.
    e. I participated in on-the-job training, an internship, or an apprenticeship.
    f. I studied on my own.
    g. Other
    h. Not applicable

10. Do you have to earn continuing education units (CEUs) or other professional development credits to maintain this certification or license?
    a. Yes
    b. No
    c. Not applicable

11. Which one of the following best describes the MOST RECENT activity you engaged in to earn your continuing education or other professional development credits for this certification or license? (Mark one)
    a. Have not yet met these requirements
    b. Attended conferences or demonstrations (online or in-person)
    c. Completed class or seminar (online or in-person)
    d. Read instructional materials (online or hard copy)
    e. Other
    f. Not applicable

12. Who was the main provider of the instruction or learning materials for the activity you indicated in Question 11?
    a. My employer
    b. A professional or trade organization
    c. A labor union or labor organization
    d. A community or technical college, vocational or trade school, college or university
    e. Federal, state or local government entity
    f. Private training company
    g. Other
    h. Not applicable

13. Could this certification or license be used if you wanted to get a job with any employer in your line of work?
    a. Yes
    b. No
    c. Not applicable

14. Is this certification or license for your current job?
    a. Yes
    b. No
    c. Not applicable

15. Is this certification or license for a job you held in the past or for a job you plan to have in the future?
    a. For a job I held in the past
    b. For a job I plan to hold in the future
    c. Not applicable

16. Other than your most recent certification or license, do you have another certification or license for the job you have now?
    a. Yes
    b. Not
    c. Not applicable

17. Some people complete a program of study at a vocational or trade school, community or technical college, or other college or university that leads to an educational certificate rather than a degree. (e.g., cosmetology, auto mechanics, air conditioning repair, business management, etc.). Have you earned this type of educational certificate?
    a. Yes
    b. No

18. When did you earn your MOST RECENT educational certificate?
    a. Within the last year
    b. 1-2 years ago
    c. 3-5 years ago
    d. 5-10 years ago
    e. More than 10 years ago
    f. Not applicable

19. How long did it take you to earn this certificate?
    a. Less than 3 months
    b. More than 3 months, but less than 1 year
    c. One year or more
    d. Not applicable

20. What type of school awarded this certificate?
    a. Trade, vocational, or business school
    b. Community or technical college
    c. Other college or university
    d. Other (professional organization, etc.)
    e. Not applicable

21. Why did you get this certificate? (Mark all that apply)

YES	NO	a. To get a job in a new field
YES	NO	b. To get a promotion or pay raise
YES	NO	c. To stay current in my field or expand my skills
YES	NO	d. To start my own business
YES	NO	e. To get a professional certificate or license
YES	NO	f. Other
YES	NO	g. Not applicable

22. Is the subject field of this certificate related to the job you have now?
    a. Yes
    b. Not
    c. Not applicable

23. Is the subject field of this certificate related to a job you held in the past or to a job you plan to hold in the future?
    a. For a job I held in the past
    b. For a job I plan to hold in the future
    c. Not applicable

24. Are you currently taking classes from a vocational or trade school, community or technical college, or other college or university? (If you are on spring, summer, or holiday break, please answer Yes)
    a. Yes
    b. Not

25. Are you taking these classes to earn a diploma, certificate, or degree? (Do not count professional certifications or licenses.)
    a. Yes
    b. No
    c. Not applicable

26. What diploma, certificate, or degree are you earning?
    a. Diploma or certificate below the bachelor's degree level
    b. Associate's degree (e.g., AA, AS, AAS)
    c. Bachelor's degree (e.g., BA, BS, BFA)
    d. Certificate above the bachelor's degree level
    e. Master's degree (e.g., MA, MS, MEd)
    f. Professional or doctorate degree (e.g., MD, DDS, DVM, JD, Ph.D., EdD)
    g. Not applicable

27. Are you going to school full-time or part-time?
    a. Full-time
    b. Part-time
    c. Not applicable

28. How many classes are you currently taking?
    a. One
    b. Two
    c. Three or more
    d. Not applicable

29. Which ONE of the following best describes the type of classes you are taking?
    a. All my classes are for college credit
    b. Some of the classes are for college credit; some are not for college credit
    c. None of my classes are for college credit
    d. Not applicable

30. Why are you taking these classes? (Mark all that apply)

YES	NO	a.	To get a job in a new field
YES	NO	b.	To get a promotion or pay raise
YES	NO	c.	To stay current in my field or expand my skills
YES	NO	d.	To start my own business
YES	NO	e.	To get a professional certification or license
YES	NO	f.	To earn continuing education or other professional development credits
YES	NO	g.	To help me decide if I want to get a diploma, certificate, or degree
YES	NO	h.	These classes are require prerequisites to enter a college program
YES	NO	i.	Personal interest in the subject of the classes
YES	NO	j.	Other
YES	NO	k.	Not applicable

31. Did you employer require that you take any of these classes?
    a. Yes
    b. No
    c. Not applicable

32. For any of these classes, is your employer paying your tuition or fees, or reimbursing you for your tuition or fees?
    a. Yes, my employer is pay all of the tuition and fees
    b. Yes, my employer is paying part of the tuition and fees
    c. No, my employer is not paying part of the tuition and fees
    d. Not applicable

33. Other than college classes you may have describes earlier, in the past 12 months, have you completed any other courses, training, or formal instruction, either at work or outside of work? This includes both work or personal interest courses, seminars, webinars, or workshops on such topics as: (Mark all that apply)

YES	NO	a.	Job safety, work ethics, or other regulations
YES	NO	b.	Equipment use
YES	NO	c.	Communication, sensitivity, teambuilding, time management, etc.
YES	NO	d.	Computer or technical skills
YES	NO	e.	Management skills
YES	NO	f.	Other job skills
YES	NO	g.	Fitness classes, art, dance, or music lessons
YES	NO	h.	Language class (e.g., English, Spanish, French, etc.)
YES	NO	i.	Basic skills education classes
YES	NO	j.	Other
YES	NO	k.	Not applicable

34. Was this instruction or training provided by your employer during the workday at no cost to you?
    a. Yes
    b. No
    c. Not applicable

35. Why did you take this instruction or training?

YES	NO	a.	To get a job in a new field
YES	NO	b.	To get a promotion or pay raise
YES	NO	c.	To stay current in my field or expand my skills
YES	NO	d.	To start my own business
YES	NO	e.	To get a professional certification or license
YES	NO	f.	To earn continuing education or other professional development credits
YES	NO	g.	To meet an employer requirement
YES	NO	h.	Personal interest in the subject of the classes
YES	NO	i.	Other
YES	NO	j.	Not applicable

36. Last week, were you employed for pay at a job or business, were you temporarily absent from a job or business, or were you unemployed?
    a. Employed for pay at a job or business
    b. Temporarily absent from work (e.g., vacation, illness, maternity leave, other family/personal business)
    c. Was unemployed or retired

37. Which of the following best describes your employment situation last week.
    a. I worked a full-time job (more than 35 hours per week)
    b. I worked one or more part-time jobs
    c. Not applicable
    d. Not applicable

38. Which of the following categories best fits your earnings from wages, salary, commissions, bonuses or tips, from all jobs over the last 12 months? (This is your earnings as a single individual)
    a. $0 - $10,000
    b. $10,001 - $20,000
    c. $20,001 - $30,000
    d. $30,001 - $40,000
    e. $40,001 - $50,000
    f. $50,001 - $60,000
    g. $60,001 - $75.000
    h. $75,001 - $100,000
    i. More than $100,001
    j. Not applicable

39. Which ONE of the following best describes your chief job activity or business last week?
    a. An employee of a private, FOR-PROFIT company or business for wages, salary, or commissions.
    b. An employee of a private, NOT-FOR-PROFIT, tax-exempt, or charitable organization.
    c. A local government employee (city, county, etc.)
    d. A state government employee
    e. A Federal government employee
    f. Self-employed
    g. Working without pay
    h. Not applicable

40. Are you male or female?
    a. Male b. Female

41. In which of the following age bracket do you belong?
    a. 20 – 25
    b. 26 – 30
    c. 31 – 35
    d. 36 – 40
    e. 41 – 45
    f. 46 – 50
    g. 51 – 55
    h. 56 – 60
    i. 61 – 65
    j. Over 65

42. What is your current marital status?
    a. Married
    b. Widowed
    c. Divorced
    d. Separated
    e. Single

43. What is your race? (May choose one or more)
    a. White
    b. Hispanic or Latino
    c. Black or African American
    d. Asian
    e. Native American or Native Alaskan
    f. Native Hawaiian or other Pacific Islander

44. Do you speak a language other than English at home?
    a. Yes
    b. No

Permission from Stephen Nowicki to use the Adult Nowicki-Strickland Internal-External Scale

Rose Schmitt

From:	Nowicki Jr., Stephen <snowick@emory.edu>
Sent:	Sunday, August 09, 2015 6:32 PM
To:	Rose Schmitt
Subject:	RE: Permission to use the Adult Nowicki-Strickland Internal-External Scale
Attachments:	ANSIE -- Form C.doc; ANSIE manual with scoring key.doc; LOC index and ref list 2015.doc alspac.doc

Hi Rose,

Thanks for the interest in the adult NS scale. I'm attaching the scale, the answer key, the manual and the reference list.

Much success in your doctoral research.

Take care,
Steve Nowicki

From: Rose Schmitt [mailto:rose@roseschmitt.com]
Sent: Sunday, August 09, 2015 3:14 PM
To: Nowicki Jr., Stephen <snowick@emory.edu>
Subject: Permission to use the Adult Nowicki-Strickland Internal-External Scale

Dr. Nowicki,
I am currently a doctoral candidate working on my dissertation proposal. I am investigating whether a relationship exists between administrative assistants' general self-efficacy and locus of control, and their participation in education and training activities.

I am interested in using the Adult Nowicki-Strickland Internal-External Scale as one of the measurement instruments in my study and would like to request permission to do so.

Thank you.

Respectfully,
Rose Friend Schmitt
PhD Candidate in Management: Leadership and Organizational Change
Walden University
321.693.7741

Locus of Control Scale

Answer the following questions the way you feel. There are no right or wrong answers. Don't take too much time answering any one questions, but do try to answer them all. One of your concerns during the test may be, "What should I do if I can answer both yes and no to a question?" It's not unusual for that to happen. If it does, think about whether your answer is just a little more open way than the other. For example, if you'd assign a weighting of 51% to "yes" and assign 49% to "no," mark the answer "yes." Try to pick one or the other response for all questions and not leave any blank. Mark your response to the question in the space provided on the left.

____ 1. Do you believe that most problems will solve themselves if you just don't fool with them?

____ 2. Do you believe that you can stop yourself from catching a cold?

____ 3. Are some people just born lucky?

____ 4. Most of the time, do you feel that getting good grades meant a great deal to you?

____ 5. Are you often blamed for things that just aren't your fault?

____ 6. Do you believe that if somebody studies hard enough he or she can pass any subject?

____ 7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?

____ 8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do?

____ 9. Do you feel that most of the time parents listen to what their children have to say?

____10. Do you believe that wishing can make good things happen?

____11. When you get punished does it usually seems it's for no good reason at all?

____12. Most of the time, do you find it hard to change a friend's (mind) opinion?

____13. Do you think that cheering, more than luck, helps a team to win?

____14. Did you feel that it was nearly impossible to change your parent's mind about anything?

____15. Do you believe that parents should allow children to make most of their own decisions?

____16. Do you feel that when you do something wrong there's very little you can do to make it right?

____17. Do you believe that most people are just born good at sports?

____18. Are most of the other people your age stronger than you are?

____19. Do you feel that one of the best ways to handle most problems is just not to think about them?

____20. Do you feel that you have a lot of choice in deciding whom your friends are?

____21. If you find a four leaf clover, do you believe that it might bring you good luck?

____22. Did you often feel that whether or not you did your homework had much to do with what kind of grades you got?

____23. Do you feel that when a person your age is angry at you, there's little you can do to stop him or her?

____24. Have you ever had a good luck charm?

____25. Do you believe that whether or not people like you depends on how you act?

____26. Did your parents usually help you if you asked them to?

____27. Have you felt that when people were angry with you it was usually for no reason at all?

____28. Most of the time, do you feel that you can change what might happen tomorrow by what you do today?

____29. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?

____30. Do you think that people can get their own way if they just keep trying?

____31. Most of the time, do you find it useless to try to get your own way at home?

____32. Do you feel that when good things happen they happen because of hard work?

____33. Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?

____34. Do you feel that it's easy to get friends to do what you want them to do?

____35. Do you usually feel that you have little to say about what you get to eat at home?

____36. Do you feel that when someone doesn't like you there's little you can do about it?

____37. Did you usually feel that it was almost useless to try in school because most other children were just plain smarter than you were?

____38. Are you the kind of person who believes that planning ahead makes things turn out better?

____39. Most of the time do you feel that you have little to say about what your family decides to do?

____40. Do you think it's better to be smart than to be lucky?

Permission from Ralf Schwarzer to use the General Self-efficacy Scale

Everything You Always Wanted to Know About the Self-Efficacy Scale But Were Afraid to Ask

by Ralf Schwarzer
Updated: April 22, 2005

The intended purpose of this **FAQ** is to assist the users of the scales published at the author's web pages http://www.ralfschwarzer.de/ Before attending to the questions below, you should carefully study our web. You might have no questions any longer after reading the web pages.

Do I need permission to use the General Perceived Self-Efficacy (GSE) scale?

You do not explicitly need our permission to utilize it in your research studies. We hereby grant you permission to use and reproduce the General Self-Efficacy scale for your study, given that appropriate recognition of the source of the scale is made in the write-up of your study.

The international source is:

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON.

The source for the German version is:

Schwarzer, R., & Jerusalem, M. (Eds.). (1999). *Skalen zur Erfassung von Lehrer- und Schülermerkmalen: Dokumentation der psychometrischen Verfahren im Rahmen der Wissenschaftlichen Begleitung des Modellversuchs Selbstwirksame Schulen*. Berlin: Freie Universität Berlin.

I am not sure whether I want to measure general perceived self-efficacy (GSE) or specific health-related self-efficacy.

You have to decide which one fits your research question. If you intend to predict a particular behavior, you are better off with a specific scale. You might be best off by designing your own items, tailored to your study, such as:
"I am certain that I can do .xy.., even if ..zz .." (1 2 3 4).

Health-specific self-efficacy scales can be found at:
http://userpage.fu-berlin.de/~health/healself.pdf

What is the scoring procedure for the GSE?

Add up all responses to a sum score. The range is from 10 to 40 points. Or use a mean score, such as:

```
COMPUTE  SEFF = Mean (SE1, SE2, SE3, SE4, SE5, SE6, SE7, SE8, SE9, SE10).
```

In many samples, the mean was around 2.9.

General Self-Efficacy Scale

Please rate each of the following questions according to the following scale: *1. Not at all like me; 2. Somewhat not like me; 3. Sometimes like me/Sometimes not like me; 4. Somewhat like me; 5. Totally like me*

Answer	Statement
	1. I can always manage to solve difficult problems if I try hard enough.
	2. If someone opposes me, I can find the means and ways to get what I want.
	3. It is easy for me to stick to my aims and accomplish my goals.
	4. I am confident that I could deal efficiently with unexpected events.
	5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
	6. I can solve most problems if I invest the necessary effort.
	7. I can remain calm when facing difficulties because I can rely on my coping abilities.
	8. When I am confronted with a problem, I can usually find several solutions.
	9. If I am in trouble, I can usually think of a solution.
	10. I can usually handle whatever comes my way.

Appendix C: Additional Documentation for the ATES Pilot Study

Below is a detailed list of the documentation for the ATES Pilot Study. This information may be found at http://nces.ed.gov/surveys/gemena/documentation.asp.

- Summary of 2014 Expert Panel Meeting (118 KB)
- Report on 2014 Training Program Concept Interviews (101 KB)
- Report on Wave 13 of the 2008 Survey of Income and Program Participation: *Measuring Alternative Educational Credentials: 2012.*
- GEMEnA monthly meeting notes (579 KB)
- Report on 2013 Cognitive Interviews on Certifications, Licenses, and Certificates (398 KB)
- Report on 2013 Focus Groups with Participants in Work-related Education and Training (358 KB)
- February 2013 Background Paper on *Participation in Noncredit Occupational Education and Training* (296 KB)
- Summary of November 2012 Expert Panel Meeting (95 KB)
- Report on 2012 Focus Groups with Certificate Holders (265 KB)
- January 2012 Federal Committee on Statistical Methodology research conference paper on *Measurement Strategies for Identifying Holders of Certificates and Certifications* (237 KB)
- Report on 2010 Adult Training and Education Survey Pilot Study

- Summary of November 2009 Brookings Institute Roundtable on Subbaccalaureate Credentials  (178 KB)

Appendix D: Binomial Test for LOC

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
LOC1	Group 1	No	106	.85	.50	.000
	Group 2	Yes	19	.15		
	Total		125	1.00		
LOC2	Group 1	No	78	.62	.50	.007
	Group 2	Yes	47	.38		
	Total		125	1.00		
LOC3	Group 1	Yes	55	.44	.50	.210
	Group 2	No	70	.56		
	Total		125	1.00		
LOC4	Group 1	No	13	.10	.50	.000
	Group 2	Yes	112	.90		
	Total		125	1.00		
LOC5	Group 1	No	105	.84	.50	.000
	Group 2	Yes	20	.16		
	Total		125	1.00		
LOC6	Group 1	Yes	108	.86	.50	.000
	Group 2	No	17	.14		
	Total		125	1.00		
LOC7	Group 1	No	123	.98	.50	.000
	Group 2	Yes	2	.02		
	Total		125	1.00		
LOC8	Group 1	No	59	.48	.50	.654
	Group 2	Yes	65	.52		
	Total		124	1.00		
LOC9	Group 1	No	53	.42	.50	.107
	Group 2	Yes	72	.58		
	Total		125	1.00		
LOC10	Group 1	No	94	.75	.50	.000
	Group 2	Yes	31	.25		
	Total		125	1.00		

LOC11	Group 1	No	122	.98	.50	.000
	Group 2	Yes	3	.02		
	Total		125	1.00		
LOC12	Group 1	No	71	.57	.50	.152
	Group 2	Yes	54	.43		
	Total		125	1.00		
LOC13	Group 1	Yes	87	.70	.50	.000
	Group 2	No	38	.30		
	Total		125	1.00		
LOC14	Group 1	No	73	.58	.50	.073
	Group 2	Yes	52	.42		
	Total		125	1.00		
LOC15	Group 1	No	76	.62	.50	.011
	Group 2	Yes	47	.38		
	Total		123	1.00		
LOC16	Group 1	No	121	.97	.50	.000
	Group 2	Yes	4	.03		
	Total		125	1.00		
LOC17	Group 1	Yes	56	.45	.50	.283
	Group 2	No	69	.55		
	Total		125	1.00		
LOC18	Group 1	No	93	.74	.50	.000
	Group 2	Yes	32	.26		
	Total		125	1.00		
LOC19	Group 1	No	112	.90	.50	.000
	Group 2	Yes	13	.10		
	Total		125	1.00		
LOC20	Group 1	Yes	121	.97	.50	.000
	Group 2	No	4	.03		
	Total		125	1.00		
LOC21	Group 1	No	98	.78	.50	.000
	Group 2	Yes	27	.22		
	Total		125	1.00		

LOC22	Group 1	Yes	84	.67	.50	.000
	Group 2	No	41	.33		
	Total		125	1.00		
LOC23	Group 1	No	82	.67	.50	.000
	Group 2	Yes	41	.33		
	Total		123	1.00		
LOC24	Group 1	Yes	61	.49	.50	.858
	Group 2	No	64	.51		
	Total		125	1.00		
LOC25	Group 1	Yes	114	.91	.50	.000
	Group 2	No	11	.09		
	Total		125	1.00		
LOC26	Group 1	Yes	114	.91	.50	.000
	Group 2	No	11	.09		
	Total		125	1.00		
LOC27	Group 1	No	111	.89	.50	.000
	Group 2	Yes	14	.11		
	Total		125	1.00		
LOC28	Group 1	Yes	101	.81	.50	.000
	Group 2	No	24	.19		
	Total		125	1.00		
LOC29	Group 1	Yes	50	.40	.50	.031
	Group 2	No	75	.60		
	Total		125	1.00		
LOC30	Group 1	No	55	.44	.50	.210
	Group 2	Yes	70	.56		
	Total		125	1.00		
LOC31	Group 1	No	109	.87	.50	.000
	Group 2	Yes	16	.13		
	Total		125	1.00		
LOC32	Group 1	No	3	.02	.50	.000
	Group 2	Yes	122	.98		
	Total		125	1.00		

LOC33	Group 1	Yes	67	.54	.50	.474
	Group 2	No	58	.46		
	Total		125	1.00		
LOC34	Group 1	Yes	53	.43	.50	.149
	Group 2	No	70	.57		
	Total		123	1.00		
LOC35	Group 1	No	122	.98	.50	.000
	Group 2	Yes	3	.02		
	Total		125	1.00		
LOC36	Group 1	Yes	53	.42	.50	.107
	Group 2	No	72	.58		
	Total		125	1.00		
LOC37	Group 1	No	122	.98	.50	.000
	Group 2	Yes	3	.02		
	Total		125	1.00		
LOC38	Group 1	Yes	125	1.00	.50	.000
	Total		125	1.00		
LOC39	Group 1	No	120	.96	.50	.000
	Group 2	Yes	5	.04		
	Total		125	1.00		
LOC40	Group 1	Yes	112	.90	.50	.000
	Group 2	No	13	.10		
	Total		125	1.00		