

The Influence of Human Resource Development on Systemic Practices, Utility, and
Organizational Results among Contracting Professionals

Submitted by

Daniel Ryan Singleton

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COLUMBIA SOUTHERN UNIVERSITY

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by

Daniel Ryan Singleton

has been approved

September 26, 2014

APPROVED:

Mary Weber, DBA, Dissertation Chair

Debra Glass, DBA, Committee Member

Elwin Jones, Ph.D., Assistant Provost, College of Business

ACCEPTED AND SIGNED:

Gary Piercy, Ph.D.
Program Director, Doctor of Business Administration Program

9/26/2014

Date

Abstract

This study examined the influence of human resources development on systemic practices, utility, and organizational results among contracting professionals within the public and private sectors. The study used a quantitative, correlational research design to answer the research questions, which asked whether or not statistically significant correlations were observed between human resources development and systemic practices, utility, and organizational results in the public and private sectors. A purposive sample was drawn from the membership of the National Contract Management Association to obtain the data necessary to answer the research questions. Once data was collected, it was reviewed for missing values and outliers. Then, the data was coded and imported into SPSS version 22.0 for Macintosh for data analysis. The data was first analyzed descriptively to identify similarities and differences between public and private sector contracting professionals. Additionally, the data was arranged by construct and analyzed for correlations between HRD and systemic practices, utility, and organizational results. The study was grounded in two theories – Kirkpatrick’s hierarchy and contingency theory. The data were evaluated against each of these theories.

Keywords: Federal contract management, contract specialist, contract professional, contracting professional, human resource development, organizational results, federal contracting, training, workforce development

Dedication

I dedicate this work to my mother, Ann Singleton. My mom taught me so much, but most importantly she encouraged me to follow my dreams, to believe in myself, and to always give my all in whatever I do. I am forever grateful for the lessons my mom taught me – lessons that are not learned in the classroom. My mother may be gone from this world, but her spirit lives on through me.

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Chapter 1: Introduction to the Study

Introduction

Human resource development is the process of improving individual, group, and organizational performance through training, career development, and organizational development initiatives (Garavan, 2007; Nadler & Nadler, 2012). One discipline that requires significant human resource development attention is the contract management field. Contract management is a complicated discipline that requires a specific knowledge set regarding policies, procedures, rules, and regulations, as well as analytical ability, mathematical skill, and strong verbal and written communication skills. The contract management workforce in the United States is comprised of individuals who support organizations in the public and private sectors. Recent developments within the contract management field make highly qualified contracting professionals essential. In a publication by the Booz Allen Hamilton organization (2013), increased expectations placed on contracting professionals, increasing acquisition complexity, shifting contract methods, and fewer contracting professionals handling more complex work are examples of recent developments within the field that make highly qualified contracting professionals imperative. Contract management professionals that are inadequately prepared or not supported properly by their organization will implement contract management processes poorly, which creates unnecessary or exorbitant costs. Effective human resource development practices can be the key to a strong contract management workforce (Mainoo, Addo, & Kobina, 2014).

Federal contracts comprise a significant proportion of the annual federal government's budget. Spending on federal contracts has increased from \$206 billion in

fiscal year (FY) 2000 to \$537 billion in FY 2011, which is an increase of approximately 206% (“Contracts Data,” 2012). Federal spending increased at an average rate of 12% per year for FY 2000 through FY 2008, but growth in spending started to decline beginning in FY 2009 (“The White House,” n.d.). Current procurement spending remains at greater than \$500 billion per year. Streamlined contract management procedures implemented in the 1990s led to high spending levels on federal procurement, according to the United States Government Accountability Office [GAO] (2003). Streamlined procedures made it easier for federal agencies to procure goods and services such as information technology and management support services. With such a large federal investment at stake, public contracting professionals, as well as their counterparts in the private sector, must have the knowledge and skills necessary for effectively managing contracts.

Chapter 1 includes discussion of the background for the study, an overview of the problem, and an overview of the purpose of the research. The background of the study describes the present and historical state of the problem under investigation. The research problem is a statement about the issue under investigation and the purpose of the research describes the rationale and importance of completing the study. Next, Chapter 1 provides a discussion regarding the significance of the study, the nature of the study, the research questions, and the theoretical frameworks that ground the study. The significance of the study describes how the knowledge provided through this study will be beneficial. The nature of the study and the research questions briefly describe the methods for completion of the study and the research questions under evaluation. The theoretical frameworks section discusses the theories that ground the study under investigation. Chapter 1 closes with a discussion of key definitions and assumptions, limitations, and

delimitations for the study. The key definitions section provides definitions for the key terms used throughout the study. Assumptions describe theoretical and methodological suppositions and limitations describe uncontrollable factors that limit the research. The delimitations discussion describes controllable factors imposed on the research to narrow the scope of the study.

Background of the Study

Performance of the acquisition workforce is a source of significant interest for the federal government and others (GAO, 2010; GAO, 2013). The scrutiny of the contract management workforce is partly a function of the amount of money invested in federal contracts as well as significant contracting failures occurring in recent years. An example of such a contracting failure is the rollout of the website and underlying infrastructure for the Affordable Care Act's healthcare.gov website (Aitoro, 2013). The highly publicized failure had a negative impact on the rollout of the already sensitive and controversial Affordable Care Act legislation as well as cost implications to the United States federal government. Ineffective training, a subsequent lack of knowledge on best practices in procurement, and poor organizational processes contributed, at least in part, to the failure.

The United States Congress has worked to improve the acquisition workforce since the 1970s because of significant issues that the government experienced (GAO, 2002). Significant issues related to contract management over the course of several decades prompted the government to create the Office of Federal Procurement Policy (OFPP) and the Federal Acquisition Institute (FAI). The objective of OFPP and FAI is to provide clear and specific guidance to agencies as well as to bolster the effectiveness of the contract management workforce. In the 1990s, the United States Congress expressed

concern regarding several large-scale and significant contracting failures. The contracting workforce failed to provide the necessary oversight and management of federal contracts, which led to multi-million dollar cost increases and significant schedule delays.

Therefore, implementation of several legislative and administrative actions ensued, as outlined in Table 1.

Table 1

Summary of Legislative and Administrative Actions Implemented in the 1990s

The Office of Federal Procurement Policy (OFPP) Act, P.L. 93-400, codified in 41 U.S.C. §401 et seq.	This act created OFPP within the Office of Management and Budget to provide governmentwide leadership for agencies other than DOD in procurement matters. The act was amended to establish FAI, which under the direction of OFPP, was to, among other things, (1) promote the development of the acquisition workforce, (2) analyze acquisition career fields to identify competencies for acquisition positions, and (3) develop training courses.
The Defense Acquisition Workforce Improvement Act, P.L. 101-510, codified in 10 U.S.C. §1701 et seq.	This act recognized acquisition as a multidisciplinary career field for DOD comprised of 11 functional areas – program management; systems planning, research, development, engineering, and testing; procurement, including contracting; industrial property management; logistics; quality control and assurance; manufacturing and production; business, cost estimating, financial management, and auditing; education, training, and career development; construction; and joint development and production with other government agencies and foreign countries. The act also directed the Secretary of Defense to establish minimum education, training, and experience requirements, and a defense acquisition university structure.
OFPP Policy Letter 92-3	In implementing the acquisition workforce provisions of the OFPP Act, this guidance established a standard set of contracting competencies and identified specific training requirements for personnel in the contracting and purchasing occupational series and contracting officers.
The Clinger-Cohen Act of 1996, P.L. 104-106, codified in 41 U.S.C. §433 et seq.	This act requires civilian agencies, in consultation with OFPP, to establish education, training, and experience requirements for civilian agencies' acquisition workforce and to ensure uniform implementation of policies and procedures among components to the maximum extent practicable. The act also requires OFPP to establish minimum qualification requirements and to ensure that agencies collect and maintain standardized information on the acquisition workforce.
OFPP Policy Letter 97-01	In implementing provisions of the Clinger-Cohen Act, this guidance requires agencies to (1) identify and publish model career paths and (2) establish education, core training, and experience requirements for enumerated acquisition personnel. The letter defined the "acquisition workforce" to include contracting and purchasing, contracting officers, CORs, and COTRs; it also stated that the Administrator of OFPP would "consult with the agencies in the identification of other acquisition related positions." Furthermore this policy letter delegated to FAI the responsibility for developing, with the agencies and the Office of Personnel Management, a governmentwide management information system that would allow agencies to collect and maintain acquisition workforce information including the employees' completion of all core training courses.

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Following the enactment of legislation and administrative actions in the 1990s, issues with federal contracting workforce persisted (GAO, 2002). Training issues prompted Congress to request that GAO examine how federal agencies define contracting

professionals and other acquisition-related positions, if federal agencies have specific training requirements for contracting professionals, and if significant funding was allocated to training the contract management and acquisition workforce. The study by GAO (2002) found that different agencies define the acquisition workforce differently. Having different definitions for the workforce across the government makes designing and implementing consistent training practices more difficult. Additionally, GAO (2002) found that the government did not have the necessary information technology infrastructure in place for tracking the acquisition workforce and the associated training requirements. Therefore, agencies were relying on ineffective methods for tracking training and certification information for the acquisition workforce. GAO recommended that OFPP work with agencies to define the acquisition workforce in a more comprehensive manner. According to GAO, all individuals involved in the acquisition workforce must be capable of performing their job functions effectively (GAO, 2002).

In 2013, Congress requested that GAO complete another review regarding acquisition workforce training. Specifically, Congress asked GAO to examine the role that OFPP and FAI play in ensuring acquisition training and certification requirements are met by agencies, the approach agencies take to ensure that training requirements are met, and the extent to which government agencies evaluate training outcomes (GAO, 2013). While GAO found that OFPP and FAI work closely to manage training information, more work is required to streamline training guidance and to leverage training resources across the federal government (GAO, 2013). Additionally, GAO found that less than half of agencies had information on whether acquisition training and certification was having a positive impact on improving individual skills or

organizational success. Lack of information and metrics on the organizational impacts from human resource development (HRD) is not restricted to government agencies; many private sector companies do not know the extent to which HRD influences individual and organizational results (Phillips, 2003). GAO concluded that given tremendous procurement investments that are made by the government each year, it is essential that contract and acquisition professionals be trained and developed sufficiently to carry out their responsibilities effectively and accurately.

Enabling an effective and efficient workforce is only capable if organizations understand the extent to which training and development practices influence organizational results (GAO, 2010). Training evaluation is an important component in understanding the performance of the (HRD) environment. However, according to the Defense Acquisition University (DAU), there is little consistency between various organizations in measuring the training and development outcome metrics (Dacus, 2011). Understanding the influence of human resource development on systemic practices, utility, and organizational results are key to enabling acquisition workforce improvements. Systemic practices are the extent to which organizations evaluate HRD activities, how often training, development, and mentorship opportunities are made available to staff, and the modality of employee development opportunities. Utility is the extent to which employees identify development activities as useful to performing their job. Organizational results include measurements of employee productivity, efficiency, and overall satisfaction. Limited research exists that explores these facets for contracting professionals in the public and private sectors (Hawkins, Gravier, & Powley, 2011). Despite limited information, ensuring a high quality and effective human resource

development environment, which supports a strong acquisition workforce, remains a key concern for organizations.

Contract and acquisition workforce development has been a source of concern for several decades. In the 1970s, Congress created the OFPP and FAI to more effectively articulate training requirements for contract and acquisition professionals. Since the creation of OFPP and FAI, the organizations have implemented numerous policies, procedures, and directives regarding the acquisition workforce. While these actions were a step in the right direction, continued acquisition workforce issues has prompted Congress to request GAO to investigate issues pertaining to training the acquisition workforce and the effectiveness of policies and procedure numerous times. Steps have been taken to make improvements for the contract and acquisition workforce, but more work remains (Figure 1).

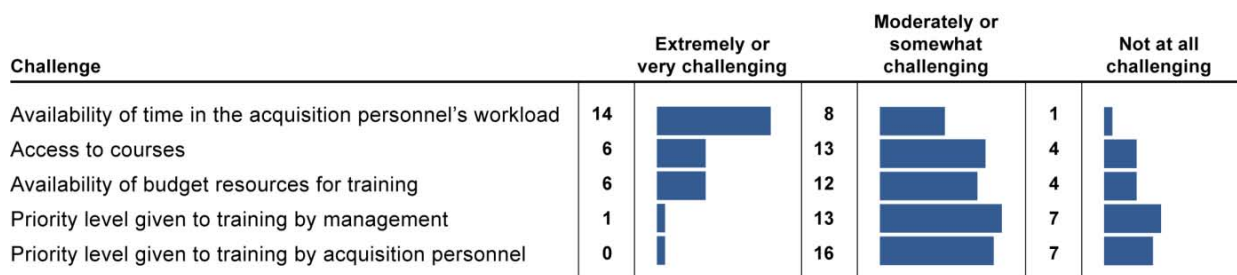


Figure 1. HRD challenges reported at 23 federal agencies. This figure demonstrates the number of federal agencies reporting contracting workforce issues and the nature of those challenges. This is the work of the government of the United States of America and is not copyrighted. Reprinted from United States Government Accountability Office (2013).

Problem Statement

It was not known if and to what degree HRD influences systemic practices, utility, and organizational results among contracting professionals in the public and private sectors. The literature indicated there was limited knowledge comparing public

and private sector HRD practices (Hawkins et al., 2011). Exploration of the problem provided actionable data necessary for HRD professionals, organizations, and education institutions to make informed decisions regarding HRD programs for contracting professionals.

The contract management workforce consists of individuals employed in both the public and private sectors. According to the Bureau of Labor Statistics (2014), there are more than 500,000 contracting professionals in the United States. Contracting professionals are responsible for billions of dollars of contracts each year, which necessitates that there be a strong and knowledgeable workforce. Therefore, having a strong HRD environment that results in well-prepared employees is an essential component of ensuring contracts are managed in the most cost-effective manner possible.

Purpose of the Study

The purpose of this quantitative correlational study was to explore how HRD influences systemic practices, utility, and organizational results for public and private sector contracting professionals who are members of the National Contract Management Association (NCMA). The dependent variable, HRD, was identified as improving organizational performance through career development and organizational development initiatives. Systemic practices were identified as organizational training and development evaluation practices. Utility was identified as how well individuals can apply development opportunities to their day-to-day work. Organizational results were identified as the extent to which an organization achieves its mission.

NCMA is a nationwide professional organization for contracting professionals and is the largest association dedicated to the profession. NCMA consists of contracting

professionals employed in both the public and private sectors from across the United States. The NCMA, the data source for the study, consists of 19,136 members – approximately 25% are public sector employees, 64% are private sector employees, and the remaining 11% include attorneys, accountants, consultants, and other unaffiliated members (NCMA, 2012).

A strong HRD climate is an essential component of demonstrating a commitment to organizational success (Kaifeng, Lepak, Jia, & Baer, 2012). The study seeks to determine the extent to which HRD in the public and private sectors influence systemic practices, utility, and organizational results. Understanding more about HRD in the public and private sectors has practical implications, namely, the ability for the organizations to determine the strengths and needs of existing practices. Armed with this knowledge, federal government, private organizations, and educational institutions will have the ability to effectuate positive change for the acquisition workforce.

Research Questions and Hypotheses

The continued need for acquisition workforce improvements guided the formulation of the research questions for the study. Through investigating the research questions, organizations have increased insight into how HRD in the public and private sectors influences systemic practices, utility, and organizational results. The independent construct under investigation is HRD climate. Variables for the independent construct include organizational commitment, management involvement, and proactivity. The dependent constructs under investigation include systemic practices, utility, and organizational results. The systemic practices construct consists of three variables, which include HRD evaluation quality, frequency of training and individual development

opportunities, and training modality. The utility construct measured the extent to which training participants identify the training program as pertinent and applicable to their day-to-day duties. Finally, the organizational results construct consists of the three variables, which include employee productivity, efficiency, and overall satisfaction. The following research questions and hypotheses guide the study:

R1: To what extent does human resource development influence systemic practices in the public sector among contracting professionals?

H1₀: Human resource development does not influence systemic practices in the public sector among contracting professionals.

H1_a: Human resource development does influence systemic practices in the public sector among contracting professionals.

R2: To what extent does the human resource development influence systemic practices in the private sector among contracting professionals?

H2₀: Human resource development does not influence systemic practices in the private sector among contracting professionals.

H2_a: Human resource development does influence systemic practices in the private sector among contracting professionals.

R3: To what extent does the human resource development influence utility in the public sector among contracting professionals?

H3₀: Human resource development does not influence utility in the public sector among contracting professionals.

H3_a: Human resource development does influence utility in the public sector among contracting professionals.

R4: To what extent does the human resource development influence utility in the private sector among contracting professionals?

H4₀: Human resource development does not influence utility in the private sector among contracting professionals.

H4_a: Human resource development does influence utility in the private sector among contracting professionals.

R5: To what extent does human resource development influence organizational results in the public sector among contracting professionals?

H5₀: Human resource development does not influence organizational results in the public sector among contracting professionals.

H5_a: Human resource development does influence organizational results in the public sector among contracting professionals.

R6: To what extent does human resource development influence organizational results in the private sector among contracting professionals?

H6₀: Human resource development does not influence organizational results in the private sector among contracting professionals.

H6_a: Human resource development does influence organizational results in the private sector among contracting professionals.

Utilization of the adapted survey instrument the human resource development – environmental survey (HRD-ES) provided the questions necessary to obtain the appropriate data to answer the research questions under investigation. Questions focused on the extent to which acquisition training and certification influences systemic practices, utility, and organizational results in the private and public sectors for contracting

professionals. Data analysis allowed for acceptance or rejection of the hypotheses. HRD professionals and others are able to use the findings from the study to determine the areas that require action. Answering the research questions and evaluating the hypotheses benefits the acquisition and contract management field by providing information necessary for enhancing HRD programs in the public and private sectors.

Advancing Scientific Knowledge

Research that compares public and private sector practices is limited (Hawkins et al., 2011). This study addressed the gap in the literature by examining the influence of HRD on systemic practices, utility and organizational results. Because of this study, more information is available about HRD in relation to systemic practices, utility, and organizational results in the context of contracting professionals in the public and private sectors. This information is valuable to organizational leadership, HRD practitioners, and educational institutions responsible for providing development to contracting professionals.

The study is grounded in two theoretical frameworks – Kirkpatrick’s training evaluation taxonomy and the organizational contingency theory. Kirkpatrick’s (1959) training evaluation taxonomy is the primary theoretical framework for the study. Kirkpatrick’s model describes the concept that as evaluation of HRD practices within an organization improve; the overall quality of the HRD environment improves. The second theoretical foundation for this study was contingency theory. Contingency theory states that the more skilled the organization is at adapting to environmental changes, the greater the probability of successful outcomes for the organization (Scott, 1981). The data collected through this study was examined in light of each of these theories and provided

additional evidence in support of the theories or demonstrated areas where additional research might be beneficial.

Significance of the Study

This study is beneficial to public and private sector organizations that engage in federal contracting, education institutions that provide training to contracting professionals, such as the Defense Acquisition University, and to the body of literature in the HRD and contract management fields. The study provided information to public and private sector organizations, which the study helps, close a gap that existed in the literature through providing insight into the similarities and differences between the public and private sectors amongst contracting professionals (Hawkins et al., 2011).

The study also benefits public and private sector organizations that engage in federal contracting. Over several decades, GAO has highlighted numerous deficiencies in contract management and made recommendations for action in order to improve acquisition workforce HRD practices (GAO, 2002; GAO, 2013). The study provides information on the extent to which these recommendations have influenced systemic practices, utility, and organizational results. GAO specifically made recommendations to public sector organizations, so this study will add additional information to the field by determining if the recommendations to the public sector resulted in a statistically significant variation between the two sectors. Further, this study could benefit organizations by providing specific and actionable information related to HRD factors that contribute most to organizational results. Ultimately, the information that results from the study will allow organizations to make more informed decisions regarding HRD program structure to more effectively impact bottom-line organizational results.

The study also provides insight about HRD that will benefit educational institutions providing job-related education to contracting professionals. The study provides information on the relationship between HRD and organizational results. Therefore, training organizations have information necessary for determining the factors that contribute most to improving organizational results, which include employee productivity, efficiency, and overall satisfaction. Armed with this information, educational institutions have the information necessary to structure development programs in line with the factors that are most likely to yield positive organizational results.

The study benefits the body of HRD and contract management literature. According to Hawkins et al. (2011), additional research comparing organizational practices for contract professionals in the public and private sectors was needed. The study provides data that contributes to the HRD field by demonstrating the extent to which HRD practices influence systemic practices, utility, and organizational results. Additionally, the study is beneficial to the contract management literature, as provides data that can be used to inform organizations on the factors that contribute most to organizational results.

The information that resulted from the study provides organizations, educational institutions, and HRD professionals with data on the strengths and weaknesses that are present in each sector, granular comparative data between the public and private sectors – which is cited as an existing gap in the literature – and provides guidance for future research inquiries. If the public and private sectors are more aware of strengths and needs in each respective sector, the opportunity exists for evaluation of best practices and

subsequent modeling of training programs to align more closely with programs that are more effective.

Rationale for the Methodology

The study used a quantitative research methodology, falls within the post-positivist paradigm. Quantitative research within the post-positivist paradigm uses a deductive approach and rejects the concept that absolute truth can be discovered when research involves human participants (Parylo, 2012). Furthermore, HRD researchers commonly employ a quantitative methodology quantitative methodologies often rely on data obtained through surveys. Within the quantitative methodological construct, data analysis commonly occurs to test hypotheses using statistical methods. Several recent studies in the development and human resources arenas have used quantitative methodologies (Hua, 2013; Tsang-Kai, 2010; Van Eerde, Tang, & Talbot, 2008).

According to Grohmann and Kauffeld (2013), quantitative HRD research using surveys offers a cost-effective means to determine specific HRD influences on an organization. Grohmann and Kauffeld maintain that a quantitative survey-based research approach is most appropriate because of the ease of administration to a large number of participants as well as the cost effectiveness of such an approach. Grohmann and Kauffeld (2013) were not the first researchers to use a quantitative survey instrument to measure the extent to which HRD practices influences organizational outcomes. One such study examined the first three levels of Kirkpatrick's hierarchy within an organization using a survey (Lim & Morris, 2006). Therefore, precedent exists in the literature calling for quantitative research design in HRD evaluation research.

Nature of the Research Design for the Study

The study employed a quantitative correlational research approach to determine the extent to which HRD influences with systemic practices, utility, and organizational results. According to Harvard University (2014), a quantitative research approach is appropriate when specific hypotheses are tested, concepts are defined as distinct variables, procedures are standard, and analysis occurs using statistics, tables, and charts. This study meets these criteria.

Analysis of variance (ANOVA) between-groups t-tests determined the extent of the differences between the public and private sector groups. ANOVA tests for significant variances between mean values for variables in an effort to identify differences (Creswell, 2013). Additionally, the Pearson correlation coefficient, also known as Pearson's r , was used to assess the extent of correlations between the dependent and independent variables. Pearson's r measures the extent to which variables are related (Pearson, 2010). The statistical analyses conducted for the study provides insight into each sector's HRD practices that have the most impact on systemic practices, utility, and organizational results.

The source of data for the study was the National Contract Management Association (NCMA) through which a purposive sample was acquired. NCMA members received a pre-notice regarding the survey via the NCMA website and a contract management professional group on LinkedIn. The pre-notice informed members of the purpose and importance of the study. Using a pre-notice letter increases survey participation (Phillips, 2003). Two weeks after the pre-notice, members received the link to complete the survey via the NCMA newsletter. Next, data collection proceeded until

obtaining a sufficient number of responses for statistical analysis purposes. After data collection, data was imported into the Statistical Package for the Social Sciences (SPSS) version 22.0 and analyzed.

Definition of Terms

The following list of definitions provide for a common understanding of terms used throughout the study:

Contract management. Contract management is defined as the process of requesting proposals from vendors, evaluating proposals, awarding contracts, implementing contracts, measuring work completed, and computing payments. Additionally, contract management also involves monitoring the contract relationship, addressing issues that arise, making necessary modifications to the contract, ensuring that both parties meet or exceed expectations, and interacting with the opposite party to ensure the contract's objectives are met (Hunsaker, 2009).

Contingency theory. Contingency theory is the concept that organization formation occurs in a manner that is consistent with the environment with which the organization must interact (Scott, 1981).

Human resource development (HRD). HRD is the process of improving individual, group, and organizational performance through training, career development, and organizational development initiatives (Garavan, 2007; Nadler & Nadler, 2012).

Kirkpatrick four-level training evaluation hierarchy. The Kirkpatrick evaluation hierarchy is an HRD standard for training evaluation. The model has four hierarchical levels: reaction, learning, behavior, and results (Giovengo, 2014).

National Contract Management Association (NCMA). NCMA is a professional organization for contract and procurement specialists and is the largest association dedicated to the profession. NCMA has more than 19,000 members from across the United States (NCMA, 2012).

Private sector. Private sector is defined as organizations that are non-governmental and not tax supported (Nutt, 2005).

Public sector. Public Sector is defined as organizations that are governmental and tax-supported (Nutt, 2005).

Organizational effectiveness. Organizational effectiveness is defined as the ability of an organization to generate the outcomes the organization wants to fulfill (Etzioni, 2012).

Training and development evaluation. Training and development evaluation is defined as a process to determine the value or meaning of a training program and its effect on an organization (Phillips, 2003)

Training modality. Modality is defined for the purposes of the study as the approach through which training is offered, which may be face-to-face, via electronic methods, blended methods, or some other approach (Kathryn, 2011)

Training and development satisfaction. Training and development satisfaction is the extent to which training participants are engaged in the training and development process and have a positive experience with the overall HRD program (Latif, Jan, & Shaheen, 2013)

Assumptions, Limitations, and Delimitations

All research inquiries have certain assumptions, limitations, and delimitations

(Leedy & Ormrod, 2012). Assumptions describe theoretical and methodological suppositions that are made by a researcher. Limitations describe uncontrollable factors that constrain the research, while delimitations are factors imposed purposefully on the research to narrow the scope of the study. Delimitations are important because they narrow the universe of information, which makes the study possible.

The following assumptions were present in the study:

- Participants are representative of contracting professionals;
- Participants answered the survey questions honestly;
- Participants took time to answer the survey questions accurately;
- Participants understood the survey questions as intended; and
- The survey administration service operated as intended and precludes participants from submitting more than one response.

The study had two primary limitations. The study used a purposive sampling method. Although, the sampling method was a technical limitation, the sampling approach drew a sample from a specialized group of participants who were best suited to answer the research questions. However, it is possible that the data resulting from the study could have over-represented or under-represented the public and private sector groups. Mitigation of the limitation occurred through reviewing demographic information to determine the extent to which the respondents matched the known population demographics such as the public and private sector mix. Additionally, surveys can present additional limitations. Respondents may not remember the information asked, data errors can occur as a result of the individuals who chose to respond to the survey, and finally questions may not have been understood by all participants exactly the same.

The limitations were addressed by piloting the survey, providing clear instructions, and working with NCMA leadership to ensure that the survey was advertised in a manner to elicit a representative sample.

The following delimitations were present in the study:

- In order to make the study possible within time and budgetary constraints, NCMA was chosen as the data source versus the entire universe of contracting professionals;
- For the purposes of the study the following dependent constructs are being considered: systemic practices, utility, and organizational results; and
- Phillips (1991) added a 5th level to Kirkpatrick's hierarchy – assessment of return on investment (ROI). For the purposes of the study, assessment of the first four levels of the hierarchy took place. Routine collection of ROI data is not typical because of perceived difficulty in collection of said data (Subramanian, Sinha, and Gupta, 2012).

Summary and Organization for the Remainder of the Study

Chapter 1 introduced the study topic – HRD influence on systemic practices, utility and organization results – explored the background of the study, defined the research problem, and the described the purpose of the research. Additionally, the problem under investigation was examined, the nature of the research was discussed, and the study's limitations, assumptions, and delimitations for the study were defined. The research problem was it was not known if and to what degree HRD influences systemic practices, utility, and organizational results among contracting professionals in the public and private sectors because of a gap in the literature. The purpose of the quantitative

correlational study was to explore how HRD climate influences systemic practices, utility, and organizational results for public and private sector contracting professionals who are members of the National Contract Management Association. The research is significant because it makes contributions to improving public and private organizational HRD practices and it makes headway in closing a gap in the literature by providing insight into the similarities and differences between the HRD environments in the public and private sectors amongst contracting professionals.

Chapter 2 provides a comprehensive review of the literature. In Chapter 2 the following topics are covered: a description of the literature search, an in-depth discussion of the theoretical constructs that ground the study, the history of federal contracting, a review of HRD program evaluation methods, systemic practice, HRD and utility, and HRD and organizational results. The literature review chapter closes with a discussion on the description of the extant environments in the public and private sectors and lastly, a description of literature that supports and provides the rationale for this quantitative study. Chapter 3 describes the methodology, research design, and procedures used for the investigation. Chapter 4 details how the data was analyzed and provides both a written and graphic summary of the results from this study. Chapter 5 also provides interpretation and discussion of the results from the study.

Chapter 2: Literature Review

Introduction to the Chapter and Background of the Problem

A literature review is the systematic collection and synthesis of scholarly work that surrounds a given topic (Smallbone & Quinton, 2011). The literature review began with a search for broad concepts about a given topic and was refined to more and more specific search criteria as the literature review process progresses. A literature review is significant because it provides context for the study, assists in identifying gaps in the literature, and provides readers with a comprehensive review of information pertinent to the study under investigation (Zorn, 2006).

Contract management in the United States traces its roots back to practices established in England. During the Revolutionary War, contract management became important in the United States to ensure that goods were in the right place at the right time for the military. Problems regarding contract management procedures and the associated workforce have been a concern since the early days of contract management in the United States. In the early days of contract management, concerns primarily related to fraud and abuse (Keeney, 2007). While those concerns still exist in modern times, the focus has shifted to the necessity of appropriate skills and knowledge for contracting professionals (GAO, 2013). An organizational climate that supports appropriate and effective professional development of the contract management workforce is necessary to ensure contracting professionals have the appropriate knowledge and skills necessary for successfully carrying out their job duties (GAO, 2002; Kaifeng et al., 2012).

There is limited knowledge about how the public and private sectors compare concerning HRD and the literature calls for more research (Hawkins et al., 2011). A need

exists to explore how HRD influences systemic practices, utility, and organizational results for public and private sector contracting professionals. According to Hawkins et al. (2011), the lack of research on how the public and private sectors compare is problematic, more research is necessary in order to determine where continued needs exist, and improvements are possible. The overall purpose of the study was to assess the impact of HRD climate on systemic practices, utility, and organizational results. Chapter 2 will address theoretical foundations for the study, provide a synthesis of the literature that exists on HRD, systemic practices, utility, and organizational results, discuss the environmental differences between the public and private sectors, and provide support for the study's quantitative methodology.

Theoretical Foundations

A theoretical foundation is a combination of theories and their definitions used to ground the study and to demonstrate how the study ties to broader research concepts and bodies of knowledge (Richey, Klein, & Tracey, 2011). Two theoretical foundations ground this study – Kirkpatrick's training evaluation taxonomy and contingency theory. Kirkpatrick's (1959) model describes the concept that as evaluation of HRD practices within an organization improve; the overall quality of the HRD environment improves. Contingency theory is the concept that an organization must be adept at adjusting to environmental conditions; the more adept an organization is at meeting these environmental changes, the greater the probability of successful outcomes.

Kirkpatrick's hierarchy. For the purpose of the study, having a framework from which to evaluate training program effectiveness was essential. The most prominent HRD evaluation method is Kirkpatrick's four-level evaluation hierarchy (Alliger, Tannenaum, Bennett, Traver, & Shotland, 1997). Kirkpatrick (1959) found four levels exist from which to evaluate training – reactions, learning, behavior, and results (Figure 2). The higher the level of evaluation an organization reaches the more pertinent and valuable the information is in terms of improving HRD program. Kirkpatrick's taxonomy is a simple and systematic approach for evaluating HRD initiatives, thus its appeal to organizations and researchers.

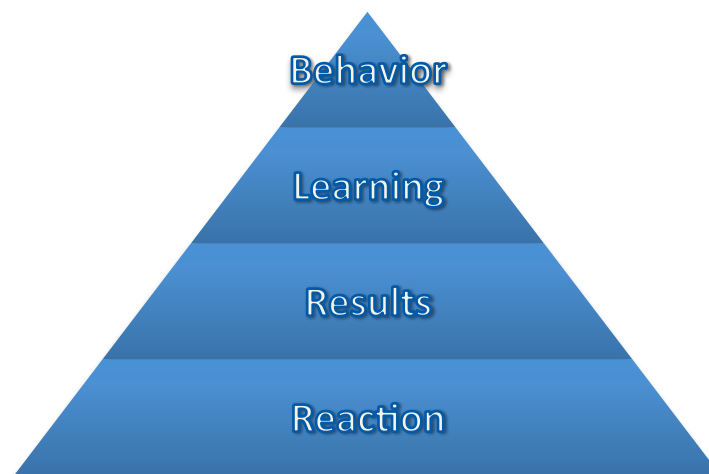


Figure 2. Kirkpatrick's training evaluation taxonomy. A graphical representation of the Kirkpatrick's (1959) HRD evaluation hierarchy.

The first level of Kirkpatrick's (1959) hierarchy is the reaction level, which measures general satisfaction from trainees. Kirkpatrick views trainees as customers and specifically referred to the reaction level as a measure of customer satisfaction. Kirkpatrick postulated that a positive experience with training does not imply that learning has occurred, but a negative experience reduces the likelihood of learning

occurring. The next level of the hierarchy is learning, defined as the extent that trainees change their outlooks, expand their knowledge, and increase their skills because of the training. Kirkpatrick stressed the importance of learning objectives defined in a clear and concise fashion, so trainers know specifically what to measure. The third level of evaluation is the behavior level of the hierarchy, also known as the transfer of training. The level of evaluation focuses on measurable changes in the trainees' behavior because of their training experience. Finally, the highest level of training evaluation is results. Results, as defined by Kirkpatrick, are the extent to which the training program achieves the desired outcomes (Kirkpatrick, 2010).

Not all researchers agree that Kirkpatrick's theoretical assumptions are correct, even though it is the most prominent approach in measuring training quality. Alliger and Janek (1989) completed a study that questioned Kirkpatrick's assumptions. Kirkpatrick's assumptions were that each level provides higher fidelity information, one level leads to the next level, and each level has a positive correlation with the next level. Alliger and Janek's (1989) research, which spanned thirty years and over two-hundred studies on training evaluation, revealed that only a small number of positive correlations existed between more than two levels of the hierarchy. Few argue, however, with the fact that obtaining measurements at higher levels of the training evaluation hierarchy ultimately result in a higher quality HRD program.

Contingency theory. Organizational effectiveness is of paramount importance in the today's economic climate for public as well as private firms (Lewis, 2000). Theories of organizational effectiveness became popular in the literature during the 1980s (Cameron & Whetton, 1996). Several themes were consistent throughout the literature

such as, participatory management styles, innovative cultures, and customer engagement. However, researchers have not reached consensus on exactly what constitutes the theory of organizational effectiveness. Several areas are consistent across the literature:

- Although the literature is inconsistent, organizational effectiveness must be attended to in both research and theory.
- It is impossible to define comprehensively all the criteria and metrics that comprise organization effectiveness.
- There are multiple models and theoretical constructs for organizational effectiveness. Depending on the research and circumstances, certain models are more useful and applicable than others.

For the purposes of this study, Scott's (1981) interpretation of the contingency theory of organization served as the secondary theoretical construct to ground this study. According to Scott (1981), contingency theory is the concept that organization formation occurs in a manner that is consistent with the environment with which the organization must interact (Figure 3). According to Donaldson (2001), the first mention of contingency theory in the literature occurred in 1967 by Lawrence and Lorsch, but the exact date that the theory originated is unknown. However, the underlying concepts of contingency theory first appeared in the literature in the 1950s, but were isolated to the science field. Sociological research and development gave rise to contingency theory. Specifically, Weber's research on organizational bureaucracy precipitated applying contingency theory to organizational management (Matyusz, 2012). The primary insight from contingency theory is that organizations facing different environmental conditions may use varying solutions, while maintaining organizational effectiveness. Essentially,

the theory demonstrates that varying environmental conditions require different organizational structures and reactions (Matyusz, 2012).



Figure 3. Contingency theory visualization. This figure depicts how HRD influences organizational results from the view of contingency theory. Adapted from Donaldson, 2001

Contingency theory is the concept that there is no single way for a firm to organize that ensures success (Hatch & Cunliffe, 2012). A position within contingency theory is a firm must be agile in terms of adaptability in order to meet the needs of a changing environment. More specifically, the needs of the firm and demands of the environment in which the organization is functioning must reconcile in a manner that produces the most effective organization. The theory states that the structure of the organization has a direct relationship on an organization's effectiveness and that this relationship is empirically verifiable (Daft & Armstrong, 2009). Contingency theory rationale describes reasons for different organizational structures, models of organization, and assists organizations in identifying areas in which change is necessary to meet environmental evolution (Matyusz, 2012).

The Aston group published studies in response to a gap in the literature related to how contingency factors interact with organizational systems and behavior (Pugh et al., 1963). The Aston group is the name for the group of researchers led by Pugh (1963). The Aston group published four works that are the foundation for the contingency theory literature. In the first study, the researchers evaluated the effect of organizational structure on behavior. The study was primarily theoretical in nature, but did provide recommendations for improving organizational structure to effectively impact employee behavior. The Pugh, Hickson, Hinings, and Turner (1968) study examined the recommendations made in the initial study. The study sampled organizations that employed more than 250 people. The sample was comprised of 52 firms that had different environmental conditions as well as management and organizational structures. The second study found that organizational structure is not standardized and that management styles other than Weber's bureaucratic approach can be more effective. The third study proposed a method for categorizing organizational structure and development and the final study validated structures using contingency factors identified in earlier research (Pugh et al., 1968).

Review of the Literature

The literature review was compiled by first completing exploratory research. The exploratory research took place by first searching Google Scholar for training and development articles. The initial literature search yielded several seminal articles on HRD evaluation, which led to the subsequent searches using identified keywords. The search for the keywords occurred across five academic databases: Academic OneFile, Academic

Search Complete, Business Source Complete, Ebsco, and ProQuest. The following primary keywords and phrases were searched:

- contract management,
- HRD evaluation,
- Kirkpatrick,
- contingency theory,
- CIPP training evaluation,
- KPMT model,
- public sector environment,
- private sector environment,
- public sector HRD,
- private sector HRD,
- history of contract management
- human resource development,
- systemic practices,
- utility, and
- organizational results.

When pertinent scholarly information was identified, utilization of the find similar works function within each of the databases yielded additional results. Additionally, articles' primary sources that were pertinent to the study under investigation were analyzed for additional relevant information. This section provides a synthesis of the body of knowledge surrounding each of the four constructs under investigation – HRD, systemic practices, utility, and organizational results.

Human resource development. HRD is a key function within organizations (Mohammed, Bhatti, Jariko, & Zehri, 2013). HRD is an evolving field, but the basic goal remains the same - improving individual, group, and organizational performance through training, career development, and organizational development initiatives (Garavan, 2007; Nadler & Nadler, 2012). HRD has advanced beyond the narrow view of simply training and has evolved into a more complete approach to learning, not only at the individual level, but at the organizational level as well. Leonard Nadler was the first to use the term HRD and he defined it as a group of related activities completed in a given time period to produce a behavioral change (Mittal, 2013). Other researchers have defined HRD since that time. McLagan (1989) defined HRD as the integration of training and development, career development, organizational development to improve individual, group, and organizational results. Rao (1985) defined HRD as a process that organizations must continuously use to assess the skills and knowledge of human capital in order to proactively plan for ensuring employees have the required skills to perform their present and future jobs within the organization.

Organization must balance numerous considerations for HRD to be most effective. HRD must account for and anticipate how the organization may evolve as time progresses (Mittal, 2013). Understanding the manner in which an organization may change in the future is important to HRD because it provides the framework for a facilitative and appropriate environment for employees to learn and develop, which will assist the organization in reaching its goals. Additionally, Rao and Salunkje (2013), presented the following considerations for effective HRD within an organization:

- Organizational leadership must view people as their most valuable resource.
- Organizational culture must support the concept that developing employees to perform their jobs more effectively is the job of every manager and supervisor within the organization.
- Organizational culture must support that concept that all employees are capable of performing at higher levels at any point in their career.
- Organizational communication is open and honest, as opposed to closed and guarded.

HRD enables an organization to perform at its full capacity and is a means for creating a competitive advantage in today's volatile environment. Specifically, effective HRD ensures that organizations are agile, their workforce is capable and flexible, and the workforce has the correct skills at the appropriate time (Mittal, 2013).

Systemic practices. The term systemic practice, in a broad sense, refers to how the sum of multiple parts behaves (Kaufman, 1983). From an organizational development perspective, systemic practices refer to how the organizational components interact and result in some output, whether that output is positive or negative (Kaufman, 1983). Systemic practices in the context of the study under investigation are defined as training and development evaluation quality, frequency of training and individual development opportunities, and training modality. Systemic practices are an imperative consideration for organizations as HRD environments are established or modified to attain optimal organizational results (Saks & Burke, 2012). Development evaluation quality is most frequently ascertained using Kirkpatrick's framework, but there are other models as well.

Kirkpatrick's HRD evaluation framework. Kirkpatrick's (1959) method for evaluating training and development activities remains the most prominent in the HRD field. Use of the framework is extensive in training and development evaluation and the vast majority of alternate approaches have their grounding in Kirkpatrick's framework as described in the following sections. Every year the American Society for Training and Development (ASTD) conducts a survey to evaluate trends in HRD. Differing levels of organizations participate in the survey - Benchmarking Forum Organizations (BMF), Benchmarking Service Organizations (BMS), and BEST organizations. BMS organizations include a broad range of organizations across the United States, which constitute the norm for the United States. BMF organizations are comprised of global organizations and corporations. The findings from these annual assessments continue to identify training evaluation as an important and widely accepted practice amongst all three types of organizations (Brewer, 2007).

Use of each of the levels of Kirkpatrick's training evaluation hierarchy varies depending on a wide range of factors. Several studies have indicated low positive correlations between organizational performance and the level of evaluation used in the technical training, healthcare, and financial services industries (Gomez, 2003; Hill, 1999; Twitchell, 1997). However, Gomez (2003) determined that strong positive correlations exist between level 4 evaluation and performance outcomes. Hill (1999) determined that statistically significant strong positive correlations exist between the rationale for a training program and the use of levels 1 through 4 of Kirkpatrick's hierarchy.

Phillips (2003) described the existence of a significant relationship between an organization having a policy in place for evaluation and the use of each of the levels of

the training evaluation hierarchy. Additionally, there are strong indications that planning for training evaluation is strongly related to use of the training evaluation hierarchy as well as consistent reporting of training evaluation outcomes to senior management within the organization. Gomez (2003) went on to find that there are strong positive correlations between training evaluation program planning and the use of most of the levels of training evaluation. Further, in the study organizations that reached level 3, behavior, on the evaluation hierarchy, were found to be most likely to have conducted planning before the training program was implemented (Gomez, 2003).

Other models of HRD evaluation. Several researchers have offered suggestions for improving upon Kirkpatrick's hierarchy of training and development evaluation - the most prominent in the field of training and development evaluation (Han & Boulay, 2013). One such modification was by J. Phillips who added a level to assess the organization's return on investment. Measuring return on investment (ROI) for training is a complex and challenging issue for the training evaluation field (Subramanian, Sinha, & Gupta, 2012). Phillips proposed adding the fifth level to Kirkpatrick's approach because of the benefits of assessing ROI. Assessing ROI enables the organization to know more about the benefits of a training program, determine the training programs that contribute to an organization success, ensures the organization focuses on results, and ultimately results in organizational changes in perception regarding training. Specifically, from the perspective of management, assessing ROI can change the perception of training being an investment versus being an expense. Although there are several benefits to assessing ROI, several drawbacks exist as well. Many managers contend that assessment of ROI is

difficult because of the necessity to isolate effects of training and convert training evaluation data into monetary values.

The Kearns and Miller KPMT model of HRD evaluation is similar to the Phillips' ROI model (Wankhede & Gujarathi, 2012). Both models insist that clear objectives are essential to effective training evaluation. One difference is that the KPMT model provides human resource development professionals with tools to implement the model. The KPMT model focuses on bottom line results using questionnaires, evaluation of existing training, and process mapping. KPMT consists of four levels of evaluation, which include reaction to training, learning, transfer of training to the workplace, and benefits. The level assessing benefits to the organization is similar to the ROI level of Phillips' model, but goes further. The focus in the KPMT model is on the business need versus the training need. KPMT takes a hard line approach with regard to the ROI. More specifically, the KPMT model argues that if there is not a business case, then offering the training is unnecessary (Kearns & Miller, 1997).

The Stufflebeam Context, Input, Process, and Product (CIPP) model is another method for training evaluation developed in the 1970s (Boonchutima & Pinyopornponich, 2013). CIPP is a systems-based model that proposes four stages to assess the effectiveness of a HRD program (Aaberg & Thompson, 2012). The first stage is context evaluation. At this point in evaluation, the overall purpose is to describe the needs and goals of training. The second stage is training evaluation, according to the model, is the evaluation of inputs. Input evaluation involves understanding what components are necessary for making the training process as effective as possible as well as providing a cost-benefit analysis. The third stage is the process evaluation stage. In the

third stage, the organization evaluates the specifics of training implementation and performance. Finally, the fourth stage is the product evaluation stage. In the final stage of evaluation, measurement to identify and document outcomes, assess the strengths and needs of the training program, and make a determination regarding the value of the training program occurs.

According to Boonchutima and Pinyopornponich (2013), the context evaluation must assess areas such as the political and social environment as well as the availability of technology to the program. Additionally, the organization must consider the motivation of their personnel, the organizational culture, and leadership communication efforts within the organization. Next, the input evaluation stage should contain information pertaining to how the program will function from budgetary and administration perspective. The third stage, process evaluation, must consider three major areas - public relations, sustainment, and communication (Boonchutima & Pinyopornponich, 2013). Finally, product evaluation must consider the tasks performed, the amount, and quality of the tasks performed the participant's change in behavior, and organization benefits.

Barriers to implementing HRD evaluation methods. According to Phillips (2003), several barriers exist to implementing training evaluation practices within an organization. Some of the most commonly cited reasons for not implementing evaluation of training include: an organization does not have a policy requiring evaluation of training, cost, lack of training on how to obtain training evaluation measurements, or because a perceptions exists that training evaluation will not yield tangible benefits for the organization. Other studies describe that barriers to training evaluation occurring at

level 1 have a strong relationship to the lack of training evaluation policies within the organization. Additionally, lack of assessment at level 4 has a strong relationship with the cost associated with assessment at this level as well as the type of organization (Gomez, 2003; Hill, 1999; Twitchell, 1997).

Benefits of HRD evaluation. Although barriers exist in implementing training evaluation practices within an organization, numerous studies describe significant benefits in the use of training evaluation. As budgets are becoming constraining in both the public and private sectors, there is a call for more accountability related to training expenditure. Through training evaluation, organizations are can quantitatively describe the value of training programs to senior leaders within an organization as well as make better decisions about the continuation or discontinuation of particular training components (Grohmann & Kauffeld, 2013). Another benefit, according to Aguinis and Kraiger (2009), is that training evaluation provides psychometrically sound and theory-based measures to assess the value of training and development. The literature also indicated that use of training evaluation metrics can be used as a marketing tool to attract and retain job candidates (Mainoo, Addo, & Kobina, 2014). Additionally, the same information can be used to market the value of training programs to individuals within a organization who may be skeptical of the associated value (Kraiger, 2002).

Training and development frequency. Training and development frequency, or intensity, is how often training and development opportunities are available to employees within and organization. The literature on training and development frequency is limited and in some cases contradictory (Zwick, 2006). One of the first studies, which examined training and development frequency, identified a strong positive relationship between

employee output quality and number of hours in training (Holzer, Block, Cheatham, & Knott, 1993). Bartel (1994) found that businesses operating below their productivity goals and subsequently instituted additional training experienced improved productivity following increased training frequency. However, a subsequent study found bias because of unobserved heterogeneity between the variables, which complicated the findings of the original study (Griliches & Mairesse, 1998). Another study used a similar methodology as Bartel, but instead of using regression analysis on the change in training frequency, she regressed the level of training frequency on the change in productivity (Barrett & O'Connell, 2001). The results from this study indicated that training frequency has a positive significant impact on changes in workforce productivity. On the other hand, another study found that there was no correlation between training expenditures and performance (Bassi, Harrison, Ludwig, & McMurrer, 2001).

Training and development modality. Training and development modality is the approach, through which training and development opportunities are offered, which may be face-to-face, via electronic methods, blended methods, or some other approach (Kathryn, 2011). According to Rao and Salunkhe (2013), HRD in the future will include more computer-based development opportunities and learning partnerships between private and public sectors. According to Kong and Jacobs (2012), classroom-based training is the most frequently used modality. The reason most organizations favor classroom-based training is because this approach allows participants and instructors to interact directly with one another. In the early 2000s, a steep increase was observed in the use of web-based training because of improvements in technology and distribution of technology within organizations. Classroom-based training and web and computer-based

training modalities have similarities, but have far more differences. Because of these differences, numerous studies have indicated how important it is to evaluate critically the differing HRD modalities (Curtain, 2002; Jung & Rha, 2003; Rumble, 2001).

Utility. Utility, in the context of HRD, is defined as how well training and development activities transfer to the work environment (Jaidev & Chirayath, 2012). Another way of defining utility is how well individuals can apply development opportunities to their day-to-day work. One way utility is measured is through examination of how well training and development is maintained over time and generalized across different conditions (Holton & Baldwin, 2003). Several studies have been conducted that examine utility.

Velada (2007) examined the relationship between HRD utility and training and development design, environmental conditions, and individual characteristics. The researchers found that in order to increase HRD utility, organizations must design training and development opportunities in a manner that strengthens employees' beliefs that they are capable of applying new skills in the work environment. Furthermore, Velada found that providing feedback on individual performance following development activities is a key factor for increasing HRD utility.

Aufseb, Smukalla, and Abt (2009) examined 58 studies that examined HRD utility. The purpose of the research was to determine the variables that increase utility which organizations have control over and were had a significant enough impact to warrant investing organizational resources. Through the review of extant literature, the researchers found the following to be the most important factors that influence utility:

- Characteristics of individual employees

- Design of the HRD program
- The modality of training and development opportunities
- The conduciveness of the organizational environment in reinforcing new learning and skills

This study is valuable to HRD because it summarizes the variables that have the most impact on utility.

Burke and Hutchins (2008) examined the variables that had the most significant impact on improving HRD utility. The researchers found that opportunities for improving utility occur in the design and delivery phase. Additionally, improvements to utility require not only an effective trainer, but an effective supervisor as well. The study demonstrated the importance of proactivity in HRD design and delivery as well as the importance of having an organizational climate that reinforces new learning through training and development opportunities. Burke and Hutchins (2008) suggested several best practices for improving the HRD utility – supportive supervisory staff, ensuring opportunities exist for employees to perform, training and development opportunities that are highly interactive, and training and development opportunities that directly tie to an employee's current work.

Organizational results. Organizational results are the extent to which an organization reaches its goals and achieves its mission (Mitchell, 2012). Obtaining organizational results is important to every organization, whether it is in the public or private sector, as this is a means for assessing how well the organization is performing against established criteria deemed important by the organization. Park and Jacobs (2011) found that an organization's focus on HRD significantly contributes to organizations

results. In order to measure organizational results, it is necessary to assess employee productivity, efficiency, and satisfaction.

Productivity. Productivity is defined as the amount of output in response to a given input (Huselid, 1995). In the context of HRD, productivity is the how well an employee performs in response to training and development. Studies have indicated the importance of HRD to impacting productivity. Nambwaayo and Ivanov (2014) found that the most important factor that influences an organization's productivity level is HRD. Tabiu and Nura (2013) posit that organizations are striving to do more with less in today's economic climate and that improving productivity is a key concern to most organizations. The researchers in this study also found that HRD initiatives are a key factor to improving productivity across an organization.

Efficiency. Efficiency concerns how well an employee performs tasks to achieve organizational goals. Strategic HRD is an important component of improving employee efficiency (Kaifeng et al., 2012). Teodora, Emil, and Adriana (2013) conducted a study to determine the relationship between components of HRD. The researchers found that it is efficiency is an important measure of HRD effectiveness. However, Kaifeng et al. (2012) posit that strategic HRD may impact some measures of efficiency in a heterogeneous nature and certain HRD practices may have unequal impacts on different measures. The researchers argue that many studies on HRD and efficiency assume an equal impact of HRD on efficiency when this may not be the case. According to Kaifeng et al. (2012), steps should be taken by organizations to understand not only if relationships are present, but the extent of the relationships. Understanding the extent of the relationship between

HRD and efficiency ensures that the most proximal factors to improving efficiency are known and addressed.

Satisfaction. Satisfaction is a key measure of organization results. Satisfaction is the extent to which training participants are engaged in the training and development process and have a positive experience with the overall HRD program (Latif et al., 2013). Several studies have examined the connection between HRD and satisfaction. Tan Fee and Yahna (2013) examined the impact of strategic HRD on employee satisfaction and found that satisfaction is strongly related to the HRD environment within an organization. The researchers describe satisfaction as being derived from improved knowledge of job requirements, ability to effectively and efficiently complete job requirements, and a sense that the company wishes to ensure that their employees are prepared for taking on additional responsibilities and are marketable within the organization. One method of improving employee satisfaction is by organizational promotion of high quality work. According to Spencer (2013) organizations have an ethical responsibility to promote high quality work within an organization and from an economical perspective it makes sense. Although the promotion of high-quality work is initially more costly because of HRD investments, it pays off through lower attrition rates, increased productivity, and improved organizational culture. Promoting high quality work includes ensuring that employees are assigned work that is meaningful and fulfills a purpose, which improves employee satisfaction.

Public and private sector organizational climate. Organizational climate is defined as an organization's general culture and psychology that is attributed to conditions imposed by the organization, such as management approach, organizational

intricacies and structure (Ali & Patnaik, 2014). Organizational Climate is a perception of how things are in the organizational environment, which is composed of a variety of elements or dimensions. According to Ferlie (1996), rapidly changing legislation, priorities, policies, organizational rigidity, and a top-down management approach characterizes HRD in the public sector. The environment exists because of the assumption that individuals in top management positions are capable of quickly initiating and implementing appropriate change initiatives within the organization without bias. However, according to Beer and Eisenstat (2000), a top-down strategy is not always the best approach. Beer and Eisenstat assert the importance of utilizing a bottom-up strategy to ensure the public employees buy-in and active involvement in training and change initiatives. The bottom-up approach is not the norm in the public sector because of its hierarchical structure. Additionally, the current economic and political landscape has resulted in increased scrutiny of the federal budget, which has resulted in decreased federal spending on training and HRD (Blimes & Gould, 2009). Decreased budgets have contributed to the austere nature of the training and development environment for contract management personnel.

According to GAO (2002), Congress has attempted to determine the steps necessary to strengthen the contract management workforce because of a lack of skilled personnel since 1974, which is when the Office of Federal Procurement Policy (OFPP) came into existence. Congress established the OFPP to create procurement policies for agencies within the executive branch of government with the primary goal of strengthening training available to the federal contract management workforce. In the 1990s, significant contracting failures occurred because of an inadequately skilled

contract management workforce. Major contracting failures, leading to significant cost and schedule overruns for major systems contract managements, made the poor quality of training available to the contract management workforce even more apparent.

Contracting failures prompted the passage of two articles of legislation — the Defense Contract management Workforce Improvement Act (DAWIA) in 1990 and the Clinger–Cohen Act in 1996. These acts require minimum training, education, and experience requirements for defense and civilian agencies. To ensure the preparation of contracting professionals in civil service, Congress required OFPP to promote government-wide training certifications and trainings to ensure the workforce is capable of handling the complex nature of contracts (GAO, 2013). Defense Acquisition University (DAU) is primarily responsible for providing training, education, and certifications to contracting professionals, but agencies or third-party providers can also provide training.

The need for organizations to maximize profits and to create a competitive advantage through adapting quickly to changing environmental conditions characterizes the private sector (Noe & Tews, 2012). Private sector organizations invest significant budget dollars in order to prepare employees to competently perform their jobs. In fact, according to the American Society for Training and Development (2012), the private sector spent \$156.2 billion on training and development in 2011. Increased scrutiny from managers and decreased budgets, which results in significant changes to training implementation, characterizes the training and development environment in the private sector. Although according to research, an effective HRD environment should take precedence over the barriers that exist within the current economic climate (Zarim, & Zaki, 2014). Many organizations have strengthened efforts to increase the productivity of

employees by providing basic skills training. Additionally, as a way to improve employee engagement and retention, organizations focus on providing meaningful training and development opportunities. Finally, to justify expenses, training and development departments must demonstrate return on investment.

Quantitative research design. Research is an essential component of academia. There are two primary types of research – qualitative research and quantitative research. Qualitative research has been defined in many ways, but the overarching principals of qualitative research remain the same. The primary focus of qualitative research is that it is exploratory in nature and seeks to understand concepts that are not known (Cochran & Dolan, 1984). Qualitative research is concerned with the meaning of yet to be understood concepts, while quantitative research, on the other hand, is concerned with the confirmation of concepts. According to Given (2008), quantitative research is defined as the measurement of phenomena in the environment and qualitative research is the process of understanding the attributes, or qualities, of phenomena.

Quantitative research related to HRD falls within the post-positivist paradigm, which uses a deductive approach and rejects the concept that absolute truth can be discovered when research involves human participants (Parylo, 2012). Furthermore, HRD researchers commonly employ quantitative correlational research designs amongst other approaches. Quantitative correlational research designs often rely on data obtained through surveys. Within the research construct, data analysis commonly occurs to test hypotheses using statistical methods. Several recent studies in the development and human resources arenas have used a quantitative research designs (Hua, 2013; Tsang-Kai, 2010; Van Eerde, Tang, & Talbot, 2008).

According to Grohmann and Kauffeld (2013), quantitative HRD evaluation research using a survey offers a cost-effective manner to determine specific HRD influences on an organization. Grohmann and Kauffeld maintain that a quantitative survey-based research approach is most appropriate because of the ease of administration to a large number of participants as well as the cost effectiveness of such an approach. Grohmann and Kauffeld were not the first researchers to use a quantitative survey instrument to measure the extent to which HRD practices influences organizational outcomes. One such study examined the first three levels of Kirkpatrick's hierarchy within an organization using a survey (Lim & Morris, 2006). Therefore, precedent exists in the literature calling for quantitative research design in HRD evaluation research.

Summary

The review of the literature section spanned a vast amount of literature to provide historical context for the development of contract management within the United States as well as to provide a comprehensive review of the literature associated with HRD as it relates to systemic practices, utility, and organizational results in the public and private sectors. Additionally, the literature review provides support for the quantitative methodology used in this study. In summary, contract management in the United States is based on systems and practices that started in England. In the earliest days of contract management in the United States, the primary objective was to ensure that the military had the necessary goods at the right time and place during the revolutionary war. Concerns about contract management were present from the profession's inception in the United States. Early concerns about the contract management field related to fraud and waste by contracting officials. While fraud and waste is still a concern today, the

knowledge and skills deficit of the workforce has become the primary concern. Concerning HRD and its relationship to systemic practices, utility, and organizational results, numerous studies highlighted the importance of HRD within organizations. Finally, this chapter discussed studies that support the quantitative methodology used in this study.

Chapter 3 describes the methodology used for carrying out the study. Specifically, Chapter 3 will restate the problem and research questions. Additionally, Chapter 3 describes the research methodology and design, population and sample selection, instrumentation, validity, reliability, pilot survey procedures, data collection procedures, data analysis procedures, and describes the ethical considerations. Finally, Chapter 3 closes with a discussion of the study's assumptions, limitations, and delimitations.

Chapter 3: Methodology

Introduction

The purpose of the study was to understand how HRD climate influences systemic practices, utility, and organizational results for public and private sector contracting professionals. According to Hawkins et al. (2011), lack of research on how the public and private sectors compare is problematic, especially amongst contracting professionals. Evaluation and statistical analysis of the relationship between HRD and systemic practices, utility, and organizational results enabled a more full understanding of the public and private sector HRD environments. The dependent constructs included systemic practices, utility, and organizational results. The systemic practices construct consisted of three variables, which included training and certification evaluation quality, frequency of training and individual development opportunities, and training modality. The utility construct measured the extent to which training participants identify the training program as pertinent and applicable to their day-to-day job duties. Finally, the organizational results construct consisted of three variables, which included employee productivity, efficiency, and overall satisfaction. Obtaining information on these variables provided actionable information for practitioners to act on through providing a better understanding of the similarities, differences, and areas for opportunity.

Chapter 3 provides a detailed discussion of the methodology used for the study. Specifically, Chapter 3 describes the statement of the problem, the hypotheses, the research methodology, the research design, the population and sample selection, instrumentation, validity and reliability, data collection procedures, ethical considerations, and the study's limitations. The population and sample section describes

the overall population and the sample from which participant selection occurred. In addition, the instrumentation section describes the questionnaire used in the study. The validity and reliability sections address the extent to which the study obtains intended information and the research results of the study are replicable. The data collection procedures section describes the specifics involved in collecting the data for the study. The ethical considerations section explains how the research will ensure protection of human subjects. The limitations section will describe the factors that limit the research and results.

Statement of the Problem

The problem was it was not known if and to what degree HRD climate influences systemic practices, utility, and organizational results among contracting professionals in the public and private sectors. Research comparing these variables for contracting professionals is scant (Hawkins et al., 2011). Federal spending on the contract management of goods and services costs the government in excess of \$500 billion annually (“Contracts Data,” 2012). If contracting professionals do not have the requisite knowledge or skills relevant to federal contracting, they may not spend federal funds properly or meet federal legislation and policy. Therefore, having an HRD environment that supports employees’ development and effectiveness is an essential component of ensuring that federal funds are spent in the most cost-efficient manner possible.

Research Questions and Hypotheses

The deeper understanding that the study provided allows individuals and organizations responsible for training and developing contracting professionals the opportunity to identify target areas for improvement. According to the Procurement

Round Table (2014), the processes and procedures involved in public and private sector contract management strategies are increasingly unclear and additional research was necessary to determine where disparities exist and what areas organizations should focus on to ameliorate any weak points that have a resulting impact on the organization.

To more fully understand the public and private sector HRD environments, the study compared the respective sectors by measuring the correlational influence of HRD on systemic practices, utility, and organization results. The study poses the following research questions and hypotheses:

R1: To what extent does human resource development influence systemic practices in the public sector among contracting professionals?

H1₀: Human resource development does not influence systemic practices in the public sector among contracting professionals.

H1_a: Human resource development does influence systemic practices in the public sector among contracting professionals.

R2: To what extent does the human resource development influence systemic practices in the private sector among contracting professionals?

H2₀: Human resource development does not influence systemic practices in the private sector among contracting professionals.

H2_a: Human resource development does influence systemic practices in the private sector among contracting professionals.

R3: To what extent does the human resource development influence utility in the public sector among contracting professionals?

H3₀: Human resource development does not influence utility in the public sector among contracting professionals.

H3_a: Human resource development does influence utility in the public sector among contracting professionals.

R4: To what extent does the human resource development influence utility in the private sector among contracting professionals?

H4₀: Human resource development does not influence utility in the private sector among contracting professionals.

H4_a: Human resource development does influence utility in the private sector among contracting professionals.

R5: To what extent does human resource development influence organizational results in the public sector among contracting professionals?

H5₀: Human resource development does not influence organizational results in the public sector among contracting professionals.

H5_a: Human resource development does influence organizational results in the public sector among contracting professionals.

R6: To what extent does human resource development influence organizational results in the private sector among contracting professionals?

H6₀: Human resource development does not influence organizational results in the private sector among contracting professionals.

H6_a: Human resource development does influence organizational results in the private sector among contracting professionals.

Use of an adapted web-based survey instrument provided the data necessary to answer the research questions and to accept or reject each of the hypotheses. The survey was administered to members of the National Contract Management Association (NCMA). The instrument used for the study is the Human Resource Development - Environment Survey (HRD-ES), adapted from Grohmann and Kauffeld's (2013) Questionnaire for Training Evaluation, or Q4TE, and's (1986) HRD climate survey. A purposive sample derived from NCMA allowed the research questions to be answered using statistical analysis. A purposive sampling method is a form of participant selection based on the specific purpose of a study. More precisely, a purposive sample is one in all individual participants meet the selection criteria for the study by default (Jupp, 2006). For the study, NCMA was selected because all members meet inclusion criteria – members are contracting professionals in the public and private sectors. Purposive sampling is capable of producing reliable and valid results and was appropriate for the scope and purposes of the study under investigation (Guarte & Barrios, 2006).

Research Methodology

The study employed a quantitative research method that utilized descriptive, analytical, and correlational statistical analysis techniques to determine the extent to which HRD influences systemic practices, utility, and organizational results. Utilization of analysis of variance (ANOVA) statistics were used to determine the extent of the differences between the public and private sector groups. ANOVA tests for significant relationships between mean values for variables in an effort to identify differences (Keller, 2012). The Pearson correlation coefficient, also known as Pearson's r , was used to evaluate each of the hypotheses and independent samples t -tests were used to analyze

differences between the public and private sector groups. Pearson's r was used to describe the extent of correlations that exist between the independent and dependent variables. Pearson's r measures the extent to which two or more variables tend to vary in unison (Stine & Foster 2013). The coefficient ranges from -1 to +1, where +1 would indicate that there is a perfect correlation between the variables and -1 would indicate there is a perfect inverse relationship between the variables.

The statistical analyses conducted for the study provided insight into which sector provides a higher quality HRD environment. Descriptive statistics provided an overview of how the two sectors compare, the between-groups t-test described instances in which statistically significant relationships existed between the two groups, and Pearson's r described instances of statistically significant relationships between the independent and dependent variables. The methodology allowed for statistical evaluation of the research questions and hypotheses. Precedent exists for the use of a quantitative methodology in HRD and human resources related studies, similar to the methodology used in this study (Lloyd, 2014; Setyaningdyah, Nimran, & Thoyib, 2013; VanWyk & McLean, 2007). A quantitative approach was appropriate for this study because it utilized an instrument designed to assign numerical values to the participants' observations and experiences related to their respective HRD environments.

Research Design

This study used a correlational, survey-based research design. The study used a survey instrument adapted from Grohmann and Kauffeld's Questionnaire for Training Evaluation (Q4TE) (2013) and Rao's (1986) HRD climate survey, to collect data necessary for conducting correlational analysis on the variables of interest. Surveys are

an economical and efficient method to collect quantitative data pertaining to a given population (Creswell, 2013). The purpose of this quantitative correlational study was to determine how HRD climate influences systemic practices, utility, and organizational results for public and private sector contracting professionals at the National Contract Management Association. The research design was appropriate because the survey provided the necessary data to answer adequately the research questions and to accept or reject the hypotheses.

The independent construct was HRD in the public and private sectors. Variables for the independent construct included organizational commitment, management involvement, and proactively. The dependent constructs under investigation included systemic practices, utility, and organizational results. The systemic practices construct consisted of three variables, which included training and development evaluation quality, frequency of training and individual development opportunities, and training modality. The utility construct measured the extent to which training participants identified the overall HRD environment as pertinent and beneficial to carrying out day-to-day job duties. Finally, the organizational results construct measured three variables, which included employee productivity, efficiency, and overall satisfaction.

The independent variables within the HRD construct were measured through tailored survey questions on a Likert-type scale. Measurement of independent variables within the construct took place by identifying the extent to which participants agree that their respective organizations are committed to HRD, management is actively involved in development, and the organization is proactive. The information that resulted from

evaluation of this construct provided the information necessary to employ correlational analysis techniques.

Measurement of training evaluation quality and utility, within the systemic practices and utility constructs, took place by determining the extent to which organizations are evaluating HRD programs according to Kirkpatrick's hierarchy and by determining the extent to which study participants rated the utility of the overall development environment. Survey questions resulted in the data necessary to determine if the respective HRD environment affected evaluation practices in line with Kirkpatrick's 4-level hierarchy, which is comprised of reaction, learning, behavior, and results. Reactions are the participant's level of satisfaction with the training. Learning is the amount of new knowledge and skill obtained through development and behavior is a measure of the training program's impact on the trainee's performance in the natural work environment. Finally, organizational results are the extent to which the training affects the organization's desired outcomes (Kirkpatrick & Kirkpatrick, 2006). Measurement of training evaluation quality and utility occurred through the use of survey questions adapted from the Q4TE related to each of Kirkpatrick's four levels of training evaluation on a five-point Likert scale. Assessment of the systemic practices and utility components provided information on the extent to which HRD influences contracting professionals in the public and private sectors in these areas.

Also within the systemic practices construct, measurement of frequency and modality took place using open-ended numerical survey questions. Specifically, the survey asks participants for the number of formal development meetings, the number of web-based or e-learning courses, and the number of face-to-face training sessions within

the preceding twelve months. The frequency and modality variables will provide insight about the frequency and modality of training offerings as well as insight regarding opportunities for development meetings with supervisory and managerial staff in the public and private sectors.

Finally, measurement of the organizational results construct took place through assessing employee productivity, employee efficiency, and overall employee satisfaction. Employee productivity is the extent to training has had a positive impact on the employee's ability to complete their job better. Employee efficiency is the extent to which training has had a positive impact on the employee's ability to complete their job faster and with higher quality. The final variable within the construct is employee satisfaction. Satisfaction is defined for the purposes of this study as the extent to which employees believe the training and development environment is effective and practical in supporting employees in performing their job duties. Measurement of employee productivity, employee efficiency, and satisfaction took place by using survey questions on a five-point Likert scale that will range from very dissatisfied to very satisfied.

Population and Sample Selection

NCMA is a professional organization for contract and procurement specialists and is the largest association dedicated to the profession. NCMA has more than 19,000 members from all across the United States. The population for the study were the members of NCMA who were actively involved in federal contracting – 17,031 members. Private and public sector contract professionals are required to have extensive knowledge of the federal procurement system, rules, regulations, and require similar skills in order to be effective in their positions. As a result, a requirement for selecting the

population was that all individuals would be involved in the management of federal contracts. Therefore, the population is suitable for the study because of the membership of the organization is contracting professionals – the group of interest in this study. The NCMA, the data source for the study, consists of 19,136 members – approximately 25% are public sector employees, 64% are private sector employees, and the remaining 11% include attorneys, accountants, consultants, and other unaffiliated members (NCMA, 2012). The survey instructions restricted the 11% of individuals (2105 members) who are not directly involved with federal contract management, such as unaffiliated members and consultants, from participation in the study

The study employed a purposive sampling method, which was appropriate for the scope and nature of the study. A purposive sample is one in which participant selection is based on meeting certain criteria of interest to ensure the most relevant information is obtained based on the population (Cooper & Schindler, 2011). Furthermore, use of similar approaches in training and human capital studies is common (Lloyd, 2014; Setyaningdyah, Nimran, & Thoyib, 2013; VanWyk & McLean, 2007). Because the study was interested in drawing conclusions based on the NCMA, random sampling of the group would not yield additional value. All NCMA members received a notice to complete the study from NCMA headquarters as well as a description of the importance of the survey. All contracting professionals had equal opportunity to participate in the study. The notice specifically described the need for individuals to participate whose primary job responsibilities involve federal contract management. The objective was to attain a minimum of 96 responses from applicable members of NCMA. This response rate results in a 10% margin of error at the 95% confidence level (Raosoft, 2011).

Instrumentation

The survey instrument for the study was adapted from Grohmann and Kauffeld's Questionnaire for Training Evaluation (2013), also known as the Q4TE, and the HRD Climate Survey by Rao (1986). The development and validation of the Q4TE instrument occurred through a three-study process. Grohmann and Kauffeld (2013) determined that the instrument is a psychometrically sound, reliable, and valid instrument. Rao's HRD Climate instrument has also been proven a valid and reliable instrument (Chaudhary, Rangnekar, & Barua, 2013). Both instrument's designs lend themselves well for conducting comprehensive evaluation of HRD environments between and within organizations or groups. The Q4TE instrument encompasses models widely used in training evaluation practice, such as Kirkpatrick's taxonomy for training and development evaluation (Kirkpatrick & Kirkpatrick, 2006; Wang & Wilcox, 2006).

The brief nature of the instruments makes them appropriate for field research. The survey design lends itself to determining if organizations are taking the steps necessary for a high-quality training environment. Additionally, the Q4TE instrument assesses the level of training quality attained based on participants' responses. The Q4TE instrument is effective for assessing both short- and long-term outcomes for systemic practices, utility, and organizational results stemming from the training program. The survey aligns with Kirkpatrick's hierarchy. As figure 4 demonstrates, the reaction and learning levels measure the effectiveness of the training and development environment in the short-term, which includes questions based on satisfaction, utility, and knowledge. The long-term effectiveness of the training environment assessment occurs through the behavior and organization results levels and includes questions on

application to practice, individual organizational results, and global organizational results (Grohmann & Kauffeld, 2013).

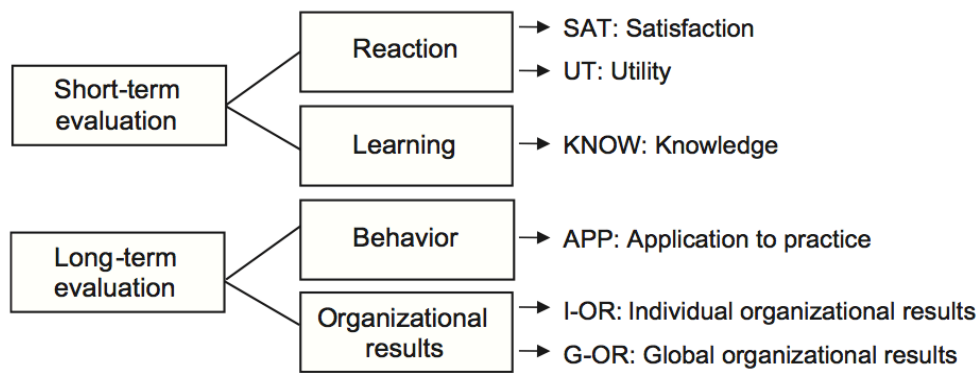


Figure 4. Scales of the Q4TE Instrument. This figure represents the six scales that are contained within the Q4TW instrument. Reprinted with permission. (Grohmann & Kauffeld, 2013)

The HRD Climate instrument is designed to assess the organizational climate that encompasses the three independent variables – organizational commitment, management involvement, and proactivity (Rao, 1986).

The survey instrument for the present study, the Human Resource Development Environment Survey (HRD-ES), is similar to the Q4TE and HRD Climate instruments with minimal adaptations. The modifications included general demographic questions, the addition of questions to ascertain the frequency and modality of training, the addition of questions regarding opportunities for development with supervisors, and finally the addition of a question to assess overall satisfaction with the HRD environment as a whole (Appendix A).

Validity

Validity is the extent to which an instrument measures what it is intended to measure and performs as it is designed to perform (Biddix, 2014). Grohmann and Kauffeld's (2013) Questionnaire for Training Evaluation (Q4TE) has undergone a rigorous evaluation resulting in the determination of the instrument as a valid for measuring training quality within and between groups for both short- and long-term effects. The basis for the Q4TE instrument is Kirkpatrick's training and development evaluation model, which in and of itself speaks to its validity because of the volume training and development evaluation models based on the taxonomy. Additionally, the researchers chose to evaluate the instrument through a three-study process. In the first study, the researchers developed the questionnaire itself, the Q4TE, to be a time-efficient and psychometrically sound instrument for measuring training quality. In the second study, Grohmann and Kauffeld cross-validated the underlying factor structure. During the study, the researchers added questions to assess long-term impacts of training within an organization. Finally, in the third study assessment of the differential and discriminant validity occurred. The instrument displays satisfactory internal validity scores for all Q4TE scales. More specifically, the outcome of the researchers' analysis indicated that the instrument is a valid, effective, and efficient training evaluation tool generalizable to a wide range of settings and contexts.

The Q4TE and HRD Climate instruments provide increased validity as compared to Kirkpatrick's (1967) framework because of the increased variability provided through the response structure and splitting Kirkpatrick's (1959) four levels into a six-scale assessment (Figure 4). Rao's (1986) HRD Climate instrument has also been demonstrated

to be a reliable measure of organizational commitment, management involvement, and proactivity (Chaudhary, Rangnekar, & Barua, 2013). The HRD-ES instrument assessed all six scales derived from the Q4TE. According to Creswell (2013), external validity is how well the results of the study are generalizable to the population at large.

Enhancement of external validity in the study took place by requesting that all members of the population complete the survey and keeping the survey open until attaining the response rate goal. The methodology enhanced the representative nature of the responses as well as the generalizability of the findings.

According to Creswell (2013), content validity concerns how well an instrument measures intended areas. To increase content validity, five individuals provided feedback on the HRD-ES instrument. The five individuals were recruited from a contract management group on the LinkedIn professional networking website. Feedback requested included comments on the survey instructions, clarity and wording of survey questions, and the individual's understanding of the meaning for each of the survey questions. Feedback from the pilot survey was incorporated where appropriate. There were three changes to the survey because of the pilot, which included re-wording two questions and including a definition of development in the instructions.

Reliability

Reliability of an instrument is the extent to which the result from a measuring procedure is capable of replication in the future. In the context of survey research, there are two primary areas of concern related to reliability – measurement error and random error. Measurement error is how well the instrument performs in relation to the population under evaluation (Biddix, 2014). The demonstration of reliability of the

instrument occurred through its development and the researchers' focus on the generalizability of the instrument to numerous environments.

However, no survey is perfect and one should always expect some level of measurement error. Minimization of measurement error took place through focusing on obtaining data from at least the minimum number of respondents, which was 96. Next, Creswell (2013) described internal consistency reliability as the consistency of results across items in the questionnaire. Internal reliability values from Grohmann and Kauffeld's (2013) survey, measured using Cronbach's alpha, demonstrate high internal consistency. The values ranged from 0.79 at the lowest to 0.91 at the highest.

Data Collection Procedures

The HRD-ES survey instrument was made available to the membership of NCMA through a link provided in the organization's newsletter as well as advertised on the organization's website and the headquarters-approved NCMA LinkedIn group. Before providing a link to the survey was provided, a pre-notice took place via LinkedIn and the organization's website to communicate with members that their assistance in completing the study was needed in order to understand more about the HRD environments for contracting professionals in the public and private sectors. Additionally, all chapter presidents received a pre-notice as well which requested their assistance in ensuring that members within their respective chapters were aware of the survey. The notice included a statement on the minimal risk involved in the study as well as a description of the voluntary nature of the study. According to Phillips (2003), the pre-notice approach has received favorable feedback from respondents. Respondents indicated they responded to the survey because they knew about the survey in advance and because of increased

awareness regarding the purpose of the study (see Appendix B for a copy of the pre-notice).

The survey was hosted on the SurveyMonkey™ website, which is a common platform researchers use for collecting data (Bethlehem & Biffignandi, 2012). Permission to use the SurveyMonkey™ platform was obtained for conducting this research (Appendix C). The study used the SurveyMonkey™ system to disseminate the survey (Appendix A). Prior to beginning the survey, the participant was presented with the informed consent notice (Appendix D). If the participant consented, he or she was able to proceed to the detailed instructions for the survey as well as ways to contact the researcher with any questions or comments. After the notice, the survey was presented in single page format. Once the respondent answered all of the questions, he or she will clicked the complete button and received a notice thanking the individual for his or her participation. Immediately after submitting the survey, the data was secured in the SurveyMonkey™ database for access by the researcher. Once the all data was collected, raw data was exported to SPSS. Minimization of missing or invalid responses will take place within SurveyMonkey™. The platform requested responses to each of the questions before the survey submission was permitted. Screening of the responses and omission of missing or invalid data took place before data analysis begins. The survey remained open until a sufficient number of responses were attained. Raw data was stored on a password-protected computer in a secure environment.

All data submitted by participants was anonymous. Anonymous submission means the individual will not provide their name or other identifying information, thus ensuring the respondents' confidentiality. However, participants will have the option of

providing their email address if they wish to receive a copy of the completed study. Data resided on the electronic data server until the research study and data analysis is complete. Destruction of the raw data maintained on the SurveyMonkey™ platform took place through an option provided by the platform once data analysis was completed. SurveyMonkey™ employed physical and environmental controls to protect the data provided by respondents. Additionally, SurveyMonkey™ did not use the information collected from the surveys in any way, as outlined in the company's Privacy Policy. Finally, data backup occurred on a daily basis by SurveyMonkey™ to provide protection against the possibility of data loss.

Data Analysis Procedures

Raw data analysis was conducted using SPSS version 22.0 for Macintosh to test the research questions and hypotheses. The SurveyMonkey™ platform automatically categorized responses and provided exportable data directly to SPSS. Once the data was in SPSS, descriptive and correlational statistical analyses were conducted to inform the study. Descriptive statistics such as calculations for the mean, median, and mode provided data summarization. Next, calculations of Pearson's r were used to evaluate each of the hypotheses and independent samples t -tests were used to analyze differences between the public and private sector groups. The Pearson correlation coefficient, also known as Pearson's r , was used to describe the extent of correlations that exist between the independent and dependent variables. Pearson's r measures the extent to which two or more variables tend to vary in unison (Trochim, 2006). The coefficient ranges from -1 to +1, where +1 would indicate that there is a perfect correlation between the variables and -1 would indicate there is a perfect inverse relationship between the variables.

Analysis of the research questions occurred using descriptive statistics including frequencies, mean averages, and modes as well as ANOVA and correlational statistics. Use of calculations of Pearson's r correlation coefficient were used to assess the extent to which correlations were present between the independent and dependent variables, allowing the hypotheses to be tested. The t -test procedure was used to determine statistically significant relationships between the public and private sector groups for each of the six research questions. Attaining a statistically significant relationship occurred at the $p < 0.05$ level. According to Coolbridge (2012), obtaining results at the $p < 0.05$ level ensures the findings are not simply the effect of random chance alone.

Ethical Considerations

The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979) highlighted the paramount importance of ethics in research and this study adhered to the highest level of ethical standards including those outlined in the commission's Belmont Report. The Belmont Report identifies three major areas of consideration for research involving human subjects: respect, beneficence, and justice. The study involved human participants who provided data about their experiences in the workplace. Therefore, assurance of the participant's rights to privacy, respect, justice, beneficence, and freedom from coercion was a priority throughout the course of the study. Collection of the participants' information was anonymous and the data was presented in aggregate form to add additional protection to participant-level data. Therefore, there was no risk of an individual's data being personally identifiable. Additionally, in an effort to further ensure the participants privacy, the Internet Protocol (IP) address information collected by the SurveyMonkey™ platform was not maintained

in SPSS. This data was stored on the SurveyMonkey™ survey to prevent duplicate survey submissions. Since this information was not stored locally, information about the computer from which the individual completed the survey was not traceable. All participants reviewed and provided informed consent before being allowed to proceed with survey completion.

The informed consent provided participants with an overview of the survey, the type of data collected, how the data was to be used, and discussed the individual's right to refuse participation in the study or to cancel participation at any point in the process. Finally, participants were provided with contact information for the researcher and an email address to contact if they felt that their rights, privacy, or confidentiality was at risk in any way. As discussed above, the storage of data resulting from the survey occurred in a secure environment on SurveyMonkey™ servers. Raw data for statistical analysis from SurveyMonkey™ was stored on a password-protected computer in a secure environment. Once data was imported into SPSS and validation was completed, data was deleted from SurveyMonkey™.

Additionally, the Institutional Review Board (IRB) at Columbia Southern University within the College of Business reviewed the methodology for this study for appropriateness and ethical standards adherence for human research prior to data collection commenced. The IRB approved the initial manuscript as appropriate and ethical for doctoral research. The researcher reports that there were no conflicts of interest in the completion of this study. This study posed no known risks to participants.

Limitations

All research inquiries must make certain assumptions and delimitations in order

for the research to be possible (Leedy & Ormrod, 2012). The following assumptions were present in the study:

- Participants reflected a representative sample of contracting professionals.
- Participants answered the survey questions honestly.
- Participants answered the survey questions accurately.
- Participants understood the survey questions as intended.
- The survey administration service operated as intended and precluded participants from submitting more than one response.

The study has two primary limitations. The study used a purposive sampling method. Although, the sampling method was a technical limitation, the sampling approach drew a sample from a specialized group of participants who were best suited to answer the research questions. However, it is possible that the data that resulted from this study could over-represent or under-represent the public and private sector groups. Mitigation of the limitation took place through reviewing demographic information to determine the extent to which the respondents match the known population demographics such as the public and private sector mix. Using surveys can present additional limitations. Respondents may not remember the information, data errors can occur as a result of the individuals who chose to respond to the survey, and finally questions may not be understood by all participants exactly the same. Issues with use of a survey was addressed by piloting the survey, providing clear instructions, and working with NCMA leadership to ensure that the survey is advertised in a manner to elicit responses in a manner that were as representative of the population as practicable.

Summary

The chapter discussed the research design and methodology for the study as well as information on the population and sampling strategy. The methodology for the study allowed for an efficient means to answer the questions posed by the study and to assess the hypotheses. The study used a survey instrument adapted from the Q4TE and the HRD climate survey (Grohmann & Kauffeld, 2013; Rao, 1986). The SurveyMonkey™ platform was the system used for data collection, a common platform used by researchers to collect survey data. Chapter 4 discusses the findings from the study.

Chapter 4: Data Analysis and Results

Introduction

This study examined the influence of human resource development (HRD) climate on systemic practices, utility, and organizational results among contracting professionals in the public and private sectors. The study used a quantitative correlational methodology to examine the impact of HRD on systemic practices, utility, and organizational results. To investigate the relationships between the variables a purposive sample was identified and selected from the membership of the NCMA. The research hypotheses as mentioned in Chapter 3 were as follows:

R1: To what extent does the human resource development influence systemic practices in the public sector among contracting professionals?

R2: To what extent does the human resource development influence systemic practices in the private sector among contracting professionals?

R3: To what extent does the human resource development influence utility in the public sector among contracting professionals?

R4: To what extent does the human resource development influence utility in the private sector among contracting professionals?

R5: To what extent does human resource development influence organizational results in the public sector among contracting professionals?

R6: To what extent does human resource development influence organizational results in the private sector among contracting professionals?

The 31-item HRD-ES survey instrument was used to obtain the data necessary to answer the research questions from the participants. Demographic information was

attained through six survey questions, Q.1 and Q.3 through Q.7. The HRD climate scale was measured by nine survey questions, Q.8 through Q.16. The dependent constructs – systemic practices, utility, and organization results – were assessed through the remaining survey questions, Q.17 through Q.31. The HRD climate scale as well as the systemic practices, utility, and organizational results scales were measured on a five-point likert scale that ranged from strongly disagree to strongly agree.

This chapter provides descriptive data, data analysis procedures, and results that were attained from the study. The descriptive data section provides information on demographics for the sample with a narrative description. The data analysis procedures section describes the procedures that were used to analyze the data, provides information on the validity and reliability of the data, and describes how the data analysis aligns with the respective research questions. The results section of the chapter presents the data from the statistical analyses used to answer the research questions. Chapter 4 concludes with a summary of the key points from each of these sections.

Descriptive Data

The link to the HRD-ES survey instrument was distributed to the membership of the National Contract Management Association (NCMA) via an electronic newsletter sent to all members through electronic mail. The NCMA, the data source for the study, consists of 19,136 members – approximately 25% are public sector employees, 64% are private sector employees, and the remaining 11% include attorneys, accountants, consultants, and other unaffiliated members (NCMA, 2012). The survey instructions restricted the 11% of individuals (2105 members) who are not directly involved with federal contract management, such as unaffiliated members and consultants, from

participation in the study. After removing the other affiliated members from the population, the public sector comprises 28%, or 4,784 members, and the private sector comprises 72%, or 12,247 members, for a total of 17,031 survey-eligible members. The sample consisted of approximately 32% public sector contracting professionals and 68% private sector contracting professionals.

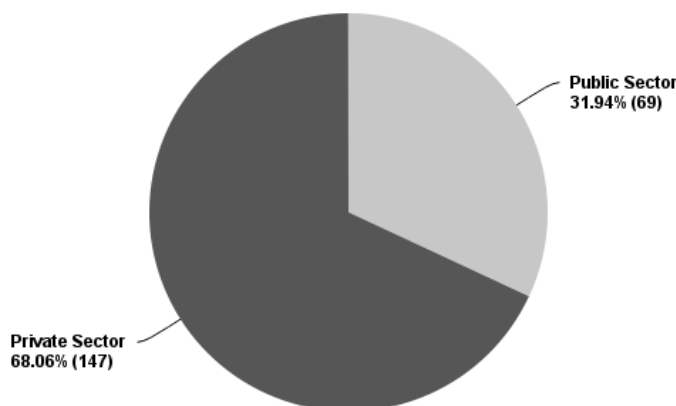


Figure 5. Participants by sector. This figure illustrates the percentage of participants in the public and private sectors.

In order to conduct statistical analysis a minimum of 96 responses was required (Raosoft, 2011). The required response rate was exceeded by 120 responses for a total of 216 responses. The sample consisted of 123 female participants, or 56.9%, and 93 male participants, or 43.1%. The education composition for the sample indicated that the majority of participants, 61%, had a masters degree or higher. One participant reported not completing high school, 10 participants reported high school as their highest level of education, 45 participants had a bachelors degree, and 131 participants had a masters degree or higher.

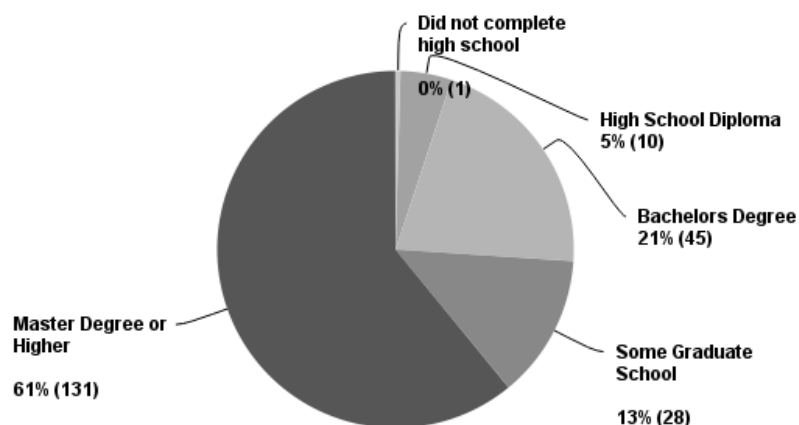


Figure 6. Education level of all participants. This figure illustrates the educational attainment of participants.

The public sector had a higher percentage of participants with a masters degree or higher. Overall, 68% of the public sector group and 58% of the private sector group indicated having a master degree or higher.

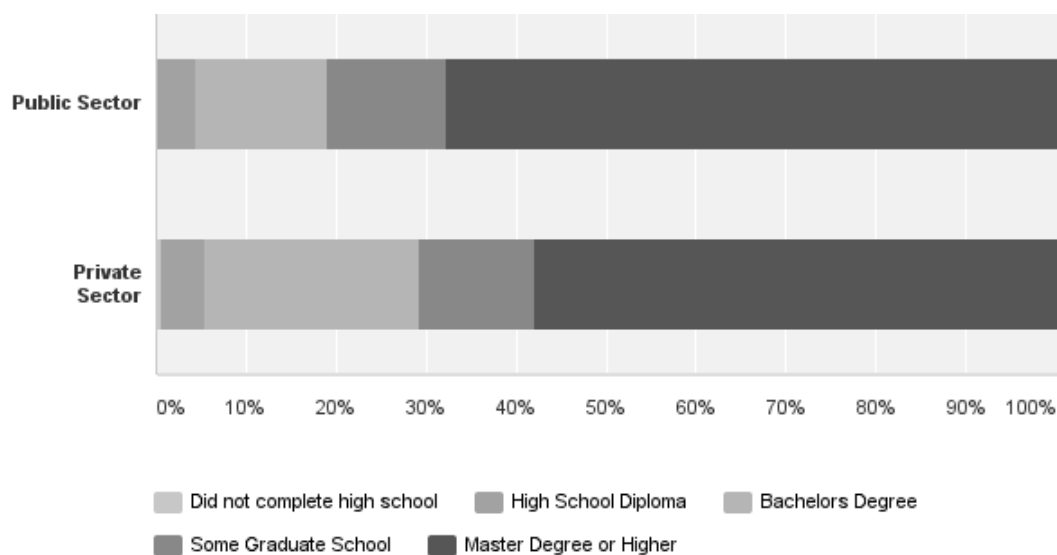


Figure 7. Highest level of education by sector. This figure illustrates educational attainment of participants by sector.

Concerning ethnicity, the sample was comprised of 1% American Indian or Alaskan Native, 2% Asian or Pacific Islander, 7% Black or African American, 3% Hispanic or

Latino, and 88% White or Caucasian. Six participants preferred not to respond to this demographic question.

Table 2

Ethnicity of Survey Participants

	American Indian or Alaskan Native	Asian or Pacific Islander	Black or African American	Hispanic or Latino	White or Caucasian	Prefer Not to Answer	Total
Public Sector	3% 2	0% 0	12% 8	3% 2	83% 57	4% 3	72
Private Sector	0% 0	3% 4	5% 7	3% 4	91% 134	2% 3	152

Two job-related demographic questions were asked of participants – current job level and number of years in position. For current job level, the majority of survey participants categorized themselves as being in an intermediate or middle management position.

Table 3

Job Level of Survey Participants

	Owner/Executive	Senior Management	Middle Management	Intermediate	Entry Level	Total
Public Sector	9% 6	14% 10	28% 19	45% 31	4% 3	69
Private Sector	10% 14	18% 26	39% 57	28% 41	5% 8	146

As Table 4 demonstrates, the average years of experience for the overall sample were 7.9 years. The public sector participants had an average of 9.5 years of experience and the private sector participants had an average of 7.2 years of experience.

Table 4

Years of Experience for Survey Participants

	<i>n</i>	Range	<i>M</i>	<i>SD</i>
Public Sector	69	37.3	9.5	10.1
Private Sector	147	51.6	7.2	8.2

In comparing the known demographics of the population to those of the sample, the sample was adequately representative of the population for the scope and purposes of the study. The public/private sector mix for the population is 25% and 64% respectively, and the public/private mix for the sample was 28% and 72% respectively.

Data Analysis Procedures

Data was collected using the SurveyMonkey™ platform. Once the data collection period ended, the data was downloaded, audited for missing values and outliers, coded, and imported into SPSS version 22.0 for Macintosh. To understand more about the sample's demographic information, frequency analysis was conducted on questions 1 through 7. Then, demographic information was assessed for the entire sample as well as separately for the public and private sector groups. Next, descriptive statistics were analyzed for each of the variables. The data was then compiled according to construct – HRD climate, systemic practices, utility, and organization results – aligned with the research questions. The 9-item HRD climate scale, the independent construct, consisted of Q.8 through Q.16; the systemic practices scale consisted of Q.18, Q.21, Q.24, and Q.27; the utility scale consisted of Q.17, Q.19, Q.20, and Q.22; the organizational results scale consisted of Q.23, Q.25, Q.26 and Q.30. The data was arranged into these scales to answer each of the research questions through analysis of the constructs. As described in

the research questions, the variables were analyzed for statistically significant correlations for both the public and private sector groups. Additionally, between-groups *t*-tests were conducted to determine cases in which there was significant variance between the public and private sector groups.

Each of the scales used to measure HRD climate, systemic practices, utility, and organizational results were assessed for reliability using Cronbach's alpha (*a*). The HRD climate scale resulted in an *a* value of .92, the systemic practice scale resulted in an *a* value of .83, the utility scale resulted in an *a* value of .88, and the organizational results scale resulted in an *a* value of 0.83. A value for Cronbach's *a* greater than 0.70 are considered reliable (Trochim, 2006). Each of the scales met or exceeded the reliability threshold of 0.70.

Results

HRD climate overview. For a better understanding of the HRD climate scale, descriptive statistics were calculated for each of the scale variables for the overall sample, which consisted of Q.8 through Q.16, as depicted in Table 5. The lowest combined sample mean scores were Q.8, Q.12, and Q.13 with mean scores of 2.94, 2.97, and 2.97 respectively. A mean score of less than 3.0 indicated that participants disagreed with the statements. These variables assessed the extent to which management sees it as their responsibility to develop employees, the organization proactively notifies employees of impending changes, and incompetent employees are addressed rather than left unattended. In order to determine if there was a difference between the public and private sector groups the HRD climate variables were analyzed by group.

Table 5

Combined HRD Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Management Ensures Job Satisfaction	216	2.94	1.07	1.14
HR Most Valuable Resource	216	3.44	1.11	1.22
Development Supervisor's Responsibility	216	3.39	1.07	1.15
Policies Facilitate Development	216	3.38	0.99	0.98
Management Time	216	3.06	1.15	1.33
Organizational Proactivity	216	2.97	1.12	0.02
Incompetence Addressed	216	2.97	1.06	1.13
Employee Behavior Can Be Changed	216	3.23	0.92	0.86
Culture	216	3.40	1.09	1.20

The public sector had four mean values that were less than the neutral score of 3.0, which included Q.8, Q.12, Q.13, and Q.14 at 2.71, 2.93, 2.83, and 2.74 respectively. The variables assessed by these questions was the extent to which management goes out of their way to ensure job satisfaction, management spends considerable time developing

employees, the organization proactively notified employees of impending changes, and incompetent employees are addressed. Table 7 shows the results for the private sector.

Table 6

Public Sector HRD Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Management Ensures Job Satisfaction	69	2.71	1.15	1.33
HR Most Valuable Resource	69	3.25	1.18	1.39
Development Supervisor's Responsibility	69	3.30	1.15	1.33
Policies Facilitate Development	69	3.44	1.09	1.19
Management Time	69	2.93	1.26	1.60
Organizational Proactivity	69	2.83	1.18	1.38
Incompetence Addressed	69	2.74	1.11	1.23
Employee Behavior Can Be Changed	69	3.01	0.96	0.93
Culture	69	3.22	1.19	1.41

The private sector group did not have any mean scores that were below the neutral score of three. The highest mean score was 3.53 on Q.9, which assessed the extent to which human resources were considered the most valuable resource within the organization. In

order to determine if there was a significant variance between the two groups, a between-groups *t*-test was conducted as depicted in Table 8.

Table 7

Private Sector HRD Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Management Ensures Job Satisfaction	147	3.05	1.01	1.02
HR Most Valuable Resource	147	3.53	1.06	1.13
Development Supervisor's Responsibility	147	3.44	1.03	1.07
Policies Facilitate Development	147	3.35	0.94	0.89
Management Time	147	3.12	1.10	1.20
Organizational Proactivity	147	3.04	1.10	1.20
Incompetence Addressed	147	3.08	1.02	1.05
Employee Behavior Can Be Changed	147	3.33	0.89	0.80
Culture	147	3.48	1.04	1.09

Within the HRD climate scale, there were three measures where significant variance between the public and private sector groups was observed. The between groups variance occurred on Q.8, Q.14, and Q.15, which measured the extent to which management goes

out of their way to ensure that employees enjoy their job, incompetence is addressed within the organization, and management believes that an employee's behavior can change at any point in their career. In each of these cases, the public sector had statistically significant lower mean scores than the private sector.

Table 8

HRD Climate Scale Between Groups t-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Interval of the Difference	
									Lower	Upper
Management Ensures Job Satisfaction	Equal variances not assumed	5.210	0.023	-2.087	119	.039	-.33747	.16172	-.65770	-.01725
HR Most Valuable Resource	Equal variances assumed	2.073	0.151	-1.769	214	.078	-.28424	.16067	-.60094	.03247
Development is Supervisor's Responsibility	Equal variances assumed	3.905	.049	-.836	214	.404	-.13103	.15670	-.43989	.17784
Policies Facilitate Development	Equal variances assumed	1.962	.163	.660	214	.510	.09553	.14479	-.18987	.38094
Management Time Investment	Equal variances assumed	3.821	.052	-1.159	214	.248	-.19491	.16824	-.52653	.13671
Organizational Proactivity	Equal variances assumed	1.587	.209	-1.311	214	.191	-.21473	.16381	-.53763	.10817
Incompetence Addressed	Equal variances assumed	.953	.330	-2.233	214	.027	-.34250	.15335	-.64478	-.04023
Employee Behavior Can Be Changed	Equal variances assumed	.008	.930	-2.336	214	.020	-.31204	.13358	-.57534	-.04874
Culture Conducive to Development	Equal variances assumed	1.477	.226	-1.669	214	.097	-.26560	.15912	-.57925	.04805

Systemic practices overview. For a better understanding of the systemic practices scale, descriptive statistics were calculated for each of the scale variables for the overall sample, which consisted of Q.18, Q.21, Q.24, and Q.27, as depicted in Table 9. The lowest combined sample mean score was 3.53 for Q.21, which assessed the extent to which participants knew more as a result of development activities. There were no variables within the systemic practices scale that fell below the neutral mean score of 3.0. The highest score within the systemic practices construct was Q.18, which assessed the

extent to which participants enjoyed development activities offered within their organization. In order to determine if there was a difference between the public and private sector groups the HRD climate variables were analyzed by group.

Table 9

Combined Systemic Practices Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Enjoy Development	216	3.87	0.91	0.83
Know More	216	3.53	0.83	0.69
Successful in Application	216	3.75	0.81	0.67
Increased Efficiency	216	3.79	0.89	0.79

Table 10

Public Sector Systemic Practices Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Enjoy Development	69	3.91	0.97	0.93
Know More	69	3.49	0.88	0.78
Successful in Application	69	3.71	0.84	0.71
Increased Efficiency	69	3.71	1.03	1.06

The public sector had zero mean values that were less than the neutral score of 3.0. The highest mean value was 3.91 for Q.18, which assessed the extent to which participants enjoyed development activities offered within their organization Table 11 shows the results for the private sector.

Table 11

Private Sector Systemic Practices Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Enjoy Development	147	3.85	0.89	0.79
Know More	147	3.55	0.80	0.65
Successful in Application	147	3.76	0.80	0.64
Increased Efficiency	147	3.83	0.81	0.66

The private sector group did not have any mean scores that were below the neutral score of 3.0. The highest mean score was 3.83 on Q.27, which assessed the extent to which development activities within the organization increased the efficiency of employees. In order to determine if there was a significant variance between the two groups, a between-groups *t*-test was conducted as depicted in Table 12.

Table 12

Systemic Practices Scale Between Groups t-Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Enjoy Development	.085	.771	.471	214	.638	.06270	.13316	-.19977	.32518
Know More	.819	.367	-.481	214	.631	-.05827	.12120	-.29716	.18063
Successful in Application	.186	.667	-.437	214	.662	-.05176	.11840	-.28514	.18162
Increased Efficiency			-.849	109.306	.398	-.11979	.14105	-.39934	.15977

The between groups *t*-test showed no statistically significant variances between the public and private sector groups for any of the measures within the systemic practices construct.

Utility overview. For a better understanding of the utility scale, descriptive statistics were calculated for each of the scale variables for the overall sample, which consisted of Q.17, Q.19, Q.20, and Q.22, as depicted in Table 13.

Table 13

Combined Utility Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Remember Development Information	216	3.94	0.83	0.70
Development Beneficial	216	3.75	0.94	0.89
Development Useful	216	3.79	0.91	0.84
New Skills Attained	216	3.54	0.91	0.83

The lowest combined sample mean score was 3.54 for Q.22, which assessed the extent to which participants learned new skills as a result of development activities. No variables within the utility scale fell below the neutral mean score of 3.0. The highest score within the systemic practices construct was Q.17, which assessed the extent to which participants remembered information from development activities offered by their employers. In order to determine if there was a difference between the public and private sector groups the HRD climate variables were analyzed by group.

The public sector had zero mean values that fell below the neutral score of 3.0. The highest mean value was 4.02 for Q.17, which assessed the extent to which participants remembered information from development activities offered by their employers. Table 15 shows the results for the private sector.

Table 14

Public Sector Utility Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Remember Development Information	69	4.02	0.80	0.63
Development Beneficial	69	3.73	1.01	1.03
Development Useful	69	3.80	0.96	0.93
New Skills Attained	69	3.67	0.97	0.93

Table 15

Private Sector Utility Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Remember Development Information	147	3.91	0.85	0.73
Development Beneficial	147	3.76	0.91	0.83
Development Useful	147	3.79	0.89	0.78
New Skills Attained	147	3.48	0.88	0.77

The private sector group did not have any mean scores that were below the neutral score of 3.0. The highest mean score was 3.92 on Q.17, which assessed the extent to which development activities within the organization increased the efficiency of employees. In order to determine if there was a significant variance between the two groups, a between-groups t-test was conducted as depicted in Table 16.

Table 16

Utility Scale Between Groups t-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Remember Development Information	Equal variances assumed	2.015	.157	.846	214	.399	.10293	.12170	-.13696	.34281
Development Beneficial	Equal variances assumed	.725	.396	-.221	214	.825	-.03046	.13785	-.30218	.24125
Development Useful to Job Performance	Equal variances assumed	.056	.814	.060	214	.952	.00799	.13295	-.25407	.27004
Learn New Skills	Equal variances assumed	.011	.916	1.388	214	.167	.18367	.13236	-.07721	.44456

The between groups *t*-test showed no statistically significant variances between the public and private sector groups for any of the measures within the utility construct.

The systemic practices construct included the frequency and modality variables, but were not included in the scale-level analysis because they were not on the same measurement scale as the other measures and therefore could not be correlated with other variables on the scale. Table 17 highlights how the two sectors differed in regard to the frequency of development opportunities and the modality in which these opportunities occurred.

Organizational results overview. For a better understanding of the utility scale, descriptive statistics were calculated for each of the scale variables for the overall sample, which consisted of Q.23, Q.25, Q.26, and Q.30, as depicted in Table 18.

The lowest combined sample mean score was 3.05 for Q.30, which assessed the extent to which participants were satisfied with the overall HRD environment within their organization. No variables within the utility scale fell below the neutral mean score of 3.0. The highest score within the systemic practices construct was Q.23, which assessed the extent to which the development environment provided skills to employees that they

were able to use to more effectively complete their jobs. In order to determine if there was a difference between the public and private sector groups the HRD climate variables were analyzed by group.

Table 17

Frequency and Modality of Development Activities

		<i>n</i>	Range	<i>M</i>	<i>SE</i>
Public Sector	Face-to-Face	69	25	3.38	0.55
	Web-Based or E-learning	65	20	4.85	0.53
	Development Meetings with Supervisor	69	30	2.80	0.67
Private Sector	Face-to-Face	138	30	2.98	0.36
	Web-Based or E-learning	134	30	4.05	0.36
	Development Meetings with Supervisor	147	26	2.55	0.42

The public sector had zero mean values that fell below the neutral score of 3.0. The highest mean value was 3.74 for Q.26, which assessed the extent to which participants' performance improved as a result of development activities offered by their employers. Table 20 shows the results for the private sector. The private sector group did not have any mean scores that were below the neutral score of 3.0. The highest mean score was 3.74 on Q.26, which assessed the extent to which participants' performance improved as a result of development activities offered by their employers. In order to determine if

there was a significant variance between the two groups, a between-groups t-test was conducted as depicted in Table 21.

Table 18

Combined Organizational Results Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Development Utility	216	3.74	0.86	0.74
Development Increases Job Satisfaction	216	3.38	1.01	1.03
Improved Performance	216	3.73	0.89	0.80
HRD Environment Satisfaction	216	3.05	1.27	1.63

Table 19

Public Sector Organizational Results Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Development Utility	69	3.73	0.86	0.73
Development Increases Job Satisfaction	69	3.32	1.18	1.40
Improved Performance	69	3.74	.97	0.93
HRD Environment Satisfaction	69	3.03	1.47	2.15

The between groups *t*-test showed no statistically significant variances between the public and private sector groups for any of the measures within the organizational results construct.

Table 20

Private Sector Organizational Results Scale Mean Scores

	<i>n</i>	<i>M</i>	<i>SD</i>	Variance
Development Utility	147	3.74	0.86	0.74
Development Increases Job Satisfaction	147	3.41	0.93	0.86
Improved Performance	147	3.72	0.86	0.74
HRD Environment Satisfaction	147	3.06	1.18	1.40

Table 21

Organizational Results Scale Between Groups t-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Development Useful to Job Performance	Equal variances assumed	.056	.814	.060	214	.952	.00799	.13295	-.25407	.27004
Development Increases Job Satisfaction	Equal variances not assumed	6.022	.015	-.553	108.735	.581	-.08932	.16153	-.40948	.23083
Performance Improved	Equal variances assumed	.057	.811	.138	214	.890	.01804	.13040	-.23899	.27507
HRD Environment Satisfaction	Equal variances not assumed	11.738	.001	-.160	111.173	.873	-.03224	.20157	-.43166	.36718

Influence of HRD on systemic practices. Research questions one and two addressed the relationship between HRD and systemic practices within the public and private sectors respectively. The following hypotheses were established to answer research questions one and two:

H1₀: Human resource development does not influence systemic practices in the public sector among contracting professionals.

H1_a: Human resource development does influence systemic practices in the public sector among contracting professionals.

H2₀: Human resource development does not influence systemic practices in the private sector among contracting professionals.

H2_a: Human resource development does influence systemic practices in the private sector among contracting professionals.

To determine if a significant relationship existed between the HRD climate and systemic practices. A Pearson correlation coefficient, r , was calculated between the HRD climate scale and the systemic practices scale for the public and private sectors.

Table 22

<i>HRD and Systemic Practices Pearson Correlation Coefficients</i>			
	<i>n</i>	Sig. (2-Tailed)	<i>r</i>
Public Sector	69	.000	.661**
Private Sector	147	.000	.547**

** $p < 0.01$

For H1₀ a moderate positive correlation, $r = .661$ at the $p < 0.01$ level of significance, was observed between HRD climate and systemic practices in the public sector. For H2₀ a moderate positive correlation, $r = .547$ at the $p < 0.01$ level of significance, was observed between HRD climate and systemic practices in the private sector. Therefore, the alternate hypotheses, H1_a and H2_a were accepted stating that a statistically significant correlational relationship existed between HRD climate and systemic practices.

Influence of HRD on utility. Research questions three and four addressed the relationship between HRD and utility within the public and private sectors. The following hypotheses were established to answer research questions three and four:

H3₀: Human resource development does not influence utility in the public sector among contracting professionals.

H3_a: Human resource development does influence utility in the public sector among contracting professionals

H4₀: Human resource development does not influence utility in the private sector among contracting professionals.

H4_a: Human resource development does influence utility in the private sector among contracting professionals.

To determine if a significant relationship existed between the HRD climate and utility a Pearson correlation coefficient was calculated. To determine if a significant variance existed between the public and private sector groups an independent samples t-test was conducted for the As depicted in Table 23, a Pearson product correlation coefficient, r , was calculated between the HRD climate scale and the utility scale for the public and private sector.

Table 23

HRD and Utility Pearson Correlation Coefficients

	<i>n</i>	Sig. (2-Tailed)	<i>r</i>
Public Sector	69	.000	.652**
Private Sector	147	.000	.607**

** $p < 0.01$

For H3₀ a moderate positive correlation, $r = .652$ at the $p < 0.01$ level of significance, was observed between HRD climate and utility in the public sector. For H4₀

a moderate positive correlation, $r = .607$ at the $p < 0.01$ level of significance, was observed between HRD climate and utility in the private sector. Therefore, the alternate hypotheses, $H3_a$ and $H4_a$ were accepted, which stated that a statistically significant correlational relationship existed between HRD climate and utility scales.

Influence of HRD on organizational results. Research questions five and six addressed the relationship between HRD and organizational results within the public and private sectors. The following hypotheses were established to answer research questions five and six:

H5₀: Human resource development does not influence organizational results in the public sector among contracting professionals.

H5_a: human resource development does influence organizational results in the public sector among contracting professionals.

H6₀: Human resource development does not influence organizational results in the private sector among contracting professionals.

H6_a: Human resource development does influence organizational results in the private sector among contracting professionals.

To determine if a significant relationship existed between the HRD climate and organizational results. A Pearson product correlation coefficient, r , was examined between the HRD climate scale and the organizational results scale for the public and private sectors.

For H5₀ a strong positive correlation, $r = .816$ at the $p < 0.01$ level of significance, was observed between HRD climate and utility in the public sector. For H6₀ a moderate positive correlation, $r = .704$ at the $p < 0.01$ level of significance, was observed between

HRD climate and utility in the private sector. Therefore, the alternate hypotheses, H5_a and H6_a were accepted, which state that a statistically significant correlational relationship existed between the HRD climate and organizational results scales.

Table 24

HRD and Organizational Results Pearson Correlation Coefficients

	<i>n</i>	Sig. (2-Tailed)	<i>r</i>
Public Sector	69	.000	.816**
Private Sector	147	.000	.704**

** $p < 0.01$

Summary

Responses from 216 survey participants were collected through the SurveyMonkey™ platform. After the survey closed, the data was downloaded, verified, coded, and uploaded to SPSS version 22.0 for Macintosh. Data was analyzed through descriptive statistics, between-groups *t*-tests, and Pearson correlation coefficients. First, descriptive statistics were used to summarize demographic information from the sample and to summarize mean scores across the variables. Additionally, to determine if statistically significant variance existed between the public and private sectors, between-groups *t*-tests were used to evaluate each of the four constructs that were examined through this study – HRD climate, systemic practices, utility, and organization results. Last, each of the hypotheses were tested using Pearson’s *r* to determine if statistically significant correlations between HRD and systemic practices, utility, and organizational results for the public and private sectors existed.

Descriptive statistics were used to summarize the sample’s demographic information. The sample consisted of approximately 32% public sector contracting professionals and 68% private sector contracting professionals. Approximately 57% of

the sample was female and 43% were male. The education composition of the sample indicated that the majority of participants, 61%, had a masters degree or higher. The mean number of years of experience for the overall sample was 7.9 years. The public sector participants had an average of 9.5 years of experience and the private sector participants had an average of 7.2 years of experience. The sample was comprised of 1% American Indian or Alaskan Native, 2% Asian or Pacific Islander, 7% Black or African American, 3% Hispanic or Latino, and 88% White or Caucasian.

Mean scores for each of the measures within each of the scales demonstrated some variance between the public and private sector groups; therefore, between-groups *t*-tests were used to assess the significance of these variances. Three measures were identified as having a statistically significant variance between groups. The measures in which statistically significant variances between the public and private sector groups was observed included Q.8, Q.14, and Q.15, which measured the extent to which management goes out of their way to ensure that employees enjoy their job, incompetence is addressed within the organization, and management believes that an employee's behavior can change at any point in their career. In each of these cases, the public sector had statistically significant lower mean scores than the private sector.

Each hypothesis was evaluated by calculating Pearson correlation coefficients between HRD and systemic practices, utility, and organizational results in the public and private sectors. In each case, the null hypothesis was rejected because statistically significant positive correlations were noted between HRD and systemic practices, HRD and utility, and HRD and organizational results among public and private sector contracting professionals. Moderate positive correlations significant at the $p < 0.01$ level

were observed between HRD and systemic practices and HRD and utility for the public and private sectors. Strong positive correlations significant at the $p < 0.01$ level were observed between HRD and organization results for the public and private sectors.

Chapter 5 provides a summary of the study in which review of the key components of the study are presented. Additionally, Chapter 5 discusses the implications of the data described in this section. The implications are addressed from both theoretical and practical perspectives. Chapter 5 also describes recommendations for future research and for how the information presented in this study can be applied to practice.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

The purpose of the quantitative correlational study was to examine the influence of HRD climate on systemic practices, utility, and organizational results among contracting professionals within public and private sector organizations. The study results contributed to the field by providing detailed insight into how the public and private sector's HRD climates impact systemic practices, utility, and organizational results and by determining instances in which significant differences between the two sectors existed. The study made progress towards addressing the identified research problem, a gap in comparative knowledge between the public and private sectors (Hawkins et al., 2011). Because of this study, HRD practitioners in the public and private sectors now have the data and framework necessary to make systematic improvements in areas that require attention.

Chapter 5 includes a summary of the study, summary of findings and conclusions, implications, and recommendations. The summary section provides an overview of the entire study and highlights key points from Chapters 1 through 3. The summary of findings and conclusions section provides answers to each of the research questions and describes the conclusions drawn from the data. Next, the implications section discusses what the research implies theoretically, practically, and for the future as well as describing the strengths and needs identified over the course of the study. Last, the recommendations section highlights the key suggestions to academia and industry for further action.

Summary of the Study

HRD is the process of improving individual, group, and organizational performance through training, career development, and organizational development initiatives (Garavan, 2007; Nadler & Nadler, 2012). For HRD to be effective, organizations must balance numerous factors. HRD must account for and anticipate how the organization may evolve as time progresses (Mittal, 2013). Understanding the manner in which an organization may change in the future is important to HRD because it provides the framework for a facilitative and appropriate environment for employees to learn and develop, which assists the organization in reaching its goals. Additionally, according to Rao and Salunkje (2013), leaders within organizations must create an environment in which human capital is viewed as the most valuable organizational resource. HRD enables an organization to perform at its full capacity and is a means for creating a competitive advantage in today's volatile environment. Specifically, effective HRD ensures that organizations are agile, their workforce is capable and flexible, and the workforce has the correct skills at the appropriate time (Mittal, 2013). The contracting field is a complex and technical discipline that requires a strong organizational HRD climate that supports an employee's development in such a manner that results in increased knowledge, skills, effectiveness, and efficiency.

The performance of the acquisition and procurement workforce has been the source of intense scrutiny and concern for several decades, which provided the impetus for this study (GAO, 2002; GAO, 2013). Because of these concerns, organizations have invested a great deal of effort in making improvements in HRD. This study was primarily concerned with determining if these efforts have resulted in changes and the extent to

which the public and private sectors differed. The research questions that guided this study were aimed at determining the extent to which HRD influenced systemic practices, utility, and organizational results in the public and private sectors among contracting professionals. This section describes key information from earlier chapters.

In reviewing the history of contract management literature, an interesting observation was that that issues seem to occur in a cyclical nature. Additionally, some of the same themes that were concerning to the contract management profession in its earliest form still hold true today. Since the earliest times of contract management in the United States, there have been concerns about the contract management workforce and efforts to make improvements (Nadler & Nadler, 2012).

This study used a quantitative correlational research design to answer the research questions. An n of ≥ 96 was required in order to conduct statistical analysis. The response exceeded the minimum required by 120 for a total of 216 responses. The study used a survey instrument adapted from Grohmann and Kauffeld's Questionnaire for Training Evaluation (Q4TE) (2013) and Rao's (1986) HRD climate survey, to collect data necessary for conducting correlational analysis on the variables of interest. Surveys are an economical and efficient method to collect quantitative data pertaining to a given population (Creswell, 2013). The purpose of this quantitative correlational study was to determine how HRD climate influences systemic practices, utility, and organizational results for public and private sector contracting professionals at the National Contract Management Association. The next section presents conclusions made based on the data analysis and findings of the study.

Summary of Findings and Conclusions

The independent construct for this study was HRD climate and the dependent constructs were systemic practices, utility, and organizational results. In the previous chapter, the results of the data analyses conducted were presented for each of the constructs evaluated through this study. This section provides an overview of the findings from those analyses and presents conclusions based on those findings.

HRD climate overview. Descriptive statistics were analyzed for the HRD climate construct for the entire sample and for the public and private sector participants separately. The public sector sample mean score for HRD climate was 3.05 ($n = 69$, $SD = 0.94$) and the private sector sample mean score was 3.27 ($n = 147$, $SD = 0.79$) for a combined sample mean score of 3.12 ($n = 216$, $SD = 0.84$). This indicates that on average private sector contract professionals rated the HRD climate more favorably than public sector contracting professionals did. There were three combined sample scores that fell below the neutral score of 3.0, which included variables that assessed the extent to which management sees it as their responsibility to ensure employee engagement, the organization proactively notifies employees of impending organizational changes, and incompetent employees are addressed rather than left unattended. The results indicated that both the public and private sectors should ensure that top managers are actively involved in understanding the factors that drive employee engagement, are aware of and notifying employees of impending organizational changes, and are actively addressing incompetent employees within the organization.

The public sector had four sample mean scores that fell below the neutral threshold of 3.0 on the HRD climate scale. The variables that fell below the neutral

threshold evaluated the extent to which management sees it as their responsibility to ensure employee engagement ($n = 69, M = 2.71, SD = 1.16$), management spends considerable time developing employees ($n = 69, M = 2.9, SD = 1.26$), the organization proactively notifies employees of impending changes ($n = 69, M = 2.83, SD = 1.175$), and incompetent employees are addressed rather than left unattended ($n = 69, M = 2.74, SD = 1.11$). Public sector participants rated their organizations especially low on variables that assessed management responsibility for employee engagement ($n = 69, M = 2.7, SD = 1.16$) and addressing incompetent employees ($n = 69, M = 2.74, SD = 1.11$). In order to improve the overall HRD climate for public sector contracting professionals, the four areas in which the public sector mean score fell below 3.0 should be prioritized as areas for improvement.

The private sector group did not have any scores that fell below the neutral threshold. However, the lowest scores on the HRD climate scale were the same as those in the public sector. This indicates that both sectors should prioritize improvements in these areas in order to increase the overall quality of the HRD climate.

To determine if statistically significant variance existed between the public and private sectors, between-groups t -test data was analyzed. The t -test data indicated that there were three variables within the HRD construct in which the variance between the two sectors was significant. The three measures in which there was a statistically significant variance between the public and private sectors included: the extent to which management sees it as their responsibility to ensure employee engagement ($t(119) = -2.09, p < 0.039$), incompetent employees are addressed rather than left attended ($t(214) = -2.23, p < 0.027$), and management believes that employees behavior can be changed at

any point in their career ($t(214) = -2.24, p < 0.020$). These results suggest the private sector had statistically significant higher mean scores in these areas than the public sector.

Systemic practices overview. Descriptive statistics were analyzed for the systemic practices construct for the entire sample and for the public and private sector participants separately. The systemic practices construct evaluated the extent to which organizations were performing in accordance with Kirkpatrick's HRD evaluation framework - one of the theoretical constructs grounding the study. The public sector sample mean score the systemic practices scale was 3.71 ($n = 69, SD = .80$) and the private sector sample mean score was 3.75 ($n = 147, SD = .65$) for a combined sample mean score of 3.74 ($n = 216, SD = .70$). The results indicate that both the public and private sectors participants are reporting increased efficiency as a result of the HRD climate, which indicates that both sectors seem to be reaching the results level according to Kirkpatrick's hierarchy. The between groups t-test revealed no statistically significant variances between the public and private sector groups.

Utility overview. Descriptive statistics were analyzed for the utility construct for the entire sample and for the public and private sector participants separately. The utility construct evaluated the extent to which employees considered development activities useful within their organizations. The public sector sample mean score for the utility scale was 3.80 ($n = 69, SD = .83$) and the private sector sample mean score was 3.74 ($n = 147, SD = .75$) for a combined sample mean score of 3.76 ($n = 216, SD = .77$). The between groups t-test revealed no statistically significant variances between the public and private sector groups. Analysis of the frequency and modality variables revealed that

the public sector averages more frequent face-to-face, web-based, and supervisory development opportunities than the private sector within the preceding 12-month period.

Organizational results overview. Descriptive statistics were analyzed for the organization results scale for the entire sample and for the public and private sector participants separately. The organizational results construct evaluated the extent to which increased productivity, employee efficiency, and overall HRD satisfaction. The public sector sample mean score for the organizational results scale was 3.45 ($n = 69$, $SD = .96$) and the private sector sample mean score was 3.48 ($n = 147$, $SD = .77$) for a combined sample mean score of 3.47 ($n = 216$, $SD = .83$). These results indicate that the private sector scored their organizations slightly higher than their public sector counterparts. However, the between groups t-test revealed no statistically significant variances on any measures within the organization results scale between the public and private sectors.

HRD influence on systemic practices. To determine the extent to which HRD influenced systemic practices, Pearson's r was calculated between the HRD climate and systemic practices scales for the public and private sector groups. The following hypotheses were evaluated in this section:

H1₀: A relationship does not exist between human resource development and systemic practices in the public sector among contracting professionals.

H1_a: A relationship exists between human resource development and systemic practices in the public sector among contracting professionals.

H2₀: A relationship does not exist between human resource development and utility in the private sector among contracting professionals.

H2_a: A relationship exists between human resource development and systemic practices in the private sector among contracting professionals.

Regarding H1₀ and H1_a, a moderately strong positive correlation ($n = 69$, $r = .661$, $p < 0.01$) was observed between HRD and systemic practices in the public sector.

Therefore, the null hypothesis was rejected and the alternate hypothesis was accepted.

That is, there was a statistically significant correlation between HRD climate and systemic practices within the public sector. This result indicated that increases in HRD mean scores were correlated with increases in mean scores within the systemic practices construct. Furthermore, this result indicated that an effective HRD climate is related with better HRD evaluation outcomes.

For H2₀ and H2_a, a moderately strong positive correlation ($n = 147$, $r = .547$, $p < 0.01$) was observed between HRD and systemic practices in the private sector. Therefore, the null hypothesis was rejected and the alternate hypothesis was accepted. This result indicated that increases in HRD mean scores were correlated with increases within the systemic practices scores. This result indicated that an effective HRD climate is related with better HRD evaluation outcomes.

HRD influence on utility. To determine the extent to which HRD influenced utility, Pearson's r was calculated between the HRD climate and utility scales for the public and private sector groups. The following hypotheses were evaluated in this section:

H3₀: A relationship does not exist between human resource development and utility in the public sector.

H3_a: A relationship exists between human resource development and utility in the public sector.

H4₀: A relationship does not exist between human resource development and utility in the private sector.

H4_a: A relationship exists between human resource development and utility in the private sector.

Regarding H3₀ and H3_a, a moderately strong positive correlation ($n = 69$, $r = .652$, $p < 0.01$) was observed between HRD and utility in the public sector. Therefore the null hypothesis was rejected and the alternate hypothesis was accepted. That is, there was a statistically significant correlation between HRD climate and utility within the public sector. This result indicated that increases in HRD mean scores were correlated with increases within the utility construct. Furthermore, this result indicated that a better HRD climate creates higher utility of development activities within the public sector.

For H4₀ and H4_a, a moderately strong positive correlation ($n = 147$, $r = .607$, $p < 0.01$) was observed between HRD and utility in the private sector. Therefore, the null hypothesis was rejected and the alternate hypothesis was accepted. This result indicated that increases in HRD mean scores were correlated with increases within the utility scores. This result indicated that an effective HRD climate is related with higher utility of development activities within the private sector.

HRD influence on organizational results. To determine the extent to which HRD influenced organizational results, Pearson's r was calculated between the HRD climate and organizational results scales for the public and private sector groups. The following hypotheses were evaluated in this section:

H5₀: Human resource development does not influence organizational results in the public sector among contracting professionals.

H5_a: human resource development does influence organizational results in the public sector among contracting professionals.

H6₀: Human resource development does not influence organizational results in the private sector among contracting professionals.

H6_a: Human resource development does influence organizational results in the private sector among contracting professionals.

Regarding H5₀ and H5_a, a strong positive correlation ($n = 69, r = .816, p < 0.01$) was observed between HRD and organizational results in the public sector. There was a statistically significant correlation between HRD climate and utility within the public sector. Therefore, the null hypothesis was rejected and the alternate hypothesis was accepted. Increases in HRD mean scores were correlated with increases within the organizational results scores. This result indicated that a stronger HRD climate is correlated with better organizational results within the public sector.

For H6₀ and H6_a, a moderately strong positive correlation ($n = 147, r = .704, p < 0.01$) was observed between HRD and organizational results in the private sector. There was a statistically significant correlation between HRD climate and organizational results. Therefore, the null hypothesis was rejected and the alternate hypothesis was accepted. Increases in HRD mean scores were correlated with increases in organizational results scores. This result indicated that a stronger HRD climate is related with better organizational results within the private sector.

Conclusions. Several conclusions can be derived from the findings that resulted from this study. The following conclusions were drawn through analysis of the descriptive statistics for each of constructs in the study – HRD, systemic practices, utility, and organizational results.

- Private sector contract professionals rated the HRD climate more favorably than public sector contracting professionals.
- Public sector participants rated their organizations especially low on variables within the HRD climate construct that assessed management responsibility for employee engagement and addressing incompetent employees.
- The private sector group did not have any scores that fell below the neutral threshold within the HRD climate construct. However, the lowest scores on the HRD climate scale were the same as those in the public sector mentioned above.
- The private sector had statistically significant higher mean scores within the HRD construct on measures that assessed the extent to which management sees it as their responsibility to ensure employee engagement, incompetent employees are addressed rather than left unattended, and management believes that an employee's behavior can be changed at any point in their career.
- Analysis of the systemic practices construct indicated that both public and private sector participants report increased efficiency as a result of the HRD climate within their respective organizations. This indicates that both

sectors appear to be reaching the results level according to Kirkpatrick's hierarchy.

- The public sector participants reported more face-to-face and web-based development opportunities within the preceding twelve-month period than the private sector participants.
- The utility construct mean scores for both the public and private sectors were the highest scores among all of the constructs.
- Analysis of the organizational results scale indicated that the private sector scored their organizations slightly higher than their public sector counterparts. However, the between groups t-test revealed no statistically significant variances on any measures within the organization results scale between the public and private sectors.

Additionally, the following conclusions were drawn based on correlational analysis between HRD and systemic practices, utility, and organizational results:

- Increases in HRD climate mean scores were correlated with increases in mean scores within the systemic practices construct in the public sector.
- Increases in HRD climate mean scores were correlated with increases in mean scores within the systemic practices construct in the private sector.
- Increases in HRD climate mean scores were correlated with increases in mean score within utility construct in the public sector.
- Increases in HRD climate mean scores were correlated with increases in mean scores within utility construct in the private sector.

- Increases in HRD climate mean scores were correlated with increases in mean scores within the organizational results construct in the public sector.
- Increases in HRD climate mean scores were correlated with increases in mean scores within the organizational results construct in the private sector.

As discussed earlier in the manuscript, a strong HRD climate is an essential component of demonstrating a commitment to organizational success (Kaifeng et al., 2012). The findings and conclusions demonstrate this point. HRD is an essential organizational component that must be attended to in both the public and private sectors among contracting professionals. The findings are significant because they provide information that allows HRD professionals in the public and private sectors the opportunity to make concerted efforts to improve the overall HRD climate. The conclusions drawn from this study demonstrated that HRD climate had moderate to strong correlational relationships with systemic practices, utility, and organizational results within both sectors. The conclusions indicate that organizations should focus intently on creating the most effective HRD climate possible in order to attain the greatest organizational benefits.

Implications

This study was grounded in two theoretical constructs, Kirkpatrick's evaluation hierarchy and contingency theory. Kirkpatrick's (1959) model is based on the concept that as evaluation of HRD practices within an organization improve; the overall quality of the HRD environment improves. Contingency theory is the concept that an organization

must be adept at adjusting to environmental conditions; the more adept an organization is at meeting these environmental changes, the greater the probability of successful outcomes (Scott, 1981). This section will also discuss the practical implications in light of the findings and conclusions based on this study.

Theoretical implications. Kirkpatrick's model suggests that as HRD evaluation practices improve, the probability for improved organization performance increases as well (Kirkpatrick, 2010). The Kirkpatrick hierarchy has four increasingly important levels of HRD evaluation – reaction, results, learning, and behavior. The findings indicated that both the public and private sectors were achieving at least some learning and behavior-level impacts as a result of the HRD environments (Kirkpatrick, 1981). These impacts were observed in the descriptive statistics as well as the correlational analysis between HRD and systemic practices. A moderately strong positive correlation was observed between HRD and systemic practices, which assessed HRD evaluation level. The correlational data lends additional evidence to support Kirkpatrick's (1959) taxonomy.

Contingency theory is based on the concept that as an organization becomes more adept at adapting to changing environmental conditions, the better the chances of the organization's success (Scott, 1981). As described in Chapter 2, the literature suggests that the public and private sectors have very different motivations and approaches to management (Noe & Tews, 2012). Based on the organizational differences, it would be reasonable to expect significant differences between the public and private sectors groups. Interestingly, comparing the two groups revealed that there were very no statistically significant variances between the two groups within the systemic practices,

utility, and organizational results areas. Only three out of nine measures within the HRD construct had statistically significant variance between groups. Although there were few statistically significant variances observed between the two groups, that that does not mean that the contingency theory is not applicable. The lack of observed variance between the groups simply means that there was not evidence to support the theory based on the information assessed through this study.

Practical implications. Two primary implications were apparent based on the conclusions from this study in light of the theoretical constructs that grounded this study. The evidence supports the necessity of HRD evaluation activities in line with Kirkpatrick's (1959) hierarchy in order to attain the best organization results. According to Kirkpatrick (1981), the better job organizations do with assessing outcomes at each of the levels on the hierarchy, the better the organizational results. The data suggested that while both the public and private sectors were attaining at least some results at the highest levels of the hierarchy, more work by HRD specialists within organizations would be beneficial to determine the extent to which HRD activities are evaluated and improved.

Future implications. That data that resulted from this study did not produce sufficient evidence to provide additional support for contingency theory. The literature suggests that the private sector is more agile than the public sector (Ferlie, 1996). Therefore, the expectation based on contingency theory would be there would be significant variance between the public and private sectors, especially within the organizational results construct. However, that was not the case as evidenced by no statistically significant variance between the public and private sector groups within the

organization results construct. Because the study examined a very specific group of employees within the public and private sectors, future researchers should consider including additional public and private sector employees to determine if the lack of evidence for contingency theory observed here is a result of the selected population and sample.

Recommendations

This research made headway in understanding more about the similarities and differences in the HRD climates within the public and private sectors. Organizational leaders, HRD professionals, and individuals responsible for providing education and development to contracting professionals could use the results from this study to improve HRD practices within their respective organizations. These same professionals could use the results to inform HRD decisions in an effort to improve organizational effectiveness and bottom-line results within their respective organizations. Several interesting findings resulted from the study, but additional research is necessary in order to further develop this line of research. Recommendations for future research as well as recommendations for practice are reviewed in the next sections.

Recommendations for future research. As discussed in Chapter 2, a great deal of research exists concerning HRD and how HRD practices influence various factors. However, there was very little research that examined the contracting professionals population, specifically. Although, this research made progress in providing more information on the HRD environments within the public and private sectors among contracting professionals, more research is necessary. Specifically, researchers should consider examining the influence of HRD on systemic practice, utility, and organizational

results with other populations to determine if the results from this study are isolated to the contracting professionals group or if observations observed with this population generalize to other groups as well. Additionally, this study found moderately strong to strong correlations between HRD and systemic practices, utility, and organizational results. While the evidence is strong that HRD plays a key role in these areas, future research should be conducted to determine causal factors, if any, that underlie these correlations. There were three measures within the HRD construct, examined through this study, where significant variance between the public and private sectors existed. Future research should examine the factors that contribute to the observed variance. A qualitative study may be beneficial in order to supplement this research in this regard. Public sector participants reported a higher average number of trainings within the last twelve months than the private sector, but as a whole, the private sector had a higher mean HRD climate score. This seems to indicate that increased quantity of training does not necessarily mean that a stronger HRD climate exists. Future research should examine this observation more depth.

Recommendations for practice. This study found that HRD was positively correlated with systemic practices, utility, and organizational results in both the public and private sectors, thus underlining the significance of HRD within organizations. Organizational leaders and HRD practitioners should strategically examine existing HRD environments to identify opportunities for improvement. Within the HRD construct, both sectors scored management's commitment to employee engagement, proactively notifying employees of impending changes, and the organization's willingness to address incompetent employees especially low. Although the public sector had lower overall

mean scores in this area, both sectors should examine, refine, and improve their practices in regard to these areas in particular. In general, public and private sector contracting professionals indicate a neutral stance on the HRD environments within their organizations. Neutrality in this regard should be a significant concern for organizations. Without a strong HRD environment, systemic practices, utility, and ultimately, organizational results will suffer.

Concluding Statement

The findings from this study contribute to the field of HRD and organizational psychology by providing detailed insight into the public and private sector's HRD climates' influence on systemic practices, utility, and organizational results. The study's findings made progress in addressing a gap of knowledge present in the literature, as described by Hawkins, et al. (2011), by providing more insight into the similarities and differences between the public and private sectors among contracting professionals. As a result of this study, HRD practitioners and organizations now have the data and framework necessary to inform strategic HRD improvements within their respective organizations.

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Human Resource Development Environment Survey

***1. The purpose of this research project is to understand differences between the training and development environments for contract and procurement professionals in the public and private sectors as well as how human resource development influences systemic practices, utility, and organization results.**

This is a research project conducted by doctoral candidate Daniel Singleton at Columbia Southern University. You are invited to participate in this research project because you are a member of the National Contract Management Association and are a contract specialist and/or procurement professional. Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participation there is no penalization. The overall risk to participants is low. The benefit of participating is the information you provide may help improve human resource development practices for contract specialists.

The procedure involves filling an online survey that will take approximately 10 minutes. Your responses will be confidential and the research will not collect identifying information such as your name, email address or IP address. However, you may choose to provide your email address if you would like to receive a summary of the results upon completion of the study. The survey questions will be about human resource development influence on systemic practices, utility, and organizational results. Keeping your information confidential is a priority. All data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain information that will personally identify you.

The results of this study are will be used for scholarly purposes only. If you have any questions about the research study, please contact Daniel Singleton at JSUDaniel@mac.com. This research has been reviewed according to Columbia Southern University IRB procedures for research involving human subjects. If you have concerns that you are being put at risk in any way, please contact the Columbia Southern University Institutional Review Board at dba@columbiasouthern.edu.

ELECTRONIC CONSENT: Please select your choice below. Clicking on the "agree" button below indicates that:

- you have read the information above**

Human Resource Development Environment Survey

- you voluntarily agree to participate
- you are at least 18 years of age

If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

Agree

Disagree

*1. Is your organization public or private?

Public (State or Federal Employee)

Private

2. If you would like the results of the completed study, at what email address would you like to be contacted?

Email Address:

3. What is your gender?

Female

Male

4. What is your ethnicity? (Please select all that apply.)

American Indian or Alaskan Native

Asian or Pacific Islander

Black or African American

Hispanic or Latino

White / Caucasian

Prefer not to answer

5. About how long have you been in your current position?

Years

Months

6. What is the highest level of education you have completed?

Other (please specify)

Human Resource Development Environment Survey

7. Which of the following best describes your current job level?

- Owner/Executive/C-Level
- Senior Management
- Middle Management
- Intermediate
- Entry Level

***8. Top managers go out of their way to ensure employees enjoy their work.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***9. Top management believes that human resources are the most valuable organizational resource.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***10. Managers and supervisors see it as their responsibility to develop subordinates within the organization.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***11. Personnel policies within the organization facilitate employee development.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***12. Management and supervisors are willing to invest a considerable part of their time and other resources to ensure employee development.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***13. The organization's future plans are made known to the managerial staff to help them develop their subordinate staff and prepare them for future.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***14. People lacking competence in doing their jobs are helped to acquire competence rather than being left unattended.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***15. The managers in this organization believe that employee behavior can be changed and people can be developed at any stage of their life.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

Human Resource Development Environment Survey

***16. The organizational culture in this organization is conducive to any employee interested in developing by acquiring new knowledge and skills.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***17. I remember information from development opportunities I have participated in over the past 12 months.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***18. I have enjoyed the development opportunities I have been involved in over the past 12 months.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***19. Development opportunities offered by my employer are beneficial to my day-to-day work.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***20. Participation in development opportunities offered by my employer is useful in performing my job.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***21. After participation in a development opportunity, I know substantially more.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***22. I learn new information and skills through development opportunities offered by my employer.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***23. In my everyday work, I often use the knowledge I gained through development activities in which I have participated.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***24. I am successful in applying new skills acquired through the development process in my everyday work.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Human Resource Development Environment Survey

***25. As a result development activities offered by my employer, I am happier with my job.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***26. My job performance has improved through the application of knowledge and skills acquired through development.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***27. Overall, use of knowledge gained through development activities increases efficiency within my organization.**

Strongly Disagree Disagree Neutral Agree Strongly Agree

***28. How many development opportunities have you attended for your job in the past 12 months?**

Face-to-Face

Web-Based or E-learning

Other

***29. How many times have you met with a superior, manager, or formally assigned mentor for development meetings in the last 12 months (not including performance evaluations)?**

Number of Development Meetings

***30. All things considered, rate your overall satisfaction with the development environment within your organization.**

Very Dissatisfied Somewhat Dissatisfied Neutral Satisfied Very Satisfied

Appendix B:

Pre-Notice

Fellow Contract/Procurement Professional:

You are invited to participate in a doctoral research study led by Daniel Singleton, M.S., Ed.S., Doctoral Candidate at Columbia Southern University. It is vitally important that we all support scholarly research in our field of study. This study will examine the differences between public and private sector development environments for contracting professionals. A significant sample size is needed to draw powerful conclusions/inferences and to conduct meaningful factor and sub-factor analysis among subgroups in the population. Your participation in this research is exceptionally valuable and can help guide and shape human resources opportunities in our profession. NCMA encourages you to take approximately 10 minutes to complete this voluntary and anonymous survey.

Thanks in advance,

Daniel Singleton
Doctoral Candidate
Columbia Southern University

Appendix C

Permission to Use SurveyMonkey™ Platform for Research

August 28, 2013



SurveyMonkey Inc.
www.surveymonkey.com

For questions, email:
support@surveymonkey.com

Re: Permission to Conduct Research Using SurveyMonkey

To whom it may concern:

This letter is being produced in response to a request by a student at your institution who wishes to conduct a survey using SurveyMonkey in order to support their research. The student has indicated that they require a letter from SurveyMonkey granting them permission to do this. Please accept this letter as evidence of such permission. Students are permitted to conduct research via the SurveyMonkey platform provided that they abide by our Terms of Use, a copy of which is available on our website.

SurveyMonkey is a self-serve survey platform on which our users can, by themselves, create, deploy and analyze surveys through an online interface. We have users in many different industries who use surveys for many different purposes. One of our most common use cases is students and other types of researchers using our online tools to conduct academic research.

If you have any questions about this letter, please contact us at the email address above.

Sincerely,

SurveyMonkey Inc.



285 Hamilton Avenue, Suite 500, Palo Alto, CA 94301 | O: 650.543.8400 | F: 650.289.0335
111 SW 5th Ave, Suite 1600, Portland, OR 97204 | O: 503.225.1202 | F: 503.225.1200

Appendix D

Informed Consent

The purpose of this research project is to understand differences between the training and development environments for contract and procurement professionals in the public and private sectors. This is a research project conducted by doctoral candidate Daniel Singleton at Columbia Southern University. You are invited to participate in this research project because you are a member of the National Contract Management Association and are a contract and/or procurement professional.

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participation there is no penalization.

The procedure involves filling an online survey that will take approximately 10 minutes. Your responses will be confidential and the research will not collect identifying information such as your name, email address or IP address. The survey questions will be about the quality of the training and development environment within your organization, the frequency and modality of trainings, and your overall satisfaction with the training and development environment within your organization.

We will do our best to keep your information confidential. All data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain information that will personally identify you. The results of this study are used for scholarly purposes only.

If you have any questions about the research study, please contact Daniel Singleton at JSUDaniel@mac.com. This research has been reviewed according to Columbia Southern University IRB procedures for research involving human subjects. If you have concerns that you are being put at risk in any way, please contact the Columbia Southern University Institutional Review Board at dba@columbiasouthern.edu.

ELECTRONIC CONSENT: Please select your choice below.

Clicking on the "agree" button below indicates that:

- you have read the above information
- you voluntarily agree to participate
- you are at least 18 years of age

If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

- Agree**
- Disagree**

Appendix E

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Appendix F

Permission to Use Human Resource Development Climate (HRDC) Instrument

On Jun 2, 2014, at 3:13 AM, T.V.Rao <tvrao@tvrao.com> wrote:

You are most welcome to use the hrd climate survey questionnaire. Best regards. Tvrao

T. V. Rao

Chairman, TVRLS;603, Parshwa Building, SG Road, Bodakdev, Ahmedabad, 380015

web site: www.tvrls.com and www.hrdaudit.org

Blogs: <http://tvraoblogs.blogspot.com/>

Recent book: Managers who Make a Difference (www.iimabooks.com); and Nurturing Institutional Excellence: Indian Institute of Management, Ahmedabad, Macmillan (editors: Vijaya Sherry Chand and T. V. Rao);

Hurconomics for Talent Management, Pearson Education; 100 Managers in Action: Tata McGraw-Hill.

Tel: 91-79-26872718, 26870312, (Res: 079-26764775)

From: "jsudaniel"jsudaniel@me.com

Sent: Mon, 02 Jun 2014 02:28:54 +0530

To: tvrao@iimahd.ernet.in

Cc: tvrao@tvrao.com, tvrls@tvrao.com

Subject: HRD Survey

Dr. Rao,

मेरा नाम डैनियल सिंगलटन है और मैं ऑरेंज बीच में कोलंबिया दक्षिणी विश्वविद्यालय, अल, संयुक्त राज्य अमेरिका में एक डॉक्टर की छात्रा हूँ. मैं तुम्हें मैं मानव संसाधन विकास में अपने अनुसंधान द्वारा intrigued रहा हूँ और मेरे शोध में HRDC सर्वेक्षण साधन का उपयोग करना चाहते हैं बताने के लिए लिख रहा हूँ. मूल सर्वेक्षण साधन निम्नलिखित प्रकाशन में शामिल है:

राव, टीवी और ई. अब्राहम (1986) "भारतीय संगठनों में मानव संसाधन विकास जलवायु". में: राव टीवी और लोमो परेरा (सं.), मानव संसाधन विकास, पीपी 70-98 में हाल के अनुभवों. नई दिल्ली: ऑक्सफोर्ड और IBH.

>

मैं अपने शोध के प्रयोजनों के लिए सर्वेक्षण का उपयोग करें और अनुकूलन के लिए आपकी अनुमति हो सकता है? कोर्स की, मैं ठीक से अदालत में तलब करना और अपने काम में जमा करेगा.

>

My name is Daniel Singleton and I am a doctoral student at Columbia Southern University in Orange Beach, AL, USA. I am writing to let you know that I am intrigued by your research in HRD and would like to use the HRDC survey instrument in my research. The original survey instrument is included in the following publication:

Rao, T.V. & E. Abraham (1986) "Human Resource Development Climate in Indian Organizations". In: Rao T.V. and D. F. Pereira (ed.), *Recent Experiences in Human Resources Development*, pp. 70-98. New Delhi: Oxford & IBH.

May I have your permission to use and adapt the survey for the purposes of my research? Of course, I will properly cite and credit your work.

>

>

Thanks,

Daniel Singleton, M.S., Ed.S.

Doctoral Candidate - Columbia Southern University