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An exploratory study of the role of the human resource information system professional

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AN EXPLORATORY STUDY OF THE ROLE OF THE HUMAN RESOURCE INFORMATION SYSTEM PROFESSIONAL

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DEDICATION

To my family, for always encouraging me to try. Thank you for believing in me when at times I didn't believe in myself.

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VITA

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ABSTRACT

The increasing implementation of technology applications into the workplace has substantiated the need for adept professionals who can manage HR technology for employees and provide data about the organization. For some companies, these professionals are found within the human resources department. These information systems professionals combine HR knowledge and technology skills to procure applications that improve work processes and HR outcomes.

This qualitative study focused on exploring the role delineation of human resource information systems (HRIS) professionals to better understand the advantageous aspects of the role's focus in HR technology and analytics. Specifically, the study aimed to describe how the HRIS professional role supports the functions of HR and transformation of HR activities within organizations. Additionally, the research sought to uncover how HRIS professionals described their responsibilities and competencies in response to the significance of data analytics, as well as how the HRIS professionals described the outlook of their professional role.

Ten, semi-structured interviews were conducted with HRIS professionals who reported having progressive HRIS experience within U.S. based organizations. The results included HRIS professionals' beliefs about their tasks, competencies, and job outlook and thematic analysis resulted in six categories: data management, HR/IT intersection, HRIS emergence, business intelligence, professional identity, and job satisfaction. The conclusions drawn from the research findings indicated that: HRIS professionals encourage HR technology integration to improve workplace processes; HRIS professionals manage data integrity and support the safeguarding of employee information; HRIS professionals run data inquiries and provide reports that influence decision making related to workforce and business outcomes; and HRIS professionals are enthusiastic about emergent job responsibilities in the design and coding of systems.

Recommendations for practice include executive consideration toward improving the visibility of HRIS contributions as a way of strengthening relationships between HRIS professionals and the stakeholders they support. Recommendations also include further investigation into the utilization of analytics in the workplace. This study contributes to the existing literature by providing insight into the opinions of HRIS professionals about their role and interactions within their organizations and recognizes that HRIS professionals consider both people and data when it comes to HR technology implementation.

Chapter 1: Study Introduction

The widespread usage of computerized systems for human resource management (HRM) began in the mid-1960s in response to landmark labor laws regarding equal opportunity employment and occupational safety and health (Hendrickson, 2003). These decisions required organizations to engage in extensive data entry to remain compliant with laws that required the reporting of employee demographic information. HR technology now provides software solutions to previously costly and time-consuming tasks, including recruitment, onboarding, benefits, and succession planning (Marler, 2009). However, this is a limited scope. Consideration should also be given to the impact that technology has on strategic HR practices.

With the accelerated workflow that technology delivers, HR departments can engage in more meaningful management tasks and strategic planning for the organization. To achieve this, HR generalists and specialists should have access to and be trained on the proper, enterprise grade, platforms that allow them to complete a wide range of HR activities, whenever and wherever. A workforce evaluation by the Society of Human Resource Management (SHRM, 2016d) indicated that organizations are continuously challenged to transform their HR department to maximize operational improvements. Employee data is of particular importance because this information can draw attention to gaps in an organization's human capital performance (Shen, 2011). Bersin (2016) suggests that organizations partake in feedback systems to assess the maturity of various processes. For example, a pro-digital culture can continuously develop technology and communication tools, which organizations can utilize in alignment with business goals. The HR department needs to be aware of the organization's goals and have the capability to innovate on behalf of the organization in order to make measurable progress toward defined business objectives. Human resources would therefore benefit from a

role dedicated to promoting HR as an essential business asset, an asset aided by technology solutions and predictive analytics.

HR practitioners are discussing the crucial need to add technology expertise to the umbrella functions of the profession. Organizations are urged to uncover important information about their business and take that information to make data-driven decisions about important human capital factors such as hiring, productivity, and talent retention. Since the HR department is responsible for human capital management (HCM) it is arguably the organization's best functional and divisional entity to collect employee data for analysis. Thus, data collection and metrics are a way for HR to put an organization's HCM efforts into numerical figures that translate to business and finance acumen (Schein, 2012). Such information is often expressed in the form of an analysis where organizational and industry strengths, weaknesses, opportunities, and threats (SWOT) are assessed in the current workforce climate. Tools such as data reports and rater feedback are then analyzed and become predictors of future organizational needs (Fitz-enz, & Mattox, 2014). In order for HR to take on the role of strategic partner and influence organizational decision making the department must prove what gains can be made through upgrades to various HR functions.

Several consulting and market research organizations offer HR professionals resources and information on current and projected trends. The Sierra-Cedar HR System Survey (Sierra-Cedar, 2014) sought to identify organizations that gathered the most data for analytical evaluation of business and management practices. They characterized companies that invested heavily in HR technologies as being "quantified organizations" (Sierra-Cedar, 2014, p. 3), where managers' access to HR analytics had a significant impact on the organizational return on equity (ROE). Return on equity refers to the profits a company makes on specific capital allocations,

such as allocations toward technology. Quantified organizations saw higher revenue per employee, higher profit per employee, and a 79% greater ROE than organizations that were considered not quantified. Of particular interest are globally structured companies that rated highest in efficiency factors and innovation factors within their organizations. The association between technology adoption and financial gains is demonstrated through the ROE chain; which states that technology influences improved HRM outcomes, which leads to improved business standing within the market and eventually improved financial gains in the form of ROE (CedarCrestone, 2013). Return on equity has been statistically linked to the adoption of HR technology, although this relationship is indirect and not causal (Marler & Fisher, 2013).

HRIS and the Projected Future of Work

Research by Capgemini Consulting (2013) suggested that by 2015, 90% of job positions would require technology skills, especially as new applicants' first area of contact with potential employers is through the online recruiting and application process. The changing nature of life and work is often attributed to the rapid rate of change in technology. Human resources managers should be concerned with the increased use of Internet and electronic communication by employees, which should lead to new policies and best practices often outlined by HR departments. By 2020 nearly 75% of the global workforce will be comprised of millennial employees, those often considered to be the most technologically fluent generation who are expecting up-to-date digital services (Bennett, Pitt, & Price, 2012; Deloitte Consulting, 2014). Jobvite (2015), a recruiting platform, found that surveyed Millennials also prefer flexible work, including the opportunity to work from mobile devices. This is also noted in job searches, as 86% of job searches were performed on mobile devices. Organizations are valued through their employees and for demonstrating proficiency in adapting to fluctuations of talent and skillsets

within the workforce. However, the Workforce 2020 survey found that many companies lack the insight to understand the opportunities that emerging generations present, as well as the increased rate of technology usage and self-efficacy among older generations (Bersin, 2015; Oxford Economics, 2014).

As technology resources becomes an increasing concern for organizational development and employee performance it will be important for companies to take an effective stance on the ways in which employees interact with technology in the workplace, as well as the ways in HR can utilize technology solutions in order to support business goals. Understanding HR technology, software evaluations, and metrics have never been an explicit competency for HR professionals, but a recent update to the HR Body of Knowledge has suggested an increased emphasis on analytics. Department staffing in HR represents a median ratio of 1.1 full-time employees per 100 organization employees, so difficulty can arise when managing the exponential growth of employee information (Bloomberg BNA, 2015; Zielinski, 2012). The software market has responded by providing talent management support. Now employee self-service (ESS) and manager self-service (MSS) applications allow for self-reporting and the handling of other tasks such as those related to benefits and performance reviews. Employees are given access to computer-based applications for the purposes of inputting their personal data into a management system, which assembles data for storage and processing. These services include cloud-based functions that allow employees to engage with the system through various devices and from various locations. Over 30% of core HR functions are now maintained through cloud computing (Bersin, 2013). Organizations produce an enormous amount of content and the information technology (IT) department oversees data storage. However, the relevance of

employee data to the HR department demonstrates the need for collaboration between the HR and IT divisions in order to speed organizational innovativeness.

Talent acquisition is also transforming as employees are leveraging networked and social media recruiting and e-marketing to attract candidates. Similarly, data is being used for talent analytics and future workforce planning by using metrics to estimate and predict trends in hiring, compensation, telework, and retention. Although skills in analytics will be increasingly needed in the next several years only one-third of companies consider themselves to have made good or significant progress in meeting workforce goals (Oxford Economics, 2014). A lack of knowledge about quantifiable metrics, for the purpose of benchmarking, can inhibit HR from developing appropriate business strategies. Additionally, insufficient information may preclude HR's ability to influence board-level strategy concerning new workplace initiatives and adoptions. For example, between 2012 and 2013 mobile-enabled work increased by 67% (CedarCrestone, 2013). While this is an opportune avenue for improved employee engagement smaller companies have reported that they have no plans for mobile work infrastructure (Sierra-Cedar, 2016).

Hendrickson (2003) defined the human resource information system (HRIS) as various solutions integrated together to gather, store, and analyze organizational information. Therefore, an HRIS professional is the technology point-of-contact for the HR department; a technologically fluent individual highly invested in the HR mission (Zeidner, 2012). A review of HRIS job postings, sourced from daily Google alerts, for analysts and managers revealed a similarity in typical duties within the following realms: administration, project management, and analytics. Concerning the administrative function, HRIS professionals are in charge of collecting data and maintaining it in standardized formats. With respect to project management, HRIS professionals are tasked with preparing upgrades and enhancements to HRM systems, leading

user testing, and making recommendations for technology policies. Responsibilities surrounding analytics encompass evaluating workflows for improvement opportunities, running queries and reports for the business function, and utilizing mathematical models to interpret raw data and make predictions about human capital needs (Dussert, 2014). A survey by the Information Services Group sought to identify goals of HRIS managers in various organizations. Objectives included speedy implementation of new systems, improved user experience with technology, and identification of data shortfalls in the current organizational design (Sivak & Card, 2014). The HR function can therefore benefit from the HRIS professional, a stakeholder invested in technology solutions that can enhance organizational procedures and outcomes. However, further discussion is needed concerning why the HRIS professional should calculate people analytics, and why organizations should take predictive analytics into serious consideration.

Statement of the Problem

Upwards of 2.7 million individuals will voluntarily leave their jobs, whereas one in four people will change jobs if they think they can get a better workflow experience at another organization (Bureau of Labor Statistics, 2016; Deloitte University Press, 2013). This confidence is highest in the technology industry, as two-thirds believe they can find a better experience in 60 days (Universum, 2015). This is an important consideration when a company's budget is primarily spent on human capital in the form of recruitment, wages, and turnover costs. Yet, some organizations fail to invest resources to gather and analyze data about their employees as a means to improve HCM decision making. Deloitte Consulting (2014) found that 86% of surveyed organizations assessed that they did not have analytic capabilities specific to their HR function. Human resource leaders specifically expressed that they often lack resources and qualified team members to make the most meaningful impact on business outcomes.

The report on Human Resources Competency (SHRM, 2012) found that although being a proponent of technology was considered a desirable trait, the perceived impact on HR effectiveness was only 12%, while the perceived impact of technology on business performance measured 18%. Additionally, the report on Global Human Capital Trends revealed that only 21% of respondents believed that there was a sense of urgency surrounding the trend of HR technology (Deloitte Consulting, 2014). The intersection between IT and HR can pose problems when IT is not particularly invested in HR solutions. To earn support from executives and other functional areas, a demonstrated need must occur concerning the role of HRIS and its importance. When HR is unable to defend a technological business strategy with metrics and analytics investment is denied and allocated to other departments within the organizational (Higgins, 2014).

Statement of the Purpose

The purpose of this study is to explore the role delineation of HRIS professionals as contributors to the HCM process. The study considers the evolution of the HRIS professional's role and responsibilities when implementing technology solutions, specific to the needs of the organization, and their continuing use of organizational and workforce analytics will be discussed among the study participants. The emphasis of the study is how the HRIS professional represents an IT expert assigned to transform HR departments by expanding the technological efficiency of HCM. As significant contributors to the 21st century HR department, participants from this study will consider technology and analytics as HR competencies and address how the role of the HRIS professional is best implemented within organizations.

Conceptual Framework

This dissertation will address the purpose by looking at practitioner-driven intervention within organizational development through organizational role theory and delineation (Cummings & Worley, 2015). Specifically, role theory will examine how formally and informally defined characteristics of HRIS professionals affect their knowledge and capacity to participate actively in use-inspired applications of HR technology. Formally defined responsibilities are often predetermined and available in the form of posted job descriptions; while informally defined responsibilities can be attributed to the modeling and social interactions that occur within the organizational culture (Biddle, 1986). Within organizations is it important to justify technology spending through curiosity-driven inquiry and mission-oriented research (Stokes, 1997). Accordingly, this study will examine the characteristics of HRIS professionals in the areas of information gathering, planning, analysis, and evaluation. Results will then be reviewed to comment on the trajectory of the HRIS profession toward use-inspired research. This framework will be useful in determining the characteristics of an expert HRIS professional. For example, the professional can demonstrate high knowledge but fail to carry out action plans. Similarly, a professional who is highly active in implementing applications can see projects fail and resources wasted if they are lacking in professional knowledge and research.

Additionally, Marler's application of strategic HCM theory will be considered (Sierra-Cedar, 2014). Strategic HCM theory links an organization's human capital to its competitive advantage. Marler found that when HR is aligned with the business strategy business outcomes will improve. The theory specifically states that the adoption of HR technology is indirectly related to improved business outcomes because of an increased return on equity (ROE). The study participants, HRIS professionals in charge of HR technology, will demonstrate if their

knowledge and activities attest to the HRIS specialty as being an instrumental force in human capital strategy by discussing their past and current experiences within their organizations.

Research Questions

This exploratory study seeks the opinions of HR specialists to forecast the benefits HRIS professionals bring to organizations in order to remain competitive and relevant in the global market. This study posed the following central question and two sub-questions:

- How does the HRIS professional role support the functions of HR and transformation of HR activities within organizations?
- How do HRIS professionals describe the responsibilities and competencies of the role in response to the emergence of big data?
- How do HRIS professionals describe the outlook of their professional role within organizations and the HR profession?

Significance of the Study

A study by McKinsey and Company (2015) found that 31% of executives surveyed found that leadership and talent was limited when it came to digital projects and the speed of digital adoption. This is perhaps an indication of the under representation of the significance of HR technology competency and leadership as being necessary for organizational strategy. HR technology selection and implementation for workplace analytics and strategic planning was low across various industries in comparison to typical technologies for basic automation tasks (CedarCrestone, 2013).

Sierra-Cedar (2016) expressed that change management represented a challenge within organizations, with only 27% of responding organizations claiming that they promote a culture of change. The field is lacking in rigorous research featuring HRIS professionals discussing

technology concerns. This study will engage HRIS experts in dialogue about how utilizing HR technology and metrics benefit the bottom line. There are publications about how a new system becomes implemented within a particular organization, but there is little guidance about who should lead, maintain, and be a part of the drive for future HR innovations to keep up with continuously evolving technologies. This study aims to fill a gap in the literature concerning the importance of HRIS professionals.

Overview of the Research Design

This study seeks the opinion of HR experts in order to explore the role delineation of the HRIS professional and forecast the benefits to organizations in the competitive market. Semi-structured interviews were conducted with 10 HRIS professionals. Additional details about the methodology and procedures are discussed in Chapter 3.

Definition of Key Terms

The following HR terminology is defined in order to provide clarification for the reader:

- *Analytics:* The examination of data as to deduce relationships from HR metrics into predictive indicators (Kavanagh, Thite, & Johnson, 2015).
- *Big data:* Growing volumes of complex information in either unstructured or structured formats, which may be analyzed for patterns and trends (Berman, 2013).
- *Competency:* Efficient and effective behavior within a specialized domain (Swanson & Holton, 2009).
- *Employee/Manager self-service systems (ESS/MSS):* Web-based service bundles of enterprise software that allow employees to engage with applications for activities such as updating individual records, submitting timesheets, or accessing training materials (Florkowski & Olivas-Luján, 2006).

- *Human capital management (HCM):* Processes including recording and analyzing the value of employees as assets within an organization. Organizations can harness the knowledge and skill-sets that employee bring and utilize them in a productive way to reach organizational goals. This also includes measuring employee needs and fulfilling those needs (Baron & Armstrong, 2007).
- *Human resource information system (HRIS):* A coordinated effort to collect, store, and analyze HR data about an organization. In addition to explicit technology concerns, HRIS influences decisions about HCM for the purposes of strategic planning (Hendrickson, 2003).
- *Information technology (IT):* As IT infuses into the field of HR it is important to establish the differences in order to eliminate confusion. For the purposes of this study IT represents the maintenance and integration of specific hardware and software used to transmit data (Taylor, 2004).
- *Metrics:* Quantifiable measurements related to organizational strengths and weaknesses such as costs, revenue, employee performance, and turnover. Utilized for HR analytics (Fitz-enz, 2009).
- *Quantified organizations:* Derived from the term quantified-self, which describes using tools to achieve personal goals, quantified organizations are those companies that invest in innovations and regularly analyze metrics to examine their current landscape and to plan for the future (Sierra-Cedar, 2014).
- *Software as a service (SaaS):* Refers to on-demand applications that run on a cloud interface. (Castro-Leon & Harmon, 2016).

- *Strategic planning:* Implementation of workplace changes in order to support organizational goals (Pynes, 2013).
- *Workforce:* Refers to the collection of individuals available for employment. The workforce is especially influenced by social and economic factors, which impact talent (Savitz & Weber, 2013).

Assumptions

A crucial assumption about this study is the need to have HR technology managed by the HR function rather than the IT function. This stance is based on the researcher's own experience at organizations without dedicated HRIS staff, where technology solutions were heavily influenced by IT workload and stake in new projects. It is therefore assumed that technology is at the intersection of IT and HR, signaling that a difference exists concerning the perceived importance of HCM. This study also assumes that HRIS is a necessary component for all organizations regardless of size and industry. It is the researcher's intent to utilize the interview data to uncover professional opinions about how the participants are applying HRIS principles within various organizational landscapes.

Summary

Demonstrated need for more emphasis on HR technology in the workplace has led to the emergence of the HRIS professional. This exploratory study will examine the duties of HRIS professionals and the future trajectory of the specialty. Chapter 2 presents a review of organizational literature concerning HR competency, strategic HCM, HR technology, HRIS design, and HR analytics. Chapter 3 provides an in-depth discussion about this study's research design and data collection procedures. Chapter 4 reports the results of a qualitative study through

interview data. Finally, Chapter 5 provides conclusions based on the research findings and proposes recommendations for future scholarship and practice.

Chapter 2: Review of Literature

Overview

HR is continuously described as an occupation in transition. The profession has begun to shift its focus from the transactional activity to the strategic activity (Fitz-Enz, 2010). This evolution relies heavily on information technology because many transactional activities have been characterized as ideal for automation (Bersin, 2017). Efforts and resources can be spent on forecasting and implementing change rather than simply reacting to change. Higher level activities, such as problem identification and data analysis, influence organizational decision making (Bell, Lee, and Yeung, 2006). This demonstration of business intelligence has great potential for keeping HR departments relevant and essential to an organization. Specifically, harnessing the power of technology and employee metrics promotes the strategic positioning of the HR department as an advising entity.

This literature review examines published works concerning the role of HR professionals in advancing technological competency within the occupation. The literature reveals a shift in understanding when it comes to the evolving role of HR and the urgency to utilize new technologies within the changing work environment. This includes a discussion of the evolution of the HR generalist and recent implications of HR specialties. Noted will be the gap in literature as it pertains to published studies about HRIS professionals as technology specialists. The chapter begins with a review of HR competencies currently observed within the industry and is followed by discussions pertaining to: strategic positioning, human capital management, HR technology trends, and the benefits of analytics.

HR Competencies

HR generalists are often described as being knowledgeable to the point of providing overall guidance on several functional areas, while specialists develop an in-depth understanding of one particular functional area (Deloitte Consulting, 2016; SHRM, 2016b). SHRM (2017b) described common functional areas of HR and the elements of each. Table 1 summarizes these common functional areas.

Table 1

Diverse Functional Areas of the Human Resources Profession

Human Resources Functions	Elements/Responsibilities
Employee benefits	Insurance and retirement funds
Business leadership	Short and long term organizational goals
Payroll	Base pay, incentives, and overtime
Consulting	External provider of HR management
Diversity	Open and inclusive company values
Employee relations	Employer-employee mediation
Ethics and corporate responsibility	Sustainability and philanthropy
Global HR	Global workforce interaction
Labor relations	Unions and contracts
Organization and employee development	Change management and succession planning
Risk management	Safety, security, and loss prevention
Staffing management	Recruitment, hiring, and retention
Technology	Vendor selection and solution implementation

A study conducted by Cornell University defined a profession as being a full-time career, with a body of knowledge, a national professional association, a credentialing body, and a code of ethics (HR Certification Institute, 2013a). The American Society of Personnel Administration (ASPA), a professional organization, used the aforementioned criteria to establish the profession of HR management and in 1972 formulated the ASPA Accreditation Institute (AAI), which was tasked with compiling a body of knowledge and certification exam pertinent to the HR profession (SHRM, 2016a).

Competency models are frameworks that identify necessary capabilities and attributes that a professional should possess, as they are commonly demonstrated capabilities of those who have been identified as high performers (Ulrich, Brockbank, Johnson, & Younger, 2010). Additionally, competencies can be used as benchmarks when conducting performance evaluation of employees. This drives professional development opportunities so that the professional is aligned with the practice. An examination of research studies reveals attempts to establish HR competency models addressing the areas of HR knowledge, skills, and abilities. For example, Ulrich et al. (2010) stipulated that competencies represented agreed upon industry standards of performance. Brockbank (1999) advocated two concepts for competency, the operational work habit and the strategic business driver. Birchfield (2003) recognized several crucial responsibilities for the HR professional. These included leadership through management skills, expertise in business intelligence, and the performance management of business outcomes through the use of metrics and analysis. Ramlall (2006) found that strategic contribution, personal credibility, HR delivery, business knowledge, and HR technology were important considerations in the discussion of HR competencies. Ramlall characterized the HR profession as being highly receptive to research and stressed that research be done continuously in order to enhance the practice.

Two recognizable HR competency models include one established by the HR Certification Institute (HRCI) and one established by the Society for Human Resource Management (SHRM). Both have developed a body of knowledge, which is a collection of concepts, skills, and tasks that are regarded as being unique to the professional practice. For the purposes of this dissertation we will understand HR competency based on the HRCI and SHRM list of competencies. SHRM (2017b) states competencies attributed to the profession as

including those that cover functional or practical knowledge and those that cover behavioral characteristics. Whereas practical knowledge encompasses knowledge and policies specific to the tradition of HR, and behavioral characteristics contribute to effective job performance which can be applied to any profession. When the HR practice changes in a meaningful way, the body of knowledge should be updated to reflect new focus. These models indeed strengthen the HR practice, but greater emphasis on HR technology competency and proficiency in analytics would further the profession's positioning as a strategic partner.

HRCI competency model. The HR Certification Institute (HRCI), formerly the AAI, initiated six functional standards committees to define the body of knowledge for: employment and personnel planning; training and development; compensation and benefits; risk management; employee and labor relations; and management practices (HR Certification Institute, 2013a). Examinations covering these areas were first administered in 1976 (HR Certification Institute, 2013b). The accreditation program continues today with over 500,000 professionals certified worldwide (HRCI, 2017b). Emphasis is placed on high professional distinction and career commitment, as certification requires documented HR experience, formal education, examination, and ongoing professional development. The exams are designed to distinguish mastery of HR practices and policies for use in real-world applications. The National Commission for Certifying Agencies, an accrediting body of the Institute for Credentialing Excellence, granted accreditation to the HRCI's examinations based on the Standards for Accreditation of Certification Programs (HR Certification Institute, 2013c). HRCI (2017a) describes current HRCI Certification Exams. Table 2 lists the available certifications from the HRCI.

Table 2

HRCI Certification Exams

HR Certification	Exam Focus
Associate Professional in Human Resources (aPHR)	Knowledge of foundational Human Resources
Professional in Human Resources (PHR)	Technical and operational aspects of HR management and program implementation
Professional in Human Resources – California (PHRca)	Laws, regulations, and HR management practices unique to the state of California
Senior Professional in Human Resources (SPHR)	Strategic and policy-making aspects of HR management
Global Profession in Human Resources (GPHR)	Multinational HR, including strategies of globalization growth and development
Professional in Human Resources – International (PHRi)	Professional-level competency for internationally based practitioners
Senior Professional in Human Resources – International (SPHRi)	Senior-level principles in strategy and policy for internationally based professionals

HRCI (2017a) states that the body of knowledge covering HRCI certification is revised every five years. To remain in good standing HRCI recertification is required every three years through reexamination or demonstrated professional development through: continuing education, job activities, research and publishing, instruction, and leadership. The weighting of the exam, by functional area, is as follows by the most commonly earned certifications, the PHR and SHPR respectively (a) Workforce Planning and Employment (24% and 17%), (b) Employee and Labor Relations (20% and 14%), (c) Compensation and Benefits (19% and 13%), (d) Human Resource Development (18% and 19%), (e) Business Management and Strategy (11% and 30%), and (f) Risk Management (8% and 7%). The SPHRi certification is unique in that it is the only HRCI certification with a designated functional area specific to employee performances measures (a) HR as a Business Leader (32%), (b) People Development and Talent Management (29%), (c) HR Service Delivery (23%), (d) and Measurement (16%).

SHRM competency model. The Society for Human Resource Management (SHRM) is a professional member association founded in 1948 as the American Society for Personnel Administration (SHRM, 2016a). It is the largest HR membership organization with over 275,000 members worldwide. SHRM provides members with both professional development and networking opportunities. The society also engages in research to advance the profession in response to the evolution of the business environment. In 2010, SHRM developed an evidence-based competency model grounded in data from university research initiatives and corporate assessments. The model identifies the foundational skills that HR professionals need for business success. The model was published in association with the American National Standards Institute and the International Organization for Standardization in order to establish professional HR standards (SHRM, 2016c). The model applies to all HR professionals and is inclusive of career level, job function, and industry. The model emphasizes eight behavioral attributes: business acumen, critical, evaluation, global and cultural effectiveness, leadership and navigation, consultation, communication, relationship management, and ethical practice as skills that all HR professionals need (SHRM, 2012). Knowledge about specific HR polices was also identified in the model as functional expertise.

In 2012, a content validation study was conducted to confirm the SHRM Competency model. Over 32,000 HR professionals, deemed subject matter experts, completed the surveyed. The respondents selected their career level (entry, mid, senior, executive) and were then asked to rate the importance of each competency and its requirement upon entry into the practice. Respondents were also grouped by: (a) the size of their organization, specifically, small, medium, or large; (b) the sector, whether not-for-profit, non-profit, public, or private; and (c) the operation, whether domestic or multinational. The ratings scale (not important, minor

importance, important, critical) established if the competency was effective to HR job performance. The requirement for entry (not required at time of hire, required at time of hire) established if the competency was an essential characteristic of a new hire.

Through this study SHRM identified a sub-competency, or an expanded definition, concerning business acumen. Specifically, the study found that technology usage to solve business problems was rated as being important, but it was not rated as being a requirement for entry into the profession. The results of the content validation study found that the majority of the participants rated all nine competencies as important or critical to the success of HR professionals and that each was required for entry into the profession. There was no significant difference in the ratings across organization size or industry. This combined with the large sample supports the applicability of the model to the entire HR profession.

A criterion validation study of the model was also conducted by SHRM (2014). The sample included more than 1,500 HR professionals and their supervisors for the purpose of establishing that being proficient in the identified competencies indeed lead to successful job performance. The results found that the eight behavioral competencies were better indicators of successful job performance than the functional competency of HR knowledge. The competency model and subsequent content and criterion validation studies informed the SHRM Body of Competency and Knowledge resource. This resource outlines the framework for SHRM sponsored professional certification. Two competency-based examinations are available as a way for professionals to demonstrate high-level knowledge and skills in order to obtain certification. These certifications were implemented in 2015. The SHRM-Certified Professional and SHRM-Senior Certified Professional examinations test knowledge items and evaluate situational judgment. The knowledge items assess the professional's understating of factual HR

information, while the situational items assess decision making skills, drawing heavily from the behavioral competencies. The weight of each competency varies between the certified professional and senior certified professional distinction. Whereas certified professionals are recognized as those performing operational HR functions, and senior certified professionals are characterized as those HR leaders who lead the practice by developing strategies to align the function with organizational goals. As of 2017, SHRM has certified over 100,000 professionals (SHRM, 2017a). Exams are updated several times a year to reflect changes in HR law. SHRM plans to conduct a new competency survey to update their 2012 competency model and body of knowledge resource.

Human resource competency study. The Human Resource Competency Study (HRCS) reports on areas of inquiry that the HR profession should direct its focus toward. Most recently the HRCS has noted stakeholder concerns over technology developments, globalization, and workforce demographics. Initiated by the RBL Group (2015), the HRCS surveyed over 30,000 respondents from over 1,5000 organizations around the world. These stakeholders were identified as HR associates and non-associates. The goal of the study was to define what it means to be a high performing HR professional, and what strengths HR could promote among its professionals to propel HR into the future as an asset to business performance. This global study surveyed stakeholders including external customers, investors, communities, regulators, line managers, and employees, to identify competencies that their HR professional should possess. The survey is unique in that the value of HR professionals is realized through stakeholder opinions about HR expertise, accumulated knowledge, and behavioral traits which contribute to business success.

Seeing the HR professional and their activity as representative of the entire department, stakeholders were asked to evaluate the activities of their HR point-of-contact. Evaluation of four activity domains included (a) employee performance: HR responsibilities that engage employees in professional development, (b) integration: HR activities that support strategic innovations to business problems, (c) information management: HR's ability to manage information flow into the organization for business decisions, and (d) analytics: HR's ability to keep metrics and report findings to the stakeholder. The study revealed that although all competencies were important for HR professionals to possess, some competencies where not as revered by certain stakeholders. The study found that integration practices had the most influence on value creation for stakeholders within the organization, while information management had the most influence on value creation for external stakeholders, such as investors and customers of the organization.

The studied emphasized nine competencies that added to the business value of HR. The seventh iteration of this HR competency model empirically defined the characteristics of the HR professional and their impact on business performance, as seen through the stakeholder's determination of value that the HR professional brings to the stakeholder's activities. The researchers are keeping track of the changes in perceived competency per iteration of the study. A noted focus of the seventh round concerned how HR enabled organizational capabilities involving information, collaboration, innovation, risk management, strategic clarity, talent, and change. Additionally, there was a search for cause and effect indicators between HR practices and business performance metrics.

Nine key traits were identified (a) strategic positioner, (b) culture and change champion, (c) human capital curator, (d) total rewards steward, (e) credible activist, (f) technology and media integrator, (g) analytics designer and interpreter, (h) compliance manger, and (i) paradox

navigator (RBL Group, 2015). The model identifies three core competencies and six HR enablers. These enablers were competencies that either drove the business strategy (organization enablers) or helped to deliver strategy (delivery enablers). The study found that stakeholders viewed HR professionals as having the dual role of being knowledgeable about the organization's business activities, while also focusing attention on managing employees through the proper employment practices. HR professionals were to audit organizational activities and respond to necessary changes by taking appropriate internal actions in order to serve employees.

Two new competencies identified in this iteration of the study where the traits of being a credible activist and paradox navigator. In order to solve business problems a credible activist needed to successfully reconcile an organization's capacity for change with an appropriate rate of change. This capacity building entailed strengthening skills, processes, and resources, that the organization needed to adapt. The understanding of the internal and external influences of technology offered a significant opportunity to achieve such capacity building. Finally, the paradox navigator was identified as an HR professional's ability to address tensions within the business as it relates to the organizational structure, operations, and mission. The professional should be able to offer solutions to overcome such challenges.

The Strategic Positioning of HR

The HR profession is concerned with the ways in which to expand the view of HR departments as being value centers instead of costly service centers. Ulrich, Younger, and Brockbank (2008) insisted that the HR department is not a separate business entity within the organization but actually works to complement the business department. For example, by presenting the executive body with ways in which to increase profits, decrease costs, focus investments, and impact efficiency and productivity from employees. Additionally, the hierarchy

of HR activities was defined. First, basic operations and day-to-day tasks associated with administrative activities that can be automated, such as payroll and benefits. Next, general operations, such as the development of information systems, compliance, and regulatory guidelines. Lastly, strategic activities such as talent management and development.

Bersin (2013) defines strategic outcomes as achieving improvements in end-results such as operational efficiency, improved employee engagement and satisfaction, retention, and branding. Before this emphasis toward strategic partnership, HR was often reacting to change instead of predicting change concerning 21st century nuances in culture, technology, economy, and workforce demographics. Smaller organizations and startups are mostly concerned with daily operational needs. As organizations expand they become more reliant on strategy and require a responsive HR department to deliver results. Unfortunately, some HR departments allocate less than 15% of its efforts to strategic activities. Those HR departments that do leverage strategy achieve the most value. Strategy is useful for all organizations regardless of corporation size and industry, but smaller organizations do run the risk of being stuck in the operational stage.

Transitioning from operational duties to strategic activities has been a major consideration for the HR practice (Vosburgh, 2003). This includes integrating those day-to-day activities into the strategic vision so that HR elevates to a high-impact profit center that contributes to the organization's bottom line (Mercer, 2002). However, HR is not measured in the monetary and therefore it can be difficult for the executive body to recognize HR's value (Righemer, 2002). Instead, HR is about advocating for an organization's greatest assets, its employees. Evidence suggests that a relationship exists between employee development and organizational strategy. Key components of HR strategy therefore include identifying the

training and development needs for employees so that the organization's workforce is kept current. This requires that HR department to be agile and adaptive.

Rowden (1999) stressed that strategy and business competency is imperative to managing business uncertainties. Collins (2001) assessed that strategy must be considered in order to elevate an organization to a high-level of sustainability and competitive advantage. Through this vision the role of HR has become supportive and representative of the organization's mission and culture, which encompasses the values and desired behaviors of the organization and employee engagement and satisfaction. The argument for HR to transform into a strategic partner is also supported by the opinion that everything which occurs in executive meetings relates to the HR function and not having a seat at the corporate table becomes a disservice to the organization (Ulrich, Schiemann, & Sartain, 2015).

HR departments can struggle to be seen as valuable and often face criticism concerning an inability to handle human capital concerns (Bersin, 2015). Organizational opinion about HR is tied to the current economic conditions and when conditions are bad HR is not seen as being particularly business savvy. If this continues HR could loose credibility as a strategic partner due to the failure of aligning HR activities with business goals which support the business's competitive advantage (Lawler, & Mohrman, 2003).

In an attempt to demystify the negative opinion that executives and employees hold against the HR department Ulrich (2012) proposed four steps toward strategic transformation and fluency: (a) assessment of the organization's current state and understanding why the environment is the way it is; (b) visualization of a future state by defining desired outcomes; (c) formulation of HR redesign, including technology redesign, for improved work processes; and (d) execution of the strategy and further adjustments to achieve desired outcomes. Further, the

effectiveness of an organization ultimately depends on talent and knowledge management to curate information, change management to battle uncertainty, and capability building to remain competitive within an industry. Professionals who can set the strategy agenda and properly execute those activities into action are known as strategic positioners (RBL Group, 2015). Kotter (2012) expressed that credibility as a champion of change was essential to getting people invested in the transformation. Credibility is related to trust and is necessary for influence when trying to alter behavior, especially when it comes to human capital curation.

Managing Human Capital

Information management literature has found that there is indeed value with aligning human capital capabilities with the organizational strategy in order to achieve desired business outcomes (Manuti, 2014). Within organizations, human capital is valuable but is ever changing and the management of information and distribution remains ongoing. Manuti described human capital as a foundational component of an organization, a resource that is difficult to replicate. Whereas human capital is defined as the knowledge, habits, and personality attributes that employees bring into their organization. Human capital is also characterized as networked knowledge, where the large amounts of captured data provide a visual representation of how knowledge is distributed, scalable, organized, and adaptive. Nahapiet and Ghoshal (1998) reinforced the notion of networked knowledge by characterizing it as social capital, where the value of personal connections affects the dissemination of knowledge and influence. This cross-departmental information sharing is a way to improve organizational efficiency when stakeholders share complementary business goals. It is essential to understand that HR controls the human capital that comes into an organization and that HR is responsible for what happens next. Human capital management (HCM) is a strategic business function impacting employee

performance as it relates to information collection, dissemination, and creation (Feng, Chen, & Liou, 2004).

In 2014, half of the top 50 companies were talent based, verifying the shift in the business environment from a manufacturing economy to a knowledge based economy (Martin, 2014). Literature has cited employee talent as a significant resource to organizations. This reimagining of employees as commodities and assets, rather than costs, supports an understanding that human capital has a unique influence on an organization's bottom-line. The investment in human capital does consist of various costs for wages, benefits, training, technology, and outsourcing. However, these costs should be considered an investment toward enhancing the value of the employees.

Firestone and McElroy (2003) suggest three levels of knowledge management within organizations. Level one represents a platform for e-document storage and retrieval. Level two allows for the creation of new knowledge sources among employees. While the third level represents an embedded process of knowledge management that the entire enterprise depends on. Rosenberg (2001) identified knowledge management activities to include the creation, archiving, and sharing of information throughout the organization. An important question for organizations to answer is whether or not knowledge is transparent within the organization. Information systems arrange knowledge in such a way that can easily accessed by employees. Knowledge capital is thus the asset of information and is an essential component of human capital. Organization behavior theories identify knowledge management as a positive organizational behavior (Luthans, Youssef, & Avolio, 2007).

Firestone and McElroy (2003) also stated that knowledge management occurs at two levels: micro (individual employees) and macro (organization/enterprise). It benefits the

organization to take stake in their employees' knowledge and determine the best mechanisms, formal or informal, toward learning. Rosenberg (2001) classifies learning within organizations as the acquisition of knowledge and new skills in order to enhance job performance. Concerning knowledge creation, HR should use performance measures to identify the type of talent that is missing from the organization as well as determine deficiencies in knowledge. Further, it has been accepted that a conclusive relationship exists between an individual's job performance and the overall performance of the organization. Therefore, HR should take the lead in implementing targeted professional development trainings and reward incentives. Bower (2007) described how this talent strategy affords HR departments the option to customize how training content is delivered to employees for enhanced learning, such as through an on online platform where learning and development is centralized, otherwise known as a learning management system (LMS). Learning modules, online simulations and demos, as well as synchronous and asynchronous webinars also contribute to knowledge management. Additionally, social networking and online spaces where employees can collaborate and have discussions are mechanisms to keep employees engaged in learning. Deloitte Consulting (2014) found that organizations which are good at encouraging learning have higher employee retention. The Corporate Executive Board reported that 1 in 3 organizations identified their talent strategy as effective, while only 1 in 10 organizations identified their talent strategy as mature and integrated (Orler, 2015).

Knowledge management is not a single event but an ongoing process that occurs throughout a professional's employment lifecycle from recruitment, to retention, to the employee's exit for the organization (Ulrich et al., 2015). The transfer of knowledge among employees occurs through: training/cross-training; mentoring/shadowing programs; skills

transition/succession planning; multigenerational work teams; diverse work teams, and the knowledge base. The knowledge base being a database where end-users can access documents and learning for problem solving (Hendrickson, 2003). Learning management is thus enabled through a successful system of delivery.

Argyris (1977) presented a definition for organization learning as the detection and correction of error. Senge (1990) found that teams within organizations learn through innovative and coordinated action, as well as through disseminated learning by being members of multiple teams and sharing knowledge. Senge also discussed the nuance between what it means to engage in organizational learning and being defined as a learning organization. The learning organization is sprouted when organizational learning is structured and collaborative and creation is a common activity and continuously expansive. Easterby-Smith (1997) reconciled theory versus practice by stating that organizational learning concerns how organizations learn as a collective, while knowledge management asks how organizations can harness this learning to improve business outcomes. Garvin, Edmondson, and Gino (2008) further explained that the desired outcome of organizational learning was for companies to become learning organizations. Where a learning organization is capable of the acquisition, creation, and transference of knowledge and essentially becomes quick enough to modify its behavior and processes as needed. In order to achieve performance improvement, HR must manage the quality of knowledge being shared (Martin, 2014). Unfortunately, organizations can experience "brain drain," the loss of knowledge and experience due to the loss of employees (Deloitte Consulting, 2014, p. 76). Retirement, job change, and downsizing, all lead to gaps in knowledge.

Discrepancies between organizational goals and the current results is an indicator that change needs to occur. Bhattacharya and Wright (2005) addressed the phenomenon of a valuable

human capital asset that becomes inherently unsustainable due to poor HCM practices. Research literature has questioned the ways in which HR can fulfill gaps concerning learning management. Paré and Tremblay (2007) discussed that high-involvement HR practices mediates high-turnover. However, this is dependent on establishing a sense of urgency about intervention. In general, organizational development is centered around responding to the business environment and leads to incremental shifts in organizational behavior, while change management is strategic and value centered concerning the people within the organization (Kotter, 2012). The principle of change management introduced intervention practices to address big picture shortcomings of traditional organizational development practices. Strategy associated with change management impacts the system and structure leading to major shifts.

Literature stresses that human capital needs to be measured and further analyzed so that the organization is aware of what is occurring and can gain control over unprofitable situations. This analysis includes assessing the return on investment into human capital solutions (Bhattacharya & Wright, 2005; Fitz-enz, 2010). The innovative use of knowledge management platforms leads to the diffusion of information and increased job performance, and is therefore a profitable business outcome. Gardner Research found that the largest gaps in the HCM process are strategic HR skills transformation and HCM technology (Lindquist, 2015). However, top organizations and high-performing companies are already using HCM technology. Additionally, 71% high preforming companies use analytics, while only 49% of average performing organizations use analytics (Clements, O'Connor, & Schramm, 2015).

Organizational change remains an ongoing topic for investigation for the HR profession. Since HR must support its customers (i.e., the employees) conversations need to be raised about how organizations succeed or fail at promoting learning. Additionally, HR should be considered

a high-value asset for organizations since they are responsible for the overall human capital asset. Ultimately, the organizational culture will identify the collective interests shared between employers and employees. The organization accomplishes its goals, while the employee gains valuable skills and experience.

Human Resources Technology

The SHRM Foundation (2015) gauged that HRM is increasingly more technology based due to the need to streamline procedures in order to reduce administrative and compliance costs. When operational activities are automated HR can focus on advanced work, such as devising new HR strategy and revamping organizational practices. Research supports that organizations achieve a competitive business advantage when they adopt an appropriate HR technology structure. Researchers also emphasized that effective HR technology solutions will provide a return on investment. Concerning the current state of HR technology, a report from TSCIU (2015), an HCM software vendor, reported that 59% of mid-sized firms surveyed planned on investing in HR technology during 2015. Market Research Media (2014) predicts that the HR software market will be worth $9.2 billion by 2020. As the average iteration of HR technology is nearly 5 years old, it is predicted that organizations are currently in the market to upgrade and expand their technology.

An inventory of all HR software and hardware currently used within an organization aids in the evaluation of the features offered and known limitations of these technology solutions (Orler, 2015). New technologies and applications are to be scrutinized for the ways in which they improve the current workflow, while current solutions need to be evaluated for adaptability and expansion capabilities in order to address future needs. These considerations allow for the overwhelming number of application options to be narrowed. Similarly, consideration must be

made concerning the type of HR technology adopted within an organization. The organization might be in need of a single product, such as a talent acquisition software which allows potential hires to apply online and lets hiring managers quickly identify compatible hires. Or the organization might be in need of a comprehensive HRM/HRIS product, which offers a software suite of solutions that includes base applications for HR functions (e.g., Administration, Payroll, Benefits, ESS/MSS, and Recruitment).

A review of popular HR software reveals three general categories of supported functions: basic core, general strategic, and integrated. Daily operational and core activities include the curation of employee and manager self-service systems (ESS and MSS) through software such as Kronos for time keeping, or ImageNow for content and documentation management (Florkowski, & Olivas-Luján, 2006). These systems allow employees to input and edit their own information, such as demographic and tax information, electronically. The automation of HR tasks translates to less time spent on overseeing minimal tasks. Strategic HR activities are related to employee management and include applicant tracking and onboarding. These activities are supported by such software as Taloe and PeopleSoft. Other strategic tasks include tracking learning and development and performance. These next generation HR software solutions emphasize human capital management. Finally, integrated information technology applications allow for the exchange of information throughout the enterprise and aid in providing solutions for major concepts such as resource planning, knowledge management, and group communication (Barua, Ravindran, & Whinston, 2007). Marketed as HRMS or HRIS packages these integrated applications offer a complete, end-to-end solution. Various departments within an organization can have different IT software systems and technology hardware to satisfy functional needs, however this can be challenging for knowledge management when various

departments are using different, or incompatible solutions. A homogenous system, (i.e., HRIS) is more beneficial in order to manage inconsistencies between technologies and applications. The planning and design of a HRIS considers all levels of end-users and offers close to real-time efficiencies in the workplace.

Most recently, conversations about collaborative efforts of virtual and global work teams has influenced the increased adoption of mobility tools. Where social learning includes the utilization of collaboration technology within the organization to promote sharing and feedback, while mobile applications help workforce productivity. Matos (2015) cites that work has become flexible, moving from the office, to home, and now to wherever the employee chooses to be. Additionally, 67% of employees engage in occasional telework, while 38% engage in regular telework. Workplace flexibility has become an attractive advantage that top talent considers when searching for employers.

The need for better employee engagement has led to other unique solutions. For example, in recent years a growing interest in the gamification of HR tech has impacted employee engagement (Larkin, 2017). Upwards of 2,000 organizations already utilize a gamified application in the workplace (Meister, 2012). This includes the digital badge phenomenon for job skill recognition. Additionally, when it comes to employee benefits and compensation HR can issue health and wellness challenges, through digital engagement, that reduce overall insurance costs for the organization.

Concerning technology adoption among employees, literature addresses an organization's need to innovate or perish. Organizational behavior theories indicate strong responses to external threat factors within the business landscape that result from vendor promotion, government policies, and competitive pressure within the industry (Silverstein, Samuel, & DeCarlo, 2012).

Cummings and Worley (2015) attributed the response to transformation and rate of change as being dependent upon both internal and external factors that are imposed on the organization. Guzmán-Cuevas, Cáceres-Carrasco, and Soriano (2009) attributed innovation to a dependency on current economic conditions. Brynjolfsson and McAfee (2014) address an organization's IT investment as a leading factor for business management innovation.

Factors for establishing IT innovation will be specific to the individual organization, but literature often attributes IT innovation to Rogers' Diffusion of Innovation theory. This theory discusses relative advantage, compatibility, complexity, observability, and trailability (Rogers, 2003). As it applies to organizations and the business landscape in which organizations operate, IT innovation is impacted by: (a) organizational readiness and competency, specifically, financial and HR preparedness; (b) organizational demographics such as size, experience, and type of business; (c) the organizational structure whether centralized, formalization, specialization, or standardization; and (d) the institutionalization of HRM, meaning the comprehensiveness of HRM and the HR professional's role. The technology acceptance model indicates that the perceptions of usefulness and ease of use are the determinants of technology adoption among organizational employees (Davis, 1989). Similarly, perceived effort and time to learn new technologies affected adoption among employees (Goodman & Darr, 1998). Kim and Lee (2006) also supported the ease of use factor and suggested the importance of a culture of acceptance. Overall, the value of an HR technology products will be determined by the practitioners and end-users. Evaluation and feedback in the form of end-user satisfaction surveys is necessary, as successful enterprise integration benefits greatly from stakeholder collaboration and the recognition of their needs and concerns. The gap in technology adoption is often associated with the perceived costs of implementation (Moore, 1999; Smolcic, Thomas, &

Contacos-Sawyer, 2014). Therefore, when pitching new HR technologies to the executive board, a successful demonstration of value should outweigh decisions based strictly on the cost of investment. Considerations for technology adoption should address (a) the cost reduction of operational activities, (b) the reduction of time spent on administrative work, (c) features that solve current problems, (d) the adaptability potential for future activities, and (e) the end-user experience.

Additionally, HR can stress the ways in which technology influences organizational learning. Literature references the introduction of e-learning in the workplace as being attributed to institutions of higher education, which offered distance learning opportunities for students. Within HR, e-learning applies to computer-based training and simulations. Rosenberg (2006) recognized e-learning as enhancing job performance through internet delivery, storage and instant retrieval, and networked and non-traditional types of learning. Romiszowski (2004) identified four essential elements to implementing e-learning, including: the need or goal associated with the learning; a project design; the inclusion and use of technology; and evidenced learning. E-learning is often managed through a vendor provided learning management system (LMS), an entire infrastructure of content, goals, assessment, and supervision (Bower, 2007).

Bell et al. (2006) discussed the influence IT departments have concerning HR's technology transformation. However, literature is lacking in research related to the adoption of specific HRIS infrastructure. As HR departments attempt to take a permanent stake in organizational strategy it is important to understand how HR technology and HRIS integration is required to achieve operational efficiency. Critics have argued against the pro-innovation bias that overvalues technology (Rogers, 2003). However, 40% of today's workforce would not take a job with an organization that did not have social or mobile technology capabilities (Orler,

2015). The HRIS professional is responsible for such enterprise resource planning and evaluates how investments in technology solutions will meet the business goals and improve the employee experience.

The HRIS Professional

The topic of HRIS solutions is most often found within e-HRM literature, where these systems are considered a tool for HR departments. Martinsons (1997) had defined HRIS as consisting of sophisticated information technology tools which improve HR processes and contributes to the quality of human capital within organizations. Hendrickson (2003) expands and identifies HRIS as more than the use of software but a system inclusive of technology, end-users, data, and policies. Bondarouk, Ruël, and van der Heijden (2009) described an HRIS as providing multiple services covering three main functions: operations of daily transactions, relational communication between stakeholders, and transformational decision making.

Mayfield, Mayfield, and Lunce (2003) stipulate that the goal of an HRIS is to harness technology as a tool which can lower barriers to HR's strategic efforts. Different activities, such as solutions for recruiting, payroll, and self-service are therefore undertaken with a new emphasis of technology. By automating the operational, HR departments leverage technology in order to free up resources to do other, more strategic work.

Lepak and Snell (1998) characterized HRIS software as being a relational database for stakeholders, where information is collected and then shared between other functional departments within the organization. Firestone and McElroy (2003) explained that this intra-organizational communication of data represents double-loop learning and feedback as individuals continuously draw conclusions from beliefs, actions, and reactions that are occurring

within the organization. While Casalino et al. (2015) described the success of systems implementations as being influenced by paths to organizational learning.

In addition to remaining up-to-date on HR technology trends and developments, HRIS professionals are the main point of contact for technology upgrades related to HR applications. Relationships are key when it comes to resolving issues within HR systems, as the HRIS professional must work closely with end-users and IT, while also acting as liaison between departments, technology vendors, and end-users. Within a global organization, the HRIS professional will liaison with international counterparts. Further research is needed to explore the relationship between HR and IT departments concerning enterprise resource planning and the HRIS intersection. Currently, many organizations are lacking application development practitioners and IT support staff, however, research suggests that technically proficient HR professionals can influence HR technology adoption even in the face of such capacity limitations (MetaScale, 2014). An HRIS professional should be a representative of the HR department on various committees as a proponent of new technologies that support the operational effectiveness of employees. Yet, research reveals a chasm between the potential proposed by HRIS adoption and the actual success of enterprise-wide HRIS (Tansley & Watson, 2000). In addition to challenges related to investment and resource allocation, criticism about HRIS may contribute to difficulty in solution integration. These criticisms include the belief that operational efficiencies should be attributed to IT departments and not to HR departments, as well as a belief that HR departments benefit from automation services while other departments within an organization see little direct value (Martinsons, 1997; Panayotopoulou, Galanaki, & Papalexandris, 2010; Strohmeier, 2007). However, it is ideal for HR, IT, and business departments to work together when evaluating and appraising existing HCM procedures and the integration of HRIS solutions.

No published consensus on HRIS competencies is provided by SHRM or the HRCI, as they focus on generalist principles. However, job descriptions which list necessary skills, duties, and responsibilities, have been established by organizations seeking such technology professionals. A review of HRIS job postings, sourced from daily Google alerts, revealed several key characteristics related to technical complexity, innovation, and autonomy. The professional should research emerging technologies and find the correct technology applications for the needs of the employees and goals of the organization. This includes an understanding of employee and team assignments and their use of various HR technology products. Duties also include reviewing application functionality and assessing modifications during regularly scheduled intervals of testing and reconfiguration. Another concern for the HRIS professional is risk management and data security, including intellectual property of the knowledge base and security of end-user information. This requires diligent maintenance of up-to-date documentation throughout all processes and interpreting and complying with data collection laws and regulations designated by the Department of Labor. Additionally, there is a need to oversee technology and social media policy within the organization. Social media platforms provide a unique opportunity for HR as HCM extends outside of the organization since social media can be used for recruitment and company brand management (Headworth, 2015).

Overall, duties are based on the essential function that the professional will be supporting (e.g., payroll, risk management, and administration). The professional performs related duties based on the departmental need, essentially combining HR functional tasks with data retrieval and analysis. This leads to various job descriptions and responsibilities. For example, an HRIS benefits administrator would possess an understanding of how technology supports the payroll and timekeeping functions, including compensation, retirement, and insurance programs. An

HRIS operations analyst would design and evaluate HR systems while ensuring data integrity. An HRIS technologist might work closely with IT programmers to oversee the installation and maintenance of the HRMS, which includes supporting upgrades, patches, and testing of the system. Experience with server management and creating system reports and performing data audits in order to measure the effectiveness of HR technology was often mentioned. Concerning the organization's employees, the HRIS professional monitors work activities and engages in training and professional development of employees to surpass predetermined benchmarks. This includes providing orientations for new and updated software and technologies as well as acting as a consultant for the end-user and providing accessible documentation concerning user procedures and guidelines concerning software applications. Additionally, these professionals review issues reported in the technology support log in order to provide opportunities for improvements in end-user support.

The HRIS professional takes the reins when measuring the gap between applicable innovation and their organization's capability to change. Organizations operate at different levels of technology necessity, so it is important for HRIS teams to take inventory of the current offerings and recommend solutions that are most beneficial to strengthen the human capital strategy (Orler, 2015). Organizations often start with implementing HR technology solutions and then evolve and mature into an HRIS design.

Anderson and Ackerman-Anderson (2010) described a call for conscious change leader and skills that extend beyond metrics and promote engagement with each function of the organization. Long-term HRIS strategy and sustainability is end-user centric in that as HR tries to increase its business value through talent retention and career development, the department must provide avenues for engagement and collaboration for employees. It is important that the

HRIS professional provide a positive experience for the end-user by listening to suggestions, investigation resolutions, and surveying employee attitudes post-implementation. Ulrich et al. (2015) suggest that technology transparency within the organization is a best practice. As HRIS professionals are responsible for maintaining an open dialogue with all department heads in order to gain leadership and executive buy-in. A key to this is that the professional should have an understanding of the organization's business process and the metrics which influence the process. Overall, the HRIS professional must be responsive to the speed of innovation, the effects of globalization, and the constant change that organizations face (Fox, 2010).

HRIS Metrics and Analytics

As business, industry, and workforce environments change so must the HR profession. One of the best ways for HR to become better equipped for change is through the use of metrics and analytics. Where HR technology offers improvement on service delivery to employees, metrics provides opportunity for evidence-based recommendations. Harnessing metrics and proposing analytics can improve the organization by asking questions about how and why outcomes are occurring. Metrics are important to all industries, but those industries adopting analytics more quickly include retail, manufacturing, healthcare, information, banking, and media businesses. Rogers and Blenko (2006) stated that successful organizations make faster and better decisions compared to competitors. Bain and Company (2013) found that organizations that gather metrics and analytics are twice as likely to use data when making business decisions, five times as likely to make quick decisions, and twice as likely to return top financial performance compared to other organizations in the competitive market. The Corporate Executive Board also found that organizations that quantify have (a) 17% greater succession

strength, (b) 12% better employee performance, (c) 10% better quality of hire, (d) 9% better engagement, and (e) 12% better talent outcomes (Stroko & Adamsen, 2015).

The Aberdeen Group (2015) described three goals associated with analytics: technical goals, which are established when basic metrics are reported to a department to improve outcomes; operational goals, which are reactions to recurring metrics suggesting changes in daily processes; and strategic goals, which are implemented when deeper insights inform the decision making for long-term overhauls. Through analytics, HR departments can predict workforce trends in preparation to fluctuations in their human capital investment related to hiring the best talent (Aberdeen Group, 2015). The HRIS professional can use data to confirm if HCM goals are being met, and suggests solutions. This includes analyzing employee performance metrics and identifying gaps in productivity and reporting these results.

Where big data is defined as stored information resulting from the human-computer interaction that occurs at the front-end of an employee's application use. Information about this interaction is then stored at the back-end and is available to data scientists for metrics and analysis (Panayotopoulou et al., 2010). Available HCM and HRIS applications store this data in a central location and offer computation tools to help analysts see correlations within the data that would have been difficult to visualize otherwise. MetaScale, LLC (2014), a big data accelerator, stated that the analytics of big data has become a new basis for competitive advantage but assessed that big data was still in an early stage and not well disseminated due to lack of knowledge on how to compile and use this information. Although most organizations use big data as a mere evaluation tool, full-phase use would consist of big data evaluation, leading to pilot implementation, and then solution deployment. Analytics can be presented in three ways: descriptive, diagnostic, and predictive. However, most organizations are at the descriptive stage,

where information is hindsight. The SHRM Big Data Survey reported that 68% of organizations responded that their HR function did not use big data to support organizational objectives, while 42% responded that another department in their organization, outside of HR, used big data for activities such as marketing and sales (Clements et al., 2015).

Data collection is not difficult, as data is already stored at the back-end of applications, but determining the most valuable information does require a team with data science experience. Data scientists can include analysts, programmers, and information technology support. The number of data scientists are on the rise although the practice of HR analytics as a canon is uncommon (MetaScale, 2014). Specifically, the HRIS analyst identifies ways to maximize system output by calculating the return on the organization's technological capabilities. Characteristics associated with the HRIS analyst role include quantitative, mathematical as well as reactive and proactive behaviors based on collected data, thus they make evidence-driven decisions (Kavanagh et al., 2015). Fitz-enz and Mattox (2014) reviewed several frameworks concerning HR analytics and outlined the following considerations: taking a data inventory to gather information and reveal issues; correlating data to gain insights; and incorporating the findings into a plan of action based on priorities. These considerations help analysts reach solutions about the following goals: how to improve performance (individual, team, and organizational); how to improve the work experience (job satisfaction, purpose, wellness, organization culture); and how to reduce risk (business continuity, people investments, hiring, retention).

The analyst provides the business partner with insight about the end-user. However, analytics require a multidisciplinary approach to explanation for the various end-users consuming the insight. It is necessary to present such information in an accessible and

understandable fashion. For example, proposing HRIS analytics to the executive board includes an understanding of market dynamics and the business impact of integrated solutions. Especially where executive approval is needed to execute major changes in strategy, producing reports, scorecards, and regressions, corroborates the human capital strategies that can improve productivity and business performance. Furthermore, analytics are used to identify independent variables and driving factors that have an impact on outcomes (Coco, Jamison, & Black, 2011). An effective way of presenting metrics is demonstrated with Marler's academic model linking an organization's HCM to its competitive advantage (Sierra-Cedar, 2014). Marler stated that HR technology adoption is indirectly related to the return on equity. The model asserts that technology adoption that is aligned with the business strategy leads to increased business performance, thus leading to financial value. Ultimately, organizations studied saw cost efficiency, improved decision making, and improved employee engagement and retention.

Common reportable HR metrics that organizations calculate include (a) human capital ROI, (b) cost per hire, (c) human capital value-added, (d) time to fill open position, (e) training investment factor, (f) turnover rate and cost, and (g) vacancy rate and cost (Kavanagh et al., 2015). Overall, organizations aim for a significant return on value and impact in comparison to the resources allocated. The ROI of resources is an important indicator for investors as it substantiates weather or not money is being used in a manner appropriate to expanding the business and is expressed by calculating the profits less the cost of investment, divided by the cost of investment (Fitz-enz, 2009). Other areas of interest include: (a) working talent, which is the measurement of talent readiness; (b) psychometric and personality testing; and (c) engagement scores. Essentially, HR can predict turnover and understand the costs associated with employee retention. Additionally, metrics can reveal how much revenue each employee

brings to the organization. Workforce analytics is therefore an appraisal of the talent within the organization (National Academies of Sciences, Engineering, and Medicine, 2017). This contributes to the overall strategy of workforce planning to forecast labor demand and the current supply, as well as talent strategy optimization. Gaps in talent are highlighted, while predictions can also be made regarding the employees who are most likely to leave the organization. This is important because talent expenditures, including employee benefits and compensation, equate for the largest operating expense for most organizations. This is expressed as an employee's return on investment, or the dollar amount generated for every dollar invested in employees, as a means to show how employee investment is supporting organization goals (Director, 2013).

Metrics and analytics are not without challenges, particularly when it comes to the interpretation of information. Deloitte Consulting's (2015) Global Human Capital Trends report found that HR leaders were concerned with the lack of qualified team members with statistics skills who could tackle metrics and analytics. Fitz-enz (2010) explains that if analytics are met with disinterest there is a possibility that the reporting is being done incorrectly and to the wrong audience. To address this, it is proposed to approach analytics from that angle of change management and value. This can be achieved by reporting numbers and then following-up with the narrative (Fitz-enz, 2010; Zielinski, 2014). Essentially, HR activities that are measured and successfully reported to stakeholders are more likely to get managed and hopefully improved. The HRIS professional is needed in order to tell a story about the organization and about why things are happening the way they are.

Literature concerning HRM discusses the importance of resources, such as time and expenditures, being allocated to support the organizational strategy in the spirit of competitive advantage (Fox, 2010). Sierra-Cedar (2014) reported that 49% of large organizations spend at

least 10% of their HR technology budget on efforts to integrate solutions into the enterprise. Many organizations fail to recognize the value earned from investments in HRIS solutions, but workforce analytics and planning can present estimated value. The SHRM Global Expertise Panel concluded that there was concern that educational institutions did not keep pace with preparing the workforce for data analytics and that this tasked the HR departments with doing more to solve the talent pool shortages, but with fewer resources (Wallack, 2015). When HR budgets were not increased, HRIS solution investments decreased. Further, a shortcoming for some organizations was the heavy investment in human capital development without follow-up on the metrics of the return on investment and other measurable outcomes. There is a need to distinguish the value of technology from the value of human capital, as technology is the value delivery channel for the human capital asset.

Summary

Several credentialing groups have attempted to define HR competencies within the practice, but there is a substantial lack of emphasis related to demonstrating technology skills and the understanding of data processing and presentation, which are beneficial to both the generalist role and the HRIS specialty. Literature has demonstrated the new positioning of HR departments as curators of human capital within organizations. Further, the introduction of HR technology allows for the automation of daily operational tasks and has the added benefit of encouraging HR departments to move toward more strategic, long-term goals.

The introduction of an HRIS professional demonstrates a role dedicated to the advancement of human capital performance by the facilitation of systems supportive for human capital development. Additionally, literature demonstrates how data, metrics, and analytics attributes to informed business decision making and better organizational outcomes. The

following chapter describes the research methodology that asked current HRIS professionals to examine how this specific job role benefits organizations.

Chapter 3: Research Methodology

This study explored the role delineation of the HRIS professional and addressed the benefits to organizations within the competitive market. This chapter outlines the methodology for the study, including the population and sampling, collection and analysis of data, and ethical considerations. Additionally, this chapter establishes why an exploratory methodology and the subsequent research procedures were appropriate for this study.

Research Design and Rationale

Creswell (2014) states that the main purpose of qualitative research is to develop a detailed description and understanding of human experience. A review of literature noted the emergence of the HRIS professional field but currently there are no HRIS centric studies concerned with role delineation from the perspective of the professionals themselves. Based on the limited foundational research, this study utilized an exploratory approach to inquiry. Stebbins (2001) defines exploratory research as an effort to more thoroughly explain an idea or observation from the standpoint of the target population's attitudes, opinions, and behavior associated with the topic. This type of research is conducted before engaging in qualifying research that generalizes findings.

The method of inquiry employed for this exploratory study relied on the qualitative technique of interviewing. Expert interviews help the researcher gain information from specialists when the researcher seeks deeper knowledge about a topic. Open-ended questions are exploratory by nature, and encourage the collection of large amounts of data. Interviewing allows for the participant to demonstrate their expertise as participants bring up issues, provide feedback, and insight that perhaps the researcher did not anticipate. The researcher was tasked with identifying important trends that can be revisited for future, more focused research. The

purpose of this research study was to explore the role delineation of HRIS professionals and their contributions to the organizational HCM process by exploring the perceptions, beliefs, qualifications, duties, and strategy inherent among HRIS professionals. To understand the trajectory of HRIS professional competencies and establishment within organizations this study posed the following central question and two sub-questions:

- How does the HRIS professional role support the functions of HR and transformation of HR activities within organizations?
- How do HRIS professionals describe the responsibilities and competencies of the role in response to the emergence of big data?
- How do HRIS professionals describe the outlook of their professional role within organizations and the HR profession?

In addition to providing research conclusions, the exploratory process can identify additional research questions and objectives that lay the groundwork for future studies.

Population and Sampling Procedures

The sampling procedure utilized purposive sampling of HRIS professionals to recruit participants that met specific criterion needed for the exploratory methodology of the study. An initial search of LinkedIn, utilizing the key term *HRIS* and industry categories of *HR* and *IT*, yielded more than 300 results within the United States demonstrating a means to contact numerous professionals who are in HRIS roles. This study sought the opinions of HRIS staff members, including analysts and managers, who work with HR technology and are responsible for reporting on HCM statistics within an organization. Participants were recruited for the study by their response to the recruitment letter (Appendix A) posted in an HR member group on LinkedIn. The inquiry asked for HR individuals who have worked in the HRIS specialty to

consider participating in a study about HRIS role delineation. Interested parties who met the participant criteria were directed to email the researcher to discuss the study. Participants were also recruited by the researcher reaching out directly to individuals through their professional email and social media accounts. These individuals were either already known to the researcher to meet the participant criteria, or they had a public LinkedIn profile that confirmed their experience.

Per Gobet's (2016) definition, an expert is an individual having knowledge and experience of the topic being discussed. The researcher was looking participants who have technical knowledge and experience in the field of HRIS within a business context. The recruited participants represented several types of HRIS stakeholders, including analysts, managers, specialists, trainers, and consultants who have applicable knowledge and experience, and thus relevant perspectives on the emerging field of HR technology. Specific criteria for participation in the study included: (a) at least seven years of progressive HRIS experience; (b) preferably a higher education degree in HR or IT related major such as administrative, business, computer science, information systems, or data analytics; and (c) a current job role at a U.S. based enterprise. Organization size and industry were expected to be varied as participants were anticipated to share their experiences within HRIS before their current job role, thus having occurred across numerous organizations. The researcher believed that experienced professionals could speak to fluctuating workforce trends and demands for technology in the workplace.

Concerning the sample size, Mason (2010) suggests the importance of data saturation. The researcher anticipated conducting 10-12 in-depth interviews, an appropriate sample size for this exploratory study. The study size is smaller to make the data collection and analysis processes manageable. The study was dependent on successful recruitment, where the most

appropriate participants can be interviewed to obtain enough information considered substantial. Purposive sampling was used to find the best participants with experience and insight that can best answer the research questions presented. This use of purposive sampling considers the researcher's own experience with the population as being advantageous when determining who to include in the study. Snowball sampling from referrals were also considered when the interview participants recommended peers for this study. Although this study did not seek a statistically representative sample, the use of experts contributed to the credibility of the study results.

Data Collection Procedures

Qualitative methods are advantageous in exploratory research, particularly with interviews and the use of open-ended questioning and probing. Engaging in conversation research enables a participant's opinions and views to be revealed (Rubin & Rubin, 2012; Seale, 2007). Participants answer in their own words with more meaningful, surprising, and explanatory responses than if they were required to choose from fixed responses. Considering the exploratory nature of the study a qualitative approach to the methods allowed the researcher better flexibility to dive deeper into a participant's initial response. This was achieved by listening intently to the participant and responding appropriately to their cues to get the most in-depth answer. Additionally, interviews were conducted with only the researcher and participant present to provide a comfortable environment for the participant. The research presented formal questions and follow-up questions. It is through this semi-structured format that the researcher could extract the desired data.

Interviews were conducted at a date and time agreed upon by the participant and the researcher. Interviews occurred over the phone or FaceTime. Prior to beginning the interview,

the researcher and interviewee discussed informed consent (Appendix B) and the researcher answered any questions that the interviewee had about the study or interview process, including confidentially concerns. Next, the interview commenced with guided questioning by the researcher, with room for follow-up and clarification questions at the discretion of the researcher to better their understanding of the responses presented.

The interviews were audio recorded and then transcribed using HyperTRANSCRIBE, an audio transcription tool. The researcher also took detailed handwritten notes and memos to capture other specifics that occur during the interview such as making notations about tone, body language, or implications that are not easily gleaned from the audio recordings alone. Kvale and Brinkman (2009) noted that other information in addition to the words spoken can be found within the interview. It is the researcher's task to determine the full message being expressed by the participant and to capture those impressions within the moment.

Johnson and Rowlands (2012) emphasize the importance of credibility and trust as factors influencing the validity of qualitative design. The researcher's genuine interest and curiosity about the role of HRIS within organizations stemmed from her own experience in HR and study of employee training. The researcher conveyed this sincere approach during the interview process.

Interview Protocol

The interview protocol provided an outline for the researcher to follow during each interview. Interviewees were first asked questions related to their educational experience, certifications, time in the HR or IT industries, years specializing in HRIS, current organization industry, organization size, number of employees, number of HR employees, global employee assets, and organizational structure. The researcher was tasked with remaining cognizant of the

structuring of questions so that they were direct but not leading. Gray (2014) proposes a standardized interview platform used with every participant to maintain study reliability. Below are some of the open-ended questions, including probes, related to this study's research questions. These questions were used to guide the interview in an attempt gain a clear understanding of the opinions of professionals currently engaged in the HRIS specialty:

1. How and when did you enter the HRIS profession?
    a. What was your prior work experience before moving into the HRIS role? HR or IT related?
    b. Can you expand on your educational background? Including certifications.
2. Please describe your current job role.
    a. Can you please describe your current organization: # of employees, # of HR employees, global employee assets, and organization structure?
    b. How has HRIS varied between the different organizations you've worked?
3. How do you define the HRIS professional role?
    a. What are some of the job duties assigned to an HRIS professional?
    b. What are required job competencies for an HRIS professional?
4. What does an HRIS professional provide to the HR function and business function?
5. How is data being used for regular operations? Proactive and predictive outcomes?
    a. What specific data measures do you look at?
6. How does HRIS contribute to HR's role as a strategic partner within your organization?
    a. Please describe an HRIS driven project or strategy that has been carried out or proposed within your organization.

7. What is your opinion concerning the current trends and future outlook of the HRIS profession?
    a. What are some of the challenges faced by the HRIS specialty or professionals? Suggested solutions?

At the end of the interview the researcher asked if the participant would suggest peers and colleagues who would be interested in participating in the study. Each interview was carried out over an hour-long period, as to not cause fatigue for the interviewee or the researcher.

To confirm the internal validity of the interview approach, interview questions posed by the researcher were first examined by a professional familiar with HRIS topics and interview protocol. Next, the logistics and feasibility of the study were tested with a pilot study conducted with two HRIS professionals who met the criteria of the sample population. The pilot study provided an opportunity for the researcher to adjust the interview procedures and interview questions based on the suggestions of the participants. The information obtained from two pilot interviews did not change the essence of the questions, but instead reaffirmed the interview protocol. These interviews were therefore included in the study results.

Data Analysis

This exploratory strategy of inquiry utilized the qualitative approach to research through the interview process. The basis for interpreting the data was based on previous literature and the expertise of the participants. Creswell (2013) identifies qualitative analysis as comprehensive. It entails interpreting the significance of specific words and phrases, identifying themes, and relating categories together. Data collection was driven by the discovery of opinions while analysis involved the process of determining significant statements made by the participants and

the most important issues. The open-ended interview strategy and subsequent analysis gave rise to themes within the HRIS specialty.

Research requires a culmination of all data to tell the whole story. The researcher gained a sense of the information through a general review of the data. A system was developed by the researcher to code interview responses. These codes were used to determine patterns in the data, identify themes, and comprehend the overarching connections across categories (Charmaz & Belgrave, 2012; Creswell, 2013). Each interview then received an in-depth review by the researcher. This focused reading helped the researcher best familiarize themselves with the data in an attempt at identifying all possible coding opportunities. The researcher also used qualitative research software, HyperRESEARCH, to organize data and codes from the interviews. After the basic coding, more interpretive coding occurred to engage in thematic and narrative analysis related to the participant's opinions, personal experiences, and perceptions.

Qualitative research relies on the accuracy of the findings, otherwise known as validity (Creswell 2013). To ensure a valid study and meaningful results the reader must believe that the researcher's role and positioning in the study does not negatively impact the study and is not biased. Additionally, the researcher encouraged rich descriptions during participant interviews to clarify context in which participants are working and their opinions are based. Finally, the researcher conferred with a peer reviewer who evaluated the researcher's coding scheme and examined the consistency of the coding. The researcher and peer reviewer also discussed appropriate changes to the codebook.

Upon completion of the study, the findings were reported in the narrative text and expressed through detailed analysis of each theme and the relationship of themes to the research questions. The presentation of the final results aims to give the reader a collective interpretation

of the discussion topics about HRIS professional tasks, competencies, and HRIS challenges. As there is little published specifically on HRIS job competencies and challenges the HR profession will benefit greatly from further research specific to HRIS within various industries and organizational size.

Human Subject Considerations

An application for exempt status was submitted to Pepperdine University's Graduate and Professional Schools Institutional Review Board (IRB). The IRB reviews research projects involving human subjects to ensure that the rights of participants are protected. Based on the requirements outlined by the IRB this study qualified for exempt research under Category (2) of 45 CFR 46.101 because study procedures involved no more than minimal risk to the adult human subjects. The IRB approved the study on July 27, 20016 (Appendix C). Informed consent forms were distributed to participants and confirmed their voluntary participation in the study. The consent form addresses the purpose of the study, describes possible minimal risks, and explains the efforts to maintain confidentiality as to alleviate any concerns about identifying information that could negatively impact the reputation of the participant or their organization. Identifying information, including names, contact information, and place of employment are not referenced directly. Interviewees were assigned a participant code that was used on their interview transcripts. The key stating the assignment of numbers to interviewee names are stored separately, therefore limiting the possibility of matching the identities of the respondents to interview responses in the unlikely event that data is somehow compromised. The identities of these human subjects are only known to the researcher, and all communication originating from the researcher's email account was used solely to provide information, reminders, and updates to the participants. Interview recordings and transcriptions have been uploaded to the researcher's

password protected laptop computer and backed up over a password protected cloud storage account for the duration of time as required by the IRB. The consent form also highlights the benefits to participation. Personal benefits include professional development and newfound strategies about preparing their organizations for changes in technology and workforce trends. Additionally, the HR profession, in general, can benefit from the clarification of the HRIS job description, addressing the significance of HR analytics, and examining the reemergence of HR departments as strategic partners within organizations. Participants will also receive a copy of the study results.

Summary

This chapter described an exploratory design of inquiry concerning the emerging role of HRIS professionals and includes an in-depth discussion about the study's data collection procedures. Recruited HR professionals who met the recruitment criterion established by the researcher were asked to participate in interviews covering the topics of HRIS. Chapter 4 provides a narrative description of the interviews.

Chapter 4: Results

The purpose of this research study was to explore the role delineation of HRIS professionals and their contributions to the organizational HCM process. An exploratory approach to inquiry was used to compensate for the limited availability of foundational research about HRIS professionals. Specifically, the study used the qualitative technique of interviewing to identify topics of interest related to HRIS in the workplace. The researcher developed an interview protocol (Appendix D) and engaged in conversations with experienced HRIS professionals from various business industries. Professionals were questioned about their work experience and goals concerning the utilization of HR information systems within their organizations. This chapter will revisit the main research questions of the study, provide a description of each participant, list the themes deduced from the transcripts, and summarize the participants' responses to the interview questions.

Research Questions

This study was directed by the following central research question and two sub-questions:

- How does the HRIS professional role support the functions of HR and transformation of HR activities within organizations?
- How do HRIS professionals describe the responsibilities and competencies of the role in response to the emergence of big data?
- How do HRIS professionals describe the outlook of their professional role within organizations and the HR profession?

To answer these questions, the interview protocol included specific probes into the participant's career preparation, previous work experience, professional tasks and responsibilities, the use of technology and analytics, and personal opinions about the value and contributions of HRIS and

the professional job role.

Participant Descriptions

Table 3 lists the participants by code and includes information about gender, number of years within the HRIS specialty, and current business industry.

Table 3

Interviewee Demographics

Participant Code	Gender	Time as HRIS Professional	Current Industry
3Z2	Female	14 years	Technology
6MF	Female	5 years	Education
7N7	Female	20 years	Education
CTG	Male	18 years	Healthcare
EH8	Female	7 years	Education
PC9	Female	8 years	Healthcare
T3U	Female	9 years	Energy
V68	Male	38 years	Education
XGE	Male	10 years	Consulting
ZWU	Male	7 years	Education

The ten HRIS professionals who participated in interviews with the researcher are described as follows:

3ZR. Senior Manager of HRIS at a leading technology services company. During her undergraduate studies as a psychology major, she entered the HR field as an intern with her university before moving into administrative roles in both the healthcare and technology fields. She also has experience as HR analyst during her tenure at a major photography agency.

6MF. HRIS Analyst at a private, nationally ranked research university, where she also earned her interdisciplinary studies degree. Her educational background also includes a master's degree in industrial design. Job experience includes administration work at both an independent bookstore and an independent production company, before moving into a facilities management

role for an electronic library. Although, she did not have a minimum of seven years HRIS experience, the participant was included in the study because of her experience with coding.

7N7. Chief Business Analyst for HR and Payroll at a private, not-for-profit university. She was prepared in speech communications and marketing, but entered HR when an interview for a marketing internship at a media conglomerate instead turned into an opportunity for a position within HR. Industry experience includes entertainment, finance, and higher education.

CTG. HRIS Analyst at a small community clinic. He studied linguistics before entering HR as a benefits administrator for a biotechnology company. He progressed through different HR employment specialties before certifying in systems programming and working as a systems analyst for several healthcare and insurance organizations.

EH8. Lead Business Analyst at a private institute of higher education. She studied business administration and worked in records and as an employment specialist at several private universities. Earned a subsequent certification in HR, before focusing on HR systems and enterprises.

PC9. Lead HRIS Analyst for a multistate hospital system. She studied political science, completed a certification in HR, and earned a master's degree in public administration. Worked in recruiting and staffing during her studies before progressing into project management roles within the healthcare industry.

T3U. HRIS Business Configuration Consultant at an oil and drilling company. She worked as in HR intern before earning a bachelor's and master's degrees in business administration, both with an HR concentration. She has worked as a systems analyst, project manager, and consultant for HRIS and has experience in various fields including recreation, finance, and energy.

V68. Senior HRIS Business Analyst at a major public university system. He worked as an information systems manager for a major convenience store chain before earning a bachelor's degree in management. He moved to the higher education field after 23 years in retail.

XGE. Founder and President of an HRIS consulting firm. He studied international business and entered the workforce as a management consultant. Progressed into IT and software project management for various healthcare, financial, and telecommunications organizations. His continuing education includes a master's in management and certification as a Human Resource Information Professional.

ZWU. Senior Academic Personnel Analyst at a leading public research university. He earned a bachelor's degree in business administration and human resources administration while working as an HR associate for a major department store chain. He moved into higher education as an HR representative before progressing into analyst work. He subsequently, earned a master's in business administration and management.

Findings

The exploratory nature of the design provided an extensive amount of data. The qualitative analysis of the interviews resulted in 724 coded passages grouped into six categories (a) data management, (b) HR/IT intersection, (c) HRIS emergence, (d) business intelligence, (e) professional identity, and (f) job satisfaction. Table 4 lists the six categories with themes and counts. Each of the thematic categories are presented to the reader separately. Additional themes and associated sub-themes for each category are described and supported with the direct quotes that interview participants provided.

Table 4

Thematic Categories with Themes

Category	Theme	Count
Data Management	Curation	51
	Ownership	19
	Resources	72
HR/IT Intersection	Structure	45
	Task Allocation	26
HRIS Emergence	Culture	26
	Career Outlook	23
	Technology	55
Business Intelligence	Data Leverage	13
	Insights	28
	Reporting	30
Professional Identity	Education	15
	Job Role	81
	Motivations	37
	Perceptions	88
	Previous Experience	41
	Professional Development	48
Job Satisfaction	Factors	26

Note. N = 724 coded passages.

Category One: Data Management

HRIS professionals spoke considerably about the collection and usage of data within their organizations. Specifically, the increased concerns regarding data management, the ownership of information, and the available resources to support the collection and analysis of information. Table 5 lists data concerns by themes and associated sub-themes, along with counts found throughout the ten participant interviews.

Table 5

Data Management with Themes and Sub-themes

Category	Themes/Sub-themes	Count
Data Management	Curation	
	Compliance	13
	Integrity	13

(continued)

Category	Themes/Sub-themes	Count
	Methods	25
	Ownership	
	Access	6
	Dissemination	7
	Storage	6
	Resources	
	Application/Enterprise	40
	Development	19
	Expenditures	13

Note. N = 142 coded passages.

Curation. Concerning data management, HRIS professionals spoke to the procedural considerations surrounding data curation. Participants drew attention to numerous factors as well as general statements about the various data management methods used by their organizations. Three sub-themes for data management were predominant: compliance, integrity, and methods.

***Compliance*.** Federal and state regulations had a significant impact on the way HR business was conducted. A central concern for system maintenance includes the safeguarding of employee information and the retention of data. Participant T3U strongly emphasized confidentiality laws that apply to those systems that house employee information:

> HRIS is basically IT for HR. IT should not have access to sensitive data or personnel information that is available in an HRIS system…They shouldn't have access to employee benefit records or employee pay grades and all of that in the system… and in most cases it's a breach of confidentiality and all kind of other laws.

Another participant described a project they were undergoing in response to retention laws. Participant GMF referenced employment verification processing and the fact that keeping old I-9 forms in the system presented a liability, "…after a certain point it's no longer a legal requirement that we keep them. There's still legal liability if there are errors on them. So, [we're] trying to get rid of the I-9s which we no longer have to retain."

Legal compliance also played a significant role in the way HR information systems were designed and updated. Participant PC9 noted that requests for changes to the data systems were often a matter of federal regulation, especially in the healthcare industry:

> Sometimes the requests are even federally dictated, so we have to make a change to the system because something changed in government. Like, we recently had a program last year, a bunch of changes to be able to do ACA reporting for the Affordable Care Act.

Another participant, 3Z2, referenced how her organization needed technological support to accommodate the scope of increased regulation and reporting:

> As things start to change with, like, government requirements and laws you need to keep up on that, systems need to account for that… this past year we went through Affordable Care Act reporting for the first time and you know there's no way a company can build and maintain and support something like that on their own.

Additionally, she addressed how new legal implications had an impact on their current procedures, "There's a change coming to the FLSA, what's the lowest you can pay someone and call them salaried… that's something we should probably put a rule in our system, that you can't hire someone underneath that pay range." Another, GMF, explained a proactive approach her HR department made in response to the ACA:

> We fairly recently started running reports on employees to determine whether ACA laws makes them eligible for benefits even though they're not classified necessarily as a benefits eligible employee… In order to just try to make sure we're fulfilling our legal requirements, you know, getting people the benefits that they're eligible for if they've worked the requisite number of hours in a non-eligible position.

As noted by participant CTG, working in the health care industry saw increased regulations on HRIS systems because these systems needed FDA certification:

> We had to lay out, in a narrative, what we were doing and why we were doing it and provide documents before quality would approve it… There were all kinds of quality documents we had to fill out when we wanted to do something, if we wanted to make a change to the system…Then once it was approved we have to go to IT for implementation, you know, went through tests, user acceptance testing, before we even saw production.

Participant PC9 also addressed complications that can arise when trying to meet several regulatory requirements at the same time, specifically union laws versus state laws:

> We have to set up a lot of overtime rules and things like that…the union may dictate that they get overtime after eight hours but the state my dictate that it's over ten hours, and so having to configure the system to say, if this person is in this union then their overtime starts here, and if this person's not in the union then their overtime starts here… And those all have to be configured into the system.

Regulations also played a part in the expectation of systems innovations. Participant 7N7 recalled her differing experiences between her time at a state university and a private institution:

> The state school has to function in a certain way, to meet state requirements. So there's a lot of similarities between each state school. And you need to meet at least a minimum… you can't delay an upgrade, you must upgrade within a certain amount of time.

However, concerning private universities, the participant continued, "They don't need to meet state requirements, they don't have to meet anybody's requirements, other than HR law."

T3U describes how her time at a company that went public for trade had to open their records for compliance:

> They recently went public a couple of years ago and now they have to get all of their ducks in a row. They have to be compliant with HR and they have to have public records if they are going to be a publicly traded company. So, they realize that in order to do that they need to have a handle on their people and people management and in order to do that they need HRIS, they need the systems, they need the knowledge, they need us.

Integrity. A second sub-theme emerged as participants recalled experiences where the accuracy of data collected proved to be a significant consideration. As even with automation, data still goes through a human intermediary who is between the data and the system. Participant T3U expressed that maintaining correct data was tricky:

> They don't understand the manual work that it takes to maintain an Excel file because it can be inaccurate because it's always being keyed manually by an actual person and, you know, I feel like a person entering in manual data all of the time is only going to have maybe 90% accuracy. There's always a chance or a 10% chance that something could be wrong.

However, participant 6MF explained that systems can be robust enough to capture errors:

> We have an electronic system for the form I-9… right now we're working on a project to remediate all of the paper forms that we initially uploaded to the system before we started collecting the forms electronically. We had to take all of our paper forms and get those uploaded, and so the system now will recognize anywhere there's an error in the transcription of those paper forms. So now we're working through the process of making amendments to uploaded I-9s in order to get those fixed.

Another participant, ZWU, recalled a major systems implementation, "It required a lot of data cleanup and a lot of data validation... auditing some of the logic behind the systems and the transmission of data… to make sure that things were matching." As noted by participant 3Z2, she came into an organization that had an improperly maintained data system which proved to be problematic:

> They had this system that wasn't being maintained and it was causing a lot of problems because executives would want to know headcount figures, they wanted to know turnover… it's the whole garbage in, garbage out situation where if your data is bad then your analysis is going to be bad… During the course of my tenure there [the system] got really cleaned up and then we got known for having good data to the point where if other teams were running data for the executives team they would want HR to vet it.

She continued, "If we passed off bad data then it was a poor reflection of our team."

The accuracy of data was also noticeable when the information was to be collected by others. As 6MF shared, at her organization HR consultants were responsible for collecting information from departments and passing that information to HRIS:

> In order for us to get that kind of information reflected properly in the data we rely heavily on our HR consultants to get us that kind of information or to tell us when employees and managers are seeing things in the system that aren't up-to-date… Things as simple as, you know, a social security number for an employee, does it look wrong… So, my supervisor and I will run audits of the data based on feedback that we've gotten from various groups about what it should look like and therefore what we should be looking for, for data that's in error.

Another participant, 7N7, substantiated that data inputs were significant to contributing to the functionality of the information system being used:

> My first applicant tracking… it's only as good as the data you have in it... You need all your resumes in this applicant tracking system… And I had… eleven recruiters… and they were hoarding [candidates]. And they were keeping their special ones out of the system. And they would only put them in when the offer happened, but if it was somebody they thought they could use in the future they kept them in a little manila folder. Yeah, and they weren't creating requisitions until the last minute because they didn't want the other recruiters to know what jobs they were working on.

Methods. The third sub-theme for data management involved discussions of methods used in their organizations. Participants voiced that organization of complex data was aided by the conversion from paper to digital recordkeeping, including the push toward automation. Participant 6MF described her organization's plan to convert to digital processing of forms, including I-9 employment eligibility verification:

> We have a lot of paper documents... one of the things we're looking for to change in the near future is adding a system which will allow us to upload all of those and start getting rid of some of the paper or at least get it out of our way so that we're not using file folders on shelves as our reference for employee data anymore.

Participant 6MF also described data conversion:

> We're always looking at new systems. We…recently implemented several different systems to convert paper processes to electronic processes and so that's kind of where our eyes tend to be right now, especially with considering, potentially in the next several years, switching our whole, you know, HRIS interface… which would allow us to automate things rather than continuing to do things on paper. So those are the kinds of, the areas that we tend to look in our systems and systems that provide services that are complex enough to handle the kinds of things that we're doing on campus.

However, she also noted that automation had a caveat:

> Because usually anything that can be automated by someone else is not going to be quite as complex as our own existing processes. Just because anything that's on paper can be totally ad hoc. I mean, you can do a one-off thing for one employee that is not out there for people in other situations, and you can just do it because it's people that are doing it [and] not a system that's been automated specifically to do something for everybody. So, figuring out how we can accommodate all of our employees' different needs is our biggest concern I think, in automating processes. So that tends to be where we're looking and what we're thinking about.

Participants also described the complexity surrounding the procedures for implementations, conversions, and upgrades. Participants attested that implementing software as service applications was easier than complete enterprise response planning (ERP) implementations. As stated by participant CTG, "Conversions are never easy, never. Conversions and implementations are just the hardest thing to do. They never go as planned, ever." Additionally, participant 6MF described how the siloed environment of higher education institutions influenced data management methods, "College campuses tend to be… almost like a lot of different organizations all grouped together and every different department is kind of doing all of their own processes… the data gets kind of complicated managing all of that." Participant EH8 attested that having these siloed environments on the same system was rare, "So, to have five [academic departments]… and to have them all on the same system, like PeopleSoft or Salesforce, all sharing data in the same place is not entirely common, I was not aware of this."

Participants also had anecdotes about working in organizations that needed significant HR implementations. Participant 3Z2 recalled being recruited to support her current company:

> When I joined about five years ago… they were trying to figure out how they wanted to solve their HR technology problem. Because they didn't have any HR technology before that… everything was done on paper, spreadsheets… and merit was being done on spreadsheets, bonuses on spreadsheet, performance reviews… The company had decided to build out infrastructure later… but then suddenly we're at over 2,000 people… but still operated like a startup.

ZWU recalled his time at a major department store and experiences with antiquated systems and the slower integration of HR technology:

> The way the systems were set up there, it's a very old company… and a lot of their [business systems] were pretty much mandated by headquarters… A lot of times I think that when IT infrastructure or information system infrastructure has just been around for so long for a business… it's hard to patch together something new, to fully convert to something new... There wasn't much customization. If you needed to find certain pieces of information you pretty much either had to sit in front of the computer and go through a bunch of computer screens that were just black and green like the old computer DOS

> system, or you would have to pull, like, five or six different reports to come up with a good point of view of what they had.

Several participants referenced to the ways in which application vendors could be utilized to handle implementations. Participant XGE, described implementation services that his consultancy company provides:

> We help implement systems for people... We'll do that either through… the software vendor or we'll just do it directly with the client. Besides that, we help some companies find systems and then in other cases some companies have systems already in place and we're just trying to get more out of them for them. So, they add functionality or fix things, to make the system work better for them.

T3U described a similar experience in working with vendors to implement software:

> They were basically helping us set up our [system]. They have workbooks and we would fill out those workbooks with our company data. So, we would have a workbook for benefits, we'd have a workbook for payroll. We'd fill out those workbooks with as much company data that we knew of and they would go and build… based on that information.

Ownership. Concerning ownership of information, HRIS participants discussed concerns about information gatekeeping. Three sub-themes for ownership were predominant in the interviews: access, dissemination, and storage.

Access. Specific references to information access revolved around the availability of data and navigation of databases and systems. Several participants, including 6MF, conveyed the extent to which information is requested, "People will email us all the time… Really anything that's information related, that's HR information, is potentially going to be requested by folks who need to be able to use that data to either do something or analyze something." Similarly, P69 explained that the access to systems extends beyond the use of HR associates, "Whether it was the time and attendance system, the capital management, the LMS, all of those have to be accessed by the [employees]." She continued about employees having 24-hour HRIS support:

> All hospitals are 24/7, so like my position even though I'm in human resources I'm on-call 24 hours a day and I do get tickets that somebody needs to be able to access, say,

> their time system in the middle of the night. It's not common but in the clinical world you do have that 24 hour a day role that you need to be able to accommodate those who are working those night shifts and such.

Another participant, 6MF, described a fear of losing access to data in the event her company moved to cloud-based solutions, "The information in our database is so complex that my biggest concern is that in moving to a cloud system we lose access to some of our data or lose access to working with it in very specific ways."

Dissemination. The second sub-theme for ownership focused on how information flows and the clarification of boundaries as to where data could be shared. Participant 6MF specified that her department disseminated information to various groups:

> We provide information to groups all over campus if it's information that's appropriate for them to have and that they can't get access to themselves… Really anything that's information related, that's HR information, is potentially going to be requested by folks who need to be able to use that data to either do something or analyze something.

Participant V68 described a similar experience of sharing information across departments through a helpdesk structure, "We provided a lot of data to other people. Requests that we had for information came from the president down, we touched all areas, we touched all departments." Participant EH8 described a solution where a lack of information flow affected her organization because one department was unaware of the processes established by a different department:

> That makes us look a little bit ill prepared as a university, even though our colleges are separate, but to the outside world we are one…So to help bridge that gap a little bit we brought all of the career centers kind of together to share data so they could have visibility into that…With having such a siloed environment where the schools aren't really working with each other, it's getting them to sit down with each other and talk [about] processes together and to see the commonalities between them and get them to come to a consensus on how they're going to use a new system together and how they're going to share data in the new system. I think most of the hurdles come around those silos and people being used to doing things in the way that they want without that impacting anyone else and when they come together in one system, their processes impact the other schools and their data impacts the other schools… You have to kind of help that change

> management process and that visibility, establish processes where things did not exist before because there wasn't direct collaboration like that before.

Storage. The third sub-theme presented considered information storage. Several participants recalled experiences with in-house servers and the centralized location of information in a single database. However, transformation emerged requiring HRIS professionals to work with multiple databases in more complex system setups. For example, T3U explained her interaction with pulling data from multiple databases:

> At the time, it used to be called HRIS system and now it's called HCM which is human capital management. Basically, it's just a system that houses [all] the master data for employee personal data basically… So basically, we would dump a whole database into a database warehouse and we would create a universe for that database… So, let's say we wanted to marry HR with Finance. We'd put both of those databases in the system, create universes for them, and then pull data by matching that data up with the key that is related to either a business unit or a cost center.

She also commented on the appeal of new storage platforms, "I think everyone is getting into the SAP HANA. Mostly because it's supposed to be, like, a reporting genius and a database that houses pretty much every system and you can do amazing things with it." Participant 6MF brought up the push toward the storage of information offsite through cloud-based solutions:

> Right now, all of our data is in-house. It's onsite. But… I think the systems that we're looking at are primarily software as a service type, offsite systems. So, our data wouldn't be right here on campus with us anymore.

Resources. Considering data resources, participants discussed various HR technology applications, raised comparisons about the development process, and reflected on factors surrounding technology expenses. Three sub-themes for resources were predominant in the interviews: application/enterprise, development, and expenditures.

Application/Enterprise. Participants made references to specific applications and software suites and described the decision making, and sometimes struggle, behind choosing the

most appropriate applications based on offered features. Participant 6MF emphasized that knowing the processes of various departments aids in the selection of a unifying product:

> A lot of the things that we do in our group, and that I do specifically as it relates to information systems, involves working as closely as possible with other groups within HR to figure out what their processes are so that we can figure out what system will be supporting those processes.

Most participants named popular, industry standard applications that currently have a lot of leverage in the markets, including various time and attendance systems, learning management systems, applicant tracking systems, and merit and compensation add-ons. Participant T3U recalled when a popular system was brought into her organization:

> Around this time, SAP was coming out and it was like the new kid on the block, sort of like what Workday is right now. And everybody thought that SAP was great and it was wonderful and it was going to change the world. I mean, which it did, it changed the world [for us].

She also placed emphasis on design considerations for the user interface as a factor for adoption:

> [Workday], it's the easiest system to use. It's very easy, it reminds me of like a Twitter for business because it has that type of platform where it's very easy to use, it's very user friendly and simple and all you have to do is go in there and start typing, like, key words and hashtags and things like that.

As noted by 3Z2, her company's global expansion called for unique employee support and an add-on that was supplemental to their existing Oracle enterprise system:

> We implemented this new tool called Success Factors that was meant to address handling employee performance reviews and annual merit increases and they were really big on having a tool that supported some of our language needs, because it's pretty hard to find [a system] to do everything.

Several participants offered anecdotes of their time in organizations with slower upgrades. Participant 7N7 recalled her experience in banking where she was hired to assist with a self-service upgrade:

> They hadn't upgraded in years… ten years or something. They were in a version of PeopleSoft I'd never even seen and they were upgrading… the switch from going to PeopleSoft, all these individual PeopleSoft systems to going to one central SAP system.

Conversely, another participant, CTG, recalled multiple conversions within the same biomedical manufacturing company, "We did a payroll conversion, we went from ADP to ABRA…. Then… from ABRA to Oracle EBS." He continued with his opinion about data systems:

> No HR system is perfect…From an HRIS perspective, there are differences between all of the different systems, but they're all fundamentally the same. I mean, functionality may be a little different, but it's still pretty much all the same. [But] I tell people the hardest thing to learn is the data structure.

Participant XGE brought up that options can be frustrating when an agreement needs to be reached within the department when it came to acquiring new technology, "Getting past those obstacles has been one of the biggest challenges."

Development. The second sub-theme that emerged considered development or the creation and upgrading of resources, their customization, and maintenance. Participants had experience with both in-house applications and those resources that were purchased from vendors. One participant, ZWU, recalled a system implementation that was extensive in scope because it spanned seven university system satellites:

> The entire [system] decided that they were going to implement an entirely new HR system and finance system… I was on the project for at least three to four years… it went from helping design the system, giving feedback to the programmers as far as how things should work or how we wanted them to work... There were times when we had to play the waiting game and we had to wait to see what kind of decisions were going to be made at a higher level, or to see if it was going to work. And other times it was, like, you have one week and you have twenty [or] thirty items that you need to turn in to make sure that the system is up and running, or make sure that everybody is up-to-date…. And these are institutions who, yes, must follow the same rules and guidelines but who conduct their business in very different ways. To get them to agree to one way of doing things was, I mean, it was testing at times.

Participants PC9, T3U, and 7N7 described homegrown HRIS systems, including LMS systems, that can be programmed in-house and reside on servers within the organization. Specifically,

7N7 stated, “We did the whole thing. We came up with the business processes, how the system was going to work, and conducted training.” Participant CTG described in-house development of insurance claims processing out of displeasure for a contracted administrator:

> They were unhappy with the TPA we were using, so they brought it in-house. And we had a company in Texas that actually built the software program. And through that process I started to learn programming… I went in, completely audited their system, made huge changes… I absolutely know that their performance module manual [was something] they went out and purchased from another company and customized it to fit. And that’s not uncommon.

Another participant’s response, 6MF, corresponded with the notion that purchased systems often don’t meet every need, “If a system doesn’t accommodate that need then we would just have to find workarounds, that ultimately tends to be more time consuming and intensive.” One participant, 3Z2, described her time at a major photography agency where she had the opportunity to test customizations to existing applications:

> The thing with Oracle is that it’s specific to every company, the way it’s been coded and developed. So, you know, I can talk to other people in the community that were on Oracle but they had a completely different configuration. So…we really just kind of figured it out ourselves. We had in-house Oracle developers but they were more focused on the financial applications, not the HR application. So, there was, a lot of it was just let me see what this does if I click this box, or if I fill out this field what’s it going to do. So, the nice thing about HR system is that there’s almost always something called sandbox. And a sandbox is basically where you play. You’re not going to impact anyone’s data. It’s a place for you to try testing something out to see what it does and not have to worry about, you know, someone not getting paid because you did something you shouldn’t have done. So, you know, a lot of it was ok, let me go into sandbox and just see what happens if I make this change. Is this going to cause any problems anywhere else?

She also recalled moving to a technology startup and their attempt at in-house application development:

> Because we’re a technology company there was a thought at the time that we can just build whatever we need. Like, we don’t need to go use systems that are on the market, we’ll just build it and the problem is that that’s not salable at all.

Participant XGE noted that his consulting company has aided organizations that have gotten in over their head when it comes to creating systems, "What they end up doing, since they think they have the expertise on the intellectual side of it, they end up trying to do a lot of the work themselves, do the services themselves." He continued and advised that diligence is needed when working with vendors and the customization of their products:

> When you work with a vendor there's just a chance that they're not looking out for your interests, they're looking out, you know, just for their own a lot of times…but that's just like the basics of it…so we just find that sometimes when clients, like for example, they just do an implementation straight with a vendor the vendor might cut some corners. They might tell them some things just to make them happy.

Participant EH8 offered and concurring statement, "We'll seek out individuals for applications to use and we'll have to vet them, would they be a good fit, would they serve what we need? Do they actually deliver what they promise?"

Additionally, participant PC9 described an important comparison concerning the maintenance of third-party supported applications and applications designed in-house:

> The other difference is the upgrade process… where the software as a service, we can turn those upgrades around in a day if it's a software as a service, like Taleo or Fusion would be, but if it's something that we are programming in-house and it actually resides in our servers, that upgrade process takes much longer. So usually if we have something like that we have to take it down or make modifications to it without the user being able to access it. [With] that we do get a little bit more, I guess, negative energy around the application because there are times that it has to be down and we have a little less control. Software as a service applications, because they're managed by another corporation who can schedule their downtime a little bit differently is a little easier.

Expenditures. The third sub-theme that emerged concerning HRIS resources was specific to costs related to technology investments, including expenses and savings. Expenditures for HR applications varied between industries. One participant, T3U, described her observations in the manufacturing industry:

> So, in manufacturing they view... well, not everyone… but [for my organization]… They feel that HR is a liability. They are not a department that generates money for the company. So, they try to make it as lean as possible. They don't want to spend any extra

> money in HR, whether it has to be upgrades or anything like that. You always have to have some type of business case… We don't have the spending cap that another department would have, say like Marketing or Finance. You know, they will go and give their executives, you know, $50,000 to spend on a monthly basis just because they're the executive, but you wouldn't give that to an HR person who would get something like $10,000. I mean…it's a big deal when you compare it…you see those types of differences.

Participant PC9 explained how expenditures were tight:

> I've always worked for public health care organizations. [But] currently I'm with a catholic organization that's not for profit… Technology obviously is expensive and so usually those public practices are behind in technology so they're slower to get the applications like electronic medical charting and things like that.

Another, 3Z2, explained how making a case for purchasing and investing in HR technology applications resulted from constant requests for data:

> We'd get a lot of requests from leadership that would say, you know, how many promotions have we done over the last year? And we'd say we don't know because we'd have to go through every employee file and count papers that said someone got promoted… It helped us a lot because it helped build out our business case for why we needed to get a new solution and you know how, that data gets more and more important and the requests get more and more specific. It's like we can't deliver, we can't help support the business if we don't have the right tools to do that.

There were several participants, however, that noted certain industries needed less convincing to make significant contributions. Participant XGE stated:

> A decent chunk of our clients are, like, in technology companies so they tend to understand that they need to spend on the solutions themselves… There are industries, they just assume [what] they spend on employee related technology has to be very large and… they go into every year with a substantial budget and they've gotten used to paying that amount. Like, I think of the health care industry, you know, like hospitals and Blue Crosses and HMOs of the world. They all just assume they need to spend a ton on this, so that's what we do. Whereas some other industries might scrutinize it more year to year.

Participant V68 quipped about expenditure decisions at the executive level:

> Most everybody was trying to transition out of what they call the legacy system, mainframe system, ect. something different. So, part of my role as a manager was to be on committees and see could we use the software, put out RFPs, figure out the best resources to use to come in and transition from legacy…It really came down to what the CEO liked and who he played golf with. That's how it is in the business world, you may

> not see that in the academic world, but that's the way the business world works… every time the CEO took a plane somewhere and he read a magazine, that was the trend, that was what a lot of people were doing, that was more of the change de jour.
>
> Organizations also looked toward cost saving alternatives, such as SaaS applications.

Participant PC9 described their observations:

> I do look at the trending of software as a service…. So, less companies are investing in full applications that are owned and maintained by an IT department in their organization and they're going to software as a service that are maintained by the company offering the application.

Many participants noted the costs benefits of moving to cloud storage, but were aware of consequences to this change in practice. Participant 6MF explained:

> There are definitely pros and I think that there are cons too. The pros are it's a lot less expensive for campus not to have to have, you know, all the servers and equipment and keep those running and updated and keep the personnel who work directly with the equipment rather than necessarily kind of more of the systems side of it. It means a big change for employees. And as an employee that's important to me. I care about, you know… I personally care that we're able to find ways to reassign and continue to use employees instead of just making them obsolete.

Participant CTG explained the cost savings of coding and programming completed within HRIS:

> For example, right now we are in the middle of open enrollment. We changed all of our insurance carriers out which means new data feeds. Which historically they have sent to Ceridian and paid Ceridian to do them. This time around because I understand code, I coded all of the reports. That is a tremendous financial savings.

Category Two: HR/IT Intersection

HRIS professionals where asked about their professional interactions and relationships with IT specialists within their organizations. Participants addressed the impact of the structure of their organizations and breakdown of departments as well how interactions where affected by the allocation of tasks. Table 6 represents the themes and sub-themes related to the intersection of HR and IT as described by the interview participants.

Table 6

HR/IT Intersection with Themes and Sub-themes

Category	Themes/Sub-themes	Count
HR/IT Intersection	Structure	
	Departmental	29
	Organizational	16
	Task Allocation	
	Distinct	12
	Collaborative	14

Note. N = 71 coded passages.

Structure. Participants were asked to consider HR and IT decision and reporting chains within their companies. Based on interview responses two sub-themes emerged specifically describing the characteristics of department and organization structures.

Departmental. Participants described the size of their current HR departments and thoroughly explained team breakdowns of the different HR functionalities. Each participant had experienced various approaches to HR department structures. Participant XGE explained his observation about HRIS departments in companies of difference sizes:

> Large companies are going to have a fairly large department that handles all of this stuff. So, you end up with multi-level functions, like people who are just responsible for responding to employee requests about the system… So, whereas in the smaller companies, like the HR admin role is a do-it-all kind of function. They bridge the gap between, like, the leadership of HR, the VPs, and the end user.

Several participants, including 7N7, described their team breakdowns and implied about the logic behind these divisions:

> In my department…we're split by modules. I shouldn't say modules, I should say systems because we have an executive director, and then we have a team that supports the finance system, a team that supports the student system, and then a team that supports the HR system because it's all PeopleSoft. And then a Portal individual who helps manage the portal. All of the developers report to a lead developer, and then the business analysts and the lead developers report to the executive director.

Participant 6MF also described her HR groups:

> In our HR department we have 25 or 26 people right now. We're broken out into groups… The group that I'm in is the data management group. Compliance and Data Management is our official title. So, it's my supervisor, the director of that group, and then I'm the HRIS analyst, and my two coworkers work in the file room.

As did participant 3Z2:

> Underneath me I've got a team of four analysts, and then I report to the senior director of Total Rewards and he oversees three teams. My team, the compensation team, and the benefits team. And then he reports directly to our SVP of HR.

T3U and V68 described how specific project teams were staffed dependent on the number of employees and contractors that needed support. Participant V68 stated, "I would say, anywhere from 10-30 people depending on the number of current number of employees and contractors that we had in that support group." He recalled first working in the education section at a public university:

> When I first started there, I was actually hired in as a just as an HRIS business analyst, the person who hired me left after six months and I took the roll over at the HRIS records area. Now the records area was the HR area that did just that, they processed all the job changes, hires, terminations, pay raises, promotions, demotions, it dealt with all of those… it was myself in HRIS and three file team/records individuals…[and] I hired one more HRIS person…

He then described the shifting landscape of his department in response to the growth of the services needed by HR professionals thanks to the unifying of several metro campuses into one university system:

> We took the HR departments from two campuses, the purchasing area, the payment area, and the payroll area and we formed what we called the Service Center [which] became part of the [university] system. I [became] director [of Information Services] in the sense, I had a group of people that was kind of the leftover hodgepodge, leftover people from the HRIS area [from two other campuses]… they became part of my team. At that point, I didn't have a records responsibility, that was moved out to the records area. You think of the HRIS function, we supported some other applications like our website. [but] then we spilt back out, split HR back out of the [university system] and I moved to that as the director over the HRIS area… I came back as a director of change, including putting HRIS under what we call Total Rewards.

Participant 7N7 also described the evolution of her department's structure, "[They] combined their Payroll and Records department… What does the study say, 50% of organizations' payroll falls under HR?" She also described the differences she experienced between working in media division of a corporation from their retail side, "I got a much bigger taste because we were a smaller team for a larger number of people and the way they did business there was completely different than the retail portion that I was at." She also described the differences in team size between her time at a public vs private university, "I'm the only HR business analyst here for all modules. Whereas there I had a team of business analysts."

Participants who had experience at smaller organizations recalled the scope of their responsibilities. Participant CTG had experience at a small credit union, "There were only seven people. And basically, I'm going to say every organization that I've worked at… I was the only HRIS resource." Smaller organizations also demonstrated need for hybrid job roles where professionals participated in multiple HR functions:

> I was in the Compensation Department, there was one HRIS analyst that reported to the same manager I did while I was in Compensation. Her workload started to increase and they slowly started giving me items to do, reporting mostly, for HRIS. So, then I had a hybrid role there for comp and HRIS. Which eventually, because of workload, just became HRIS.

Participant ZWU described how his role as an HRIS professional was created by the IT department:

> The opportunity came up to where the university's actual IT department wanted to train one of us in the office and give us access to an actual reporting tool that help us pull data for a lot of our various systems. And I just kind of fell into it.

Organizational. The second sub-theme conveyed characteristics of organization structures and the availability of IT. The majority of participants described the HRIS group as residing within the HR department. However, there were exceptions. As stated by participant

EH8, “I report to an assistant director of our IT department, and they report to the chief information officer.” Participant 7N7 also described that that her role fell under IT even though she still engaged in people support, “Well, this is the first organization I’ve ever sat actually in IT. But still, I am the one that deals with the end users and I come back to my developers.” CTG described frustrations with not having enough IT support for the HR function:

> The Oracle implementation took a year and a half…After a year and a half, it was clear to all of us that IT did not have the resources to support HR. So, at that time I made the decision, I talked to IT and I talked to my supervisor, and I made the decision to go over to IT as a programmer analyst supporting only HR.

Participants also described instances where their organizations maintained fewer IT resources. Participant 3Z2 stated, “We only have one person in IT, and he just handles [the] integrations from Workday to other [company] systems.” CTG recalled three job positions where the company did not require IT assistance, “[It was] about 1,500 employees, 15 people in HR… and because the system is cloud-based… we required no IT assistance.” However, the majority of participants, including PC9, were currently working in organizations with both HR and IT departments, “Yeah, in any area that I’ve worked HRIS, we’ve had both an IT department and an HRIS department.” Participant 6MF concurred, “We do have a whole IT, obviously, a whole ITS division on campus… that does a lot of the things that I don’t do.”

Participants also noted that reporting structure determined how much influence was to be had concerning technology discussions. PC9 described the structure of her multistate hospital organization, “Everything is at the corporate level. So, we are pretty centralized for HR.” ZWU also mentioned the centralized organizational structure at a national department store:

> They all function dependent on what’s provided to them and lent to them, and what resources are made available to them from a headquarter type establishment. So, we were working with payroll systems that were mandated by our headquarters, we were working with report systems that were mandated by our headquarters.

For participant 7N7, being the only HR business analyst afforded her the decision to decentralize her efforts so that the employee she supported could take initiative:

> Being the only business analyst for all, like, Benefits, Payroll, Staff and Compensation, Training and Development, the Student Employment group, and Labor Distribution…doing all of that you need to be able to decentralize, or make sure your end users are as independent as they can possibly be.

Task allocation. Participants also categorized the responsibility over specific tasks and projects, as falling within the efforts of either HRIS or IT. Two sub-themes related to the allocation of tasks emerged: distinct and collaborative.

Distinct. Participants made statements about which tasks were specific to either HRIS or IT departments and often communicated that application responsibility was dependent on several factors, including which entity acquired the technology. Participant 6MF stated, "There are definitely systems that were not procured by human resources and are not managed by human resources, so ITS, but we're still a part of using them. ITS will do what I do, but for other systems." She also recognized that supporting employees could be taken up by IT, "I would say honestly if I weren't the one, if there weren't me here in HR doing that, ITS probably would be doing that for HR. And they do some of that for us already." However, other participants identified the division between HR and IT. Participant T3U explained:

> So, there's a deal with IT and HR where they always have a conflict because HR feels like they are responsible for everything that has to do with employee data and IT feels like they are responsible for everything that has to do with systems. If it has to do with a computer it should be in IT. That's how IT feels, they want to have ownership of that.

Participant EH8 also described the separation, "Our IT team had understanding that they, only they were responsible for running the system but the responsibility for the data system and the business processes, that lies within HR itself." Participant 3Z2 also described how in-house developers at a previous organization would focus on financial applications, but not the HR

applications, "We had, like, a team of ten [Oracle] developers in-house, just to support the financial part of it, and HR just kind of, it got no attention." Participant V68 also described how programming staff actually resided elsewhere at a different system campus, "We don't deal with vendors ourselves as such… the main IT office… is where they kind of drive PeopleSoft and software related decisions that's where the programming staff resides." PC9 shared her opinion about the differences in responsibility:

> So, we have database administrators who are also responsible for the same applications that I'm responsible for, and the difference in description in the job that I like to use is, I configure the system where our database administrators, who are in IT, program the system. So, one is through script and working the server and mine is kind of customizing the application to the company's business practice. (PC9)

Other participants stressed the people component of their job role. Participant EH8 explained:

> [The IT department] is really responsible for managing the upgrades and sort of being experts in the system and what it could offer and my role was to be able to translate more of the technical, translate it to our HR employees as far as how changes impact them and how we could leverage it. Here's how we use it and here's what the implications of that data change are. So, a little bit of a spokesperson for both sides.

Collaborative. The second sub-theme for task allocation came from examples that participants shared concerning cooperative efforts in response to HR tech implementations. CTG described an Oracle project and the composition of the team:

> The director of compensation and benefits and I were the subject matter experts… our project manager was from IT. We had two other people from IT, we had three from Finance, and we would always bring an HR team in, you know when we had to make decisions.

Several participants provided anecdotes about the cooperative nature of their projects. Participant 3Z2 discussed cooperation among departments:

> Here we work really closely with the IT people. I have a much better relationship with them here than I did at [the previous company]. And I think part of that is we do a good job of change management…you know, we meet every week and we talk about what's

> going on and you know, because we might do something where we say, oh yeah, we noticed that Workday delivered this functionality so we're going to look into changing it. And then the IT people will say, oh you know that field is used in the payroll integration so let's look at that. And it's like, ok. And then, you know, that way we're all, we're sharing the information that we have and making sure we don't do anything to bring down anybody's system.

Participant 6MF described a standing meeting between HR and ITS:

> [The team] meets together once a month so that ITS can find out what's going on in our groups and the kinds of projects that we're all working on together can be discussed. We can get updates to different systems and data projects that need continued work.

ZWU described a major cross campus implementation as genuinely collaborative:

> We actually collaborated quite a bit. During my time at HR I became, I kind of built a really good relationship with certain key, with certain people, with the actual IT department and they were on the [implementation] project too. As far as the IT side and infrastructure, for making sure it kind of gelled with all of our systems on campus… When it came time to building or kind of auditing some of the logic behind the systems and the transmission of data, we would also have continuous meetings about, ok, the data tells me this, then the system should do this. So, it was pretty much continuous. I don't think, during the project, I don't think we went more than one week without all of us meeting together to discuss something…There were politics, yes, there was push and pull as far as what some people wanted and what other people wanted but I can honestly say I never directly experienced anything like the negative side of politics in those kinds of things. It was just a really big project with a lot of people involved and that's to be expected that there's going to be some disagreement.

Another participant, PC9, described the relationship as being complementary:

> They're receptive to us… I wouldn't say that we ever butt heads over anything. It's very collaborative because the IT individuals don't necessarily understand the full HR nature, so why we use certain dates or the definitions, I guess, within HR. That's not really… their computer science background. So, it really is a team effort to combine that computer science and HR knowledge together. So, we collaborate a lot and it's always been positive.

Category Three: HRIS Emergence

HRIS professionals addressed the emergence of HRIS as a response to assumptions and values of industries and organizations. Additionally, participants spoke to the career outlook of

HRIS and various influences related to technology. Table 7 represents the themes and sub-themes related to HRIS emergence.

Table 7

HRIS Emergence with Themes and Sub-themes

Category	Themes/Sub-themes	Count
HRIS Emergence	Culture	26
	Career Outlook	
	Growth	14
	Transformation	9
	Technology	
	Expectations	27
	Fluency	11
	Trends	17

Note. N = 104 coded passages.

Culture. Participants discussed the ways in which industry and organizational culture demonstrated the importance of data and information systems. Supporting narratives indicated a range of attitudes related to the acceptance or resistance to change. Participant EH8 noted that there was an initial hurdle to application adoption, "The big challenges tend to be more cultural or organizational challenges. Most operational or procedural challenges do kind of work out in the system." When incorporating an HRIS role under HR, participant EH8 noticed indifference:

> Each organization varies on its opinion on where the responsibility lies. For me, my HR team didn't really want any of it… So, I just happened to be there with the team where no one else was really interested. They didn't really want to bother with that, they were kind of resistant to it, where it kind of just made sense to me.

She then provided a detailed account of a failed implementation related to cultural shift:

> I had a project once where... I saw that [users] were struggling with certain things. They wanted to be able to report on something in a certain way… What they were doing was they were exporting a whole bunch of data and then they were manually manipulating the data in Excel to be able to group it in a way that they wanted it for this report. They would have to do that every quarter, to submit this quarterly report. It was large and time consuming and they needed it and I thought that if I could help them use the system to achieve that goal so they could just do that, have the data clean in the system and then run the report, that would solve, save them a whole bunch of time. Which in theory was a

> good idea, but they weren't, within their group, they weren't ready to make that change. That was too big of a change than they were ready for at the time. So even though I had, I converted all of their data, I set up the system for them, I gave them an outline of guides, sort of a cross log… So even though I gave them an outline it was a really big transition for them and they weren't quite culturally ready for it yet. It was too big of a shift, too quickly for them. And so they ended up slowly falling back into their own ways and not really using that. So now they're back to exporting all of their data and manually changing it and going with the same process as before. That was a fail on my side, because I thought that if I could show them that it would be better they would just buy-in and I kind of ignored their signs that they weren't quite ready yet and that they didn't have time to learn a new process right now. They weren't willing to learn to make time to learn something new. So, for all of the complaining and the wishing that something would get better, they weren't really ready to adopt it.

Participant T3U believed that more resistance fell with HR as opposed to HRIS, "We're always trying to justify HR's existence, but I never really have to justify the HRIS side. I think that's something everyone can see the benefit of." She continued that HRIS professionals would eventually experience people who are content with existing processes that seem adequate:

> It just depends on the environment that you're in, but there are a lot of people that have been in the workforce for a long time and they are resistant to change. They don't understand the benefits. They are like, 'Hey, if it's not broke why do we need to fix it? We've been doing this for 98 years. Why do I need to have an HRIS system when we've been using Excel spreadsheets? That works fine for us.'…There's going to be challenges with anything that is new coming into a company [and] now this consultant is going to tell them all of the stuff they're doing wrong and what they can do better.

CTG provided a similar statement about resistance:

> HR is very open to change, but the longer people are there the more resistant they are to change. The three organizations I've worked for the most all went through a cultural shift, tried to go through a cultural shift. It's very, very hard to do. It's interesting because all three organizations length of service was very high, the average length of service was very, very high.

He continued with an anecdote about why some processes haven't been updated:

> When I walked into my last job, or even the one before it, I said why are you doing it this way? Generally, after I'm familiar with the system I sit down with one of the users, typically HR, and say what is working, what is not? What would you like to see?... At least three or four employees tell me, 'Well, we do it this way because that's the way they told us we had to do it.' Or, 'It won't do it any other way.'

Participant ZWU recalled the need for change at a well-known department store and a positive reception concerning the adopting more thoughtful data collection methods:

> You know, some of these retail stores, they've been around for a long time, so when I showed up I started slowly converting stuff, you know, computer lists, adding stuff to spreadsheets, and I really got a flavor for it. And to be honest, people in the office were very open to it. They were open to it. They were like, you know what, yeah anything you can document, anything you can type up for us, go for it. Anything that's going to help us track information faster go for it, we welcome it, we need it.

Participant EH8 commented on the motivations of users as a factor when it came to adopting certain applications:

> I find that leaders or managers are concerned about their numbers and so getting credit for their work. Whereas the end users tend to be more concerned with how does this affect my daily life, my work life. Is this going to make my work harder or easier? Like, how big is this process, this new process, that I have to learn?

Participant V68 commented on moving from global retail to higher education and the changes that came with HRIS project timelines:

> I still haven't adjusted to it after being here for 10 years. It's a very different pace, a very different thought process. It's amazing. Academics are academic, great people, but [it's] very hard to watch the pace of decision making and committees and all the little nuances you worry about, that in the corporate world, you make a decision you move and you go. It's a very different atmosphere.

He also offered the following advice to successfully navigate organizational nuances:

> Learn politics of the place that you are before you jump into anything. People have a lot of trouble with honestly and want things given softly. You've got to make them understanding of change and that their idea was part of the solution. I think I've seen that just about every place I've ever worked.

Career outlook. Participants described the trajectory of the HRIS profession in terms of witnessed and projected growth, and the important evolutionary nature of the role. Two sub-themes for career outlook emerged: growth and transformation.

***Growth*.** References to increased instances of HRIS jobs and HRIS prevalence among organizations of all industries and sizes where described by the participants. Several participants,

including PC9, observed an increased number of inquiries from headhunters who are looking for HRIS professionals, "I get contacted a lot more often for roles to fill, mostly for short term implementations." Participant T3U explained her understanding of the increased need of HRIS as relating to the division of HRIS and IT responsibilities when it comes to managing private employee information, "That's why the involvement of HRIS started and it's growing so much because IT should not have that information." Participants were in agreement that the HRIS specialty would continue to grow as an essential HR function. Participant 3Z2 explained, "It's getting there. It's getting I think bigger and more important every day. And what's interesting is one of my analysts she just went and got her SHRM Certification and she was the only HRIS person in that class." 3Z2 continued, "And she came back and she's like, 'Yeah, it was pretty cool because the instructor [said] HRIS is the future of HR.'" EH8 shared her opinion as to why the HRIS professional role is needed:

> Now that technology is becoming more prevalent and there's less manual paperwork that happens in HR and more systems to manage, postings, and employment records, it's becoming a much bigger need than it used to be 30 years ago in HR…It's definitely something that's going to continue to grow as technology continues to evolve, and you always have people who want to be out there doing their jobs and not worrying about the technology behind it and have somebody who can come and kind of walk alongside them and help, help translate it or help them see how things could be changed to help their work go better.

When asked his opinion about the direction of the HRIS role, participant ZWU shared the following:

> I think HRIS has become one of those things where only now, or only within the few couple of years has it really come to the forefront…Before, I don't think that there was that much need to know your data and to be able to find an easy way to analyze things. I think it's really developed these last couple of years where there's been this urgency to, we have to find where errors happen, we have to find where this is happening, we have to understand how many people are here, we have to understand…All of a sudden everybody needed something to be able to, data to play with, then to interpret, and to give feedback on all of a sudden. And I think before there wasn't that much of a need for it.

***Transformation*.** The second sub-theme for career outlook described the importance of the ability for the HRIS specialty to evolve in response to changes demanded of the job role. Including emphasis on new tasks, skills, and responsibilities not previously accredited to HR professionals. Participant 6MF contemplated about HR functions, "Primarily, I think the things that I use don't have as much to do with HR related processes as they have to do with IT and database related processes." Participant XGE offered an explanation about the transference of IT skillsets into the HRIS role:

> The trend is that there are definitely people in that role, there's a huge variance between, like, what the large companies are doing and what the small ones are doing. But most of them have that as a defined role at this point, so that way it's not IT who's in charge of HR systems, especially with the advent of the cloud, they don't need to be involved in a hands-on way, so that's been a natural fit, or a natural progression.

Several participants shared a similar sentiment that the direction toward coding, programming, and systems responsibilities was new territory for them. All participants interviewed believed that HR needed to actively participate in transformation to reach a more strategic position within their organizations. Participant 7N7 stated, "Ultimately, for HR to be that business partner that they need to be and not just the record keepers and the paper pushers."

Technology. The interview data revealed that HRIS emergence was also in response to several factors concerning technology. Three sub-themes for technology were predominant: expectations, fluency, and trends.

***Expectations*.** Participants described technology requests from users and managing expectations of what technology and systems should do. 6MF explained:

> I feel like sometimes there's a big disconnect between HR folks and the way technology works. And so it falls to my supervisor and myself to try to help people understand what the limitations are and also the complexity of the information we're working with… We run across situations like that all the time where folks who don't work with data don't always have the big picture of how, of those interactions and complications with how it's used in different areas and by different people… I think folks in HR find it very

> frustrating that we can't just go in and change the data or the way that it works because that would change the way that other people use it. We kind of have to manage expectations a little bit, which doesn't make us popular people in the world.

Participants recognized two opposing views that users had about technology. Participant PC9 explained, "I guess it's like a 50/50 of like or dislike having to do with applications. We still have people who will call and ask for information even though it's available electronically through employee self-service and things like that." Participant XGE provided his observation:

> They either think it's just a pain in the butt and it makes their lives miserable. Or they get it and they want to make it better, and they want to be involved in it. There's, like, those two types of people.

Participant 3Z2 described her observations about technology expectations when she first joined a technology startup:

> I think the expectation here is different because we are a technical organization. So, people assume that we would have technology available to support them in the roles that they're in… So, it was interesting because there was no technology here, but it was around the time where you know technology was really, people were just having this expectation that it would always be available.

Several participants, including 6MF, referenced the usability of HRIS applications and how system design played a key role in application procurement, "We are looking over the long term for the next several years at switching to something else that's a little bit more dynamic and you know more useful for folks who aren't IT experts." Similarly, 3Z2 described the acceptance of Workday, "That seems to be very, very popular with our end users, just because it's got a great UI." When it came to the interface experience, XGE noted the difference expectations between managers and other end users:

> The end user wants it to be flashy. They want it to be interesting and exciting. The HR managers and stuff they just want stuff to work. Like, they also just want the core functions to work. The HR managers just want to make sure everyone can enroll in benefits and get paid, you know, make sure everyone's data is correct. Whereas end users basically assume that's the case [so] they want more. They want the system to be flashy, when they're enrolling in benefits. They want to see side-by-side comparisons and stuff.

The differences in expectations between managers and employees extended into their opinions about self-service opportunities:

> Employee self-service, yes, the employees do you like it. Umm, managers self-serve not so much. I remember we rolled that out in Oracle, it was a disaster. Some people, some managers really like to do things for themselves others say it's a function of HR and HR needs to do it for them. We did our best to try and convince them, did we, no. But for the most part, I'm going to say this, it's generational. I mean some of the managers and the VPs I've worked with that kind of come from old school are very adamant against doing it. Certainly, millennials have no issues doing it themselves, they prefer to do it themselves. (CTG)

Other participants also suggested that expectations varied based on the user's generation.

Participant 3Z2 stated:

> What's interesting is that some of our longer time executives they've just gotten used to waiting for HR to deliver data to them, so that's what they do. And then we have some newer executives who come from other high tech companies who are used to just like having these tools and accessing them themselves. So, it really depends on what people have been exposed to in the past and what they're comfortable with.

Fluency. The second sub-theme involved technology fluency and described how the level of comfort and knowledge of technology impacted the appeal toward HRIS applications.

Participant CTG described how he evaluated someone's comfort level with technology:

> I basically start out asking them Do you have self-service? Do you know what self-service is? Do you know how to look at your online paystub? Open enrollment? Do you go through the open enrollment online?... When you're talking to someone who doesn't know what you're talking about keep it on a lower level. Let's not use a lot of technical terms. Let's leave out everything that really has nothing to do with it. You know, I need to know details but even people in HR sometimes when I talk they just kind of look at me with this blank stare, you know.

One participant, 6MF, compared her own technology fluency with that of some of her younger hires:

> The students that I was hiring who wanted to work in a computer lab were kind of techie to begin with. Honestly, I came out of an age where computers were, I mean you know, I used a computer in college for email and for word processing but that was about it when I was in undergrad. These days they just use electronic devices for everything and they

> know a lot more about it. So, I learned so much just from my students that maybe didn't even have anything to do with the work that we were doing. But you know just things that they had learned at school that I had never learned.

ZWU shared that he tried to encourage change among the other managers:

> I started pushing people, I started pushing a lot of the management, I mean I was fairly new at that time I think I was 21 or 22, I was probably the youngest on the team of managers. The other managers had been there, they had a lot of experience, but I think there was that generational gap between the computers, the usage of technology, and implementing technology.

Several participants, including PC9, stated that an employee's job role often influenced their willingness to learn new applications:

> Within health care a lot of the clinical practitioners are clinical, they're not really, technology is not their forte. It's not something that they want to do, especially for anybody who's been working in that world for a while…So the reception of that in the clinical world is more negative than it is from any administrative personnel, from my experience.

Similarly, EH8 shared that HR staff in particular seemed to be place less emphasis on utilizing technology:

> Especially if you're dealing with a lot of people who are really heavy on the people engagement side…they're not as involved in many of the technical or systems side. So, I had staff who were really a bit overwhelmed by the system side of things.

Trends. The third sub-theme for technology identified specifics about new trends with employee technology and systems innovations in the workplace. Automation was often addressed by the participants. As stated by CTG, "The philosophy in HR is if we can automate it we're going to automate it… if you can do it on a piece of paper or you can write it in an email, you can do it on a computer." All the participants identified software as a service as an essential HR technology asset. Participant PC9 described the trend:

> So, less companies are investing in full applications that are owned and maintained by an IT department in their organization and they're going to software as a service that are maintained by the company offering the application… So, I am watching those trends, especially in the areas of education and applicant tracking… What pre-established,

> authored education can we just use because it's been vetted by this [other] organization and we can just give it to our associates. So those, the increases like that, I've been watching. And kind of the decreasing of the, like an ERP, the enterprise resource planning application that houses HR finance, payroll, and supply chain together, but rather the move toward all of these separate, sort of full-time applications.

The incorporation of mobile applications also came up several times in the interviews.

Participant CTG shared:

> One of the projects I'm going to be looking at next year is doing timeclocks via mobile phone. I think we're going to roll it out to IT first, but I'm a big proponent of using any device I can. Try to find ways, unconventional ways to do things, you know.

Participant 3Z2 described how the mobile features in Workday benefited the employees at her organization:

> It's cloud-based. So people, they don't have to be in the building and on [our] computer to get to it. It has a strong mobile application, which is really key because some of our people are field/remote sales people, so they need to, if they need to get data they need to get it in their hand when they need it… it used to be one of the things that's nice to have and now it's non-negotiable.

Some participants did note that cloud-based applications were more appropriate in certain organizations. Participant CTG explained:

> I think from my perspective there is still a need for, like, a server-based system. The larger the company it is probably the need is greater. You know, the problem with the cloud systems is they're pretty, how do I want to say this, there's not a lot of flexibility with them, there's not a lot of customizations you can do. And that, having worked on both, on the other side it's a frustration for me, but smaller companies it really works for, and I don't think it's going to go backwards. It's also less expensive, easier to maintain, and it doesn't require IT resources.

Category Four: Business Intelligence

HRIS professionals spoke about the importance of utilizing the technology-driven processes of analyzing data for business outcomes. Table 8 represents the themes and sub-themes related to business intelligence.

Table 8

Business Intelligence with Themes and Sub-themes

Category	Themes/Sub-themes	Count
Business Intelligence	Data Leverage	13
	Insights	
	Metrics	13
	Analytics	15
	Reporting	30

Note. N = 71 coded passages.

Data leverage. Participant interviews revealed numerous anecdotes of how actionable insights about employees were utilized to make business decisions such as reorganizations and succession planning. Participants explained that requests were not just informational in nature, but that the systems could be used to identify areas needing improvement, including gaining efficiencies in workplace processes and generating improved outcomes. Participant EH8 explained:

> We have, on the executive end, we have directors who are looking to do certain things and they want certain outcomes and they want you to figure out how the system can help them do that. And then on the other side you have users you see struggling with certain tasks or certain procedures that are extremely manual for them. And you think 'I think that our system can help you with that. I think that if you did it this way that would save you a significant amount of time.' So, sometimes that's troubleshooting on the user end or helping them solve problems that they're experiencing and other times it's more of a strategic partnership level where you're working with leaders. Whether they're higher executives or just department leaders on solving their, or helping them achieve their departmental goals, their institutional goals, or whatever the strategies have been set for them that year, helping them support that. You kind of have to be prepared to get that from both sides and adjust your approach a little bit.

Several participants, including PC9, named various departments that requested reports provided by HRIS:

> It varies where [requests] come from. So, sometimes the requests comes from internal HR. Say Talent Acquisition may request a change in the applicant tracking system, but then it also may come from leadership to say, 'You know, we're looking from a leadership perspective at turnover, so we want this change in the system for us to be able to try to reduce turnover.'

One participant, 3Z2, explained that although all departments reach out to her team for data most requests come from two areas:

> I'd say our executive team and our finance team are the big ones that want to know certain pieces of data to help them plan… they are basically speculating on they think there's a problem somewhere. And they're looking to us to provide the data that either supports or disproves that. They don't want to, they don't want to have to sit there and speculate about where a problem could be. They want our tools to be able to highlight it to them. Because there may be something they're missing. They can't be expected to strategize over every small portion of like employee population.

She continued about some limitations she's encountered when providing data for strategic outcomes:

> The problem we have right now is that our tools, we've only been using our current system for about two years and you generally need three plus years of data to start doing more accurate predictions.

Alternatively, one participant, 6MF, described that their organization was able to utilize older information that they hadn't previously considered:

> A lot of data that was designed, I mean years ago, it's been used for years and years and years by say the budget and payroll groups for example, positions and things like that. That information, HR tends to want to leverage it in ways that are useful for HR processes which is fabulous.

Participant 6MF provided an anecdote about a recent reorganization based on actionable data:

> Originally, the Service Center reported to my boss, to Compliance and Data Management. Which sort of makes sense, because they work a lot with data. They do data entry and they take a lot of incoming calls and get a lot of information from various places, but because a vast majority of the contacts that they get from customers, the information that customers wanted was benefits related. So, we recently did a re-org and moved that Service Center group under the benefits team instead. Now they're much more closely in contact with the benefits team and I think information is traveling a bit more easily between those two groups. So, the customers are getting help from Benefits a little more quickly I think… So, I think it's working well. So, we have used data to do re-orgs within the department.

Insights. Participants made the distinction between insights that relayed informational data for reporting versus strategic measures for forecasting. Two sub-themes for insights were predominant: metrics and analytics.

***Metrics*.** References were made about the use of data for standard accountability measures that provided a snapshot of the organization. Participants referenced different figures that needed to be known and identified that data had different audiences. Participants referenced headcounts, turnover rates, promotions, performance review scores, average length of tenure, time off, and other numbers important to leadership. Participant 3Z2 recalled a new count that was requested in her organization:

> We had, we had decided to rollout this new functionality around tracking and everyone's comp ratio. It's basically where your pay is relative to the mid-point of the pay range. So, if the pay range, if the mid-point was $50,000 and you're paid $40,000 you'd be, like, point eight, right, because you're 80% of the mid-point. So, that was, like, a big thing a few years ago. [Our organization] was really big on wanting to track that. So, we figured out how we were going to calculate it and get it into the system and so we updated all, you know, all 2,000 employee records with that new field.

Participant T3U described some metrics that were important to the global organization that she worked for:

> I want to know who's in the system, how many times they've been in the system, but I also want to take that pool data out of the system. Ok, well, tell me how many people are contingent workers and come from Mexico versus in Canada. Ok, and what is the base pay? What is the average pay for that person? I want to see all of that.

Participants, particularly those in higher education and health care, often characterized their employee data as being more complex, which affected counts. 6MF shared:

> Folks want to know, you know, who are our active employees right now, for example. So that's a complicated issue. If you worked much with higher ed data it can be fairly complex just because, and you may find this something that creates the distinction between HRIS professionals in higher ed versus in corporations and other areas, [we] have every different kind of employee.

Most participants had faith in the data. Participant 3Z2 explained:

> And data is you know, the answer, right. Can it be manipulated? Yeah. Can it be interrupted different ways? Yeah. But for the most part it's hard to argue with it. So, I definitely see that becoming more and more important… and then over the years we've gotten better with our systems and our data it's starting to get, they're starting to drill down a lot more.

Analytics. The second sub-theme for insights referenced the utilization of statistics to uncover patterns and relationships to make future predictions. Some participants, including PC9, described the analytics they were currently looking at:

> We have, our trending reports are mostly within the recruitment area. So, trying to predict expectations of openings. So, based on turnover trying to predict how many seats or how many things our recruitment group can kind of get a pool for knowing that likely this is going to open. And then some of our other predictive reports that we're working on are related to succession planning. You know, so looking at, you know, here's a service for somebody and knowing based on industry trends that people either leave after this number of years or they promote after this number of years in that role. And trying to do predictions to know who we could promote. Some attrition is not bad, but who do we really want to keep in the organization.

Most participants, however, felt that their organizations were lacking in the area of analytics. Participant 6MF identified that the interest was there, but going about developing analytics was still in progress:

> We've got a group right now, within HR, that's interested in predictive, it's really, Talent Management is interested in analytics and predictive modeling, but we don't have a lot of reports right now that I can think of off the top of my head that are looking into stats like recruitment and you know, like, starting pay. I mean Talent Management is interested in a lot of things like that. We've got groups talking through how we can, what are the reports that would be most useful to groups like TM and HR consultants to use for analytics.

Participant 7N7 compared the availability of analytics at her previous position at an entertainment studio to her current position in higher education, "We definitely don't use analytics like I have in the past, but my HR group has developed analytics that helps communicate to the executive level." Additionally, several participants, including T3U, made the

distinction that their role was to provide data and reports, rather than interpreting the information:

> I always try to be proactive when I'm looking for data or the key indicators, like KPIs. Most of the time I'm not that person who is going to say, 'Hey!' Unless I see something that's really out of control, like, why are we spending this amount of money on something. I only see that if it's in my team, like, I never really look for it for other people's teams or for the entire business because that's kind of not my role.

Participant V68, currently working within higher education, felt the road to predictive analytics was currently out of reach due in part to their current system:

> I think that the key is, I think at some point we want to get to the predictive analytics if we can ever get there. I think the issue, why I say we're scratching the surface, we're still at ground zero [is that] we have data issues. We've been on PeopleSoft for 13 years and we're still fighting some data issues from decisions made at conversion time, we didn't have all the data at the right place at the right time.... We're still fighting to get that together but having said that, they're wanting to get to information analytics, to try to help predict things, like, here's your key positions, your retirement's coming up, creating dashboards to predict that.

Participant XGE felt that organizations were missing out on the opportunity to make analytics a significant part of their processes:

> My company gets into reporting and some metrics. I think I personally understand workforce analytics, I understand their value, I've seen their power. What ends up happening in the real world, at least at the size of clients that I'm working with, they end up kind of not putting enough time and emphasis on that and they don't, like I said early, they might not have some people specifically dedicated to that role, so it ends up getting a little bit under-utilized or underdone.

Reporting. Interview participants provided extensive commentary on the creation and presentation of reports to various stakeholders. All participants had extensive experience with providing reports. Participant CTG explained, "One of my specialties is report writing. So, I have done literally hundreds and hundreds of reports. Whether it is HR, which is my primary customer, but I also support our entire organization. I run a lot of financial reports." Concerning the content of the reports that he provides, CTG explained:

> It depends, you know. Some want predictive, some want, 'just give me raw data.' Others want a synopsis. I can give you an example, I was asked, after focal merit to do an analysis by gender, race, and ethnicity. My boss wanted to see the summary. The VP of HR wanted everything. So typically, my first question is, what are you looking for? How do you want to see the data? Do you want to see a summary? Do you want full-blown data? In a perfect world give me a picture of what that report looks like. I've been report writing for 18 years, you know, I have certain standard reports that take half an hour to change them around to give people what they need. Some are much more complex.

Two participants explicitly mentioned that they didn't pull reports for themselves. Participant 6MF explained:

> I mean, I don't really need any reports for myself, I don't do too much with reports. There are definitely auto-reports that I pull in order to look at correcting data but the vast majority of reports that I pull for people are for other people. They're for folks who have processes and need data to support what they're doing or figure out what they're doing or figure out what's wrong.

Participants consistently referred to being knowledgeable about where data was located and how to extract data. Participant VG8 stated:

> Most of our reporting is…most of ours is what I call data mining, we do a lot of pulling of data, because we have a familiarity of where it all resides, and what it is, we try to put together information about people, their pay, their funding, their job, ethnicities, any of those categories related to people. And we have standard reporting and things that we schedule and run.

Many of the participants encouraged showing reporting functionalities to the employees that they support. For example, EH8 explained:

> So, it's a lot of education that happens in an analyst role… I help [users] create reports that will answer questions that they have, either to help forecast for the future or to help see what has happened so they can identify trends or what has or has not worked in the past. I find it most helpful with users to ask them what question they're trying to solve. There's just a lot of data you could get and if you don't know what you're trying to use it for it's really hard to show the results [to] solve the problem you're trying to solve.

Participants described interactions with executives as typically being limited to reporting. EH8 conveyed that communicating data with teams differed from what executives needed to know:

> There's the whole story that you might discuss with your team and a lot of details that you might discuss with IT as far as what this stage is supposed to look like and functionally that's going to happen. But then when you speak with executives you really need to narrow that down to your executive summary and if they want more they'll ask you, they'll ask questions about what they want to know about… Their time is limited, it's not that they're not interested, they just have a lot of meetings and they're fitting you into a certain time slot and you have to be respectful of that time that we have with them and try to get the most out of it that we can. So, in my conversations with them you got to do a little bit of selling, show them what's the problem, how will this solve it, more at an executive level…It's simplifying it. So, simplify as much as you can so it's concise… that's how I would translate it is take your whole plan and make it as concise as possible and show them what the benefit is and how it solves the problem.

Summarily, participant T3U discussed communicating with executives, "[Executives] only want a high-level understanding of what's going on in the business. They don't need to know about the day-to-day process. They just need to know high level." She then described how she conveyed information to executives:

> I normally build a database or I'll build some charts or pivot charts, put some charts in there to give them a high level of what they need to see. Some systems have that built in where you can create reports and you can just click a button and the database appears. So, it just depends on how advanced the system is that you're using or how advanced you are at building reports.

She also conveyed that reporting capabilities was also a factor for her when choosing HRIS applications:

> Those are the questions that I ask when I'm talking to vendors. Like, 'Hey, what do your reports look like? What analytics can I pull out? Like, how robust is that? Is it just like flat files? Do we have the ability to do charting and create dashboards so we can see a high level aggregate view of all the data that is in the system?'

Those participants with coding experience characterized default reports from cloud-based systems as not being as useful. Participant 6MF stated:

> But canned reports from systems are just fundamentally more static and more limited in my opinion, because they don't work here on campus…so they don't really know what our processes are and know exactly what we need every minute and sometimes we don't even know what we need. So, we think, 'Hey, wait a minute what if this data is not right? How do we figure that out?'…Just from my perspective as an HRIS analyst, the control that I have over the reports that I can pull when I use SQL and talk directly to the

> database is vast. The control that I have when I go into a system where they've decided what they think I need and have produced that for me is obviously much less.

Category Five: Professional Identity

HRIS professionals spoke considerably about aspects of professional identity as related to their education background, career preparation, expected job role, and professional development. Table 9 represents the observed professional identity themes and sub-themes gathered from the interviews.

Table 9

Professional Identity with Themes and Sub-themes

Category	Themes/Sub-themes	Count
Professional Identity	Education	
	Related	9
	Unrelated	6
	Job Role	
	Skills	39
	Competencies	42
	Motivations	
	Personal	23
	Professional	14
	Perceptions	
	Leadership	21
	Peers/Coworkers	19
	Self	48
	Previous Experience	41
	Professional Development	
	Formal	12
	Informal	36

Note. N = 310 coded passages.

Education. HRIS professionals were asked to recall their formal education. Two sub-themes emerged where participants made statements for how they believed their educational experiences were either related or unrelated to the HRIS specialty.

Related. References to specific HR or IT degree plans or certifications where described by the participants. Half of the participants had related undergraduate degrees in areas such as

management and business administration, with concentrations in HR. Those who pursued advanced degrees studied business. Participant EH8 stated:

> I have an undergraduate degree in business administration and I did a concentration in HR… So, I did have somewhat of training and a formal background in HR, and I just kind of picked up the systems part through the experience.

One participant, 3Z2, indicated that her interest in HR was sparked by an elective course:

> One quarter I had taken a class on organizational development. It was a psychology class, kind of like the psychology of work. And I found that I really enjoyed the class and my cooperative education coordinator said 'Hey, you know we have an opening in the HR department here?'

Several participants, including 6MF, revealed that they wanted more focused educational experience to add more technology skills:

> And I think that I would need some more education before I went that way, because like I say, I'm not an IT professional. I mean, I may be classified that way but I don't have that kind of background. You know, for example, database analyst is something I would potentially be interested in but there are skillsets there that I think I don't have yet.

PC9 described her a previous job as a personal trainer and how her management tasks and development of education plans for other trainers encouraged her to seek HR education:

> I knew I wanted to go to graduate school but that interest for my personnel work was what made me want to do my specialization in human resources. So, I ended up going into a MPA, Masters of Public Administration program and specialized in human resources.

ZWU described his general management program and adding a concentration in HR:

> As I was going through the program I started getting more familiar with the human resources side of things and what I really liked about my degree is that it's not necessarily a human resources undergraduate degree that I got, it's a general management degree with a human resources concentration. So, I thought it was cool because I was able to get this still kind of overview, bird's eye view of everything that goes into business, that can come from either being part of a business whether it's public or private, but it also gave me kind of like that specialized people skills, people related kind of stuff, that I think sometimes other areas don't necessarily prepare you for too much, as far as how to deal with people, all the laws, possible repercussions, how to really manage a workforce.

***Unrelated*.** The second sub-theme for education saw references to formal education specified by the participant as having been dissimilar to their current career path. Half of the interview participants specified that they believe they did not have a related undergraduate degree, or some other credential that would seem befitting of an HRIS professional. Some majors included Spanish and political science. As demonstrated by participant CTG, "Well, I have a bachelor's in linguistics. So, it really has absolutely no application to my HRIS position. It's something I just kind of fell into." Another participant, 6MF, described what she felt was a lack of formal preparation:

> So, I'm probably kind of an unusual situation as far as HRIS analyst. I really don't have any educational background in what I do. I… basically just a general studies degree that they design as preparation for going on to graduate school. It was kind of the idea behind that degree. I did go to graduate school. I got a master's in industrial design, which also definitely doesn't have a lot to do with either human resources or databases or IT… But it wasn't required to have any background or certifications in HR related fields. So, I definitely never had any education in HR. Or really any business related education.

Job role. HRIS professionals offered detailed descriptions of their tasks and long-term projects. Two job role sub-themes emerged from the interviews: skills and competencies.

***Skills*.** Participants discussed day-to-day tasks and various action items at their current organizations. Participant 7N7 characterized the analyst as handling, "the day-to-day, which is needed, the person who's going to help with the data entry and all that kind of stuff, they are better knowing the consistency, the consistent day-to-day stuff." Data collection was a typical task that one needed to be proficient at. Participant T3U explained, "It's a lot of data gathering from middle management and people that are on the front line and actually do the work." Participant 3Z2 expanded on the analyst description:

> I would say day-to-day is just more like system support and then layered on top of that are longer term projects and ongoing data analysis… So, a lot of my team supports people in the day-to-day stuff. But then we also have bigger projects like the launching of performance reviews or the launching of a merit cycle that take weeks or months. Like,

> we're doing our first calibration, performance calibration, that's an entirely new process. So that takes weeks and months to build up and that's more supportive of the management level.

Participant 6MF described her organization's current paper conversion process and other tasks:

> So, I'll build a lot of PDF forms, fillable forms in Acrobat…and you know just for our department I'm the person who updates the website, so anything that's part of the HR page family I do the HTML on those pages. I don't do any PHP on the pages that we do, but I know just barely enough PHP to be dangerous. So, that's another part of the responsibilities, you know, I put together the electronic newsletter. Anything that has to do with computers my department is likely to try to figure out how they can assign it to me. I just do it. My responsibilities are pretty varied, I think. But that helps me to stay interested in it, keeps it different so I'm not doing the same thing.

Participant V68 described his previous IS role before switching industries, "The role was basically meeting with users, setting priorities, whatever involved the day-to-day work between HR and payroll application from an IT perspective. I was considered probably the go-between, liaison, business analyst, did some programming." When asked about the skills he looked for when hiring HRIS professionals he stated:

> It's kind of hard to say because people treat HRIS differently. Traditionally it's a business analyst type of role, what we have is more of a hybrid where we touch more on the IT role. So, for a job here I have to look at, you know, you look at experience within the level you're trying to hire and you look at experience with PeopleSoft, Oracle, or SQL skills, Microsoft Office skills…Exposure, do they have a knowledge of it and can they navigate and use it and know where all the parts are? That doesn't mean you're going to need to know any programing to change anything in it. But you can have discussions about it when we need change or if issues arise, you know enough about it that you're knowledgeable in the workings.

Basic knowledge of coding was mentioned by several participants as a useful qualification. Participant PC9 explained:

> I wouldn't be able to write code from scratch. But through HRIS I think you have to look at code often especially for reporting if you want to do reporting. SQL is how a lot of reports are built. Especially within business intelligence. So, you have to at least be able to read that to do HRIS. And I can edit, but I would love to be able to write it. Definitely something that I would like to pursue if time allows.

CTG mentioned that when considering new hires he looks for high technical skills:

> Experience. Or depending on the position, a willingness to learn. Very high, high, high, very critical computer skills. Knowing Microsoft word, knowing Excel. I'm a big proponent of Microsoft access but that's just because I've used it forever. Some kind of coding, experience with coding, even basic, like writing in a report.

Communication skills was also an important consideration. As stated by participant PC9, "Within HRIS all of our team members, primarily me as a lead, but all HRIS members have to be able to meet and communicate with all levels within the organization." She also described that knowing workplaces processes for the area they were going to support:

> So, the biggest item that I look for, and we've actually hired a few of the analysts within HRIS, we've done internally, and I find that that's beneficial because they understand the process of the area, so the process of recruitment or the process of benefits.

Several participants, including EH8, noted the technical skills they brought to the organization, "When I worked in their HR office there were a lot of people skills in HR, but sometimes not as much technical skills… So, I just happened to be kind of in the right place of the team." One participant, XGE, expressed that certain skills couldn't be acquired:

> On the technology side that's just where a lot of HR people either have it or they don't, you know, and there's only so much you can learn on that. So that's sort of my bread and butter. So, I can tell in like 5 minutes of talking with somebody if they have that skill level or they don't. Doesn't mean they need to be able to code, but they should at least understand how systems work, how databases work and things like that.

***Competencies*.** The second sub-theme for job role offered explicit statements about characteristics related to job success and the deeper understanding needed for administrative, operational, and strategic outcomes. Participant XGE explained the difference from tasks and deeper understanding:

> I know there's a huge difference between being able to run employee demographic report and being able to see why certain people are leaving in a certain department, and diving into that and creating a story. I think those are two very different things.

EH8 described the competency nature of an HRIS manager which meant having an all-encompassing understanding of the systems being utilized and their value and outcomes which allowed her to see how others could be affected:

> I served in a capacity in what's sometimes called a functional business analyst, which is really kind of your end user expert for an area. So, your functional business analyst is someone who's familiar with all the business processes in an area, all the procedures, and the operations, and how systems are used for that area, whatever that system happens to be. So, similar to being an IT analyst in that many of those are translatable skills that cross over. Such as being able to sequence end users, being able to bridge gaps between executives and end users and IT. And also, being able to document, just create documentation for developers so that they know what the end user needs to be built and why they need it. That's really how I made the transition and I really wanted to jump into something else. I wanted to try the side of supporting the broader base instead of just one department. So, I just kind of converted those skills to a broader mass audience in IT.

Participant 7N7 described the most successful HRIS professionals:

> What I've noticed is the best HRIS people are your individuals that can solve problems. There's individuals in the workforce that are looking for a standard solution. 'I have problem X, where can I look up the solution for problem X?' The best business analysts I've ever worked with are people that sit here and can come up with unique solutions on their own. And in all my career every project business analyst I've ever worked with can do that.

Participants, including 3Z2, addressed testing, gathering, and analysis as key competencies of the job role. Implementations required detailed processes and viewing changes from the perspective of various users:

> They need to have what we consider to be strong testing skills, or at least understand testing methodology and regression testing. Because a lot of what we do is making changes to the system. So, you need to understand if you're going to make a change, you need to have an approach for how you're going to test that change. If you add a step to a workflow you can't just go through and confirm the step as there. You need to understand all the different places that that step might be referenced and how it's going to impact that workflow. And then, as I think through kind of the higher-level analyst, the real strength that they have is the ability to understand how to talk to the client about what the client is asking for because a lot of times people will ask for something but that's not really what they need.

PC9 described an assessment she gave potential hires:

> What I look for to see if they'll fit in HRIS is analytical skills and troubleshooting skills. So, usually that's hard to asses in a posting, because you can post analytical skills, troubleshooting skills, [but] that's not really something that you can see on paper. But usually if I provide them with an example and go through the steps of how you would try to resolve it or get the end result or what, who do you need to contact to get the appropriate information to get an end result. That's usually what I find most valuable for HRIS, is that troubleshooting. You know, can you figure out this problem?

One participant, EH8, emphasized the ability to learn new things:

> So, in interviews I would ask questions that would tell me whether, how that person has taught themselves something. Or how that person goes about finding the answer to something if they don't know it.

Participant 3Z2 contemplated the competencies she recognized between the various levels of HRIS professional experience:

> It varies depending upon the level. So there's, especially with the junior ones I'm looking for people that have analytical mindsets. Like they're curious about how things work start to finish. They're detail oriented.

She also recalled when she started to recognize that all the components work together:

> You know, earlier in my career I was more of a classic analyst that was just sort of head down at my desk with my headphones on and just kind of in my own world of making key changes to systems and updating data. And you know, the lessons I learned from there was that, like, regardless of what you're changing you need to make sure that you're telling everybody that could potentially be impacted by it, no matter how small it seems. So now, you know, my team we err on the side of over communicating.

For participant ZWU, he described becoming aware of the power of reporting while working on a largescale implementation:

> And that was a really intense project, it went from helping design the system, giving feedback to the programmers as far as how things should work or how we wanted them to work, to pretty much sitting at my desk for hours comparing different reports to make sure the data was being transmitted correctly. So, it was very extensive and I learned a lot about how to pull reports, how to match reports, how to have the reports work for you as opposed to having to just download a spreadsheet and work it yourself. You really, I think as you work more and you develop more, especially in that kind of analytics HRIS kind of field, you start learning, you start developing this whole other side of your brain that kind of, you start seeing exceptions and you start wanting to link things together and find causality as far as this did this because of this because of this, and really trying to find the origin point of a problem.

He also expressed policy knowledge as a useful competency:

> I think it's interesting, in a way it does fall in line with HRIS because, and I think it's something a lot of people would say is kind of, should be divided, you know. You have the people that interpret policy and they you have the people that interpret data and work with the data, but I think that being able to learn policy and being able to understand and interpret it definitely improves your ability to analyze data, the reports, and help you even kind of even pinpoint what exactly you're looking for.

Motivations. HRIS participants also discussed motivations for career achievement. Two sub-themes emerged and described personal and professional incentives for success.

Personal. References to self-motivations and goal setting were described by the participants. The majority of participants identified challenging work as a motivator. Participant 7N7 explained:

> I can tell you when I was younger yes, I always had a professional goal and wanting to get, and be at the title, there was a goal, I always had a goal. Now for me it's the challenge. Which I guess is a goal in itself. But I don't do well with the mundane. So that's a personal thing.

She explained why she moved to higher education from entertainment, "It was a challenge that I couldn't believe was given. It was the challenge that brought me to that job. Meaning they needed me, they brought me in because of my experience." Participant ZWU described his motivations while job hunting and that he sincerely wanted to work at an organization that allowed him to grow:

> I've been working at this store for four years, but yes it's been a good time and I've learned a lot, but at the same time I just got my degree. I think I owe it to myself to learn something different. I have the degree, I have the time, I have the ability, and I have the urge to try something new. So why not go out there and see what's available. So, I knew that I wanted to start somewhere, I knew that I was going to want to look for somewhere where I could possibly start at the beginning and work up, to learn really what it meant to start from one point and go to another.

He continued about getting his MBA, "My master's degree was something that I just knew I was going to do it… It was just part of the plan, it was just part of, one of those things that I was

expecting myself to do." Concerning certifications, "I've also been thinking about working on some certifications, getting maybe some more detailed HRIS certifications or more technical certifications, pursuing my PHR certification also. Those are definitely things that I have goals set for myself." Participant PC9 also stated that earning her certification was a personal achievement:

> It was a personal goal. My company did reimburse as long as you passed the exam. So, when I did take it they reimbursed me for the certification. But that was for me, it wasn't required for the job and to be honest it wasn't even looked at admirably it was really just for me. But I wanted to have the certification to know that, I guess it was a test to myself that I knew all areas of HR, since the exam you do have to test on all of the areas instead of, I wasn't specialized in one area but I wanted to know that I really did know each area well enough to receive the certification.

Participants also discussed job satisfaction. PC9 described her love of HRIS and for the healthcare industry:

> I feel like even though I'm not a clinician I feel like I'm helping people by being involved in healthcare. At least with a public hospital, you know, not for profit, I do kind of intrinsically get that we're helping people.

T3U stated that she felt secure in within her career:

> So, basically my thought was that if I'm in HR I'm always going to have job because every company, every business sector has an HR department. So, I'm always going to have a job. That was my thought. It's kind of been true. I had a couple of years where it was a struggle but right now I'm doing pretty good for the last 8 years.

When asked about her long-term plans:

> If you would have talk to me last year, my long-term goal would have been something financial at another company, but I feel like since I reached that already it's not a financial goal, it's more of, just independence, you know having the guts to get out there on my own and do my own thing and be my own boss.

Professional. The second sub-theme for motivations referenced professional factors related to career influence and trajectory. ZWU noted the usefulness of his business degree:

> I just kind of prepared me so that when I would graduate with that degree I'd be open to a lot of different possibilities instead of just really locking myself into one specific field.

> So, I wanted to take a kind a, learn as much as I can in general about everything and then still be able to prepare myself to have kind of an option for when I graduated or when I started developing my actual professional career… I mean, definitely I want to be able to look back in maybe two or three years and see that I've had career progression, that I've learned a lot more. And really that's my ultimate goal, always learning, always having some kind of progression that I can turn back and say you know what I was here, I was there, now I'm here, I've been able to do well and I just have to keep going.

Several participants noted that their move into HR was initially made to improve their professional resume. Participant 7N7 described her entry into the HR field as happenstance for her career:

> Well, the best way to say it, so I was applying for an internship in marketing and in the interview, once the interview was done said, 'You know what we don't want you in marketing we want you in HR.' And I took it simply because it was an internship that I wanted on my resume and it turned out once I started I really enjoyed it.

Similarly, when asked about her HR certification, EH8, clarified, "That was something I just wanted to do…to make my professional resume stronger." Another participant, T3U, stated that she would consider a certification if it aided her job processes:

> I think the thing I would like to have is a PMP or a PMO certification, which would be project management, since I'm implementing so many systems. I feel like project management would be beneficial to help me do my job more efficiently.

Perceptions. HRIS professionals made extensive commentary on the perceptions of responsibility and credibility within the specialty. Three sub-themes emerged and categorize the participants' descriptions of how leadership and organizational peers view HRIS, as well as self-perceptions that participants project.

Leadership. References to the opinions of leaders within the organization were identified by the participants. 3Z2 recognized that leaders witnessed skills and competencies in their employees, "So my SVP at the time recognized my inclination for systems, so she tasked me with getting everything cleaned up." Participant ZWU mentioned several instances of receiving support and mentorship from his superior:

> My supervisor at the time, he would include me in different things. He saw that I had a knack for, again using the computer, trying to get reports for him, format data for him, or make presentations for him. So, he kind of started bringing me into a full, he saw that I wanted kind of to learn more than just be there. So, he would bring me more into the fold.

He explained that earning that the experience made him more visible within the organization:

> So, when this new roll out of a new HR system came through people were just like, 'You know what, you already know our data, you know our current system, and you've gotten used to pulling reports and being able to find things, you're on this project, you're going to start on this new project with us.'

T3U described a different experience when it came to earning respect from the executives:

> I just feel like I constantly, well not constantly, it depends on the environment, always having to prove my myself first before anyone would actually say, 'Hey, that person is knowledgeable. That person knows something, go talk to them.' I feel like I always have to prove my credibility first and then after that then, you know, everything becomes easier.

Participants had different experiences when it came to executive attitude about HR and HRIS. Some believed that HR was viewed as an equal. PC9 stated, "I definitely think our organization as a whole considers HR important. Stakeholders, so the executive level or director and higher, I would say consider HR a partner." Participant XGE shared his observation, as a consultant, about leaders who don't fully realize the strategic positioning of HR and HRIS:

> Whether they're reporting directly to the CEO or through the CFO, but it's never made sense to me why they wouldn't have more of a connection to the executive role, because almost every single company is going to be as successful as its people are, and the CHRO or the VP of HR is the one who should know the most about the people. But I think it's always been about the HR function being bogged down with the crap that they have to do on a day-to day basis that they have trouble getting out of that world and speaking at a higher level, you know. It's a stigma.

However, several participants, including V68, voiced that the change was slow:

> I think that it's changing, the executive sponsorship level looks at it as something valuable. But I still think there's a thought process where people don't quite recognize that yet. HR is considered a service to the company and not necessarily a big member at the table. There's just not enough of that change thought process yet that I can see.

Peers/coworkers. The second sub-theme for perceptions related to the perceived opinions about HRIS professionals from their coworkers and peers. PC9 recognized a difference between leaders and employees at her organization concerning trust:

> I think [executives] value the decisions of HR, but staff level has that kind of negative memory of HR, that stigma that seems to have always been there. And the leadership is definitely very collaborative as a business partner with HR. But from the associate level, like your daily or hourly employees, they I still think have that kind of stigma of HR as the rule maker. So, not as positive from the staff level.

Participant 7N7 emphasized that all end users are affected by HRIS decisions:

> The way I see it is, it's my job to give the tools to human resources, who then human resources can do what they need for employees and faculty and staff. And if you're supporting faculty and staff, the faculty and staff are giving good experiences to the student. So, there's a roll down. You don't want your employees to be frustrated just because they think their HR department can't do what needs to be done.

Participant EH8 described her method for supporting end users across the various academic departments at her university:

> Talk through the whole solution with them so that you're almost leading, or guiding them to a resolution, but they feel like they're part of the process. You're not just shoving a solution down their throat. Not just like, 'Here's your new system. You're going to log in tomorrow and you're going to love it.' That doesn't tend to work so well. But making them part of it and then having them feel like you're solving part of their problem as you go along and delivering them some small wins or big wins if you can is helpful to alleviating their fears a little bit and helping them trust you a bit more, that they don't feel railroaded…Building credibility with users is huge and that is one way that has really helped me gain that credibility with them, especially with introducing a new system on campus. There's a tendency to want to find outside consultants who are experts, but if you can get some credentials or do some special trainings that you can then kind of share with your constituents and those who you're supporting helps give you some more clout with them so they don't feel the need to go outside as much. They'll start trusting you a little bit more… You have to have a bit of a bag of tricks for that because you will need to adjust based on personalities and culture… So, I don't approach each school the same way because some of the tactics I use for, like, [school A] don't work at [school B] because they just approach things differently within each school. So, I would say definitely important to listen because they won't listen to you until they feel like they've been heard first. So, definitely listen to their concerns and repeat it back to them in some way, whether it's through a diagram of their struggles or a list of their high priority items that they want to fix. Usually try to make sure that they know that we understand them and their needs, and their concerns, and then talk through with them how we might, so

> options, for how we might combat that and what the limitations are. I find that being, communicating to the point of over communicating has served me well and trying to be open with them.

Self. The third sub-theme for perceptions described the ways in which participants self-identified as technology professionals. Participants offered concise descriptions when asked to describe their HRIS professional role. Participant 3Z2 offered a pitch:

> I was hired originally just to do compensation work, but I've kind of always had a knack for systems and figuring out data… but I would say, an elevator pitch, I would say that HRIS teams manage all of the employee data for an organization.

Participant 6MF also explained her role, "A lot of what I do is work with people to determine exactly what it is that they need when they don't really know yet what they need, as far as information from the databases." T3U characterized the dual nature of the function:

> I would say an HRIS professional is basically IT for HR. And if I give a long answer I would say that that's a person that goes and finds business processes and systems to fit the business needs that is specifically around HR... because I definitely know both sides of the business. I know the IT side which I have to, to implement systems, and I need to know the HR side to make sure that I'm compliant with federal and all other types of local laws that go into place when you're doing this kind of work.

Participant ZWU emphasized analytics:

> I've really gravitated towards computer stuff, whether it's basic processing, or figuring out how to find out information or manipulating data. I've always kind of been into that… HRIS, I think is kind of, more of the analytics behind it. Being able to look at the data. Yes, having some input as far as how systems are designed and how they're going to work, but a lot of times HRIS is more being able to just know the data that you're pulling. Being able to format the data in a way that's valuable. Being able to get some value to the data that you're working for, and being able to find and format and really deduce what that data means.

Participants also made noteworthy statements about whether they identified more as HR professionals or IT professionals. For participant 7N7, whose role falls within the IT department:

> I know that this may sound weird, but I think by the basis of where I am an HR person. Deep down I'm an HR person and that I'm dealing with HR people, the nature of an HR is to communicate, so it's actually easier to establish communication within that group, than I think in other areas have.

For participant EH8, an HRIS Business Analyst:

> My career path was really never to be, I did not aspire to be in IT. I was not techie, I cannot code. I still cannot code. I was surprised to find out for myself, just through this random career ladder journey that I've been on that there is a place in IT for non-technical people. So that was surprising, but also it's really great.

Two participants stated that they preferred the IT aspects over HR. Participant 9C9 quipped, "Sometimes, depending on I guess how casual the conversation is I would say that, I'm in HR but I don't really like people, so I do the IT side of it." While participant 6MF clarified that she would not be interested in more HR duties:

> I don't think I would move out into more of the HR direction because I consider myself more of a technology person even though I don't have an educational background in that. I feel much less so an HR person. I don't have a lot of interest in learning, you know, getting HR certification and working more directly with clients on actual re-org and recruitment issues and things like that. I really, I have much more of an interest in the technology side of it.

Most participants made statements about being the liaison between groups. EH8 expressed:

> What I ended up doing in my position in HRIS was bridging the gap. So, I was really sort of the liaison and troubleshooter, problem solver between HR recruiters and professionals and executives especially and the IT team. So, I end up doing most of the documentation of processes and system user guides for the HR users and that worked out really well for me because I could understand both sides.

HRIS professionals who identified as coders felt that the skillset was invaluable. Participant 6MF explained:

> SQL is probably the most important skill that makes me unique in an HR department because obviously in HR most of the folks are HR professionals who are working with customers and working through organizational issues and employment issues and concerns, and you know recruitment, education for employees and none of those things really have a strong connection, for the most part, with IT and with technology. And that's what sets me apart from my department and makes me I think most useful to them.

Previous experience. Participants referenced workplace readiness by recalling experiential learning opportunities from previous job roles. Participant 6MF described her introduction to data management:

> Some jobs that I've had in the past gave me experience working with data and computers… I used to work in a store that I managed, retail, a bookstore, a little independent bookstore. So, I got business experience from that… I had some spreadsheet, some Excel experience that they utilized me for in the production company for you know, tracking different things that they did.

Participant 3Z2 referenced how the scope of her responsibilities expanded:

> So, I started there and I kind of did more, it was mostly administrative work in HR. Like dealing with new hire paperwork. There was some Excel stuff that I had exposure to. I was responsible for getting all the information about people's pay and job information off to the headquarters in Virginia. We were responsible for the northwest, so just a couple of states. So, I got to the exposure of kind of working in a satellite office but being responsible for a region.

Participant 7N7 was one of several who entered HR because of an internship experience:

> After I graduated, [they] offered me a job in their records department. And then, so I was very familiar with the actions and reasons, if you will. I mean, all transactions go through the records department. You have to enter everything into the HR system. I got to know the gamut there, and I was working more, slowly they were putting me more on systems stuff. So, I was getting a taste of the bigger picture.

She continued by described how gaining knowledge of systems allowed for a lateral move within that organization:

> I was part of the implementation team to implement going from our mainframe to PeopleSoft. And I was working for the umbrella to our division and, and that one they had me solely being part of the applicant, the recruitment portion of the system. And then we were close to go live, but I ended up getting an opportunity and switching to the studios and getting to be a part of their project, they had already implemented, but they were in the middle of an upgrade. And there I got to see more aspects, or be part of more aspects, or parts of the system, like the records, the compensation, recruitment, and the merit portion of the system, performance. So, there I got a much bigger taste because we were a smaller team for a larger number of people and the way they did business there was completely different than the retail portion that I was at, at the company... I came in at mid-point but having had the [company] experience that I had it was an easy transition. You know the codes, you know how their basis works. And just like you bring somebody internal versus external, there's a quicker turnaround.

T3U described stumbling into HR out of happenstance:

> I got an internship… and it was in human resources and I didn't know that I wanted to be in human resources at the time. So I did my internship and I was hired on as a file clerk and that transitioned into like payroll coordinator and how I got into HRIS is where we

> were implementing a new system for our payroll so what happened was we didn't... this was back in 1999, so at that time it wasn't a lot of HRIS professionals it was just like, 'Hey, you work in HR this is your responsibility to go out and find a system and make the system work and do everything that it needs to do to fit the business need.' So that's how I stumbled or came into being in HRIS.

She continued about how learning an HRIS system was beneficial to her career:

> I felt like once you have that SAP background that opens up a lot of doors to pretty much everything in HR. Like, you can pretty much do anything you want to do once you have that knowledge of SAP.

Professional development. Participants discussed the ways in which they stay up-to-date with HR technology trends. All participants expressed that they constantly strived to increase their knowledge. Two sub-themes emerged: formal and informal learning opportunities.

Formal. Structured continuing education through certification programs specific to HR, IT, and project management were described by many of the interview participants. Several interview participants went back for professional certification or specific systems certification after having been in the workforce. They described certifications as including readings, modules, and projects as methods of identifying learning for certification and recertification. Several participants believed that HR certification was a way to level up concerning their lack of educational background in HR. 3Z2 discussed why she opted for an SPHR certification and how studying helped her grasp various systems:

> I hadn't been exposed to all areas of HR and I knew that I wanted to go down the systems route. But you know, if you think about it, if you're working on an HR system you need to understand all the different components of HR, because they're going to be impacted by that system… So, I wanted to, you know, I knew to make sure that we setup job profiles with the right exempt versus non-exempt, so I needed to learn, I needed to round out my knowledge with HR.

Several participants focused on earning certifications in the systems that they currently managed. CTG responded:

> And really, you asked about education, I've taken a lot of, when I was working with Oracle I went to Oracle University I did a lot of courses through Oracle. Multipro, I did a lot of things around reporting because they wanted to implement dashboards to roll out to executives. It's very much in system specific training.

Other participants, such as EH8, voiced their interest in earning certifications at a later date:

> I plan to continue to grow in certification, getting certified in Salesforce which is the system that I'm supporting right now. I have one certification and I'd like to get more in that regard to be a stronger resident expert for IT and for our users.

PC9, who holds a PHR certification, indicated that she wanted to continue her HR development toward more senior responsibilities:

> I do want to get my SPHR but from my understanding the difference between the two, is the SPHR, it tests your knowledge of your role as a supervisor and since it tests that you do have to have a certain number of years experience for it and I didn't at the time that I did the PHR. So, it will be something that I'll pursue, I just have not yet.

However, participant T3U had a dissenting opinion about the combination of advanced degrees and certifications:

> I have an opinion. I feel like this. I feel like, this is my personal opinion and not everyone is going to agree with me, but I feel like if you have a master's degree in human resources you don't need to go and get HR certification. Like, why would you do that when you spent eight years of your life in college studying, living, breathing human resources? I don't understand why you would need that when you learned everything that they are going to teach you all over again to go and get certified when you just spent your money on a master's degree. I don't see how a certification is going to trump that… I don't get the argument when some people say that a certification proves more than a master's degree in HR, but that's because I have a master's degree and I don't have a certification of HR, but I don't need it and I'm fine.

Informal. The second sub-theme for professional development was attributed to informal learning through self-teaching and personal learning networks. Semi-structured learning opportunities such as conferences are also included in the narrative. Participant 6MF described how she learned SQL on her own:

> I actually taught myself SQL for personal reasons, I wanted to create a database for some personal information… Actually, I garden and so I wanted to catalog all of my, the information about different plants that I grew…And so I got started with databases using

> one of those real light databases that you can install on a single computer. And so, I learned SQL through that process.

When it came to keeping up with innovative technologies, participant 3Z2 described her use of market research reports:

> Back when we were looking at different systems a lot of what I did was just, like I looked at the Gartner Magic Quadrant. Gartner publishes one every year where they talk about, you know, here are the key players in the HRIS world and here's how they map out in terms of innovation and size of the company and reliability… I started there and kind of looked at all of the systems that were on the market and then you know you look at their website and they always have, like, we do a demo every Tuesday if you want to just dial-in and watch it and then you end up on their mailing list and so you get ongoing updates.

Two participants pointed out that vendors maintained very useful knowledge bases and online communities. Participant CTG answered:

> Yeah, most systems, I know with Oracle, Lawson, Ultimate software they have incredible knowledge base sites. I'm currently working on Ceridian and they do not, which is very challenging. But for Oracle, once a year, I would go to their annual HR conference. Ultimate I went twice, and next year I'll be going to Ceridian's. It's a way to network with people and to learn things and to talk to people. They usually have there, some of the developers there. They have sales people there, subject matter experts. And I find those very, very helpful.

Participant 3Z2 made a concurring statement about the online community:

> Here we use a tool called Workday and Workday they've got a great online community. That is a place where my team is in there, on there, everyday. And I'm just logging in right now. It's documentation from the company. It's information about enhancements that are coming. It's questions from other customers. And right now there are 2,048 customers online. So, it's pretty active and it's a variety, there's customers, there's implementation partners, there's members of, like, directly from Workday, like product managers, there's a whole variety of people.

Participants also kept in contact with HRIS peers outside of their organizations. Participant 3Z2 explained:

> I talk to a lot of, I have a lot of friends and associates in HR, so I'll talk to them quite a bit and say, 'Hey what are you guys using for this? Or is there anything new that you know, we need to be aware of?' So, a lot of it is networking. I get the SHRM emails because of my SHRM membership. So sometimes they'll be references to things that I

> think will impact our system, like if there's new compliance laws coming into place, you know.

XGE shared the importance of maintaining professional contact:

> I mean honestly, I get it from working with clients and working with vendors and stuff. But I have certain individuals, that are, like, higher ups and the influencers in the industries that are kind of my, like, they don't know this, but they're my mentors kind of, so I just talk with them, tell them what I'm up to and they tell me what they're up to and through that I get a sense of where things, you know, what's important right now. So, I have like, probably between 7 and 10 people that I cycle through on a monthly basis just to check-in and that helps me stay updated. There's people that, like, either just do analyst work. They write about the industry. One guy, like, runs conferences over in Europe, you know. One guy's starting a new gig. It's a whole mix of different people.

Another participant, ZWU, mentioned the SHRM website and stated that it was a useful resource for policy updates:

> I do reading, I read on my own every so often when I can. I go to different websites. I go to the SHRM website. A lot of the major stuff is honestly posted all over the news. So, there's really no missing it. As far as HRIS, like I mentioned before, I've always been into kind of the techie kind of stuff so I read about it. I look at different stuff that's coming up. And really once you're in the field, I think, once you're actually deep in the field, you start doing a lot of research on your own.

Attending conferences was also a predominate method of professional development. PC9 categorized the different types of conferences she attends:

> Primarily I go to conferences that are put on by our applications, so the software companies, like Lawson or Taleo, or any of those vendor managed conferences. A few of our HRIS members will attend SHRM, but actually that attendance is higher in our non-HRIS areas, so our HR staff outside of HRIS attend SHRM. So those professional organizations are less HRIS, more other HR. And then also a few of our applications have user group conferences, so they're actually put on by user groups members. So, other organizations also using the same application you are will put on conferences and I've gone to a few of those. And those I find valuable if we're kind of at the same level of using the application, but if we're already far more advanced than most of the other users, as far as the extent to which we're using it, then it's less valuable. So, it varies between those three, whether it's professional, vendor, or user group.

Within higher education, some participants, including EH8, discussed having shared their implementation approaches with similar organizations:

> Some of it is from benchmarking with other institutions. For example, if we need to hire a consultant, what other institutions are kind of in the same situation that we are, and who have they used, and how did that go with them. So, recommendations from others, learning from other schools. And higher ed is kind of unique in that there doesn't seem to be anything sacred in that if you need help they're very collaborative. Higher ed just in general. So, if you go to a conference with other institutions they're more than happy to share with you what experiences they did, what worked, what didn't work, what were their failures. They are very open. So even in HR, but more so in IT, because it's a bigger struggle in the higher ed culture. So. there's a lot of collaboration with other institutions, there's a lot of vetting ourselves.

She continued with an anecdote about being a conference speaker at a conference where she shared a presentation about data distribution across academic departments:

> So, my presentations were on how we went about doing that. What challenges we encountered. What wins we gained from that as an institution, how it made us stronger, and then also as kind of the project manager and system admin what would I do differently if I had to do it again. Or what really helped make it successful.

Participants stated that remaining current with HRIS systems and trends was a diligent process. T3U described:

> I read a lot. I'm in a lot of groups, a lot of HR groups. I read a lot about new trends. Something that just came out is called SAP Hannah and I totally engulfed myself in just learning everything that I could learn without actually implementing the system so that I would have knowledge about that. If there's something that I want to happen or something that I need to happen technology wise I am always researching things like that. I also go to trade shows... I also go to all the conferences that are related to the systems that I support…So, I'm just kind of everywhere. I feel like I need to know everything, all the time. So, I'm just constantly researching stuff.

ZWU stated that it was difficult to know everything about HR in general, but it was always likely that you heard about the most recent updates:

> I don't know that you're ever completely up-to-date because things change so much that, the thing about HR is that if you work for a full-blown HR office it's pretty much almost impossible for you to not hear about updates in HR. Especially if it's for a big company or especially if it's for a giant institution that, for example, like a public institution that has to do a lot of outward reporting to the federal government and to the state government, it's almost impossible for you to not have to be up-to-date, because you're going to hear about it at one point or another, because a lot of federal and state regulations impact the way that your office or your business does HR kind of related business.

Participant XGE stated that he learns about HR technology trends by researching topics for publication:

> I just wrote something on the topic, it's about chatbots. So just, you know, the emphasis on trying to decrease headcounts in HR as well as the increase in consumption of information…[It] basically talks about the potential applications of chatbots in HR.

Category Six: Job Satisfaction

HRIS professionals spoke about their satisfaction, gratification, and happiness within the specialty as well as within their organizations. The participants spoke to specific facets that had the biggest impact on their contentment. Table 10 represents the sub-themes related to factors surrounding job satisfaction among the participants interviewed.

Table 10

Job Satisfaction with Theme and Sub-themes

Category	Theme/Sub-themes	Count
Job Satisfaction	Factors	
	Extrinsic	13
	Intrinsic	13

Note. N = 26 coded passages.

Factors. The interview transcripts thoroughly described how several factors surrounding the overall work environment and actual job responsibilities contributed to job satisfaction for the HRIS professionals interviewed. Two sub-themes emerged regarding factors toward satisfaction: extrinsic and intrinsic.

***Extrinsic*.** Participants expressed their opinions about career and job satisfaction based on interactions with external forces, specifically, the organizational environment created by their supervisors and other employees. Participant ZWU recalled his entrance into a lead role and the benefit of support from his superiors:

> My management, my direct managers at the time were very, very supportive. They knew I was very green, very new to that kind of big of a role. But they were very supportive so that definitely helped. But definitely that position was enjoyable.

Executive support also played an important role for participant 7N7:

> What was great about that organization that I was in is that the executives did back the project, so everything was on time and on budget… It was a great place to learn the function because they gave me tools or whatever I felt I needed to do the job.

One participant, 3Z2, expressed the gratification she feels concerning collaboration among her department:

> I'm pretty content right now. I'm probably, I'm really lucky. I have an amazing team and it's just, I've only been a people manager for about four years now and it's really great to focus in on the development of what I consider the next generation, kind of watch them grow and learn new things.

One participant, CTG, described leaving an organization after the environment changed due to an acquisition, "There were a lot of changes and a lot of people who had been there for a long time, [who] were not interested in staying." While participant PC9 stated that she appreciated the job stability and stability of the organization she was in. Participant 3Z2 was one of a few participants who had HRIS experience with global organizations. She expressed that the employee scope of global organizations afforded her unique systems opportunities:

> I felt like I learned a lot about global during that time and that was part of what drew me to [this organization], was that they were global as well and they were a bit larger and continuing to grow.

Intrinsic. The second sub-theme for factors related to job satisfaction was concerned with participant opinions about the nature of their work in terms of challenging work and task variance. Participant 3Z2 described her entry into HRIS after discovering which HR functions suited her:

> And I found that I really enjoyed the class and my cooperative education coordinator said, 'Hey, you know we have an opening in the HR department here? They're looking for an intern to be exposed to all the different areas of HR if you want to try it out.' So, I

> did it. It was interesting because I got to see what I liked and what I didn't like. And during that time I was [in] recruiting and I was like, I don't like recruiting. Definitely not my thing, but I really liked working on HRIS and compensation. So, it allowed me to go ok, these are the areas that I like and then when I graduate this might be a field that I want to start working in.

Participant CTG conveyed his enjoyment for the workload that HRIS presented:

> Like I told one of my friends, the job I have right now it is my dream job because I do HRIS and that's all I do. And it's challenging because… I've had to set up six new benefit plans this year. It's a challenge. It can be very boring, but I really do love it, and I am very passionate about it.

He continued:

> I'm happy where I'm at [but] I can probably tell you in two years I'll be bored. But I really am passionate about what I do and I'm very happy doing what I do. I've managed people before, no aspirations to do that… and I pretty much decided I'm done with IT… I really like, really just prefer the HR world… [and] the HRIS world is changing so fast.

All the participants found the HRIS specialty to be stimulating. One participant, 7N7, described jumping at the opportunity to participant in a challenging system upgrade:

> I got the opportunity of a lifetime... I got to take [them] from a mainframe to PeopleSoft… They brought me in because of my experience, but also to clean up an implementation that had gone awry.

3Z2 described the accomplishment she feels having been able to improve HR processes at her organization:

> And so I think I will probably be here for a little while, just because we're working on some interesting projects as well. You know, I feel like this is almost a house flip when it comes to internal systems. Like, you know, I came in here five years ago to this, like, total disarray and I look at it today, and I'm like, oh my God it's so much better than it used to be. There's still work to be done.

For participant EH8, the people aspect appealed to her the most:

> I was surprised to find out for myself, just through this random career ladder journey that I've been on that there is a place in IT for non-technical people. So, that was surprising, but also it's really great, I really enjoy being able to help people solve their needs and also kind of be that middle buffer and I think it's going to be, the person to bridge that gap between the technical and non-technical side.

Participant 6MF agreed that the changing pace of HRIS kept her engaged within the specialty, "My responsibilities are pretty varied, I think. But that helps me to stay interested in it, keeps it different so I'm not doing the same thing." She continued with praise about getting the opportunity to learn new skills on the job:

> You know, I never really thought that this was something that I'd want to do with the rest of my life. You know, nobody says, nobody will ever tell you when they were a little kid, 'I want to work with data, I want to work with spreadsheets, that's my passion.' But I really just enjoy the day-to-day projects and tasks of it so much because it's very much a problem-solving kind of a thing, working with databases. And so, I was really lucky to find this job. I enjoy it a lot and I'm lucky that they were willing to hire me into it and grow me up in those pieces that I wasn't as strong in, that I didn't have any background in. Because you know, the scripting, the SQL and talking directly to the database, developing reports for all kinds of different uses, is a lot of fun for me.

Like several other participants, she stipulated that the coding and queries appealed to her but there was concern that those opportunities would decrease:

> That could definitely easily change. I definitely think that if the piece of my role where I am using SQL to talk directly to the database went away, the job would be a lot less interesting to me. That's always a possibility, especially if we're looking at systems that are not located on site and our data is with somebody else and basically, they have canned reports and we can customize reports through the system but it's no longer kind of that game where you use the [programming] language to talk directly to the tables and get them to give you what you want. It's kind of a totally different skill set. It's just less interesting in my opinion to work with systems like that than it is to work directly with the database.

Summary

This chapter reported the results of a qualitative study to explore the role delineation of HRIS professionals. Data was collected from 10 semi-structured interviews with recruited HRIS professionals currently working at U.S. organizations. Interviews were conducted over the phone or using FaceTime. Study participants were asked about their education, work experience, job responsibilities, and opinions about the HRIS specialty. The researcher transcribed each interview and utilized qualitative software to code data for analysis. Noteworthy responses were

situated into themes and sub-themes. From related themes emerged six major categories (a) data management, (b) HR/IT intersection, (c) HRIS emergence, (d) business intelligence, (e) professional identity, and (f) job satisfaction. Further insight into how the findings and categories provide a basis for answering this study's central research questions and sub-questions are presented in the next chapter, along with recommendations for future scholarship and practice.

Chapter 5: Study Conclusions

With technology usage increasing and an influx of digital natives in the workforce, organizations are met with increasing demands to consider how to incorporate and manage technology applications for their employees (Bersin, 2016; Sierra-Cedar, 2016). In an increasingly competitive and complex business environment, HR technology has been promoted as a solution to simplifying work and cutting data complexity through improved systems (Weeks, 2013). As evolving technology and emerging best practices in workplace processes continue to transform organizations, HRIS professionals hold a unique positioning at the intersection of understanding HR functions and technology solutions. The purpose of this study was to investigate the role delineation of HRIS professionals as contributors to the HCM process. To understand the trajectory of the HRIS professional and establishment within organizations this study posed a central guiding question and two sub-questions:

- How does the HRIS professional role support the functions of HR and transformation of HR activities within organizations?
- How do HRIS professionals describe the responsibilities and competencies of the role in response to the emergence of big data?
- How do HRIS professionals describe the outlook of their professional role within organizations and the HR profession?

This chapter provides a summary of the research study findings and relates them to the proposed research questions. Then, conclusions based on the data are presented along with implications and recommendations for practice and opportunities for future research.

Conceptual Framework

To examine the HRIS professional role, two concepts were considered when analyzing the

interview data. Organizational role theory and delineation describes how employees define their role and how other professionals respond to such definitions (Naikar, 2013; Prien, 2009). Additionally, the study considers HCM theory and the contribution of HRIS professionals to an organization's competitive advantage. The HCM theory also assesses how HR technology influences the management of the HR functions (Sierra-Cedar, 2014).

Methods

This exploratory study utilized the qualitative research technique of interviewing. Recruitment stipulated that participants have seven years of progressive work experience dedicated to the HRIS specialty, work at a U.S. based enterprise, and preferably hold a higher education degree in HR or IT. Ten HRIS professionals participated in interviews with the researcher. Interviews were conducted by phone or FaceTime and lasted between 45-55 minutes. The researcher followed a semi-structured interview protocol and inquired about their educational backgrounds, employment history, and professional development. The participants also responded to questions about their entry into the specialty, their job responsibilities, and their opinions about HRIS in the workplace. Interviews were transcribed using HyperTranscribe, and then imported into HyperResearch for thematic analysis.

Discussion of Key Findings

The exploratory nature of the design resulted in an extensive amount of qualitative data. Interview analysis resulted in 724 coded passages grouped into six categories (a) data management, (b) HR/IT intersection, (c) HRIS emergence, (d) business intelligence, (e) professional identity, and (f) job satisfaction. Within each category were themes and sub-themes that represented detailed ideas. Several key findings emerged from participant interviews. These findings are presented below and address the study's guiding research questions related to

supporting and transforming HR processes, responsibilities and competencies of the role, and the future outlook of the role within organizations and the HR profession.

HRIS emergence. Participants spoke to the emergence of HRIS in response to industry norms and organizational culture. Many associated the growth of HRIS with the usage of technology by employees and the collection of employee data. In general, participants stated that HRIS emergence was a direct response to technology trends. The participants all described their concerns with managing the expectations of end users. They expressed that end users had varying levels of interest and ability in using HRIS applications and could become frustrated or overwhelmed with technology. The data implied that there was a generational difference, where younger employees were more adapt with technology, but would become frustrated with certain limitations. Other generations appeared to place more responsibility on the HRIS professionals, and had a more difficult time adapting to new work processes.

Participants described data management concerns, including data integrity, compliance, and moving away from paper collection methods toward more simplified digital capturing. Attention was given to the ownership of data as related to how information was stored, made available, and disseminated to the appropriate parties. A concern about storing data in-house versus the cloud presented itself among participants who suggested that it was useful for certain sized organizations, but at the cost of losing some amount of control over the data. Participants also described application and enterprise development, customization, and the cost-benefit comparison to homegrown resources. Participants also described making a business case for HR technology purchases. Results indicated that some organizations instinctively invested in HR and HRIS while others viewed HR as a liability. HRIS professionals generally considered cloud-based and SaaS products as user friendly and cost-effective.

HRIS professionals discussed their organization and departmental structures, including sizes of organizations they had worked at and how implementation projects were staffed. In some cases, the HRIS professional was classified under the IT department. There were also instances where organizations did not have an IT resources in-house. Participants considered task allocation between HRIS and IT professionals and classified tasks that were distinct to each role. The data presented opinions as to which systems were managed by which function. Whereas, HRIS professionals felt solely responsible for systems specific to employee information, IT professionals were identified as being responsible for systems they had procured or that integrated with multiple systems. Implementation projects were collaborative endeavors between multiple departments, including HR and IT. Tensions between these two groups were identified as concerns surrounding communication and support. The participants described the evolution of their role as incorporating more database and systems design and implementation. Several respondents spoke to having a basic understanding of coding, while some HRIS professionals were considered very proficient in coding.

Professional identity. The interview data produced numerous entries related to the professionals discussing the necessary skills and competencies for the HRIS job role. Participants summarized day-to-day tasks associated with data collection, pulling reports, and supporting end user requests. Participants characterized themselves as being analytical and detail oriented. Additionally, they spoke to their ability to comprehend systems, by making connections to cause and effect, and problem-solving. The data presented that these ideas could be evaluated when considering hiring potential HRIS employees. They also discussed motivations for career achievement and professional motivations pertaining to their credibility as HRIS professionals. The participants felt that leaders were receptive to and recognized their skill level and

contributions. However, the professionals identified their end users as still skeptical of HR. Participants mentioned several strategies they used to foster better relationships with their users. HRIS professionals commonly described HRIS as IT for HR. Additionally, they spoke to being liaisons and bridging the gap between the two functions. Several HRIS professionals who had dived into coding and programming while others mentioned interest in project management. Respondents often referred to previous job experiences and memories of falling into the HRIS specialty because of their inherent knack for technology. The data also revealed information about professional development among the participants interviewed. Participants engaged in formal opportunities, such as HR certifications and systems certification. However, participants continuously engaged in more informal professional development opportunities by researching trends and applications, attending conferences, and utilizing their personal learning networks.

HRIS professionals also made statements about their contentment within the specialty. They spoke of job satisfaction in relation to the extrinsic factors of their work environment and the intrinsic characteristics of their job role. In general, participants did not bring up significant instances of negative feelings or stressors concerning their interactions in the workplace or with superiors. Also, most appreciated the growing pains and experience gained from their time at previous organizations. Concerning the characteristic of their HRIS role, all the participants reporting being very happy with the work that they were doing. Participants described the work as challenging, stimulating, and constantly changing.

Business intelligence. Participants described executive interest in data leverage and provided examples of desired employee outcomes. Additionally, the interviews clarified that certain insights were viewed as standard accountability while other measures offered patterns and predictions associated with analytics. Participants spoke considerably about report pulling,

including creating their own custom reports, using reports from vendor applications, and combining reports. Most participants believed that their organizations embraced metrics but the results indicated that their organizations fell short of utilizing data reports to produce predictive outcomes. The interviews identified workforce and recruitment analytics as being the most common predictive measures. The consensus seemed to be that analytic models were not being developed.

Study Conclusions and Implications

Following an in-depth analysis of the findings, the researcher identified four study conclusions and their practical implications.

Conclusion one: HRIS professionals encourage HR technology integration to improve workplace processes. The first conclusion states that HRIS professionals encourage HR technology integration to improve workplace processes by disrupting outdated and inefficient manual processes within the workplace. The HRIS professionals interviewed are knowledgeable about processes, organizational data, and technology trends. Participants described their efforts in researching and vetting HRIS applications and systems for implementation into their organizations. Much of their time was dedicated to meeting with end users and seeking the best solutions to improve their day-to-day activities. This conclusion considers the characteristic of HRIS professionals as subject matter experts, seeking a balance between knowledge and application (Stokes, 1997). HRIS professionals benefit from actively engaging in the specialty by seeking professional certifications, attending conferences, and communicating with their personal learning networks to expand their knowledge. This finding supports Bailey (2015) whose phenomenological study revealed that professional development is part of the HR practice and that non-formal learning is experienced as a means of professional

development. The study participants demonstrated that successful HRIS professionals are problem-solvers and systematic and analytical thinkers.

Conclusion two: HRIS professionals manage data integrity and support the safeguarding of employee information. The second conclusion states that HRIS professionals manage data integrity and the gatekeeping of employee information. HRIS helps organizations with complex employee classifications, and therefore complex data. Participants described the influx of employee data and the need to confirm correct information about employees, comply with retention laws, and oversee the access and dissemination of employee information and workforce data shared within the organization. This finding considers role theory, as several of the professionals interviewed described that the crossover of HRIS and IT raised questions about the boundaries related to where responsibility lies with HRIS applications and systems, and employee data. As noted by Stamper and Johlke (2003) organizations consider role theory by addressing role conflict and role ambiguity. Additionally, participants attested to collaborative efforts with other departments as being positive experiences, whereas others had experienced instances where there was lack of engagement. Therefore, conflicts can be lessened by engaging in reoccurring meetings, collaborative projects, and embracing opportunities for knowledge transfer. These findings support the work of Cerra, Easterwood, & Power (2013) who concluded that collaboration was a means of navigating organizational politics. Collaborative engagement can, therefore, improve the relationship between HR and IT departments concerning systems implementations.

Conclusion three: HRIS professionals run data inquiries and provide reports that influence decision making related to workforce and business outcomes. The third conclusion states that HRIS professionals run data inquiries and provide reports that influence decision

making related to workforce and business outcomes. Participants revealed that pulling reports and data mining was a significant feature of their role. Participants described the various requests for metrics concerning employee data and human capital figures that were requested by executives and other leaders. HRIS professionals were adept at making customized reports by combining several reports into one. This was essential when the participants concluded that a customized report would contribute to a better narrative for the requestor. Literature indicates that knowledge of metrics and analytics lead to actionable insights and therefore improved business outcomes (Weisbeck, 2016). SHRM (2012) identified technology usage as a means to solve business problems as a competency related to business acumen. For HR departments, the reporting of metrics and further consideration of analytics becomes an essential component that moves the HR function from operational to strategic tasks. As suggested by the HCM theory, HR then becomes an asset by improving business outcomes (Sierra-Cedar, 2014). Therefore, HRIS' reporting responsibilities support outcomes of various HR functions, such as recruiting, training, compensation and benefits, and succession planning. However, the HRIS professionals agreed that big data analytics to make predictions was emerging but consequently underutilized in the workplace.

Conclusion four: HRIS professionals are enthusiastic about emergent job responsibilities in system design and coding. The fourth conclusion states that HRIS professionals are enthusiastic about emergent job responsibilities in HRIS system design and coding. Participants described basic coding that they utilize during system implementations and upgrades. Respondents enjoyed the challenging nature of combining HR knowledge and people skills with technology solutions. HRIS professionals discussed workarounds and customizations that they aimed to complete for end users. Additionally, HRIS professionals expressed interest in

gaining more education in IT specific areas and some had already sought system certifications from product vendors that they are currently using in-house. Several HRIS professionals insisted that they identified as technology professionals and as having a knack for technology. There were also opportunities for HRIS professionals to make lateral movements into IT. These results also concern role theory as it relates to professional identify and self-identification of the participants as being tech savvy (Walsh & Gordon, 2008). These findings support the work of Lawler and Boudreau (2015) whose yearly surveys indicated increased satisfaction among HR professionals with utilizing technical skills. Therefore, these new skills also contribute to contentment and satisfaction among HRIS professionals.

Recommendations for Practice and Scholarship

Practice and research related recommendations emerged from the data. Interview participants described resistant attitudes from end users, suggesting that HRIS professionals needed to gain stakeholder confidence. Mondare, Douthitt, and Carson (2011) discussed the importance of executive buy-in. As mentioned by the participants, leadership typically recognized the value of HRIS. Therefore, leaders and executives can influence the opinions of end users as to the helpfulness and credibility of HRIS professionals by expressing buy-in, in a way that is visible and impactful on the culture of the organization. This could potentially encourage better working relationships between HRIS professionals and end users.

Given that some participants described their organizations as not using HR analytics, it is recommended that companies lacking in data analytics consider developing an organizational analytics team that makes use of data within the organization and develops analytic models. Roles on this team would include a project manager, business analyst, and database administrator (EMC Education Services, 2015). In this capacity, HRIS professionals would play a significant

role in developing measures for big data analytics. HRIS professionals would be unique contributors to an analytics team, because they are very familiar with people data and can represent the interests of the HR department.

The interviews also revealed opportunities for additional research. With participants discussing the cost savings associated with the adoption of cloud-based systems and the outsourcing of the IT function, it is recommended that research is conducted concerning this trend. Specifically, how this trend might reveal information about the development of new HRIS skills in coding and system management in organizations. Research can be specific to industry and organization size in demonstrating the consolidation of responsibilities.

Limitations of the Study and Internal Study Validity

The sample focused on HRIS professionals with seven years of progressive HRIS experience in U.S. based organizations. The recruitment parameters did not reflect the youngest generation in the workforce. As the workforce is nearing a changing tide concerning preparation and technology fluency, there probably are insights into the proclivity for technology and the self-identification of the upcoming HRIS leaders and their end users that these professionals' views did not address.

This study involved HRIS professionals of various titles and from various industries. This produced extensive amounts of data, which was helpful in the board, exploratory sense however industry specific or role specific conclusions cannot be made. Researcher bias was considered, as the researcher was interested in this topic because of previous workplace experiences on both the people resource and technology resource side of organizations. To convey accurate interpretation to the reader, the researcher engaged in reflexivity throughout the study including validation and pilot testing of the interview questions. Multiple reviews of interview transcripts and resultant

coding occurred and a peer reviewer was engaged to ensure consistency of the interpretation of the interview data.

Closing Remarks

This study provided an in-depth analysis of the preparation and responsibilities of HRIS professionals and comments on the outlook for the profession. The results of this study confirmed my opinion that HRIS professionals help improve work processes by procuring useful applications for employees. Additionally, HRIS professionals can contribute to HR's strategic positioning within organizations by reporting actionable insights and thus encouraging the movement toward predictive analytics.

Having personally experienced frustrations in workplace situations where my technology needs and desire for better application logic were not always in line with the motivations or priorities of IT professionals, I've always contemplated what a role invested in the people component of HR technology would resemble. I learned a great deal from listening to the opinions and experiences of the HRIS professionals who I met. Each participant commented on the importance of bridging the gap between IT and HR, and the majority expressed that they enjoyed the dual nature of their responsibilities. It is my hope that this study not only addresses a void in the literature specific to the HRIS professional role but also that the outcome of this study provides qualitative insights and recommendations that will encourage HR departments to support the HRIS professional role.

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APPENDIX A

Call for Participants

Greetings,

My name is Sapora Bradley and I am a doctoral student at Pepperdine University. Under the guidance of my dissertation chair, I am working on a research project to explore the responsibilities of human resource information system (HRIS) professionals. For this study, I am seeking the opinion of HRIS professionals who would like to discuss technology, analytics, and strategic planning.

If you have 7+ years of work experience dedicated to HRIS and are in a current HRIS role at a U.S. based enterprise, this study might be for you. Participants will engage in an hour-long interview. Each interview will be reviewed for themes pertinent to the HRIS professional role. Benefits to you include an expanded understanding about the current state of the HRIS professional role as articulated by the collective opinions and experience of the fellow participants. Your identity will remain anonymous and will not be published in the dissertation manuscript.

For more information and to join the study please email [redacted]. Your help and expertise are greatly appreciated and I invite you to forward this opportunity to your colleagues.

Sincerely,

Sapora L. Bradley, PHR, SHRM-CP
Pepperdine University, Graduate School of Education and Psychology

APPENDIX B

Informed Consent

PEPPERDINE UNIVERSITY
Graduate School of Education and Psychology

INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES

Technology and Analytics for Human Resource Management: The Role of the Human Resource Information System Professional

You are invited to participate in a research study conducted by Sapora Bradley, M.A. and under the supervision of Kay Davis, Ed.D. at Pepperdine University, because you have at least seven years of progressive experience as an HRIS professional. Your participation is voluntary. You should read the information below, and ask questions about anything that you do not understand, before deciding whether to participate. Please take as much time as you need to read the consent form. You may also decide to discuss participation with your family or friends. If you decide to participate, you will be asked to sign this form. You will also be given a copy of this form for your records.

PURPOSE OF THE STUDY

The purpose of the study is to explore the qualifications, responsibilities, and strategic benefit of HRIS professionals.

STUDY PROCEDURES

If you volunteer to participate in this study, you will be asked to participate in an hour long interview. The interview will be conducted in person or via Skype. You will be asked questions about the qualifications, duties, and strategies associated with the HRIS professional role. You will also be asked questions about your background and questions about your current place of employment. You will be audio recorded as to maintain the accuracy of your statements. You can still participate in this research study if you do not wish to be audio recorded.

POTENTIAL RISKS AND DISCOMFORTS

The potential and foreseeable risks and discomforts associated with participation in this study include possible stress related to the publishing of your opinions in a dissertation. In order to minimize risk and discomfort your identity and place of employment will only be known to the researcher and will not be linked to your interview responses.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

The anticipated benefits to your participation include your personal reflection about preparing your organization for changes in technology and workforce trends. Additionally, the HR profession as a whole may benefit from the clarification of the HRIS professional role.

CONFIDENTIALITY

Any identifiable information obtained in connection with this study will remain confidential. Data will be transcribed and de-identified by the researcher. You have the right to review or edit the audio recording or transcript. All data will be stored on a password protected computer in the researcher's place of residence for a period of three years before being destroyed.

The records collected for this study will be kept confidential as far as permitted by law. However, if required to do so by law, it may be necessary to disclose information collected about you. Examples of the types of issues that would require me to break confidentiality are if disclosed any instances of child abuse and elder abuse. Pepperdine's University's Human Subjects Protection Program (HSPP) may also access the data collected. The HSPP occasionally reviews and monitors research studies to protect the rights and welfare of research subjects.

SUSPECTED NEGLECT OR ABUSE OF CHILDREN

Under California law, the researcher(s) who may also be a mandated reporter will not maintain as confidential, information about known or reasonably suspected incidents of abuse or neglect of a child, dependent adult or elder, including, but not limited to, physical, sexual, emotional, and financial abuse or neglect. If any researcher has or is given such information, he or she is required to report this abuse to the proper authorities.

PARTICIPATION AND WITHDRAWAL

Your participation is voluntary. Your refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

ALTERNATIVES TO FULL PARTICIPATION

The alternative to participation in the study is not participating. The relationships with your employer, colleagues, and professional organizations will not be affected whether you participate or not in this study.

EMERGENCY CARE AND COMPENSATION FOR INJURY

If you are injured as a direct result of research procedures you will receive medical treatment; however, you or your insurance will be responsible for the cost. Pepperdine University does not provide any monetary compensation for injury.

INVESTIGATOR'S CONTACT INFORMATION

You understand that the investigator is willing to answer any inquiries you may have concerning the research herein described. You understand that you may contact Sapora Bradley, [redacted] and Dr. Kay Davis, [redacted] if you have any other questions or concerns about this research.

RIGHTS OF RESEARCH PARTICIPANT – IRB CONTACT INFORMATION

If you have questions, concerns or complaints about your rights as a research participant or research in general please contact Dr. Judy Ho, Chairperson of the Graduate & Professional Schools Institutional Review Board at Pepperdine University 6100 Center Drive Suite 500 Los Angeles, CA 90045, 310-568-5753 or gpsirb@pepperdine.edu.

APPENDIX C

IRB Approval

NOTICE OF APPROVAL FOR HUMAN RESEARCH

Date: July 27, 2016

Protocol Investigator Name: Sapora Bradley

Protocol #: 16-05-268

Project Title: TECHNOLOGY AND ANALYTICS FOR HUMAN RESOURCE MANAGEMENT: THE ROLE OF THE HUMAN RESOURCE INFORMATION SYSTEM PROFESSIONAL

School: Graduate School of Education and Psychology

Dear Sapora Bradley:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at community.pepperdine.edu/irb.

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chairperson

cc: Dr. Lee Kats, Vice Provost for Research and Strategic Initiatives

Mr. Brett Leach, Regulatory Affairs Specialist

APPENDIX D

Interview Protocol

Date: _____

Interview #: _____

Method of Interview: □ In-Person □ Skype

Interview Introduction

Thank you for agreeing to be a part of this study about the HRIS professional role. This interview will take no more than an hour of your time. During this interview, I will ask you questions about your experience as an HRIS professional, the duties and competencies of the role, and the contributions of HRIS within your organization and the HR field as a whole. I encourage you to be as candid as possible because your responses will add to the quality of the data collected. However, you can refrain from answering any question that you feel uncomfortable answering. Rest assured that all of your responses will remain confidential and will only be used for the purposes of completing this study. You have signed a consent form that outlined your rights under this study and any possible risks of the study. If you do not have any further questions pertaining to your consent to participate in this study, we will begin the interview.

Interview Questions

1) How and when did you enter the HRIS profession?
    a. What was your prior work experience before moving into the HRIS role? HR or IT related?
    b. Can you expand on your educational background? Including certifications.
2) Please describe your current job role.
    a. Can you please describe your current organization: # of employees, # of HR employees, global employee assets, and organization structure?
    b. How has HRIS varied between the different organizations you've worked?
3) How do you define the HRIS professional role?
    a. What are some of the job duties assigned to an HRIS professional?

   b. What are required job competencies for an HRIS professional?

4) What does an HRIS professional provide to the HR function and business function?

5) How is data being used for regular operations? Proactive and predictive outcomes?

   a. What specific data measures do you look at?

6) How does HRIS contribute to HR's role as a strategic partner within your organization?

   a. Please describe an HRIS driven project or strategy that has been carried out or proposed within your organization.

7) What is your opinion concerning the current trends and future outlook of the HRIS profession?

   a. What are some of the challenges faced by the HRIS specialty or professionals? Suggested solutions?

Conclusion

Thank you, I appreciate your time. Do you have any other statements or clarifications you would like to share? Do you have any suggestions for additional participants who might be interested in this study?