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An Analysis of Generational Differences in the Selection and Pursuit of Professional Certification

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An Analysis of Generational Differences in the Selection and Pursuit of Professional

Certification

by

Dania M. Eter

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

of

Doctorate in Business Administration

in the

Robinson College of Business

of

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GEORGIA STATE UNIVERSITY

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ACCEPTANCE

This dissertation was prepared under the direction of the *DANIA M. ETER* Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

Richard Phillips, Dean

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and for being my rock, my role model, and my cheerleader; I could not have done this without you.

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ABSTRACT

An Analysis of Generational Differences in the Selection and Pursuit of Professional
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Dania M. Eter

April 2020

Chair: Dr. Danny Bellenger

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Over a number of decades, professional certification bodies have experienced a steady
interest in their certification offerings. However, recently, multiple professional certification
bodies have been undergoing a decline in exam applications in the US market. This dip in
application volume also impacts industry vendors and consulting firms supporting the
professional certification industry. Millennials (Generation Y) are now entering and
developing in the job market. This research evaluates available literature from a socialization
theory lens to examine the motivations of Generation Y and understand their attitudes toward
professional certification compared to baby boomers and Gen X. We use a quantitative method
focused on human resource certification to explore the argument that baby boomers and
Generation X have different attitudes toward professional certification to advance their careers
than millennials. Results varied; whereas if certified, millennials agreed that professional
certification enhanced their marketability and if not certified, millennials continued to evaluate
the investment. Financial and time constraints are keeping millennials from earning those
certifications. While some are still contemplating the value and making final plans for their
career journeys, the majority of those who are certified earned their certification within the first

five years. The research also concluded that individuals with advanced college degrees seek human resource certification.

Contributions to theory and practice are discussed. Although each generation is influenced by its unique shared experiences that impact the generation's views and attitudes, all generations seek career growth, marketability, and recognition as they age and have more personal and professional responsibilities, regardless of their generation. From a practice standpoint, employers should invest in millennials through learning, development, financial support, and time. Also, certifying bodies should consider learning and certification preparation solutions that are affordable and small in size and that are digital and accessible 24/7. Recommendations are also made for future research needed to better understand this generation, which comprises nearly half of the American workforce in 2020.

INDEX WORDS: Professional certification, assessments, age cohorts, millennials (Generation Y), Generation X, baby boomers, socialization theory, human resource certification

I   CHAPTER 1: INTRODUCTION

I.1   Background

Professional certification is a designation granted by a professional certifying body in the field to assure knowledge, skills, and ability to perform identified domains, tasks, and subtasks of a given job role (Fertig, 2009). Certification processes are based on the Standards for Educational and Psychological Testing, a joint publication of the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME). Two organizations, The American National Standards Institute (ANSI) and The Institute for Credentialing Excellence (ICE), set the standards for the accreditation of personnel certification. Accreditation is not required; however, many professional certifying bodies seek accreditation for validation of their rigorous process and to demonstrate the quality and rigor of their certification to candidates.

To earn a certification, candidates must meet eligibility requirements. Passing a rigorous exam(s) based on industry standards is required. Because certifications have a time limit, it is essential for candidates to stay current by earning continuing education hours after passing the exam(s) and earning the certification. The certification blueprint that serves as the guideline for the exam(s) contains the domains, tasks, and subtasks that are identified through a practice analysis exercise (Fertig, 2009) or job task analysis process attended by certified individuals in the field of study who are from multiple industries, organizational sizes, and geographic locations. If the certification is global or international, a representation of this population is required during this process.

Many individuals seek professional certification for recognition and marketability. Similarly, many organizations use certification as a screening process for applicants and to

enhance the organizational portfolio. Wiley proposes that the main goal of certifications is the advancement of skills (1995).

The professional certification industry grew exponentially in the last few decades, with much of this growth due to the passage of the Educate America Act of 1994. This act was designed to promote the development and adoption of a voluntary national system of skill standards and certifications. Today, there are over 2,500 certifications across multiple domains, and over 1.6 million people worldwide hold 2.4 million certifications (Belton, 2016).

Recently, the American Society of Association Executives (ASAE) and The Institute for Credentialing Excellence (ICE) created a Professional Certification Coalition (PCC) with a membership of over 100 professional certification bodies across various industries. The PCC was formed to address efforts to enact state legislation that would undermine certifications developed or offered by non-governmental, private certification organizations.

For the last few decades, interest has been growing in professional certifications such as certifications for Professional in Human Resource (PHR), Project Management Professional (PMP), and Chartered Financial Analyst (CFA). Year after year, application volumes in the US market have increased. During the last 43 years, the Human Resource Certification Institute has certified over 500,000 people globally (HR Certification Institute, n.d.). For organizations that generate most of their income from certification products, this increased demand has been instrumental in the development of the organizations and the expansion of their portfolio offerings.

I.2   Research Problem and Question

From 2016-2018, multiple professional certifications experienced a 3% to 4% decline in exam applications in the US. Although financial data is not publicly available, multiple

leaders of certifying bodies have presented at industry conferences (e.g., Institute of Credentialing Excellence and Association of Test Publishers) expressing the evident declines and concerns about application volumes. Take for example the HR Certification Institute (HRCI); based on their website, they report the total number of test takers every year (HR Certification Institute, n.d.). Those numbers have been in decline year over year. Additionally, in March 2019, the Association of Test Publishers' conference program included many sessions that addressed alternative options to evolve with the digital age, test delivery methodology, and exam formats to compensate for lower application numbers and to engage new consumer expectations (Association of Test Publishers). The Institute of Credentialing Excellence also published its 2019 benchmarking survey, which showed reduced application numbers for some programs that contributed to the survey (Institute of Credentialing Excellence, n.d.). Organizations are anxious about the impact of this decline on the value of their offerings and on the ability to continue their programs. This decline is pushing organizations to investigate all variables further, to invest in research to understand the change, and to diversify product offerings for growth.

In April 2018, for example, the Human Resource Certification Institute, the certifying body for the PHR and the SPHR, launched a product focused on key current HR/business-related topics in the form of a micro credential and micro learning (HR Certification Institute, n.d.). This product offers candidates the opportunity to learn and be assessed on a specific topic anytime, anywhere, for a reasonable cost. Candidates can receive a badge for passing the assessment, which can also partially fulfill continuing education hours required to maintain one's certification cycle.

This dip in application volume also impacts industry vendors and consulting firms that support the professional certification industry, vendors such as test delivery companies and psychometrics, as well as training and program management firms that invest in alternative innovative products to support their client's growth and to serve the certification community. Pearson VUE, the leader in computer-based testing, introduced a new testing framework outside their flagship Pearson Professional Center that allows remote testing from anywhere at any time (Pearson Vue, n.d.). Because of the flexibility, this modality of testing can reach more candidates compared to traditional testing offered in specific brick and mortar locations that have limited hours.

Many drivers could be contributing to the decline in professional certification, such as economic changes, job markets (Trading Economics, 2019), and lack of growth/interest in certain professions. As of January 2019, the unemployment rate was 4%. Based on historical trends in the certification industry, when the unemployment rate is low, candidates are less likely to earn certifications as they are not as worried about differentiating themselves from other job applicants compared to job seekers in a high unemployment market like that of the late 2000s (Belton, 2016). Earning a certification requires full engagement in terms of time, money, and continuous learning. Volume declines could also be attributed to the perceived value of earning a certification. When examining the perceived value of earning a professional certification in the human resources field, both Belton (2016) and Richardson (2016) confirmed that there is an intrinsic and extrinsic relationship to the satisfaction of earning that certification.

Another common driver in the decreased demand for professional certifications is the impact of the millennial generation, also known as Generation Y (born between 1981 and

2001) on the job market. Although there is some disagreement about the cutoff point for

Generation Y, for this research, we are defining Generation Y as those born between 1981 and

2001. With over 80 million people, Generation Y is the largest population to enter the

workforce, outnumbering even the baby boomers (Millenbah & Wolter, 2009; VanMeter,

Grisaffe, Chonko, & Roberts, 2012). The oldest millennials are now 39 years old, and many of

the youngest are just entering college.

Although research has focused on the importance millennials place on career

advancement, the need to develop new skills, and the need to be recognized and promoted

quickly, researchers have not investigated attitudes toward professional certification to advance

their careers. Understanding whether millennials value professional certification as a way to

advance their careers is an instrumental component in evaluating the impact on the certification

industry. Although millennials and other age cohorts have been discussed in academic

resources, and the value of professional certification has been researched occasionally, this

research examines the attitudes of Generation Y toward professional certification compared to

the attitudes of prior generations. This research focuses on answering the research question:

Compared to older age cohorts, what are the millennials' attitudes toward professional

certification, and what are their reasons?

Owners of professional certification programs along with professional partners that

service the industry, such as exam delivery companies, training companies, and boutique

research organizations typically led by psychometricians, will find this research instrumentally

beneficial as their business models are dependent on consumers of these certifications. These

businesses will have great interest in the knowledge generated from our research. Findings will

allow colleagues in the industry to better understand the issues, make educated decisions, and adjust to support, grow, and/or alter their product portfolios.

Millennials have changed the way we live, learn, work, and play. The current research explores millennials' attitudes toward certification and the value that they place on professional certification to advance their careers. With this backdrop, we evaluate available literature using a socialization theory lens to examine the attitudes and motivation of the millennial generation, and we discuss the variability compared to other generations such as baby boomers and Generation X. This is built on the premise that Generation Y has similar behaviors, attributes, motivations, preferences, and values to older generation cohorts as suggested by the concept of socialization.

I.3   Theoretical Framework

When analyzing the extent to which millennials pursue and value professional certification, we discuss the theory of socialization. Socialization is the means by which infants begin to obtain the skills necessary to perform as effective members of society (Lumen, n.d.). Empowered with this knowledge, we focus our research on secondary or adult socialization and on the gradual development of self through the introduction of new agents of learning such as work peers and work/occupation expectations. Adult socialization is more likely to change behavior, while child socialization shapes basic values. Thus, adult socialization teaches people to take on new duties and to change individual views.

Group socialization, in this case focused on millennials, is the theory that an individual's peer groups, rather than parental figures, influence his or her personality and behavior/attitudes in adulthood. Like other age cohorts, millennials have experienced a multitude of environmental, technological, and sociological changes that impacted their life experiences and expectations through the five agents of socialization, which include family,

mass media, work peers, and school (Quizlet, n.d.). The individual or cohort feels an urge to conform to what is expected and what motivates. In this case, individuals become socialized as they act in accordance with the expectations of others.

Although some research states that the interaction of people over a prolonged period of time affects them and tends to change or strengthen their beliefs and behavior, other literature claims that age cohorts are no different because individuals within a cohort experience similar challenges and changes as adults. Socialization is the vital link between the individual and society, permitting individuals to learn the norms, values, language, skills, beliefs, and other patterns of thoughts and action that are essential for social living. Additionally, socialization also enables society to reproduce itself and to safeguard its continuity (Mass Communication, 2012).

I.4   Structure and Expected Contribution

The purpose of conducting this review is to evaluate millennials' attitudes toward professional certification as a way to advance their careers and to understand the impact of those attitudes on the certification industry. To understand the impact of this generation on the certification industry, the following chapters attempt to answer the research question: *Compared to older age cohorts, what are the millennials' attitudes toward professional certification, and what are their reasons?*

Chapter 2: Literature Review. In this chapter, we review previous literature regarding age cohorts, focusing on baby boomers, Generation X, and Generation Y from a socialization theory perspective. Additionally, we review research discussing professional certification and then propose a model for the current research along with the hypothesis.

Chapter 3: Methodology. This chapter focuses on the study design. To answer our research question, we propose a survey of certified and noncertified human resource professionals across age cohorts.

Chapter 4: Data Collection Results and Discussion. This chapter further discusses the data collection process, sample, results, and analysis of the study in light of the literature review.

Chapter 5: Findings, Contributions, and Limitations. Based on the data analysis, we evaluate findings. We also discuss implications and contributions to the theory and to the professional certification industry. Lastly, we assess limitations of the study and propose recommendations for future research.

Chapter 6: Conclusion. This chapter highlights the generalizability of the data and provides an overview of the research.

This layout, along with the application of the research element format established by Mathiassen, Chiasson, and Germonprez (2012) described in Table 1, will shed the light and structure the argument about the future of professional certification by investigating the characteristics and expectations of the millennial generation and their impact on professional certification. Interest in certification is a function of millennials' motivation for career advancement, which in essence is an interest in being recognized and being marketable. A better understanding of the value that millennials place on certification is critical to predicting the future of the certification industry.

Table 1. Research Study Elements

Component	Specification
P	For years, earning a professional certification has been one of the tools for optimizing one's marketability. As a result, the certification industry has experienced instrumental growth over the last few decades. In the last few years, however, professional certification uptake has been on the decline. This research investigates the attitudes of the millennial generation toward professional certification compared with previous cohorts.
A	Millennials are interested in skill building, not career building. They also enjoy continuous learning, fast promotions, and recognition. While benefits for earning a certification have been discussed in detail, the attitudes of millennials toward professional certification has not.
F	Research uses socialization theory to understand baby boomers', Generation Xers', and millennials' characteristics, upbringing, values, and attitudes. Socialized differently, attitudes between cohorts will be different, while those within the same cohort will have similar attitudes toward professional certification.
M	Quantitative survey-based data collection distributed through the Qualtrics survey tool.
RQ	Compared to older age cohorts, what are the millennials' attitudes toward professional certification, and what are their reasons?
C	As millennials enter and develop in the job market, this research explores their attitudes toward professional certification to advance their careers. Owners of professional certification programs, along with professional partners that service the industry, will find this research instrumentally beneficial, as their business model is dependent upon the consumers of these certifications.

Note. Reprinted from Mathiassen, L., Chiasson, M., & Germonprez, M. (2012). Style composition in action research publication. *MIS Quarterly, 36*. doi:10.2307/41703459

II   CHAPTER 2: LITERATURE REVIEW

This chapter examines the literature of socialization theory and the terms related to this research. More specifically, we discuss the literature focusing on the characteristics and social events of each of the following generations – baby boomers, Generation X, and Generation Y – with the expectation that their socialized experiences are different based on their generational events, which results in them having different attitudes toward professional certification. We focus on Generation Y to understand the attitudes of this generation toward professional certification, which is the core of our study. Lastly, we outline professional certification and end the chapter with the proposal of the research model and hypotheses.

The current research evaluates the attitudes of millennials toward professional certification to advance their careers. This is not a widely discussed topic in peer-reviewed journals, particularly if looked at through a very narrow lens. Although peer-reviewed publications of theoretical and empirical literature that specifically address professional certification and millennials are sparse, there is a plethora of literature on millennials and generational differences as well as on professional certification. To understand millennials' attitudes toward professional certification, we focused our literature review on key words addressing those two topics and assessed the findings from a socialization theory perspective.

II.1   Socialization Theory

Socialization in society shapes how people see the world and how they reflect on it. The process of learning from family members, peers, school, and work mold one's perceptions toward what is important and what is expected. Furthermore, people born in the same time frame have similar experiences such as technological advancements, music, globalization, life events, and historical moments like wars and natural disasters that impact and shape both their

attitudes and their conduct (Corsten, 1999; Grusec & Hastings, 2014; Sung-Bum & Guy, 2006).

Socialization is the process of helping an individual become part of society. Socialization occurs throughout the lifetime of individuals from the moment they are born, with primary influences from parents shaping their attitudes, motivations, and biases through experiences and interactions (Grusec & Hastings, 2014). However, multiple agents' impact and influence this socialization process, including the individuals themselves, especially as they progress through early adulthood and enter the workforce. Smith et al. (2016) discussed socialization of new employees as "injunctive logic," the moral maps tamed by their beliefs and past experiences with which they are able to compare their expectations to the reality they experience at the new workplace. Our research aligns with this school of thought as it evaluates the attitudes millennials place on professional certification to advance their careers based on their beliefs, exposures, experiences, and expectations and examines the impact of those attitudes on the certification industry.

Socialization process refers to the transmission from one generation to the next (Grusec & Hastings, 2014). Although each generation is influenced by its generation's social and historical events, it is also evident that the transmission from generation to generation, specifically in training for occupations, plays a role in millennials' attitudes toward professional certification. Additionally, individual socialization is strategically impacted by parents who belong to a different generation with specific socio-economical class, education, and successes; this transmission impacts the views of the socialized individuals who aim for similar education and social standards as their parents (Grusec, 2014; Loughlin & Barling, 2001). Children model others and are receptive to reward systems and incentives in the socialization process (Grusec &

Hastings, 2014), which also reinforces the interest of aligning with a specific socio-economical standard and the pursuit of a certain path and behavior to achieve that standard.

As noted previously, individuals contribute to their own socialization process. Early on, individuals develop self-understanding and self-consciousness (Grusec & Hastings, 2014). As they later interact and socialize with peers, siblings, parents, and the school system, they use this development to understand and seek recognition, social approval, achievement, and competency (Grusec & Hastings, 2014). Additionally, their first part time jobs as teenagers influence and contribute to their values and expectations of work (Loughlin & Barling, 2001); this socialization contributes to their interest and motivation in setting personal goals for growth and in being recognized and seen as competent members of society. Being a competent member of society also relates to being a competent individual within an area of expertise. Similarly, research on earning professional certification emphasizes peer recognition, achievement, and competency in the profession (Belton, 2016; Fertig, 2009; Lengnick-Hall & Aguinis, 2012; Lester & Dwyer, 2012; Lester, Mencl, Maranto, Bourne, & Keaveny, 2010; Richardson, 2016; Wiley, 1995)

Social experiences such as music, video games, media, social network, technological advancement, wars, and economic changes influence individual developments and attitudes toward growth and accomplishments; these shared experiences also create a cohort experience that differentiates the cohort from other age cohorts (Corsten, 1999; Grusec & Hastings, 2014; Sung-Bum & Guy, 2006; VanMeter et al., 2012; Wiedmer, 2015). As an example, Generation X, that experienced the cold war, is expected to have a different reaction toward growth and accomplishments from Generation Y that has no experience of that event. Similarly, those in Generation Y who grew up with globalization during the digital age have experiences that differentiate them from previous cohorts. Such memories and experiences influence the social

and economic behaviors of each generation. This notion of socialization experiences and memories influencing cohorts or individual behaviors further justifies our research into Generation Y attitudes toward professional certification compared to those of baby boomers and Generation X.

According to Ford (2007), "A generation is a group of people who share the same place and time in history." Joshi, Dencker, Franz, & Martocchio (2010) describe it as belonging to a "membership" (2010). Every generation is influenced by its own historical events and demographics (Grusec, 2014; Joshi et al., 2010). Generations have similar experiences, views, and opinions, which in turn, shape their motivations, attitudes, and behaviors. As Joshi et al. (2010) point out, each generation is linked to the next, and a transfer of skills and knowledge could easily influence the attitudes of the next generation (2010). By examining the three generations that make up the majority of today's workforce (baby boomers, Generation X, and Generation Y), we can develop a research model to understand the millennials' attitudes toward professional certification compared to the attitudes of previous generations.

Baby Boomers. Baby boomers, a generation born between 1946 and 1964, are prosperous and optimistic (Twenge, Campbell, Hoffman, & Lance, 2010; Wiedmer, 2015). Boomers enjoyed post-war prosperity, saw changes in women's status, witnessed the civil rights movement, and lived through Water Gate. They experienced astronauts landing on the moon, among other major events. Because most Caucasian baby boomers grew up in a racially divided environment, their lack of exposure to diversity has impacted their interactions in an increasingly diverse workplace (Mencl & Lester, 2014). As a generation, baby boomers are career focused and hard workers, and they hold high positions within the workforce (Macky, Gardner, Forsyth, & Cennamo, 2008; Becton, Walker, & Jones-Farmer, 2014). Baby boomers

are described as ambitious, positive, confident, and successful (Ford, 2007; Sung-Bum & Guy, 2006; Butler & Gheorghiu, 2010). Work is central for baby boomers (Benson, Brown, Glennie, O'Donnell, & O'Keefe, 2018), and they seek a traditional profession track (Bennett, Beehr, & Ivanitskaya, 2017). Baby boomers' experiences caused them to believe in the system and respect hierarchy (Benson et al., 2018). However, because of the size of their cohort, they also understood early on that they had to compete for slots at school and at work (Hill, 2002).

Baby boomers are focused on professional goals and expect to work their way to the top. Associating their worth to the positions they hold, boomers are responsible and focused. Often the first to be educated in their families, their socialized experiences pushed them to be goal oriented and career driven and to seek respect, reward, and recognition (Sung-Bum & Guy, 2006; Wiedmer, 2015). As Butler and Gheorghiu explain, "education is a legacy not a privilege" for baby boomers (2010). Because they are career oriented, baby boomers frequently view job changes as disruptive to their goal of reaching the top. Boomers are described as organization driven (Twenge et al., 2010; Benson et al., 2018) and have worked during a time period in which the expectation was that people held one job for life (Becton et al., 2014). They value learning and building skills to accomplish their goals (Ford, 2007; Sung-Bum & Guy, 2006; Svara, 2010) and see promotion and salary increases as a reward and a sign of achievement.

Because of their focus on learning and building skills, their motivation toward career growth and advancement, and their emphasis on recognition and promotion, baby boomers are expected to have positive attitudes toward professional certification. Earning professional certification assures that recipients possess the knowledge, skills, and ability to perform the job (Adams, Brauer, Karas, Bresnahan, & Murphy, 2004; Lester & Dwyer, 2012; Lester et al., 2010; Richardson, 2016; Roberts, 2006; Wiley, 1995). It also signals that they are experts in their

professions and credible references in their domain (Adams et al., 2004; Belton, 2016; Lengnick-Hall & Aguinis, 2012; Lester & Dwyer, 2012; Lester et al., 2010; Wiley, 1995) and that they are recognized by their peers and employer as adding value to the organization (Adams et al., 2004; Lengnick-Hall & Aguinis, 2012; Lester et al., 2010; Richardson, 2016; Wiley, 1995). Lastly, earning a certification can contribute to career development and advancement (Belton, 2016; Fertig, 2009; Richardson, 2016), which is one of the main focuses of the baby boomer generation.

Generation X. Unlike their parents, Generation X, also referred to as the "lost generation," experienced economic crisis (Twenge et al., 2010; Becton et al., 2014) and observed a gradual decline of the American global power. Born between 1965 and 1980, Generation X also observed an unsteady job market with a reduced workforce (Macky et al., 2008). These experiences cause them to question the merits of organizational loyalty (Benson et al., 2018). As a result, many have become self-directed, focusing on learning and growth in their careers.

Generation X, also referred to as the MTV generation (Butler & Gheorghiu, 2010), grew up with divorced parents, in dual income households, and during the rise of information technology where the Internet was introduced and owning a personal computer was common and affordable (Sung-Bum & Guy, 2006; Wiedmer, 2015). Generation X has been described as skeptical and as exhibiting little interest in social interactions and loyalty (Ford, 2007; Svara, 2010; Butler & Gheorghiu, 2010).

Literature shows that in the workplace, Generation X has less interest than their parents in power and rising to the top, and they tend to be more focused on teamwork and collaboration. They are generally comfortable with diversity (Twenge et al., 2010) of all kinds and seek to fit in (Mencl & Lester, 2014). Enjoying technology and the Internet, Generation X prefers work

flexibility and electronic communications, and they seek achievement and recognition (Sung-Bum & Guy, 2006; Svara, 2010; Wiedmer, 2015).

According to Sung-Bum and Guy (2006), there is very little difference between the job goals of Generation X and baby boomers. Although Generation X is open to job hopping, their main focus is on financial planning, financial security, and money (Sung-Bum & Guy, 2006; Svara, 2010; Becton et al., 2014). Additionally, they pursue achievement and acknowledgement mainly for job security rather than for power. Based on this research, we posit that this generation will have a positive attitude toward earning professional certification. Generation X's reactions to job security and financial planning could very well be based on their experience of being socialized in broken families, during a time of reduced economic prosperity that emphasized the need to save. Earning professional certification can contribute to career advancement and development (Wiley, 1995; Richardson, 2016; Belton, 2016; Fertig, 2009; Cohen, 2012), making it appealing to a generation that seeks job security. Additionally, evidence has shown that earning professional certification can lead to new positions as well as increase marketability and/or financial promotions (Belton, 2016).

Generation Y. Generation Y, also known as millennials, is a generation born between 1981 and 2001, and with 80 million people, it is the largest generation after the baby boomers (Millenbah & Wolter, 2009; Sung-Bum & Guy, 2006). Generation Y has been in the job market since 1999 (Sung-Bum & Guy, 2006). Literature published between 2008 and 2019 has described the millennial generation's work-related values, characteristics, and expectations. Much of the emerging literature presents some correlating themes between the attitudes of millennials toward professional certification for advancing their careers. Because the oldest millennials are currently 19-39, unlike older generations, we are unable to track millennials

throughout their careers to compare whether their views and attitudes toward career varies and changes as they age and advance.

Millennials experienced high school shootings, terror attacks, the Iraq war, and natural disasters (Wiedmer, 2015). These experiences built a sense of social responsibility in them to give back to their communities, and to be socially connected. Millennials also enjoy public service and doing things in groups (VanMeter, 2012; Millenbah, 2009; Wiedmer, 2015; Svara, 2010; Butler & Gheorghiu, 2010). They also seek to be more balanced in their lives (Bennett et al., 2017; Macky et al., 2008; Becton et al., 2014), and their digitally savvy facilitates their desire for a work/life balance (Hershatter, 2010) by giving them the ability to work from anywhere at any time. Growing up, millennials were socialized to trust that their opinions matter (VanMeter et al., 2012) and that everyone is a winner (Millenbah, 2009), with scoreboards a rarity at millennial games (Hill, 2002). Often, they grew up coddled by their parents (VanMeter et al., 2012).

Based on the literature, millennials' interaction with technology comes very naturally (Twenge et al., 2010), and they expect to use technology in everyday interactions (Wiedmer, 2015). Taking the socialization theory into consideration, Eisner (2005) points out that, "Gen Y was socialized in a digital world." Millennials have greater familiarity with communication, media, and digital technologies than other generations. Millennials are more connected and transient than previous generations (Khanfar, 2012; Hershatter, 2010), and they expect digital communication 24/7, 365 days a year. Hershatter and Epstein (2010) refer to millennials as "digital natives," while other generations who lived prior to the development of the Internet feel like "digital immigrants." These digital natives, being born into a highly-networked environment and expecting events to happen instantly with flexibility and customization, might

not be interested in pursuing a professional certification that is traditionally scheduled and delivered in a physical testing center.

Although the perception among baby boomers and Gen Xers is that millennials are not career oriented and are not willing to work hard, the opposite holds true in that millennials tend to be hard working and, according to Hershatter (2010) more confident in business than previous cohorts. Hill (2002) adds that millennials have less of a need to differentiate themselves from their peers, yet they expect recognition and rapid advancement (VanMeter et al., 2012). Mencl and Lester (2014) confirm that career advancement is more important to millennials than to Generation X and to baby boomers. In other words, other generations may have placed certain stereotypes on Generation Y such as being lazy; yet the literature refutes that notion as millennials socialize and demonstrate their characteristics.

Millennials are focused on resume building and expect to be in the spotlight (Sandeen, 2008). They are success oriented and status conscious, thriving on attention and support as shown by Sandeen (2008), findings that were replicated by Ng, Schweitzer, and Lyons (2010), which also added that millennials' top priority is the opportunity for advancement. Even before entering the workforce, millennials had to be competitive and seek the best colleges to attend, which they believed would impact their future marketability (Hershatter, 2010; Twenge et al., 2010). Additionally, promotions and pay increases rank quite high on their work-related expectations. Millennials are identified as ambitious and impatient, expecting promotion to be quick and frequent (Twenge et al., 2010). Deal, Altman, and Rogelberg (2010) noted that although millennials are ambitious and expect prompt promotions and career advancement, they do not place work as central in their lives. Bennett et al. (2017) add that research has

shown that millennials are self-centered and have huge egos. In fact, some researchers called them "Generation ME" because of their strong sense of entitlement (Twenge et al., 2010).

The theory of socialization is enforced yet again, illustrating that socialization is the vital link between the individual and society. It permits millennials to learn the norms for social living while influencing society through their expectations and characteristics (Grusec & Hastings, 2014). We should also recognize the importance of socialization on millennials' behaviors as they make choices similar to those of their baby boomer and Generation X parents, (Tang, 2017) placing financial benefits as a top priority. Additionally, literature suggests that millennials are behaving similarly to other cohorts as they form households and become older. Several authors believe there are misconceptions regarding some of the millennial work values and characteristics discussed above. Some authors agree that millennials want similar things from employers as other generations; for example, research indicates that the job itself and pay were most frequently cited as the most important factors for both Gen X and Gen Y (Bristow, Amyx, Castleberry, & Cochran, 2011).

Job security and job stability were also common themes explored by researchers, with millennials as a population, watching as their parents lost their jobs (Loughlin & Barling, 2001). Thus, millennials tend to be more interested in job security than in job stability. Millennials are not company driven; they are skill driven. Bennett et al. (2017) state that compared to previous generations, millennials are less likely to stay at one company. As Hershatter (2010) explains, "they are loyal to organizations that are loyal to them." Even when initially seeking employment and accepting a job offer, they will accept a better offer if it materializes. They look for organizations that offer the training to gain skills and to become more marketable; they also seek multiple employments simultaneously and enjoy being self-

employed (Wiedmer, 2015). Research by Dries, Pepermans, and De Kerpel (2008) confirms that 95% of millennials find job security important, which is higher than the last three generations (silent, baby boomer, and Generation X). Millennials do not count on organizations to offer them job stability, yet they count on organizations to offer them the training to be employable. They want to be active participants in their future (Svara, 2010) and feel at ease reaching for higher levels of leadership if it impacts their growth. They see organizations as flat (Hershatter, 2010) and do not feel the need to follow structure. Research by Shaw and Fairhurst (2008) reinforced findings by Dries et al. (2008) and added that once in the job market, millennials are perceived to be demanding, focusing on constant skill development and playing a primary role in their growth plans (Svara, 2010). This has a direct impact on job hopping and the reduction of tenure in a job, role, and/or company.

The effects of socialization can be seen in the way millennials follow in the footsteps of others while still charting different work behaviors and expectations for growth, development, and advancement. Millennials demonstrate interest in growth, success, recognition, and potentially following the footsteps of their parents as they age. Hershatter (2010) suggests that millennials will do whatever it takes to develop skills and earn the appropriate credential if it contributes to their personally set targets.

Today, with the oldest millennials at 39 and with only 20 years in the workforce, diverse literature about this cohort continues to evolve as this generation ages. With current characteristics such as lack of patience to advance in their career, attention on immediate results, focus on building skills over career, and high need for attention, immediate feedback, and constant support could indicate their lack of interest in pursuing professional certifications. Professional certification requires months of preparation, money for initial examination and

continuous recertification (Belton, 2016; Richardson, 2016), patience to dedicate time to study, self-discipline, and most importantly, interest in a specific career path because the main focus is on building one profession and advancing one career.

Although the theoretical framework of this research is focused on socialization theory, we can't ignore the body of knowledge addressing generational stereotypes and the variance between perceived differences and actual differences (Mencl & Lester, 2014). Butler and Gheorghiu (2010) suggest that we should ignore stereotypes about generational differences. Their study confirms that millennials share many of the characteristics of baby boomers and Generation X, including dedication. Mencl and Lester's (2014) research on work values revealed that 7 out of 10 work values were similar among boomers, Generation X, and millennials. Becton et al. (2014) noted that research found few generational differences in employee characteristics, motivation, and work values. Macky et al. (2008) duplicated these findings. Researchers have also examined the concept of life cycle and the notion that differences between generations are confused with variations due to aging (Bennett et al., 2017; Twenge et al., 2010; Becton et al., 2014; Hill, 2002). Bennett et al. (2017) argue that it is inappropriate to separate aging from generational effect. Collectively, these scholars agree that as people age, get married, and become parents, they realign with previous cohorts and their parents. They require a certain standard of living and the traditional career path that supports that lifestyle and family. Thus, work characteristics, values, and expectations change and evolve as people age, regardless of their generation and the specific cohort historic events, technology advancement, and experiences.

Thus far, aligning the review of literature about millennials and other cohorts against the backdrop of socialization theory, we confirm that individuals within a cohort experienced

similar life events, music, and technological advancements that resulted in similar characteristics, attitudes, and expectations toward work, growth, development, society, and financial status. With this background, the current research posits that baby boomers and Gen Xers will have different attitudes toward professional certification to advance their careers than millennials.

II.2   Professional Certification

Professional certification is a voluntary process that is time consuming, demanding, and expensive (Adams et al., 2004; Belton, 2016; Lester & Dwyer, 2012; Wiley, 1995). It is a process of assessing a body of knowledge and competency through examinations based on the Standards for Educational and Psychological Testing, a joint publication of the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME). To get certified in a profession, an individual has to pass a valid, credible, and reliable examinations(s) (Adams et al., 2004). This exam or set of exams is set forth and continuously evaluated and updated by the profession and by the national/international certifying body based on industry standards (Adams et al., 2004). One key component is the identification of the certifying body that holds the gold standard (Adams et al., 2004). Most certifying bodies have a monopoly, with little competition. When pursuing a certification, it is very important that employers and recipients alike seek the certification that carries the reputation of "the gold standard" in the profession.

Certification is designed to ensure recipients can perform certain job functions (Wiley, 1995; Adams et al., 2004; Hale, 2003). It promotes the competency and credibility of the certification holder, while also promoting their professions. Employers benefit from employing certified individuals as it increases individual and company performance (Belton, 2016; Wiley,

1995). Additionally, having certified individuals on staff can enhance a company's profile

(Adams et al., 2004; Fertig, 2009). However, professional certification should not be confused

with accreditation or licensing. To illustrate the difference, we adopt Table 2 below from

Roberts (2006).

Table 2. Comparison of Accreditation, Licensure, and Certification

Type of Credential	Recipient of Credential	Credentialing Body	Required or Voluntary
Accreditation	Programs	Association/Agency	Voluntary
Licensure	Individuals	Political Body	Required
Certification	Individuals	Association/Agency	Voluntary

Note. Reprinted from Roberts, T. (2006). Everyone's mentor: Perceptions of research administrators on the value of certification. *Journal of Research Administration, 37*(1/2), 87-99,81. Retrieved from http://ezproxy.gsu.edu/login?url=https://search.proquest.com/docview/216579235?accountid=11226

Certification. Certification is defined as the voluntary pursuit of recognition by an independent agency of one's competency through examinations (Belton, 2016; Roberts, 2006; Wiley, 1995). Examples of those seeking professional certifications include human resources personnel, project management professionals, and certified financial planners.

Licensure. Licensure is required for practice in some fields, although licensing bodies, which are typically governmental, might require an education level and/or level of experience in addition to certification examination. Licensure is typically focused on the protection of the public (Belton, 2016; Roberts, 2006; Wiley, 1995). Examples of licensed professions include doctors, registered nurses, and physician assistants.

Accreditation. Accreditation is a voluntary process by which an independent standards agency evaluates and recognizes a program or organization for meeting those standards (Belton, 2016; Roberts, 2006; Wiley, 1995). If a program seeks and receives accreditation, it indicates that the quality and value of that program is of a high level, which could potentially influence the decision making of those pursuing or attending that program.

Although both formal education, like pursing an associate, bachelor's, master's, or a doctorate degree, and professional certification are voluntary, they are also quite different. According to Richardson (2016), certification compliments education. Education occurs at a point in time, following a curriculum in a formal setting, and does not require previous experience. However, sitting for a certification examination could require education and experience as it tests for competency. Thus, individuals can choose to prepare formally and informally to sit for a certification (Belton, 2016). Additionally, the main outcome of a formal education, especially for associate and bachelor's degrees, is knowledge based; whereas, most

professional certification is based on testing for knowledge, skills, and abilities (Belton, 2016; Fertig, 2009).

Overarching benefits for certification are focused on continuing education, updating knowledge, and remaining current. To maintain certification, a certified individual is required to recertify through an examination or through continuing education hours within a certain time frame. Research has addressed the fact that academic learning can quickly become outdated, and to stay current and efficient, additional knowledge must be added throughout an individual's career, suggesting that recognized certification programs can contribute to continuous learning (Belton, 2016; Daniels, 2011; Richardson, 2016).

The "certification" construct is quite new to research, especially against the backdrop of socialization theory. Today, the academic literature on the benefits and value of certification is strongly aligned and is in sync with certifying body program research on the benefits of their certification programs. Much of the literature focuses on the personal credibility and accomplishments received by earning a certification, and most importantly, on its benefits in the workplace such as making recipients more competitive and more likely to earn peer recognition as an expert in a specific field (Wiley, 1995). Lester et al. (2010) suggested that the benefit of pursuing a certification in any field is to differentiate oneself as credible to employers who value certification and set oneself apart from those who do not have that qualification. According to Adams et al. (2004), "One of the most significant ways to gain respect in one's chosen career is to seek and achieve certification," especially if earning an accredited certification. As an example, researchers highlight that "HR certification is a career long commitment that shows peers, your employees, and your organization that you have mastered core HR principles and that you are dedicated to stay current" (Lester & Dwyer,

2012). Similarly, Richardson (2016) and (Dineen & Allen, 2016) found that employers statistically view certified individuals as having more potential and knowledge than those without certifications and view them as exhibiting a better quality of work.

The Lester and Dwyer (2012) findings were replicated by Legnick-Hall and Aguinis (2012) and Dineen and Allen (2016), who investigated additional benefits to pursuing certification, specifically regarding its contribution to one's positive attitude, career advancement, promotions, and marketability. Several researchers agreed and asserted that higher pay is an added benefit to earning a certification in some professions (Belton, 2016; Lester & Dwyer, 2012; Lester et al., 2010; Richardson, 2016; Svara, 2010; Fertig, 2009). Lastly, based on research conducted by Richardson (2016), six times more organizations now advertise jobs with required certifications (in this case human resources) than did in 2002. In his research, Dineen and Allen (2016) claim that employers experience lower turnover when hiring certified individuals.

One common theme, however, is career and occupational commitment (Lester & Dwyer, 2012). Based on previous literature review, it is apparent that all generations seek advancement and promotions. Millennials require promotion and advancement promptly, while Gen Xers are focused on the financial benefit, and baby boomers understand climbing the ladder takes time and are willing to wait to demonstrate professional attitudes and status within an organization and a job role. Both baby boomers and Generation X are career driven (Wiedmer, 2015), while Generation Y is more focused on building skills to stay marketable regardless of the company or the profession they are currently in (Svara, 2010). Although building skills is part of building a career, it is clear that millennials are focused on job security and not on job stability, and they are willing to build different types of skills to continue to be

employable regardless of the profession they are currently in. Based on Wiley (1995), one disadvantage to certification is the restrictive and specialized focus. Regardless of the focus of financial recognition, pay incentives, or advancement, the commitment involved in earning certification within a specific profession prompts the question: *Compared to older age cohorts, what are the millennials' attitudes toward professional certification, and what are their reasons?*

Table 3 details the literature findings of the general attitudes of millennials compared to previous cohorts. Although all generations seek promotions, recognitions, financial stability, and career advancement, millennials' expectations are focused on prompt recognition, rapid advancement, and opportunities to develop a diverse skillset. They are focused on job security vs. job stability and do not mind job hopping. This is quite different from baby boomers who seek to climb the corporate ladder one step at a time, within the same company and same career, because boomers understand it might take time and effort. Similarly, to baby boomers, Generation X is focused on one profession. However, they don't mind job hopping for financial security and do not have a strong need to rise to the top.

Table 3 also details the literature findings about the benefits of earning a professional certification; literature speaks to peer recognition, credibility in the chosen profession, potential for promotions, higher pay, and last but not least, an indication of occupational path and commitment because of the time, money, and patience required to earn a certification. In her dissertation concerning the value perceived value of IPMA-CP certification, Belton (2016) surveyed certified individuals and confirmed with high agreement that earning a certification validates knowledge, indicates competency, enhances professional credibility, promotes peer recognition, and provides evidence of professional commitment. Similarly, in a pursuit to

understand the value of human resource certification, Richardson (2016) found that meeting the challenge of the job and ensuring marketability ranked as the highest value. In his article addressing the value of certification from a behavioral scientist lens, Latham (2012) confirms that the value of a human resource management certification includes an increase in salary and that passing the exam to earn the certification recognizes ability and achievement. Lastly, in her commentary on the Lengnick-Hall and Aguinis (2012) findings, Cohen (2012) elaborates and suggests more research around the value of increased salary, especially for higher education degree holders. She does, however, confirm that earning a certification does increase HR knowledge, lead to better performance, and increase the probability of promotion, employment, and certainly commitment to the profession due to the investment of time, money, and effort in earning an HR certification.

Table 3. Literature Summary: Benefits of Certification Compared to Generational Expectations

Benefits of Certification	Expectations by Generation		
	Baby Boomers	Generation X	Generation Y
Peer Recognition	Career-oriented	Work Flexibility	Prompt Recognition
Differentiating Oneself	Achievement as Indication of Power	Achievement for Job Security	Rapid Advancement
Continuous Learning	Gradual Career Progression and Recognition	Teamwork and Collaboration	Opportunities to Develop Diverse Skillset
Personal Credibility	Opportunity to Become Experts in the Field	Openness to Job Hopping	Job Security over Job Stability
Promotion/Marketability	Loyalty to Employer		Job Hopping
Potential for Higher Pay			
Demonstration of Specialized Skillset/ Credibility in the Space			
Job Stability			
Indication of Occupational Commitment			

While previous research introduced millennials' strong need and interest in personal development and lifelong continuous learning, especially in relation to skill building, career marketability, and employment security (Sandeen, 2008; Shaw & Fairhurst, 2008; Wiedmer, 2015), none of the research addressed the type and format of learning that interest millennials. Similarly, while the benefits and value for earning a certification have been discussed and researched academically, the attitudes of millennials toward professional certification has not. Because their business model depends upon consumers of these certifications, this research is instrumental for owners of professional certification programs as well as the professional partners that service the industry, such as exam delivery companies, training companies, and boutique research organizations that are typically led by psychometricians.

To advance knowledge and to understand the millennials' attitudes toward professional certification compared to previous cohorts, we attempt to answer the research question: *Compared to older age cohorts, what are the millennials' attitudes toward professional certification, and what are their reasons?*

The next section discusses the research model and hypotheses that this research follows.

II.3 Hypotheses and Research Model

The current research seeks to evaluate and understand the attitudes of millennials toward professional certification compared to previous cohorts, with the focus on the following research question: *Compared to older age cohorts, what are the millennials' attitudes toward professional certification, and what are their reasons?*

The focus of this research is on age cohort (baby boomers, Generation X, and Generation Y) as an independent variable, with the cohort's experiences and characteristics

impacting the dependent variable, which is their attitude toward professional certification as a means for advancement and marketability. This model also considers education level (high school, associate, bachelor's, master's, or doctorate degree) as a moderator to the relationship between the independent and dependent variables. Lastly, this model considers certification (earned or not earned) as a moderator to the relationship between the independent and dependent variables (See Figure 1).
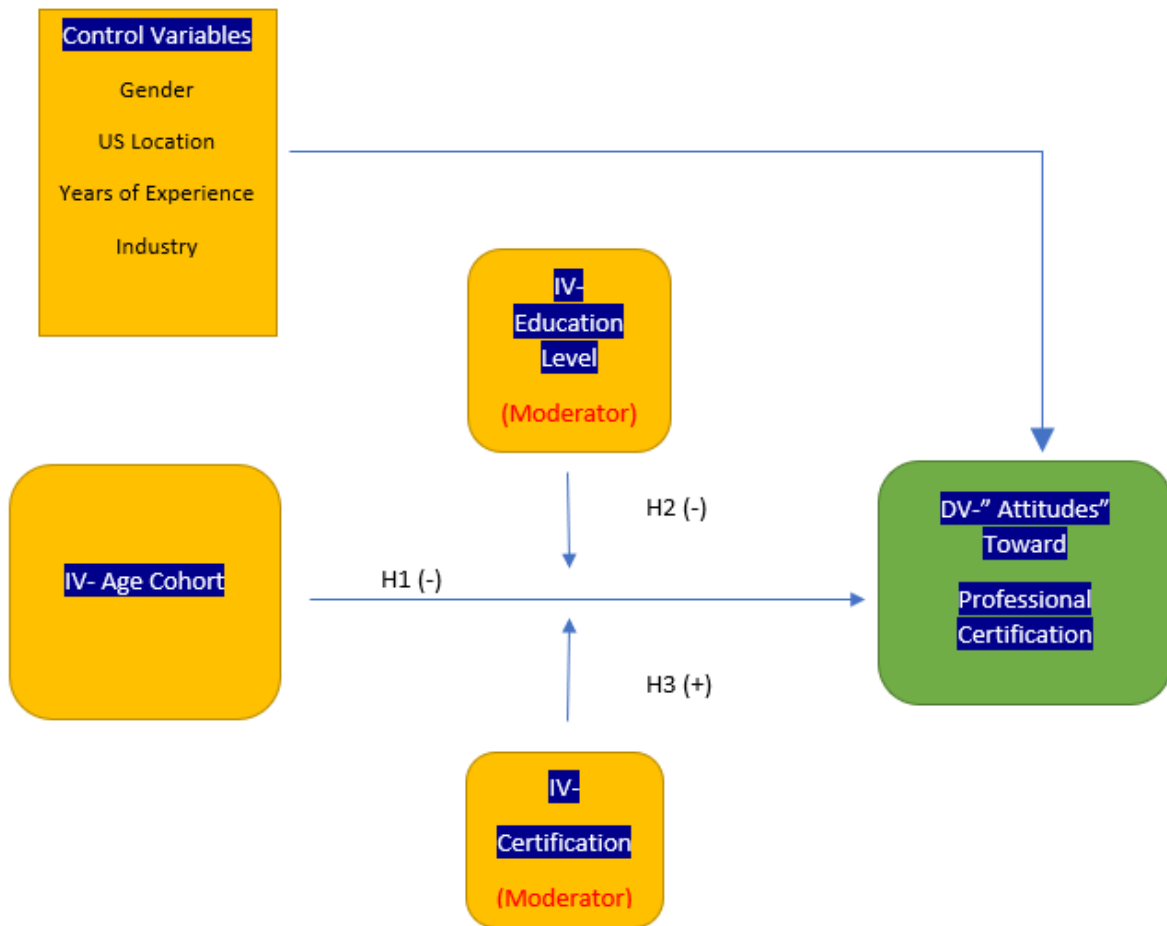
Figure 1. Research Model

Hypothesis 1: Age cohort has an effect on the attitudes toward professional certification, where millennials are less interested in professional certification.

Stemming from socialization theory, we hypothesize that based on their similar experiences, upbringing, and characteristics (Grusec & Hastings, 2014; Wiedmer, 2015) that shape their views and outlook; those within an age cohort will have similar attitudes toward professional certification. Furthermore, based on the literature review and the characteristics of millennials, we hypothesize that millennials will be less interested in professional certification to advance their careers compared to previous cohorts.

Hypothesis 2: We also hypothesize that education level moderates the relationship between age cohort and the attitudes toward professional certification, where the higher the education level, the weaker the relationship.

To understand millennials' and non-millennials' attitudes toward professional certification as a mean for advancement, we looked to previous research. Although not focused on age cohorts in their research, Lester et al. (2012) established that the lower the individual education level, the more interest in professional certification. This finding stems from research that confirms that earning a professional certification allows job applicants to differentiate themselves from others (Lester et al., 2010; Wiley, 1995; Adams et al., 2004; Belton, 2016). Thus, we hypothesize that education level – a moderator variable – will negatively influence the attitudes toward certification, whereas the higher the education, the lower the interest will be in professional certification.

Hypothesis 3: Lastly, we hypothesize that certification moderates the relationship between age cohort and the attitudes toward professional certification whereas, for all

generations, those who have earned certification will view professional certification more favorably.

According to Lester (2012), certified individuals who reported earning a certification increased their marketability; additionally, research led by Fertig (2009) added that certifications are "potent symbols" that contribute to higher pay, career advancement, and employee development. Thus, we hypothesize that certification– a moderator variable – will positively influence the attitudes toward certification, whereas those who have earned certifications will view professional certification more favorably, regardless of age cohort.

III CHAPTER 3: METHOD

III.1 Research Design

To link the socialization of boomers, Generation X, and Generation Y with numerical data and to answer our research question, we follow a variance model (Mohr, 1982, as cited in Van de Ven, 2007) or outcome-driven explanation (Aldrich, 2001, as cited in Van de Ven, 2007) of the input factors of the independent variable (age cohorts) to statistically explain the variations in the dependent variable (attitudes toward professional certification) (Van de Ven, 2007). Furthermore, we use two moderators (education level and certification) to understand the strength of the relationship between the independent variable and the dependent variable. Data is collected via an online survey to test the hypotheses. Further description of the instruments is discussed below in the data collection, instrument, and variables section.

Based on the literature review, socialization is the process of helping an individual become part of society. Socialization occurs from the moment individuals are born and continues throughout their lifetimes, with a primary influence from parents shaping their attitudes, motivations, and biases through experiences and interactions (Grusec & Hastings, 2014). Multiple agents' impact and influence this socialization process including peers and family, as well as social and historical events. Additionally, the socialization process includes the generational transmission from one generation to the next (Grusec & Hastings, 2014). Although we made the point earlier that each generation is influenced by its generation's social and historical events, it is also evident that the transmission from generation to generation, specifically in training for occupation and roles, is also at the forefront of this research as we seek to understand each generation's attitudes toward professional certification.

Within this context, our research design allows us to understand the relationship of age cohorts (baby boomers, Gen X, and Gen Y) and their attitudes toward professional certification,

considering that they are socialized differently. The literature has confirmed that baby boomers'

socialized experiences pushed them to be goal oriented and career driven and to seek respect,

reward, and recognition (Sung-Bum & Guy, 2006; Wiedmer, 2015). Boomers also value learning

and building skills to accomplish their goals (Ford, 2007; Sung-Bum & Guy, 2006; Svara, 2010).

According to Sung-Bum and Guy (2006), Generation X has few motivational differences from

baby boomers. Although Generation X is open to job hopping, their main focus is on financial

planning, financial security, and money (Sung-Bum & Guy, 2006; Svara, 2010). Although

millennials are potentially interested in following the footsteps of their parents as they age, they

also differ from previous generations in several key ways. They too are interested in growth,

success, and recognition; however, they seek attention and immediate results. Taken together,

their lack of patience to advance, their low focus on career, their high interest in building skills,

and their need for immediate feedback and support could indicate a lack of interest in pursuing

professional certification.

III.2 Data Collection, Instrument, and Variables

The survey allows us to evaluate the attitudes of different age cohorts toward

professional certification and to understand whether education level and holding a certification

influence the direction of this relationship. Data is acquired from employed certified and

noncertified human resource professionals across age cohorts to include baby boomers,

Generation X, and millennials. All US-based participants were contacted by electronic survey

(see Appendix A). Participants hold various education levels from high school diplomas to

doctorate degrees. To keep the design balanced, we use an equal sample size (500) of certified

and noncertified participants across age cohorts and education levels. Two open-ended

questions were included at the end of the survey to allow the respondents to further explain

their choices about why they have chosen to be certified or noncertified. If participants opt to share additional reasons and information in response to these questions, their answers could further explain the earlier quantitative questions and help in determining the reasons for the lower level of interest among millennials (if, in fact, the research shows that millennials have a lower level of interest). Lastly, the open-ended questions could also inform future research.

The survey was administered by Qualtrics, a research software and management company (Qualtrics, n.d.). Researchers pay Qualtrics a set fee per participant, and in return, Qualtrics compensates participants. Qualtrics vets and recruits' participants based on their already registered members and/or per an invitation to become a participant. To ensure balance, we require Qualtrics to recruit respondents across age cohorts and education levels. Qualtrics uses multiple verification tools such as "double opt in" to verify the validity of the participants for the research. Considering the challenges with online surveys, the intent is to recruit 500 participants with the goal of analyzing 400 after cleaning the data against the research model.

Great effort was taken to make sure the identification of respondents was not collected so that responses are left anonymous during the research process. Additionally, to reassure respondents to trust the process, we have included a header in the survey with a clear declaration of anonymity for respondents and a statement of confidentiality for the collection and storage of data. Participants are provided with an informed consent form (Furman, 2018) that could be printed (see Appendix B). Participants indicated agreement on the consent form before the survey was presented. If consent was not agreed to, the session was terminated. In addition to confidentiality, the consent form also included consent for data collection and storage, an assurance that no deception is being used, an explanation of the compensation

process upon survey completion, and specification of the allotted survey time. To ensure

compliance with the policies and procedures of academic research, the researchers received

approval from the Georgia State University IRB before proceeding with the survey

distribution.

To explain the relationship between age cohorts and attitudes toward professional

certification, we used the following measures: age, gender, education level, certification, years

of experience in human resources, industry, US regional locations, and attitudes toward

professional certification. To ensure their content validity, the scales for measuring these

constructs were developed based on the literature review. Table 4 addresses the definitions of

the variables of our measures: attitudes toward professional certification (dependent variable);

age cohort (independent variable); education level and certification (moderators), gender, U.S.

regional location, years of experience, and industry (control variables). To measure attitudes

toward professional certification, we use a 7-point Likert scale (e.g., "Strongly Disagree,"

"Disagree," "Somewhat Disagree," "Neither Agree Nor Disagree," "Somewhat Agree,"

"Agree," and "Strongly Agree").

Table 4. Definitions of Variables

Variable	Definition
Dependent	
Attitudes Toward Professional Certification	Individual's perception of value of professional certification for various categories (peer/industry recognition, opportunity for advancement/job promotion, competency/skill development, continuing education/continuous learning/professional development, job security/new job offers/Marketability)
Independent	
Age Cohort	Individual's age by cohort (baby boomer, Generation X, millennial/Generation Y)
Moderator	
Education Level	Individual's highest level of education (high school, Associate, bachelor's, master's, or doctorate degree)
Certification	Process of assessing a body of knowledge and competency through examinations
Control	
Gender	Individual's gender (male, female, other)
US Regional Location	Individual's US location by region (NE, SE, Central, NW, or SW)
Years of Experience	Individual's years of experience in human resources
Industry	Individual's current industry of practice

- Construction
- Education
- Health services
- Financial services
- Government
- Leisure and hospitality
- Manufacturing
- Natural resources and mining
- Professional and business services
- Information and technology
- Trade, transportation, and utilities
- Consulting
- Human resource services
- Other

III.3 Method Analysis

To understand and study the relationship between age cohort and attitudes toward professional certification, we use simple linear regression as our statistical analysis method to test Hypothesis 1: Age cohort has an effect on the attitudes toward professional certification, where millennials are less interested in professional certification. The purpose of using regression is not to understand if the variables are correlated but rather to understand if a functional relationship between age cohorts and attitudes toward professional certification can be established, allowing future projections to be made about how this relationship could impact the professional certification industry.

Linear Regression Equation: $Y = a + bx$

Y = Attitudes toward professional certification

x = Age cohort

To test Hypothesis 2: Education level moderates the relationship between age cohort and attitudes toward processional certification, where the higher the education level, the weaker the relationship, we use a moderated regression analysis to understand the interaction predictor of the third variable, the moderator (education level), and its effect on the direction of the relationship of age cohorts and their attitudes toward professional certification.

Moderator Equation: $Y = a + b1x1 + b2x1x2$

Y = Attitudes toward professional certification

$x1$ = Age

$x2$ = Education

To test Hypothesis 3: Certification moderates the relationship between age cohort and the attitudes toward professional certification whereas, for all generations, those who have

earned certification will view professional certification more favorably. We use a moderated regression analysis to understand the interaction predictor of the third variable, the moderator (certification), and its effect on the direction of the relationship of age cohorts and their attitudes toward professional certification.

Moderator Equation: $Y = a + b1x1 + b2x1x2$

Y = Attitudes toward professional certification

$x1$ = Age

$x2$ = Certification

We do a hierarchical linear regression to input the control variables (gender, US location, years of experience, industry) first and then assess the impact of the independent variable (age cohort) on the dependent variable (attitudes toward professional certification).

To analyze the results of the open-ended questions, a table documents the answers of each respondent. We are seeking and reporting on reoccurring themes from their answers to understand further why respondents chose to be certified and noncertified and to compare millennials' answers with those of Generation X and baby boomers. Lastly, this process helps further determine the reasons for the lower level of interest among millennials, if, in fact, the research shows that they have a lower level of interest.

IV CHAPTER 4: DATA COLLECTION RESULTS AND DISCUSSION

IV.1 Data Collection Results

Overall Description and Process. After a short pilot, data was collected over two months utilizing a Qualtrics survey. Some of the initial survey questions were adjusted based on additional research (Fertig, 2009; Furman, 2018; Belton, 2016; Richardson, 2016). Data was cleaned, and SPSS was used for statistical analysis. This section, modeled after Pallant's (2013) book, reports the results for the three main research hypotheses.

Variables. The variables of the study are based on the model described in II.3.

Dependent Variable: The variable, attitudes toward professional certification, was tested based on three areas, each of which was measured for certified participants, noncertified participants, and the whole sample: the "Influence of Certification" (survey questions 20 and 22- 5 in Appendix B); the "Results of Certification" (survey questions 21 and 23- 10 in Appendix B); and the "Overall Attitudes Toward Certification" (survey questions 20 to 23- 15 in Appendix B).

Independent Variables: Age cohort measured at the ordinal level (baby boomers, Generation X, and millennial/Generation Y); Education measured at the ordinal level (high school diploma, associate degree, bachelor's degree, master's degree, and doctorate degree or JD); and certification measured on the nominal level (yes, no).

Control Variables: The control variables consisted of gender measured at the nominal level (male, female, other); years of experience measured at the ordinal level (less than 5 years, 5 to 10 years, 11 to 15 years, and more than 15 years); US location measured at the nominal level (Northeast, Southeast, Central, Northwest, and Southwest), with US location recoded into 4 dummy variables for the regression analysis, where each dummy variable represented one US location; industry measured at the nominal level (construction; education; health services;

financial services; government; leisure and hospitality; manufacturing; natural resources and mining; professional and business services; information and technology; trade, transportation, and utilities; consulting; human resource services; and others), with industry recoded into 13 dummy variables for the regression analysis, where each dummy variable represented one type of Industry.

Hypotheses Testing. We tested three hypotheses.

Hypothesis 1: Age cohort has an effect on the attitudes toward professional certification, where millennials are less interested in professional certification.

We tested this hypothesis using nine simple regression analyses as depicted in Table 5.

Table 5. Effect of Age Cohort on Attitudes Toward Professional Certification

	Independent Variable	Dependent Variable
Regression 1		Attitudes Toward Professional Certification - Total
Regression 2		Attitudes Toward Professional Certification for Certified Individuals
Regression 3		Attitudes Toward Professional Certification for Noncertified Individuals
Regression 4	Age Cohort	Influence of Certification - Total
Regression 5		Influence of Certification for Certified Individuals
Regression 6		Influence of Certification for Noncertified Individuals
Regression 7		Results of Certification - Total
Regression 8		Results of Certification for Certified Individuals
Regression 9		Results of Certification for Noncertified Individuals

Hypothesis 2: Education level moderates the relationship between age cohort and the attitudes toward professional certification, where the higher the education level, the weaker the relationship.

We tested this hypothesis using three hierarchical regression analyses as depicted in Table 6.

Table 6. Effect of Education Level on Age Cohort and Attitudes Toward Professional

Certification

	Independent Variables	Dependent Variable
Regression 1	Model 1: Age Cohort & Education	Attitudes Toward Professional Certification - Total
Regression 2	Model 2: Education Moderator	Attitudes Toward Professional Certification for Certified Individuals
Regression 3		Attitudes Toward Professional Certification for Noncertified Individuals

Hypothesis 3**:** Certification moderates the relationship between age cohort and the attitudes toward professional certification, where for all generation when certified, the stronger is the relationship.

We tested Hypothesis 3 using one hierarchical regression analysis as shown in Table 7.

Table 7. Effect of Certification on Age Cohort and Attitudes Toward Professional Certification

	Independent Variables	Dependent Variable
Regression 1	Model 1: Age Cohort & Certification	Attitudes Toward Professional
	Model 2: Certification Moderator	Certification - Total

Overall Model. In addition, we conducted three regression analyses listed in Table 8 to control for the variables (gender, years of experience, and US location and industry).

Table 8. Overall Model

	Independent Variables	Dependent Variable
Regression 1	Model 1: Control Variables (Gender, Years of Experience, and US Location and Industry)	Attitudes Toward Professional Certification - Total
Regression 2	Model 2: Age Cohort, Education, and Certification	Influence of Certification - Total
Regression 3	Model 3: Education Moderator and Certification Moderator	Results of Certification - Total

Additional Analyses. Based on the data at hand and to enhance the value of this research, we conducted additional analyses to answer the following secondary research questions:

1. *Compared to other cohorts, did millennials prefer remote testing or using a brick and mortar test center?* We answered this research question using a chi square test to examine the relation between age cohort and testing center.

2. *Do employers value professional certification for millennials compared to other cohorts?* We answered this research question using a chi square test to examine the relation between age cohort and employers' value of certification.

3. *Does earning a professional certification bring relevance to participants' jobs?* We answered this research question using a frequency table that depicts whether certification brings relevance to participants' jobs.

4. *When do millennials (at what stage in their career) earn a professional certification?* We answered this research question using a chi square test to examine the relation between age cohort and stage at which participants earn professional certification.

5. *Does the number of earned professional certifications influence the attitudes of participants?* We answered this research question using a Pearson Correlation Test to examine the relation between number of certificates and attitudes toward professional certification.

6. *Does the age at which participants earned/will earn their first professional certification influence their attitudes toward professional certification?* We answered this research question using a Pearson Correlation Test to examine the relation between age of first professional certification earned and attitudes toward professional certification.

Quantitative Results. Subsequent to the description and process above, we will start with reliability analyses that examine the reliability of the scales (influence of certification, results of certification, and attitudes toward professional certification) for both certified and noncertified participants. Second, we will report the sample descriptives and scale descriptives. Next, we will examine the correlations between the variables and report on the main regression analyses that test the main three hypotheses. Lastly, we will report on the analyses related to the six additional questions.

Reliability Analysis. The reliability analysis revealed that the scales (influence of certification, results of certification, and attitudes toward professional certification) had high reliability for both certified ($\alpha = .89$, $\alpha = .92$, and $\alpha = .94$, respectively) and noncertified ($\alpha = .89$, $\alpha = .91$, and $\alpha = .87$, respectively; see Table 9).

Table 9. Reliability of the Scales and Subscales: Cronbach's alpha

Scales and Subscales	Cronbach's Alpha	Number of Items
Certified		
Influence of Certification	.89	5
Results of Certification	.92	10
Attitudes Toward Professional Certification	.94	15
Noncertified		
Influence of Certification	.89	5
Results of Certification	.91	10
Attitudes Toward Professional Certification	.87	15

Sample Descriptives. The sample of the study was $N = 483$ participants distributed across the three age cohorts: baby boomers, born between 1946 and 1964 ($N = 115$, 23.8%); Generation X, born between 1965 and 1980 ($N = 148$, 30.6%); and millennial/Generation Y, born between 1981 and 2001 ($N = 220$, 45.5%). Regarding the gender of the participants, 26.9% were males, 72.9% were females, and one participant reported as "other." Participants' education levels were 6.8%, high school diploma; 8.3%, associate degree; 45.1%, bachelor's degree; 37.5%, master's degree; and 2.3%, doctorate degree or JD. Moreover, in the past 5 years, 51.1% earned a professional certification, 46% attended continuing education classes, and 45.3% attended educational conferences, while 18.6% didn't pursue any learning activities.

Regarding the number of years of practicing human resources, 29.8% reported that they had been practicing human resources for less than 5 years, 42.4% had been practicing human resources for a period of 5 to 15 years (42.4%) and 27.7% for more than 15 years. Regarding the age at which participants started practicing human resources, 65.8% started at an age between 18 and 30, 28.4% started at an age between 30 and 45, and 5.8% started between 45 and 60. Furthermore, 41% of participants had been employed in their current position for less than 5 years, 32.7% had been employed in their current position for 5 to 10 years, 12.6% had been employed in their current position for 11 to 15 years, and 13.7% had been employed for more than 15 years in their current position. Lastly, 19.9% of participants have the job title of HR Associate/Specialist (entry level), 39.8% have the job title of HR manager (mid-level), 20.3% have the job title of HR director (mid-senior level), 3.3% have the job title of Vice President of HR (senior level), 5.8% have the job title of Chief Human Resource Officer (executive), 7.7% are HR Consultants, and 3.3% are HR Instructors/Professors.

Of the participants, 27.5% live in the Northeast, 25.7% live in the Southeast, 16.8% live in the Central US, 13% live in the Northwest, and 17% live in the Southwest. In addition, 20.9% work in small-sized companies (1 to 100 employees), 42.7% work in medium-sized companies (101 to 999 employees), and 36.4% work in large companies (with more than 1,000 employees). For current industry of practice, 3.7% of participants work in construction, 17.8% work in education, 18% work in health services, 4.8% work in financial services, 8.7% work in the government, and 3.7% work in leisure and hospitality. Moreover, 6.4% of participants work in manufacturing, 0.8% work in natural resources and mining, 8.3% work in professional and business services, 3.7% work in information and technology, 1.9% work in trade, transportation and utilities, 0.8% work in consulting, 11.6% work in human resource services, and 9.7% work in other industries.

Of the human resource certification and the survey participants, 54% of them ($N = 261$) asserted that they hold or are in the process of earning professional human resource certification. Out of those 261 participants, 12.3% were holding or in the process of preparing for aPHR™; 39.1%, PHR®; 17.6%, PHRca®; 33.7%, SPHR®; 16.5%, GPHR®; 8%, aPHRi™; 11.5%, PHRi™; 8.8%, SPHRi™; 23%, SHRM-CP; and 12.3% SHRM-SCP. Also, out of the 261 participants who hold or are in the process of holding professional HR certification, 48.7% earned/will earn their certification at an age between 18 and 30, 42.5% at an age between 30 and 45, and 8.8% at an age between 45 and 60. In addition, 44.1% earned/will earn their first certification in the first 5 years of their career (early career), 50.6% at 5 to 15 years in their career (mid-career), and 5.4% earned/will earn their first certification at more than 15 years of their career (advanced career). Furthermore, 91.2% of the 261 participants reported that their employers value human resource professional certification.

Additionally, 91.6% of the 261 participants reported that earning a human resource

professional certification brings relevance to their daily human resource job. Finally, 32.6%

preferred to take the certification exam in a brick and mortar testing center at a scheduled time,

54% reported that they preferred remote testing (anywhere, anytime, and from any device),

while 13.4% had no preference (see Table 10).

Table 10. Sample Descriptives

		N	%
Age Cohort	Baby Boomers (born between 1946-1964)	115	23.8
	Generation X (born between 1965-1980)	148	30.6
	Millennial/Generation Y (born between 1981-2001)	220	45.5
Gender	Male	130	26.9
	Female	352	72.9
	Other	1	0.2
Education	High School Diploma	33	6.8
	Associate Degree	40	8.3
	Bachelor's Degree	218	45.1
	Master's Degree	181	37.5
	Doctorate Degree or JD	11	2.3
Beyond the Educational Level	Earned a Professional Certification	247	51.1
	Attended Continuing Education Classes	222	46.0
	Attended Educational Conferences	219	45.3
	Not Pursued any Learning Activities	90	18.6
Years of Practicing Human Resources	Less than 5 Years (Early-career)	144	29.8
	5-15 Years (Mid-career)	205	42.4
	15+ Years (Advanced in career)	134	27.7
Age of Starting Practicing Human Resources	18-30	318	65.8
	30-45	137	28.4
	45-60	28	5.8
Number of Years Spent in Current Position	Less than 5 Years	198	41.0
	5-10 Years	158	32.7
	11-15 Years	61	12.6
	15+ Years	66	13.7
Job Title	HR Associate/Specialist (Entry level)	96	19.9
	HR Manager (Mid-level)	192	39.8
	HR Director (Mid-Sr. level)	98	20.3
	Vice President of HR (Sr. level)	16	3.3
	Chief Human Resource Officer (Executive)	28	5.8

	HR Consultant	37	7.7
	HR Instructor/Professor	16	3.3
US Location	Northeast	133	27.5
	Southeast	124	25.7
	Central	81	16.8
	Northwest	63	13.0
	Southwest	82	17.0
Type of Industry	Construction	18	3.7
	Education	86	17.8
	Health Services	87	18.0
	Financial Services	23	4.8
	Government	42	8.7
	Leisure and Hospitality	18	3.7
	Manufacturing	31	6.4
	Natural Resources and Mining	4	.8
	Professional and Business Services	40	8.3
	Information and Technology	18	3.7
	Trade, Transportation, and Utilities	9	1.9
	Consulting	4	.8
	Human Resource Services	56	11.6
	Other	47	9.7
Certification	Yes	261	54.0
	No	222	46.0
Type of Certification	aPHR™	32	12.3
	PHR®	102	39.1
	PHRca®	46	17.6
	SPHR®	88	33.7
	GPHR®	43	16.5
	aPHRi™	21	8.0
	PHRi™	30	11.5
	SPHRi™	23	8.8
	SHRM-CP	60	23.0
	SHRM-SCP	32	12.3
Age of Certification	18-30	127	48.7
	30-45	111	42.5
	45-60	23	8.8
Stage of Certification	Less than 5 Years (Early-career)	115	44.1
	5-15 Years (Mid-career)	132	50.6

	15+ Years (Advanced in career)	14	5.4
Employer Valuing Certification	Yes	238	91.2
	No	23	8.8
Relevance to the Job	Yes	239	91.6
	No	22	8.4
Place of Testing	Brick & Mortar Testing Center - at Scheduled Time	85	32.6
	Remotely - Anywhere, Anytime, From any Device	141	54.0
	No Preference	35	13.4

Table 11 depicts the descriptives of key variables across age cohort (education, beyond the educational level, years of practicing human resources, number of years spent in current position, and age of certification), and Table 12 depicts the descriptives of key variables (age cohort, education, beyond the educational level, years of practicing human resources, and number of years spent in current position) across certification. Across baby boomers there is n = 50 certified and n = 65 noncertified, while across generation X there is n = 91 certified and n = 57 noncertified, whereas across millennials/Generation Y there is n = 120 certified and n = 100 noncertified.

Table 11. Sample Descriptives Across Age Cohort

			N	%
Education	Baby Boomers	High School Diploma	8	7.0
		Associate Degree	7	6.1
		Bachelor's Degree	61	53.0
		Master's Degree	36	31.3
		Doctorate Degree or JD	3	2.6
	Generation X	High School Diploma	8	5.4
		Associate Degree	14	9.5
		Bachelor's Degree	58	39.2
		Master's Degree	64	43.2
		Doctorate Degree or JD	4	2.7
	Millennial/ Generation Y	High School Diploma	17	7.7
		Associate Degree	19	8.6
		Bachelor's Degree	99	45.0
		Master's Degree	81	36.8
		Doctorate Degree or JD	4	1.8
Beyond the Educational Level	Baby Boomers	Earned a Professional Certification	54	47.0
		Attended Continuing Education Classes	64	55.7
		Attended Educational Conferences	60	52.2
		Not Pursued Any Learning Activities	22	19.1
	Generation X	Earned a Professional Certification	84	56.8
		Attended Continuing Education Classes	60	40.5
		Attended Educational Conferences	62	41.9
		Not Pursued Any Learning Activities	27	18.2
	Millennial/ Generation Y	Earned a Professional Certification	109	49.5
		Attended Continuing Education Classes	98	44.5

		Attended Educational Conferences	97	44.1
		Not Pursued Any Learning Activities	41	18.6
Years of Practicing Human Resources	Baby Boomers	Less than 5 Years (Early-career)	11	9.6
		5-15 Years (Mid-career)	31	27.0
		15+ Years (Advanced in career)	73	63.5
	Generation X	Less than 5 Years (Early-career)	19	12.8
		5-15 Years (Mid-career)	71	48.0
		15+ Years (Advanced in career)	58	39.2
	Millennial/ Generation Y	Less than 5 Years (Early-career)	114	51.8
		5-15 Years (Mid-career)	103	46.8
		15+ Years (Advanced in career)	3	1.4
Number of Years Spent in Current Position	Baby Boomers	Less than 5 Years	24	20.9
		5-10 Years	29	25.2
		11-15 Years	22	19.1
		15+ Years	40	34.8
	Generation X	Less than 5 Years	36	24.3
		5-10 Years	56	37.8
		11-15 Years	32	21.6
		15+ Years	24	16.2
	Millennial/ Generation Y	Less than 5 Years	138	62.7
		5-10 Years	73	33.2
		11-15 Years	7	3.2
		15+ Years	2	.9
Age of Certification	Baby Boomers	18-30	12	24.0
		30-45	29	58.0
		45-60	9	18.0
	Generation X	18-30	33	36.3
		30-45	53	58.2
		45-60	5	5.5

Millennial/ Generation Y	18-30	70	58.3
	30-45	50	41.7
	45-60	0	0.0

Table 12. Sample Descriptives Across Certification

			N	%
Age Cohort	Certified	Baby Boomers (born between 1946-1964)	50	19.2
		Generation X (born between 1965-1980)	91	34.9
		Millennial/Generation Y (born between 1981-2001)	120	46.0
	Noncertified	Baby Boomers (born between 1946-1964)	65	29.3
		Generation X (born between 1965-1980)	57	25.7
		Millennial/Generation Y (born between 1981-2001)	100	45.0
Education	Certified	High School Diploma	15	5.7
		Associate Degree	15	5.7
		Bachelor's Degree	107	41.0
		Master's Degree	116	44.4
		Doctorate Degree or JD	8	3.1
	Noncertified	High School Diploma	18	8.1
		Associate Degree	25	11.3
		Bachelor's Degree	111	50.0
		Master's Degree	65	29.3
		Doctorate Degree or JD	3	1.4
Beyond the Educational Level	Certified	Earned a Professional Certification	182	69.7
		Attended Continuing Education Classes	131	50.2
		Attended Educational Conferences	135	51.7
		Not Pursued Any Learning Activities	22	8.4
	Noncertified	Earned a Professional Certification	65	29.3
		Attended Continuing Education Classes	91	41.0
		Attended Educational Conferences	84	37.8
		Not Pursued any Learning Activities	68	30.6

Years of Practicing Human Resources	Certified	Less than 5 Years (Early-career)	58	22.2
		5-15 Years (Mid-career)	123	47.1
		15+ Years (Advanced in career)	80	30.7
	Noncertified	Less than 5 Years (Early-career)	86	38.7
		5-15 Years (Mid-career)	82	36.9
		15+ Years (Advanced in career)	54	24.3
Number of Years Spent in Current Position	Certified	Less than 5 Years	81	31.0
		5-10 Years	103	39.5
		11-15 Years	39	14.9
		15+ Years	38	14.6
	Noncertified	Less than 5 Years	117	52.7
		5-10 Years	55	24.8
		11-15 Years	22	9.9
		15+ Years	28	12.6

Scale Descriptives. Table 13 describes the means and standard deviations of the scale variables. For certified participants, on average, they had higher levels of positive[1] influence of certification ($M = 5.70$, $SD = 1.18$), positive results of certification ($M = 5.88$, $SD = 0.94$), and positive attitudes toward professional certification ($M = 5.79$, $SD = 0.97$). For noncertified individuals, on average, participants had neutral influence of certification ($M = 3.93$, $SD = 1.43$), positive results of certification ($M = 5.58$, $SD = 0.98$), and positive attitudes toward professional certification ($M = 4.75$, $SD = 0.94$). Finally, taking all participants together, on average, participants reported having positive influence of certification ($M = 5.74$, $SD = 0.97$), positive results of certification ($M = 4.89$, $SD = 1.57$), and positive attitudes toward certification ($M = 5.31$, $SD = 1.09$).

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[1] Midpoint of the scale = (1+7)/2 = 4. As such, if the mean on a scale is higher than the midpoint, then on average, participants had positive scores on this scale.

Table 13. Descriptive of the Scales

		N	Minimum	Maximum	Mean	Standard Deviation
Certified Participants	Influence of Certification	261	1.00	7.00	5.70	1.18
	Results of Certification	261	1.00	7.00	5.88	.94
	Attitudes Toward Certification	261	1.00	7.00	5.79	.97
Noncertified Participants	Influence of Certification	222	1.00	7.00	3.93	1.43
	Results of Certification	222	1.10	7.00	5.58	.98
	Attitudes Toward Certification	222	1.05	6.95	4.75	.94
All Participants	Influence of Certification	483	1.00	7.00	5.74	.97
	Results of Certification	483	1.00	7.00	4.89	1.57
	Attitudes Toward Certification	483	1.00	7.00	5.31	1.09
	Valid N	483				

Correlation Analysis. Table 14 depicts Pearson Correlation Tests that examine the relation between (age cohort, education, and certification) and (attitudes toward professional certification total, attitudes toward professional certification for certified, attitudes toward professional certification for noncertified, influence of certification total, influence of certification for certified, influence of certification for noncertified, results of certification total, results of certification for certified, and results for certification for noncertified). There are no significant correlations between age cohort and the variables (attitudes toward professional certification total, attitudes toward professional certification for certified, attitudes toward professional certification for noncertified, influence of certification total, influence of certification for certified, influence of certification for noncertified, results of certification total, results of certification for certified, and results for certification for noncertified); $r = .03$, $n = 483$, $p = .237$; $r = -.00$, $n = 261$, $p = .481$; $r = .00$, $n = 222$, $p = .480$; $r = .07$, $n = 483$, $p = .068$; $r = -.01$, $n = 261$, $p = .461$; $r = .07$, $n = 222$, $p = .142$; $r = -.04$, $n = 483$, $p = .208$; $r = .00$, $n = 261$, $p = .491$; and $r = -.10$, $n = 222$, $p = .070$, respectively.

There were small and positive correlations between education and the variables (attitudes toward professional certification total, attitudes toward professional certification for certified, attitudes toward professional certification for noncertified, influence of certification total, influence of certification for certified, influence of certification for noncertified, results of certification total, and results for certification for noncertified); $r = .20$, $n = 483$, $p < .001$; $r = .11$, $n = 261$, $p = .041$; $r = .18$, $n = 222$, $p = .003$; $r = .19$, $n = 483$, $p < .001$; $r = .11$, $n = 261$, $p = .041$; $r = .13$, $n = 222$, $p = .028$; $r = .15$, $n = 483$, $p = .001$; and $r = .16$, $n = 222$, $p = .008$, respectively, with high levels of education associated with higher levels of attitudes toward professional certification, influence, and results of certification. However, there was no

significant correlation between education and results of certification for certified*; r = .09, n = 261, p = .078.*

Finally, there was medium and negative correlation between certification and attitudes toward professional certification, strong and negative correlation between certification and influence of certification, and small and negative correlation between certification and results of certification; *r* = -.48, *n* = 483, *p* < .001; *r* = -.56, *n* = 483, *p* < .001; and *r* = -.16, *n* = 483, *p* < .001 respectively, with being certified associated with higher levels of attitudes toward professional certification, influence and results of certification (see Table 14).

Table 14. Pearson's Zero Order Correlation Matrix

	Age Cohort	Education	Certification
Attitudes Toward Certification			
Total	.03	.20***	-.48***
Certified	-.00	.11*	
Noncertified	.00	.18**	
Influence of Certification			
Total	.07	.19***	-.56***
Certified	-.01	.11*	
Noncertified	.07	.13*	
Results of Certification			
Total	-.04	.15***	-.16***
Certified	.00	.09	
Noncertified	-.10	.16**	

* Correlation is significant at the 0.05 level (one-tailed).
** Correlation is significant at the 0.01 level (one-tailed).
*** Correlation is significant at the 0.001 level (one-tailed).

Hypothesis 1. Age cohort has an effect on the attitudes toward professional certification, where millennials are less interested in professional certification.

To test this hypothesis, we used nine simple regressions (see overall description and process). The independent variable for the nine regressions were age cohort, and the dependent variables were attitudes toward professional certification total, attitudes toward professional certification for certified, attitudes toward professional certification for noncertified, influence of certification total, influence of certification for certified individuals, influence of certification for noncertified individuals, results of certification total, results of certification for certified individuals, and results for certification for noncertified individuals. We combined the nine regressions in this section for two main reasons: first, the nine regressions were conducted to test one hypothesis (Hypothesis 1); and second, they all lead to the same results. We conducted preliminary analyses to ensure that the assumptions of normality, linearity, multicollinearity, and homoscedasticity are met. Age cohort was not a significant predictor of attitudes toward professional certification for certified individuals, attitudes toward professional certification for noncertified individuals, influence of certification total, influence of certification for certified individuals, influence of certification for noncertified individuals, results of certification total, results of certification for certified individuals, or results for certification for noncertified individuals, respectively; $F (1, 481) = 0.51$, $p = .474$; $F (1, 259) = 0.002$, $p = .962$; $F (1, 220) = 0.003$, $p = .960$; $F (1, 481) = 2.24$, $p = .135$; $F (1, 259) = 0.009$, $p = .923$; $F (1, 220) = 1.16$, $p = .283$; $F (1, 481) = 0.66$, $p = .417$; $F (1, 259) = 0.001$, $p = .981$ and $F (1, 220) = 2.20$, $p = .139$, respectively (see Table 15)

This indicates that Hypothesis 1, which states that age cohort has an effect on the attitudes toward certification, where millennials are less interested in professional certification,

was not supported. It is important to note that attitudes toward professional certification was somehow equal across baby boomers ($M = 5.22$, $SD = 1.07$), Generation X ($M = 5.37$, $SD = 1.06$) and millennial/Generation Y ($M = 5.32$, $SD = 1.11$).

Table 15. R, R Square, Adjusted R Square

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
Attitudes Toward Certification Total	.033	.001	-.001	1.08710	.001	.513	1	481	.474	1.882
Attitudes for Certified	.003	.000	-.004	.97674	.000	.002	1	259	.962	2.020
Attitudes for Noncertified	.003	.000	-.005	.93758	.000	.003	1	220	.960	2.108
Influence of Certification Total	.068	.005	.003	1.56804	.005	2.238	1	481	.135	1.912
Influence for Certified	.006	.000	-.004	1.18177	.000	.009	1	259	.923	2.029
Influence for Noncertified	.072	.005	.001	1.42963	.005	1.158	1	220	.283	2.107
Results of Certification Total	.037	.001	-.001	.96959	.001	.661	1	481	.417	1.919
Results for Certified	.001	.000	-.004	.94476	.000	.001	1	259	.981	1.951
Results for Noncertified	.099	.010	.005	.97349	.010	2.200	1	220	.139	2.037

Hypothesis 2. Education level moderates the relationship between age cohort and the attitudes toward professional certification, where the higher the education level, the weaker the relationship.

To test this hypothesis, we used three hierarchical regressions (see overall description and process). The independent variables for the three regressions are age cohort and education, while in step 2, the independent variable is education as a moderator. Moreover, the dependent variables in the three regressions are attitudes toward professional certification total, attitudes toward professional certification for certified individuals, and attitudes toward professional certification for noncertified individuals.

Regression 1. We used hierarchical multiple regression to assess the ability of education to moderate the relation between age cohort and attitudes toward professional certification total. We conducted preliminary analyses to make sure that the assumptions of normality, linearity, multicollinearity, and homoscedasticity were met. Age cohort and education were entered at Step 1, explaining 4.1% of the variance in attitudes toward professional certification total; F (2, 480) = 10.37, $p < .001$. After entering the education moderator at Step 2, the total variance explained by the model as a whole was 4.2%; F (3, 479) = 6.99, $p < .001$. As such, the education moderator, although not significant, explained an additional 0.1% of the variance in attitudes toward professional certification total; R^2 change = .001, F change (1, 479) = 0.26, $p = .612$. In the final model, only education was statistically significant (*beta* = .27, $p = .049$), indicating that individuals with higher education were more likely to have more favorable attitudes toward professional certification (see Tables 16 and 17).

Table 16. R, R Square, Adjusted R Square

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.203	.041	.037	1.06603	.041	10.367	2	480	.000	
2	.205	.042	.036	1.06686	.001	.258	1	479	.612	1.904

Table 17. Regression Parameters

Model		B	$SE\ B$	β
1	(Constant)	4.42	.23	
	Age Cohort	.05	.06	.04
	Education	.25	.05	.20***
2	(Constant)	4.17	.54	
	Age Cohort	.16	.23	.12
	Education	.33	.16	.27*
	Education*Age Cohort	-.04	.07	-.11

Note. For model 1, R^2 = .041, and for model 2, R^2 = .042, $R^2 change$ = .001, * p < .05, ** p < .01, *** p < .001.

   Regression 2. We used hierarchical multiple regression to assess the ability of education to moderate the relation between age cohort and attitudes toward professional certification for certified individuals. We conducted preliminary analyses to make sure that the assumptions of normality, linearity, multicollinearity, and homoscedasticity were met. Age cohort and education, which were entered at Step1, were not found to be significant predictors of attitudes toward professional certification for certified individuals; F (2, 258) = 1.52, p = .220. After entering the education moderator at Step 2, age cohort, education, and education moderator were not significant predictors of attitudes toward professional certification for certified individuals; F (3, 257) = 1.03, p = .381 and F change (1, 257) = 0.05, p = .829 (see Table 18).

Table 18. R, R Square, Adjusted R Square

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.108	.012	.004	.97290	.012	1.524	2	258	.220	
2	.109	.012	.000	.97471	.000	.047	1	257	.829	2.035

Regression 3. We used hierarchical multiple regression to assess the ability of education to moderate the relationship between age cohort and attitudes toward professional certification for noncertified individuals. We conducted preliminary analyses to make sure that the assumptions of normality, linearity, multicollinearity, and homoscedasticity were met. Age cohort and education were entered at Step 1, explaining 3.4% of the variance in attitudes toward professional certification for noncertified individuals; F (2, 219) = 3.80, p = .024. After entering the education moderator at Step 2, the total variance explained by the model as a whole was 3.8%; F (3, 218) = 2.83, p = .039. As such, the education moderator, although not significant, explained an additional 0.4% of the variance in attitudes toward professional certification for noncertified individuals; R^2 change = .004, F change (1, 218) = 0.90, p = .343. In the first model, only education was statistically significant (*beta* = .18, p = .006), indicating that individuals with higher education were more likely to have more favorable attitudes toward certification (see Tables 19 and 20). It is important to note that in the final model, age cohort, education, and education moderator were not significant predictors of attitudes toward professional certification for noncertified individuals.

Table 19. R, R Square, Adjusted R Square

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
					R Square Change	F Change	df1	df2	Sig. F Change	
Attitudes Toward Certification Total	.033	.001	-.001	1.08710	.001	.513	1	481	.474	1.882

Table 20. Regression Parameters

Model		*B*	*SE B*	*β*
1	(Constant)	4.18	.27	
	Age Cohort	-.01	.07	-.01
	Education	.19	.07	.18**
2	(Constant)	4.69	.60	
	Age Cohort	-.25	.26	-.23
	Education	.02	.19	.02
	Education*Age Cohort	.08	.08	.29

Note. For model 1, $R^2 = .034$; and for model 2, $R^2 = .038$, $R^2 change = .004$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Based on the three-regression explained above, Hypothesis 2 was partially supported. Specifically, education was found to significantly predict attitudes toward professional certification total and attitudes toward professional certification for noncertified individuals, indicating that individuals with higher levels of education were more likely to have more favorable attitudes toward professional certification. Education, however, was not found to be significant predictor of attitudes toward professional certification for certified individuals. Similarly, education was not found to moderate the relationship between age cohort and attitudes toward professional certification.

Hypothesis 3. Certification moderates the relationship between age cohort and the attitudes toward professional certification whereas, for all generations, those who have earned certification will view professional certification more favorably.

To test Hypothesis 3, we used one hierarchical regression (see overall description and process). In Step 1, the independent variables were age cohort and certification, while, in Step 2, the independent variable was certification as a moderator. The dependent variable was attitudes toward professional certification total.

We used hierarchical multiple regression to assess the ability of certification to moderate the relation between age cohort and attitudes toward professional certification total. We conducted preliminary analyses to make sure that the assumptions of normality, linearity, multicollinearity, and homoscedasticity were met. Age cohort and certification were entered at Step 1, explaining 22.6% of the variance in attitudes toward professional certification total; F $(2, 480) = 70.04$, $p < .001$. After entering the certification as moderator at Step 2, the total variance explained by the model as a whole was the same (22.6%); F $(3, 479) = 46.60$, $p < .001$. As such, the certification moderator, although not significant, explained an additional

0.0008% of the variance in attitudes toward professional certification total; R^2 change = .000008, F change $(1, 479) = 0.005$, $p = .945$. In the final model, only certification was statistically significant ($beta = -.48$, $p < .049$), indicating that individuals who are certified were more likely to have more favorable attitudes toward professional certification (see Tables 21 and 22).

Based on the regression, Hypothesis 3 was partially supported. Specifically, certification was found to significantly predict attitudes toward professional certification total, indicating that individuals who are certified were more likely to have more favorable attitudes toward professional certification. Certification, however, was not found to moderate the relationship between age cohort and attitudes toward professional certification.

Table 21. R, R Square, Adjusted R Square

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.48	.226	.22	.96	.226	70.04	2	480	.000	
2	.48	.226	.22	.96	.000	.00	1	479	.945	1.94

Table 22. Regression Parameters

Model		B	$SE\ B$	β
1	(Constant)	6.82	.19	
	Age Cohort	0.000093	.05	0.000069
	Certification	-1.04	.09	-.48***
2	(Constant)	6.85	.41	
	Age Cohort	-.01	.17	-.01
	Certification	-1.05	.26	-.48***
	Certification*Age Cohort	.01	.11	.01

Note. For model 1, $R^2 = .226$; and for model 2, $R^2 = .226$, $R^2 change = .000008$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Overall Model. The overall model was education and certification as moderators of the relationship between age cohort and attitudes toward professional certification while controlling for demographics. To test the overall model, including the controlled variables, we used three hierarchical regressions (see overall description and process).

Regression 1. We used hierarchical regression analysis to investigate the ability of education and certification to moderate the relationship between age cohort and attitudes toward professional certification total while controlling for gender, US location, years of HR experience, and industry. We conducted preliminary analyses to ensure that the assumptions of normality of residuals, linearity, homoscedasticity, independence of errors, and no multicollinearity were met. Gender, US location, years of HR experience, and industry were entered at Step 1, explaining 5.1% of the total variance in attitudes toward professional certification total; F (19, 463) = 1.30, p = .176. After entering age cohort, education, and certification at Step 2, the total variance explained by the regression model was 26.9%; F (22, 460) = 7.70, p <.001. As such, age cohort, education, and certification explained an additional 21.8% of the variance in attitudes toward professional certification total; R^2 change = .218, F change (3, 460) = 45.83, p < .001. Moreover, in Model 2, only education and certification were significant predictors of attitudes toward professional certification, with certification being the highest predictor (*beta* = -.45, p < .001) followed by education (*beta* = .13, p = .002). After entering the education moderator and certification moderator at Step 3, the total variance explained by the whole regression model was 26.9%; F (24, 458) = 7.03, p < .001. The two moderators, although not significant predictors of attitudes toward professional certification total, explained an additional 0.0149% of the variance in attitudes toward professional certification after controlling for Step 1 and Step 2 variables; R^2 change = .000149, F change

(2, 458) = 0.05, p = .954. In the final model, only certification was a significant predictor of attitudes toward professional certification (*beta* = -.42, p = .001; see Tables 23 and 24). This indicated that for Model 2, individuals who had higher levels of education and who were certified were more likely to have more favorable attitudes toward professional certification. However, in the final model, only individuals who were certified were more likely to have more favorable attitudes toward professional certification.

Table 23. R, R Square, Adjusted R Square

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.23	.051	.01	1.08	.051	1.30	19	463	.176	
2	.52	.269	.23	.95	.218	45.83	3	460	.000	
3	.52	.269	.23	.95	.000	.05	2	458	.954	1.96

Table 24. Regression Parameters

Model		*B*	*SE B*	*β*
1	(Constant)	5.19	.28	
	Gender	-.07	.11	-.03
	Southeast	.00	.14	.00
	Central	-.02	.15	-.01
	Northwest	-.04	.17	-.01
	Southwest	.13	.15	.05
	Construction	-.30	.28	-.05
	Education	-.31	.17	-.11
	Financial Services	.30	.26	.06
	Government	-.35	.21	-.09
	Leisure and Hospitality	.02	.28	.00
	Manufacturing	-.30	.23	-.07
	Natural Resources and Mining	-.77	.56	-.06
	Professional and Business Services	.07	.21	.02
	Information and Technology	.25	.28	.04
	Trade, Transportation, and Utilities	-.62	.38	-.08
	Consulting	.37	.56	.03
	Human Resource Services	-.07	.19	-.02
	Other	-.24	.20	-.06
	Years of Practicing HR	.18	.07	.13***
2	(Constant)	6.15	.42	
	Gender	.01	.10	.01
	Southeast	.01	.12	.00
	Central	.06	.14	.02
	Northwest	-.14	.15	-.04
	Southwest	.10	.14	.04
	Construction	-.20	.25	-.04
	Education	-.29	.15	-.10
	Financial Services	.12	.23	.02
	Government	-.14	.18	-.04
	Leisure and Hospitality	.19	.25	.03
	Manufacturing	-.11	.20	-.02
	Natural Resources and Mining	-.66	.50	-.06
	Professional and Business Services	.12	.18	.03
	Information and Technology	.22	.25	.04
	Trade, Transportation, and Utilities	-.26	.34	-.03
	Consulting	.13	.49	.01
	Human Resource Services	-.17	.16	-.05

Other	.06	.18	.02
Years of Practicing HR	.04	.08	.02
Age Cohort	.02	.07	.01
Education	.16	.05	.13**
Certification	-.99	.09	-.45***
(Constant)	5.97	.81	
Gender	.01	.10	.01
Southeast	.01	.12	.00
Central	.06	.14	.02
Northwest	-.15	.15	-.05
Southwest	.10	.14	.03
Construction	-.20	.25	-.03
Education	-.29	.15	-.10
Financial Services	.13	.23	.02
Government	-.14	.19	-.04
Leisure and Hospitality	.19	.25	.03
Manufacturing	-.10	.20	-.02
Natural Resources and Mining	-.66	.50	-.05
Professional and Business Services	.12	.18	.03
Information and Technology	.22	.25	.04
Trade, Transportation, and Utilities	-.26	.34	-.03
Consulting	.13	.49	.01
Human Resource Services	-.17	.17	-.05
Other	.06	.18	.02
Years of Practicing HR	.04	.08	.03
Age Cohort	.10	.30	.07
Education	.18	.16	.15
Certification	-.91	.27	-.42***
Education Moderator	-.01	.07	-.03
Certification Moderator	-.03	.11	-.05

Note. For model 1, R^2 = .051; for model 2, R^2 = .269, $R^2 change$ = .218; and for model 3, R^2 = .269, $R^2 change$ = .000149, * $p < .05$, ** $p < .01$, *** $p < .001$.

Regression 2. We used hierarchical regression analysis to investigate the ability of education and certification to moderate the relationship between age cohort and influence of certification while controlling for gender, US location, years of HR experience, and industry. We conducted preliminary analyses to ensure that the assumptions of normality of residuals, linearity, homoscedasticity, independence of errors, and no multicollinearity were met. Gender, US location, years of HR experience, and industry were entered at Step 1, explaining 4.5% of the total variance in influence of certification; F (19, 463) = 1.15, p = .294. After entering age cohort, education, and certification at Step 2, the total variance explained by the regression model was 33.6%, F (22, 460) = 10.60, p <.001. As such, age cohort, education and certification explained an additional 29.1% of the variance in influence of certification; R^2 change = .291, F change (3, 460) = 67.26, p < .001. Moreover, in Model 2, only education and certification were significant predictors of influence of certification, with certification being the highest predictor (*beta* = -.54, p < .001) followed by education (*beta* = .09, p = .022). After entering the education moderator and certification moderator at Step 3, the total variance explained by the whole regression model was 33.8%; F (24, 458) = 9.72, p < .001. The two moderators, although not significant predictors of influence of certification, explained an additional 0.2% of the variance in influence of certification, after controlling for Step 1 and Step 2 variables; R^2 change = .002, F change (2, 458) = 0.42, p = .657. In the final model, only certification was a significant predictor of influence of certification (*beta* = -.59, p < .001; see Tables 25 and 26). This indicated that for Model 2, individuals who had higher levels of education and who were certified were more likely to report that certification had more favorable influence. However, in the final model, only individuals who were certified were more likely to report that certification had more favorable influence.

Table 25. R, R Square, Adjusted R Square

					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.213	.045	.006	1.56532	.045	1.154	19	463	.294	
2	.580	.336	.305	1.30929	.291	67.261	3	460	.000	
3	.581	.338	.303	1.31094	.001	.420	2	458	.657	2.014

Table 26. Regression Parameters

Model		*B*	*SE B*	*β*
1	(Constant)	4.93	.41	
	Gender	-.17	.16	-.05
	Southeast	-.02	.20	.00
	Central	-.18	.22	-.04
	Northwest	.00	.24	.00
	Southwest	.11	.22	.03
	Construction	-.33	.41	-.04
	Education	-.22	.24	-.05
	Financial Services	.39	.37	.05
	Government	-.45	.30	-.08
	Leisure and Hospitality	-.11	.41	-.01
	Manufacturing	-.64	.33	-.10
	Natural Resources and Mining	-.65	.81	-.04
	Professional and Business Services	-.01	.30	.00
	Information and Technology	.23	.41	.03
	Trade, Transportation, and Utilities	-1.09	.55	-.09*
	Consulting	.40	.80	.02
	Human Resource Services	-.01	.27	.00
	Other	-.47	.28	-.09
	Years of Practicing HR	.23	.10	.11*
2	(Constant)	6.81	.58	
	Gender	-.05	.14	-.01
	Southeast	-.01	.17	.00
	Central	-.05	.19	-.01
	Northwest	-.20	.21	-.04
	Southwest	.05	.19	.01
	Construction	-.15	.35	-.02
	Education	-.17	.20	-.04
	Financial Services	.08	.31	.01
	Government	-.07	.25	-.01
	Leisure and Hospitality	.19	.34	.02
	Manufacturing	-.30	.28	-.05
	Natural Resources and Mining	-.39	.68	-.02
	Professional and Business Services	.08	.25	.01
	Information and Technology	.20	.34	.02
	Trade, Transportation, and Utilities	-.51	.46	-.04
	Consulting	.02	.67	.00

Human Resource Services	-.20	.23	-.04
Other	.01	.24	.00
Years of Practicing HR	.03	.10	.01
Age Cohort	.08	.10	.04
Education	.17	.07	.09*
Certification	-1.71	.13	-.54***
(Constant)	6.60	1.11	
Gender	-.05	.14	-.01
Southeast	.00	.17	.00
Central	-.05	.19	-.01
Northwest	-.21	.21	-.05
Southwest	.06	.19	.01
Construction	-.13	.35	-.02
Education	-.18	.20	-.04
Financial Services	.08	.31	.01
Government	-.08	.25	-.01
Leisure and Hospitality	.20	.34	.02
Manufacturing	-.29	.28	-.05
Natural Resources and Mining	-.36	.68	-.02
Professional and Business Services	.09	.25	.02
Information and Technology	.21	.34	.03
Trade, Transportation, and Utilities	-.51	.46	-.04
Consulting	.03	.67	.00
Human Resource Services	-.20	.23	-.04
Other	.01	.24	.00
Years of Practicing HR	.03	.10	.01
Age Cohort	.16	.41	.08
Education	.30	.22	.17
Certification	-1.86	.37	-.59***
Education Moderator	-.06	.09	-.13
Certification Moderator	.07	.15	.08

Note. For model 1, $R^2 = .045$; for model 2, $R^2 = .336$, $R^2 change = .291$; and for model 3, $R^2 = .338$, $R^2 change = .002$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Regression 3. We used hierarchical regression analysis to investigate the ability of education and certification to moderate the relationship between age cohort and results of certification while controlling for gender, US location, years of HR experience, and industry. We conducted preliminary analyses to ensure that the assumptions of normality of residuals, linearity, homoscedasticity, independence of errors, and no multicollinearity were met. Gender, US location, years of HR experience, and industry were entered at Step 1, explaining 6.4% of the total variance in results of certification; F (19, 463) = 1.66, p = .039. After entering age cohort, education, and certification at Step 2, the total variance explained by the regression model was 10.5%, F (22, 460) = 2.46, p <.001. As such, age cohort, education, and certification explained an additional 4.1% of the variance in results of certification; R^2 change = .041, F change (3, 460) = 7.08, p < .001. Moreover, in Model 2, only education industry, education, and certification were significant predictors of results of certification, with education industry being the highest predictor (*beta* = -.17, p = .004), followed by education (*beta* = .15, p = .002), and certification (*beta* = -.14, p = .003). After entering the education moderator and certification moderator at Step 3, the total variance explained by the whole regression model was 11.0%; F (24, 458) = 2.36, p < .001. The two moderators, although not significant predictors of results of certification, explained an additional 0.5% of the variance in results of certification, after controlling for Step 1 and Step 2 variables; R^2 change = .005, F change (2, 458) = 1.24, p = .291. In the final model, only education industry was a significant predictor of results of certification (*beta* = -.16, p = .005; see Tables 27 and 28). This indicated that for Model 2, individuals who worked in the education industry, who had higher levels of education, and who were certified were more likely to report that certification had more

favorable results. However, in the final model, only individuals who worked in the education

industry were more likely to report that certification had more favorable results.

Table 27. R, R Square, Adjusted R Square

| | | | | Std. Error | Change Statistics | | | | | |
Model	R	R Square	Adjusted R Square	of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.253	.064	.025	.95683	.064	1.663	19	463	.039	
2	.324	.105	.062	.93852	.041	7.081	3	460	.000	
3	.332	.110	.063	.93804	.005	1.236	2	458	.291	1.924

Table 28. Regression Parameters

Model		*B*	*SE B*	*β*
1	(Constant)	5.46	.25	
	Gender	.03	.10	.01
	Southeast	.02	.12	.01
	Central	.13	.14	.05
	Northwest	-.08	.15	-.03
	Southwest	.16	.14	.06
	Construction	-.27	.25	-.05
	Education	-.39	.15	-.16**
	Financial Services	.21	.23	.05
	Government	-.24	.18	-.07
	Leisure and Hospitality	.15	.25	.03
	Manufacturing	.04	.20	.01
	Natural Resources and Mining	-.89	.50	-.08
	Professional and Business Services	.15	.18	.04
	Information and Technology	.26	.25	.05
	Trade, Transportation, and Utilities	-.15	.34	-.02
	Consulting	.34	.49	.03
	Human Resource Services	-.14	.16	-.05
	Other	.00	.17	.00
	Years of Practicing HR	.13	.06	.11*
2	(Constant)	5.50	.42	
	Gender	.08	.10	.03
	Southeast	.02	.12	.01
	Central	.17	.13	.06
	Northwest	-.08	.15	-.03
	Southwest	.16	.13	.06
	Construction	-.26	.25	-.05
	Education	-.42	.14	-.17**
	Financial Services	.16	.22	.04
	Government	-.21	.18	-.06
	Leisure and Hospitality	.19	.24	.04
	Manufacturing	.09	.20	.02
	Natural Resources and Mining	-.93	.49	-.09
	Professional and Business Services	.15	.18	.04
	Information and Technology	.23	.25	.05
	Trade, Transportation, and Utilities	-.01	.33	.00
	Consulting	.23	.48	.02

Human Resource Services	-.15	.16	-.05
Other	.10	.17	.03
Years of Practicing HR	.04	.07	.04
Age Cohort	-.04	.07	-.03
Education	.16	.05	.15**
Certification	-.27	.09	-.14**
(Constant)	5.34	.79	
Gender	.08	.10	.03
Southeast	.02	.12	.01
Central	.18	.13	.07
Northwest	-.08	.15	-.03
Southwest	.14	.14	.05
Construction	-.26	.25	-.05
Education	-.41	.15	-.16**
Financial Services	.17	.22	.04
Government	-.19	.18	-.05
Leisure and Hospitality	.19	.25	.04
Manufacturing	.08	.20	.02
Natural Resources and Mining	-.95	.49	-.09
Professional and Business Services	.15	.18	.04
Information and Technology	.22	.25	.04
Trade, Transportation, and Utilities	-.02	.33	.00
Consulting	.22	.48	.02
Human Resource Services	-.15	.16	-.05
Other	.12	.17	.04
Years of Practicing HR	.05	.07	.04
Age Cohort	.03	.30	.03
Education	.07	.15	.06
Certification	.03	.26	.02
Education Moderator	.04	.06	.15
Certification Moderator	-.14	.11	-.23

Note. For model 1, $R^2 = .054$; for model 2, $R^2 = .105$, $R^2 change = .041$; and for model 3, $R^2 = .110$, $R^2 change = .005$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Based on the three regression analyses, it was evident that after controlling for gender, US location, years of HR experience, and industry, age cohort was not a significant predictor of attitudes toward professional certification, influence, and results of certification.

As such, Hypothesis 1, which states that age cohort has an effect on attitudes toward professional certification, where millennials are less interested in professional certification, was not supported. Moreover, education and certification were found to be significant predictors of attitudes toward professional certification, influence, and results of certification. As such, individuals with high levels of education who were certified were more likely to report more favorable attitudes, influence, and results of certification. Education and certification, however, were not found to be significant predictors of attitudes, influence, or results of certification. As such, Hypotheses 2 and 3, which state that education level and certification moderate the relationship between age cohort and attitudes toward certification, were partially supported.

Additional Analysis Results. We conducted additional analyses to answer the following extra research questions:

1. *Compared to other cohorts, did millennials prefer remote testing or using a brick and mortar test center?* We used a chi square test to examine the relationship between age cohort and testing center. A chi square test for independence indicated no significant association between age cohort and testing center; X^2 (4, $n = 261$) = 2.52, $p = .641$, *Cramer's V* = .07.

2. *Do employers value professional certification for millennials compared to other cohorts?* We used a chi square test to examine the relationship between age cohort and employers' value of certification. A chi square test for independence indicated a

significant association between age cohort and employers' value of professional certification; X^2 (2, $n = 261$) = 8.61, $p = .014$, *Cramer's V* = .18 (small effect). In the millennials' group, 95.88% reported that employers value professional certification, while 82% of baby boomers and 90.1% Generation X reported the same. As such, employers of millennials value professional certification significantly more than those of baby boomers and Generation X.

3. *Does earning a professional certification bring relevance to participants' jobs?* Using a frequency table that depicts whether professional certification brings relevance to participants' jobs, 91.6% of participants reported that HR certification brings relevance to their jobs. It is important to note that we couldn't analyze the relationship between age cohort and relevance to job because only 8.4% of participants asserted that HR certification does not bring relevance to their jobs.

4. *When do millennials (at what stage in their career) earn a professional certification?* We used a chi square test to examine the relationship between age cohort and stage at which participants earn their professional certification. A chi square test for independence indicated a significant association between age cohort and stage at which participants earn/or intend to earn their professional certification; X^2 (4, $n = 261$) = 36.18, $p < .001$, *Cramer's V* = .26 (small effect). In the millennials group, 58.3% earned/will earn their professional certification in less than 5 years of their career (early career), while the same was true for 24% of baby boomers and 36.3% of those in Generation X. As such, millennials are more likely to earn/intend to earn their professional certification early in their careers compared to baby boomers and Generation X.

5. *Does the number of earned professional certifications influence the attitudes of participants?* We used a Pearson Correlation Test to examine the relationship between number of earned professional certification and attitudes toward professional certification. There was no significant correlation between age cohort and attitudes toward professional certification; $r = .07$, $n = 260$, $p = .256$.

6. *Does the age at which participants earned/will earn their first professional certification influence their attitudes toward professional certification?* We used a Pearson Correlation Test to examine the relationship between age of first earned certification and attitudes toward professional certification. There was no significant correlation between age of first earned certification and attitudes toward professional certification; $r = .05$, $n = 261$, $p = .207$.

Qualitative Results

In an effort to understand beyond the quantitative results of the attitudes toward professional certification of both the certified and noncertified age cohort, participants were asked two open-ended questions focused on why an individual chose to be certified (survey questions 25 and 26) or did not choose to be certified (survey questions 24 and 26).

The sample of the study was $N = 483$ participants, distributed across the three age cohorts: baby boomers, born between 1946 and 1964 ($N = 115$, 23.8%), Generation X, born between 1965 and 1980 ($N = 148$, 30.6%), and millennial/Generation Y, born between 1981 and 2001 ($N = 220$, 45.5%). Total responses not labeled "N/A" for certified individuals across all cohorts was 134 (51.34%) and for noncertified was 188 (84.68%) as detailed in Tables 29 and 30. We created a coding scheme based on the literature; all responses were reviewed and coded separately based on the coding scheme and other emerging themes.

Table 29. Open Ended Questions Coded for Certified Individuals

	Boomers (50)	Gen X (91)	Gen Y (120)
Personal Accomplishments	**6**	**6**	**11**
Confidence in Work/Credibility	11	10	19
Don't Want to get a Master's degree	1	0	1
Advancement/Better Salary/Marketability	7	15	28
Continuing Education	5	3	10
Employer Sponsored Certification	0	1	0

Table 30. Open Ended Questions Coded for Noncertified Individuals

	Boomers (65)	Gen X (57)	Gen Y (100)
Not Needed/Makes No Difference/No Value	19	13	24
No Plans to Leave My Current Employer	1	0	0
Time Commitment	8	13	22
Financial Commitment	5	16	27
Planning to Retire	11	0	0
Prefer Formal Education	0	6	0
Planning to Change Profession	0	1	8
Might Pursue in the Future	0	3	11

For certified individuals, findings demonstrate an overwhelming response toward marketability, followed by confidence in work and skills/credibility, and lastly personal accomplishments across all age cohorts. This alignment, however, is not the same when it comes to continuing education. Millennials, by far, are very closely focused on being certified and its relationship with continuing education, followed by baby boomers, and then Generation X.

Findings for noncertified individuals are richer, in terms of the outliers and new themes. Although all age cohorts agreed on the time commitment, the financial commitment and the value to pursue a certification, millennials, being the youngest of the generations, are still considering a potential change from the HR profession. Additionally, they kept the possibility open with the potential of pursuing an HR certification later on when they have committed to a profession and they have more time and money.

IV.2 Discussion

We attempted to answer the core research question: *Compared to older age cohorts, what are the millennials' attitudes toward professional certification, and what are their reasons?* We reviewed prior literature on age cohorts and professional certification against the backdrop of socialization theory. Additionally, we drafted a model to test three hypotheses. The findings are discussed below.

Prior research suggests that millennials, the digital natives (Hershatter, 2010), are impatient, expecting promotion to be quick and frequent (Twenge et al., 2010), and believe that work is not central in their lives (Deal, Altman, and Rogelberg, 2010). Most importantly, interest in working in one profession and advancing in one career path is not appealing to millennials; they are more interested in constantly building diverse skills to be marketable.

Because of this, we argued that their lack of patience, their focus on immediate results, and their constant need for prompt feedback indicates a lack of interest to pursue professional certifications, which requires months of preparation, patience, money for initial examination, and continuous recertification (Belton, 2016; Richardson, 2016). Our results, however, did not support Hypothesis 1: Age cohort has an effect on attitudes toward professional certification, where millennials are less interested in professional certification.

Attitudes toward professional certification was equal across baby boomers (M = 5.22, SD = 1.07), Generation X (M = 5.37, SD = 1.06), and millennial/Generation Y (M = 5.32, SD = 1.11). Furthermore, millennials' interest in professional certification was also tested by a chi square test for independence, indicating significant association between age cohort and stage at which participants earn/or intend to earn their professional certification. Whereas 58.3% of millennials earned/will earn their professional certification in less than 5 years of their career (early career), only 24% of baby boomers and 36.3% of Generation X did the same. As such, millennials are more likely to earn/intend to earn their professional certification early in their careers compared to baby boomers and Generation X.

These results aligning millennials' attitudes toward professional certifications could be explained by both the literature and socialization theory. Although socialization theory states that each generation is influenced by its generation's social and historical events, it also asserts that the transmission from generation to generation (Grusec & Hastings, 2014), specifically in training for occupations, plays a role in millennials' attitudes toward professional certification. Because the older cohorts' attitudes toward professional certification were positive, these attitudes transmitted to millennials as confirmed by the results. Additionally, individual socialization is strategically impacted by parents who belong to a different generation with

specific socio-economical class, education, and successes; this transmission impacts the views of the socialized individuals who aim for similar education and social standards as their parents (Grusec & Hastings, 2014; Loughlin & Barling, 2001).

Furthermore, the qualitative results for certified millennials showcase a far larger focus on marketability and career advancement by millennials, and the literature by Mencl and Lester (2014) supports that by showing that career advancement is more important to millennials than to Generation X and to baby boomers. This research on work values reveals that 7 out of 10 work values were similar among baby boomers, Generation X, and millennials. Lastly, these results could also be explained by Butler and Gheorghiu's (2010) study that confirms that millennials share many of the characteristics of baby boomers and Generation X.

Additional data points from the qualitative question results reinforced the quantitative findings and the literature describing the millennials. For instance, 50% of noncertified millennials suggest that the most important aspect that is keeping them from being certified is the financial and/or time commitment needed to pursue a certification at this stage of their lives. The body of knowledge discussing the concept of life cycle by researchers (Macky et al., 2008; Bennett, Beehr, & Ivanitskaya, 2017; Twenge et al., 2010; Becton, Walker, & Jones-Farmer, 2014; and Hill, 2002) and the notion that differences between generations are confused with variations due to aging, and that it is inappropriate to separate aging from generational effect. These scholars collectively agree that as people age, get married, and become parents, they realign with previous cohorts and their parents to require a certain standard of living and a traditional path in their careers to support that lifestyle and their families.

Prior research suggests that although formal education, like pursing an associate, bachelor's, master's, or a doctorate degree, and professional certification are both voluntary,

they are also quite different. While Richardson (2016), suggests that certification compliments education, Lester and Dwyer (2012) established that the lower the individual education level, the more interest in professional certification because earning a professional certification allows job applicants to differentiate themselves from others (Lester et al., 2010; Wiley, 1995; Adams et al., 2004; Belton, 2016), specifically when it comes to confirming their knowledge, skills, and abilities (Belton, 2016; Fertig, 2009).

In testing Hypothesis 2: education level will moderate the relationship between age cohort and the attitudes toward professional certification, where the higher the education level, the weaker is the relationship, we find that our results confirm and contradicts prior findings, whereas education was found to significantly predict attitudes toward professional certification (*beta* = .27, *p* = .049), indicating that individuals with higher levels of education were more likely to have more favorable attitudes toward professional certification. Education, however, was not found to be a significant predictor of attitudes toward professional certification for certified individuals. Similarly, education was not found to moderate the relationship between age cohort and attitudes toward professional certification.

The literature review focused on the personal credibility and accomplishments received by earning a certification, and most importantly, on its benefits in the workplace such as making recipients more competitive and more likely to earn peer recognition as experts in a specific field (Wiley, 1995). According to Mencl and Lester (2014), all cohorts state that career advancement is important. However, this is more prominent with millennials, compared to Generation X and baby boomers. Yet that research also reveals that 7 out of 10 work values were similar among baby boomers, Generation X, and millennials. Therefore, our findings confirm that interest in professional certification aligns with the expectation of generational

cohorts that it will differentiate them and advance their careers, regardless of their education level. Although we have confirmation that more educated individuals are more likely to be interested in professional certification exactly for that same reason, education does not moderate or impact the direction and/or the strength of the relationships.

Overarching benefits for certification are focused on continuing education, updating knowledge, and remaining current. Research has addressed the fact that academic learning can quickly become outdated, and to stay current and efficient, additional knowledge must be added throughout an individual's career, suggesting that earning a professional certification contributes to continuous learning if it is maintained (Belton, 2016; Daniels, 2011; Richardson, 2016). This notion of the value of continuing education was validated and emphasized by the qualitative results of our study, whereas continuing education was verbalized highly for both certified millennials and baby boomers. Noncertified Generation X, on the other hand, saw more value in seeking additional formal education with higher degrees.

Our results align with previous literature regarding certification, whereas research on earning professional certification emphasizes peer recognition, achievement, and competency in the profession (Belton, 2016; Fertig, 2009; Lengnick-Hall & Aguinis, 2012; Lester & Dwyer, 2012; Lester et al., 2010; Richardson, 2016; Wiley, 1995). Additionally, Lester and Dwyer (2012), Legnick-Hall and Aguinis (2012), and Dineen and Allen (2016) found additional benefits to pursuing certification, specifically regarding its contribution to one's positive attitude, career advancement, promotions, and marketability. However, our contribution goes further to investigate the strength of the relationship between age cohort and the attitudes toward professional certification, with Hypothesis 3*:* certification moderates the relationship between age cohort and the attitudes toward professional certification whereas, for

all generations, those who have earned certification will view professional certification more favorably. Hypothesis 3 was partially supported. Specifically, certification was found to significantly (*beta* = -.48, *p* < .049) predict attitudes, indicating that individuals who are certified were more likely to have more favorable attitudes toward professional certification, regardless of their age cohort. Certification, however, was not found to moderate the relationship between age cohort and attitudes toward professional certification. Regarding the relevance of professional certification to the job, our results show that 91.6% of participants reported agreement that HR certification brings relevance to their jobs. Lastly, our qualitative results suggest that certified professionals across cohorts find earning a professional certification contributes to personal accomplishments, confidence in work knowledge, credibility with other colleagues, advancement, increased salary, and marketability.

Research by Hershatter and Epstein (2010) found millennials to be more confident in business than previous cohorts. Hill (2002) adds that they have less need to differentiate themselves from their peers, yet they expect recognition and rapid advancement (VanMeter et al., 2012). Mencl and Lester (2014) confirm that career advancement is more important to millennials than to Generation X and to baby boomers. Our results conclude that certified millennials demonstrate their interest in growth, success, recognition, and potentially following the footsteps of their parents (Grusec & Hastings, 2014) and therefore display positive attitudes toward professional certification. Alternatively, noncertified individuals, specifically millennials, saw no value yet in being certified whereas baby boomers who will soon be retiring categorized certification as not needed at this stage of their career.

In conclusion, controlling for gender, US location, years of HR experience, and work industry, age cohort was not a significant predictor of attitudes toward professional

certification. Furthermore, while Hershatter and Epstein (2010) assert that millennials are digital natives, who were born into a highly-networked environment resulting in expectations instant events, flexibility, customization, and 24/7/365 digital communication. However, our results indicated that there was no significant association between age cohorts' preferences of taking their certification exam remotely vs. brick and mortar.

We also learned that 58.3% of millennials earned/will earn their professional certification in less than 5 years of their career (early career), compared to 24% of baby boomers and 36.3% of Generation X. This finding aligns with Lester et al. (2010) suggesting that the benefit of pursuing a certification in any field is to differentiate oneself as credible to employers who value certification and to set oneself apart from those who do not have that qualification. In line with prior research that found that employers statistically view certified individuals as having more potential and knowledge than those without certifications (Richardson, 2016; Dineen & Allen, 2016), this study confirms that 95.88% of millennials perceive that their employers value professional certification, compared to 82% of baby boomers and 90.1% of Generation X. As such, employers of millennials appear to value professional certification significantly more than those of baby boomers and Generation X. Although we found that certified individuals have more positive attitudes toward professional certification, there was no significant correlation between number of earned professional certifications and attitudes toward professional certification; $r = .07$, $n = 260$, $p = .256$.

V   CHAPTER 5: FINDINGS, CONTRIBUTIONS, AND LIMITATIONS

V.1   Findings Summary

Millennials are currently 19-39. Unlike older generations, we are unable to track millennials throughout their careers to compare if their views and attitudes toward career varies and changes as they age and advance. Today, with the oldest millennials at 39 and with only 20 years in the workforce, diverse literature about this cohort continues to evolve as this generation ages. Our goal was to answer the research question: *Compared to older age cohorts, what are the millennials' attitudes toward professional certification, and what are their reasons?*

Our research finds millennials to have positive attitudes toward HR professional certification. What is keeping them from earning those certifications are financial and time constraints. While some are still contemplating the value and making final plans on their career journeys, the majority of those who are certified earned their certification early in their careers, within the first five years. Both employers and employees continue to see value for HR certification and find it relevant to their daily jobs. The research also concluded that individuals with advanced college degrees also seek human resource certification. Human resource certified millennials confirmed that certification allows them to advance in their careers and be recognized by peers, as well as position them for promotions and marketability. Lastly, certification enables them to stay abreast of changes in the profession as they invest in continuing education to maintain their credentials.

V.2   Contributions

Contribution to Theory

Theoretically, this research advances the understanding of socialization theory by investigating and evaluating, for the first time, the attitudes of three different generations

toward professional certification. Additionally, our results found that although each generation is influenced by its unique shared experiences such as historic events, technological advancements, and social and economic events that impact their views and attitudes, all generations seek career growth, marketability, and recognition as they age and have more personal and professional responsibilities, regardless of their generation.

Contribution to Literature

Our research evaluated the attitudes of millennials toward professional certification, a topic that is not widely discussed in peer-reviewed journals. Current literature addresses professional certification and generational differences. yet offers limited insights on millennials, considering they are currently between 19-39. This current literature presents those two constructs separately. Our research advances knowledge by providing current empirical data to understand millennials' attitudes toward professional certification compared to previous cohorts. Our findings confirm that although millennials have experienced different historical and social events and have different expectations and work characteristics than previous cohorts, millennials are interested in earning professional certification to advance their careers. If they are not, it's merely because they do not have the funds or time or because they are not yet sold on their current roles. Much of the literature was also confirmed in this research, showing that earning a professional certification enhances credibility and accomplishments as well as enables individuals to be more marketable and to engage in continuous learning to remain current. In contrast to current literature, our findings reflect that education significantly predicts the attitudes toward professional certification, indicating that individuals with higher levels of education were more likely to have more favorable attitudes toward professional certification.

Contribution to Practice and the Certification Industry

In 2020, millennials comprise nearly half of the American workforce. It is important for the certification industry, employers, and the general public to continue to learn about the characteristics and needs of this generation in order to support them with the right incentives, products, and services. Our research settles the worry that millennials might not be interested in professional certification, which was thought to be driving the decline in application numbers. Although we did not solve the decreased demand for certification, what we can contribute is that noncertified millennials are challenged with lack of time to prepare and with the extensive financial commitment that earning and maintaining a certification would require.

Employers should continue to invest in the talent of millennials and allow for learning, development, financial support, and time. Every certification, every certified population, and every certifying body has its own requirements and challenges. According to Pfeffer and Sutton (2006), it is very important to practice evidence-based management in order to come up with appropriate solutions for the market. Certifying bodies should consider both learning and certification preparation solutions that are affordable and small in size, and they should invest in solutions that are digital and accessible 24/7. By reducing the cost of the certification examinations through lower exam development costs and/or examination administration model, certifying bodies could pass on their savings. Additionally, organizations should consider offering financial incentives, such as promotions, free education, preparation webinars, and materials along with chunking the certification examination by domain if possible (without compromising on industry standards) whereby a candidate could pass each domain separately rather than worrying about the overwhelming knowledge required for the full certification examination. This is what is called a stackable model. Creating micro

credentials and micro learning solutions are also viable options, allowing a candidate to get a partial benefit of the larger product while still earning a topic-specific credential. Our research also confirms that many noncertified millennial HR professionals are still contemplating if HR is the right career for them. On that note, we suggest that certifying bodies start engaging and educating young adults at in high school and college to highlight the HR profession and to potentially offer solutions that could attract younger employees to stay within the profession and the certification brand.

Finally, our empirical data confirmed that employers of millennials continue to value certified employees and see the value in earning professional certification based on employees' performance and contributions to the organization.

V.3   Limitations and Suggested Future Research

This research advanced knowledge by investigating and discussing the research question: *Compared to older age cohorts, what are the millennials' attitudes toward professional certification, and what are their reasons?*

Unlike baby boomers and Generation X, millennials are still entering and evolving in the work force. To continue to understand their interest in professional certification, it will be important to repeat this research when the youngest millennials, now 19, are well into their careers.

Contributors to this research are three different generations that live and work in the US. Considering that socialization theory explains the impact of upbringing as well as historical and social events on generational characteristics, it will be important to extend this research to include global representation and to compare results with the US findings. Additionally, many certifying bodies are global or are working to deliver certification

examinations to the global market, so it will be crucial to investigate millennials across

cultures and regions to understand both their interest and impact on professional certification.

This research was limited to HR professionals. It will be valuable to expand the

research across generations to other professional certifications, such as project management

professionals, certified financial planners, and information technology.

This research focused on all available HR certifications by both the Human Resource

Certification Institute (HRCI), which has been designing, developing, and delivering

certifications for over 40 years and the Society of Human Resource Management (SHRM),

which just began certifications a few years ago. Further research could also show whether

millennials are interested in both organization's certifications or if they prefer one over the

other. Additionally, it will be valuable to segment noncertified professionals and research the

avenues they are taking to advance in their careers and to remain relevant professionally.

Lastly, we learned from this research that it takes time to understand and study

generational differences. Considering Generation Z, with members born after 2001 who are

currently 19 or younger, researchers should be proactive and start examining the characteristics

of this younger generation as they enter the workforce.

VI   CHAPTER 6: CONCLUSION

In an effort to advance knowledge and to investigate the concerns of the decline of some professional certifications applications, this quantitative research used a socialization theory approach to ask the research question: *Compared to older age cohorts, what are the millennials' attitudes toward professional certification, and what are their reasons?*

Based on human resource certified and noncertified professionals across three cohorts (baby boomers, Generation X, and millennials/Generation Y), the results suggest that millennials are interested in professional certification in order to be marketable, to advance their careers, and to continue to be abreast of professional changes through the continuing education required for recertification. What we also learned is that noncertified human resource millennials have limited time and funds to pursue these certifications, even when they are interested. These findings should help the certification industry look at their products and initiate future solutions that address this generation's needs and interest.

As this research shows, we should sharply challenge the perception of millennials. By continuing to pursue additional research focused on millennials, we can better understand the characteristics of this generation as they continue to evolve in the workforce in addition to resolving the current divide that the literature presents.

VII APPENDICES

VII.1 Appendix A: Informed Consent

Georgia State University
Doctorate in Business Administration
Informed Consent

Title: An Analysis of Generational Differences in the Selection and Pursuit of Professional Certification
Advisor: Dr. Danny Bellenger
Student: Dania Eter

Purpose
You are invited to participate in a research study that seeks to understand the attitudes of millennials toward professional certification compared to older age cohorts. You have been chosen for this study because you are a working professional in the United States practicing in human resources and either hold or do not hold an HR professional certification. You also belong to one of the following generations: baby boomers, Generation X, or Generation Y, also called millennials. This study is recruiting 500 certified and noncertified HR professionals across these age cohorts. Your participation will be taking a 15-minute survey.

Procedure
If you decide to participate and meet the qualifications for this study, you will complete a 15-minute survey delivered through the Qualtrics survey platform. You will only be compensated if you complete the survey.

Confidentiality
Records will be kept private to the extent required by data privacy laws. Dr. Bellenger, Dania Eter, and the advisory committee will have access the survey results, which will be password protected. Information may also be shared to the Georgia State University Institutional Review Board, the Office for Human Research Protection (OHRP). You will not be asked for your name or contact information, and we will use "Respondent #" rather than names. Findings will be summarized and reported in group form. You will not be personally identified.

Risks/Benefits
This study will not cause you any consequences or harm. This study will not benefit you individually; yet we hope that the results of this study will benefit the professional certification industry.

Compensation

Qualtrics will compensate each respondent $$; this fee is collected from the researcher. Participants will be paid in full if respondents get to the end of the survey (even if they skip some questions), and pay in part if they stop part-way through. Participant may skip questions or stop participating at any time.

Voluntary Participation and Withdrawal
You do not have to be in this study. You may skip questions or stop participating at any time.

Contact
If you have questions or concerns, please contact Dr. Danny Bellenger at dbellenger@gsu.edu or Dania Eter at deleter1@student.gsu.edu. If you think you have been harmed by the study or you would like to discuss your rights in this study, please contact Georgia State University Office of Research Integrity at 404-413-3500 and/or via email at irb@gsu.edu.

Consent
If you agree to all of the above and would like to continue with the survey, please press continue. You have the option of printing this informed consent form for your records.

VII.2 Appendix B: Survey Topics

Age Cohort

Q1. Which **generational cohort** do you most identify with?

- Baby Boomers (born between 1946-1964)
- Generation X (born between 1965-1980)
- Millennial/Generation Y (born between 1981-2001)

Q2. What **year are you born**?

- Between 1946-1964
- Between 1965-1980
- Between 1981-2001

Demographics

Q3. What is your **gende**r?

- Male
- Female
- Other

Q4. What is your **highest level of education** completed?

- High School Diploma
- Associate Degree
- Bachelor's Degree
- Master's Degree
- Doctorate Degree or JD

Q5. In the last 5 years, **beyond your highest education level,** you have… (Select all that apply).

- Earned a professional certification
- Attended continuing education classes
- Attended educational conferences
- Not pursued any learning activities

Employment

Q6. How long have you been **practicing Human Resources**?

- Less than 5 years (Early career)
- 5-15 years (Mid-career)
- 15+ years (Advanced in career)

Q7. At **what age did you start practicing** Human Resources?

- 18-30
- 30-45
- 45-60

Q8. How long have you been employed in your **current position**?

- Less than 5 years
- 5-10 years
- 11-15 years
- 15+ years

Q9. Which of the **following HR job titles aligns with your current position**?

- HR Associate/Specialist (Entry level)
- HR Manager (Mid-level)
- HR Director (Mid-level to Sr. level)
- Vice President of HR (Sr. level)
- Chief Human Resource Officer (Executive)
- HR Consultant
- HR Instructor/Professor

Q10. Which US region listed below describes your **work location**?

- Northeast
- Southeast
- Central
- Northwest
- Southwest

Q11. Considering all locations, what is the approximate **size of your current employer**?

- Small (1-100 Employees)
- Medium (101-999 Employees)
- Large (1000+ Employees)

Q12. Please select the **industry** that best describes your current employer:

- Construction
- Education
- Health services
- Financial services
- Government
- Leisure and hospitality
- Manufacturing
- Natural resources and mining
- Professional and business services
- Information and technology
- Trade, transportation, and utilities
- Consulting
- Human resource services
- Other

Qualifying Question

Q13. Do you **currently hold or are you in the process of preparing to earn any of the following professional Human Resource Certifications**: aPHR™, PHR®, PHRca®, SPHR®, GPHR®, aPHRi™, PHRi™, SPHRi™, SHRM-CP, SHRM-SCP

- Yes
- No

If YES proceed to Q14. If NO proceed to Q22

Certification

Q14. Which of the following **professional human resource certifications do you currently hold or are in the process of preparing for?** Select all that apply.

- aPHR™
- PHR®
- PHRca®
- SPHR®
- GPHR®
- aPHRi™
- PHRi™
- SPHRi™
- SHRM-CP
- SHRM-SCP

Q15**.** At **what age** did **you earn or will earn your first** Human Resource certification?

- 18-30
- 30-45
- 45-60

Q16**.** At what **stage of your career did you earn or will earn your first** Human Resource certification?

- Less than 5 years (Early career)
- 5-15 years (Mid-career)
- 15+ years (Advanced in career)

Q17. Does your employer **value** Human Resource professional certification?

- Yes
- No

Q18. Does earning a Human Resource professional certification **bring relevance** to your daily human resource job?

- Yes
- No

Q19. Currently, certification exams are delivered in Testing Center; if you had a choice, where **would you prefer taking a certification exam?**

- Brick and mortar testing center - at a scheduled time
- Remotely - anywhere, anytime, from any device
- No preference

Attitudes Toward HR Professional Certification

Q20. Please indicate the level of agreement that each of the following influenced your decision to **hold or pursue** a professional HR certification.

Peer/Industry recognition
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree / Somewhat Agree / Agree / Strongly Agree

Opportunity for advancement/Job promotion
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree / Somewhat Agree / Agree / Strongly Agree

Competency/Skill development
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree / Somewhat Agree / Agree / Strongly Agree

Continuing education/Continuous learning/Professional development
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree / Somewhat Agree / Agree / Strongly Agree

Job security/New job offers/Increased marketability
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree / Somewhat Agree / Agree / Strongly Agree

Q21. **As a result of earning a professional HR certification,** please indicate your level of agreement with each of the following statements:

My peers/employer recognizes my competency/credibility in HR.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree / Somewhat Agree / Agree / Strongly Agree

My manager/employer considers me for a position promotion.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree / Somewhat Agree / Agree / Strongly Agree

My manager/employer considers me for a financial promotion.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree / Somewhat Agree / Agree / Strongly Agree

I feel accomplished.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree / Somewhat Agree / Agree / Strongly Agree

I feel confident in my ability to perform my job.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I confirmed my knowledge in HR practices.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I learned new skills.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I grew professionally
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I received new job offers
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I feel committed to my career in HR
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

Proceed to Q25

Q22. Please indicate your level of agreement that each of the following influenced your
decision **NOT** to pursue an HR professional certification.

Peer/Industry recognition
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

Opportunity for advancement/Job promotion
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

Competency/Skill development
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

Continuing education/Continuous learning/professional development
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

Job security/New job offers/ Increased Marketability
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

Q23. **Despite NOT holding or pursuing a professional HR certification; Please** indicate
your level of agreement with each of the following statements:

My peers/employer recognizes my competency/credibility in HR.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

My manager/employer considers me for a position promotion.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

My manager/employer considers me for a financial promotion.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I feel accomplished.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I feel confident in my ability to perform my job.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I confirmed my knowledge in HR practices.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I learned new skills.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I grew professionally.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I received new job offers.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

I feel committed to my career in HR.
Strongly Disagree / Disagree / Somewhat Disagree / Neither Agree Nor Disagree /
Somewhat Agree / Agree / Strongly Agree

Open-Ended Questions

Q24. Can you share any additional reason(s) **why you have chosen NOT to pursue an** HR
professional certification?

Proceed to Q26

Q25. Can you share any additional reason(s) **why you have chosen to be a certified** HR
professional?

Q26. Please add any other comment(s) that you see valuable for this research or for future
research regarding human resource certification.

END

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