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by

Emily A. Messa

May 2015

MEASURING UP: A CASE STUDY APPROACH TO ASSESSING THE VALUE OF
UNIVERSITY STAFF PERFORMANCE MANAGEMENT

A Dissertation Presented to the Faculty of the College of Education

University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Philosophy

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MEASURING UP: A CASE STUDY APPROACH TO ASSESSING THE VALUE OF
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An Abstract

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Abstract

In 2011, non-instructional employees comprised approximately 60% of the workforce at four-year, post-secondary institutions in the United States, according to the U.S. Department of Education (2011). While the performance of instructional staff at post-secondary institutions has been the subject of much empirical study, little is known about performance measures used with non-instructional staff. This quantitative case study of one public higher education institution's performance management process fills a critical void by describing the staff workplace culture of that institution through its performance management practices.

This study evaluated the management tool of the staff performance appraisal, which is typically a corporate process that has been adapted for higher education. These management tools and corporate terminology, such as customer service, have increasingly been incorporated into the higher education culture, and little is understood about their effects on this environment (Birnbaum, 2000; Szekeres, 2006). This study utilized employee performance appraisal and demographic data for non-instructional university staff from 2,401 university employees at a large, urban research institution located in the Southwestern United States. This staff performance appraisal was divided into four components: (a) job goals; (b) job responsibilities; (c) customer focus; and (c) competencies (Human Resources, n.d.a). There were three research questions of interest in this study, including: (1) Within a university setting, how are employee competencies valued by job title within colleges and divisions? (2) How are competencies of individual

university staff valued in comparison with job responsibilities, manager responsibilities, job goals and customer service? (3) How is university staff customer service valued in higher education, and are there individual and college/division differences in customer service?

Multiple correspondence analysis was used to answer research question 1. Findings included that, among non-manager employees (N=1,836), the first dimension accounted for 65.11% of adjusted inertia, or explained variance, while the second dimension accounted for 23.89% of adjusted inertia. For manager employees (N=565), the first dimension accounted for 86.57% of adjusted inertia, or explained variance, and the second dimension accounted for 8.26% of adjusted inertia. Visual data in symmetric plots illustrated similarities and differences across departments for competencies valued at this institution, and identified competencies that were outliers, or could be considered for elimination.

Principal components analysis was used to answer research question 2. For non-manager employees, one factor had eigenvalues greater than 1.00, cumulatively accounting for 75.74% of the total variance, and all loadings were greater than .800. For managerial employees, one factor had eigenvalues greater than 1.00, cumulatively accounting for 74.17% of the total variance, and all loadings were greater than .731.

To answer research question 3, a multiple linear regression was conducted to understand variables that predicted an employee's customer focus score. The prediction model was statistically significant for non-supervisory employees (N=1,836), $F(16, 1826) = 24.27$, $p < .001$, accounting for approximately 17% of the total variance of an employee's score on the customer focus section of ePerformance ($R^2 = 0.18$, adjusted

$R^2=0.17$). An employee's score on the customer focus section of ePerformance was primarily predicted by whether the employee worked in a college or department that performed the primary functions of instruction, research, academic support, institutional support, student services or auxiliaries. It was also predicted by years of service to the institution and, to a lesser extent, ethnicity.

Several themes emerged from the quantitative case study including: (a) that there were too many competencies in use by this institution to rate performance; (b) the four sections used to rate employees appeared redundant; and (c) there were potential rater biases and unclear definitions of customer service. In addition to thematic findings, policy alternatives to improve performance management at this institution were included, and these were guided by institutional policy goals, current institutional practices, study findings and the research literature.

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Chapter 1

Introduction

In 2011, non-instructional, non-research staff comprised approximately 60% of the employees working at four-year, post-secondary institutions in the United States, according to the U.S. Department of Education (2011). These employees performed specialized roles at post-secondary institutions as enforcers of policy, and in some ways are customer service agents supporting students, faculty and other institutional business functions (Scott, 1980). Prior research - albeit limited - has documented the importance of university staff and their interactions with students in fulfilling the academic missions of American post-secondary institutions (Kinzie & Kuh, 2004; Lesnick, 2010; Schreiner, Noel, Anderson & Cantwell, 2011).

Despite this documented importance to post-secondary education, little is known about this population of employees at American universities. Szekeres (2004) referred to university staff, as the “invisible worker” at Australian post-secondary institutions, and Conway (2002) called for more research to understand the important contributions of these staff to the future of universities. Conway (2002) noted the inattention by researchers to this population, particularly those employed at Australian universities, was “deafening.”

To begin a new strand of research on a population that has received limited attention, it can be difficult to know where to begin one’s efforts. By way of example, aggregated higher education data that provides factual information on non-instructional, non-research staff are limited. One major source of these data is the *Employees in Postsecondary Institutions Report* published by the U.S. Department of Education

(2011), which provided one chart summarizing this population. This presents a challenge to the researcher seeking larger insights on this population.

However, one fruitful path is to begin where data have already been collected by human resources departments within post-secondary institutions. Individual institutions collect data on their staff beginning when the employee is hired by the institution. Data collected by these departments often include demographic and background information for each employee such as an employee's highest education achieved, gender, race/ethnicity, salary, age, and an employee's start date at the institution. Additionally, human resource departments retain annual performance data on each employee. This is the premise of this three-part study that analyzes demographic and performance appraisal information collected for individual university staff by one large, post-secondary institution in the Southwestern United States.

This study used a quantitative case study approach as defined by Creswell (2002) in which the system of university staff performance appraisal at one institution is explored in-depth to provide insights into a previously silent strand of higher education literature. The following sections provided the conceptual framework for these studies, including: (a) processes used by employers to regulate employee identity, such as the performance appraisal; (b) the role of customer service in higher education; and the case study approach used in this study for conducting in-depth, context-specific research on a particular population.

Processes Used by Employers to Regulate Employee Identity

Researchers have described that employers use various methods for implicitly and explicitly regulating employee identity development, or how employees understand their

role within the organization. Researchers have described the process used by employers to enact employee identity development as identity regulation (Alvesson & Willmott, 2003). In this way, the employer acts as a perceiver, and guides the employee to enact specific behaviors in the workplace (Swann, Johnson & Bosson, 2009). Likewise, the employee is the target whose goal in this process is to receive confirmation of identity from the perceiver (Swann et al.). In this section, research findings from the literature on normative employer practices such as employee branding, professional development, and other employer norming systems, such as the employee performance appraisal were synthesized.

Employee branding programs. One type of employee regulation process used by employers is employee branding, or when management determines how employees should exhibit desired behaviors and traits (Nair, 2010; Stuart, 2002). There were several descriptions of this type of program in the research literature, and these programs have been negatively received by employees (Cushen, 2009). Cushen (2009) found in her ethnographic study that employees articulated desired behaviors and characteristics of the branding program, and that employees were largely resentful of their employer's attempts to regulate their identity. Stuart (2002) described an example of one university's re-branding efforts and the subsequent negative responses of employees in her literature review on corporate identity and its effects on employee identity, and found that once these employees no longer were able to identify with organizational values, their overall identity was weakened.

Professional development. Professional development or training programs are also ways in which employers seek to actively instill the organizational culture within

their employees (Allen, McManus & Russell, 1999; Allen et al., 2004; Alvesson & Willmott 2002; Andersson, 2012; Cushen, 2009; Higgins & Kramm, 2001; Swann et al., 2009). Training or employee induction programs have been used as a way to socialize new employees to values, processes, policies, and culture of the organization (Allen et al., 2004). These programs are also used to re-orient employees to the organizational culture and as ways to train future leaders. In an ethnographic study conducted to observe employees who attended required employer re-training for desired organizational values, Scheeres and Rhodes (2006) found the process of employee re-acculturation was complex. They found that employees needed opportunities to question and deeply understand the meaning of organizational values (Scheeres & Rhodes). Similarly, in a study conducted to understand how managerial training impacted identity work in managers, Andersson (2012) found that training primed identity work in managers by causing managers to reflect on their work identity and was even threatening to some participants' identity.

Other employer normative systems. Researchers have also discussed other normative systems in the workplace and their impact on employee identity development. In their study on identity development in medical residents, Pratt et al (2006) discussed how pants worn by surgeons during their residency became a unique identifier for this type of medical professional at this particular hospital. Brown and Lewis (2011) discussed how the routine of billing and recording work was a normative process in one law firm that enforced the desired value of discipline and reflection in attorneys. Other systems that can be used by an employer to create normative systems in the organization

include punching a time clock or how employees enter their workplace (Ashforth et al., 2008).

The employee performance appraisal tool in a university setting. One management tool that encompasses many of these normative tools used by employers to provide role definition to university staff is the employee performance appraisal. In general, the employee performance appraisal has been described in the research literature as typically conducted annually or semi-annually, and employees are rated on strengths and weaknesses (Cleveland, Murphy, & Williams, 1989, Kondrasuk, 2011; Lunenberg, 2012; Moussavi & Ashbaugh, 1995; Spence & Keeping, 2011). Employee appraisals are used to make decisions about employees, such as pay, promotion and training needs (Cleveland et al., Kondrasuk; Lunenberg; Moussavi & Ashbaugh; Spence & Keeping).

Some researchers have described the performance appraisal process as one of the most disliked functions of managers and employees. These researchers found that supervisors do not like providing negative feedback to employees, and employees dislike hearing negative information about their performance (Kondrasuk; Spence & Keeping). Some experts have argued that the current performance appraisal system, in which supervisors provide constructive feedback, usually critical and negative to the employee, is outdated and actually harmful to future employee performance (Williams, 2012).

Performance appraisals measure whether an employee met a particular goal or be used to measure the employee in a more subjective way, such as evaluating employee competencies or traits (Kondrasuk, 2011). Competency-based measurement is defined as the supervisor identifying skill accomplishments and deficiencies relative to skills the supervisor believes are needed to complete a particular job (Scott & Einstein, 2001).

Evaluating employee performance using competencies has been called a judgmental way to conduct the appraisal, in which the supervisor compares employees and rates these employees on individual qualities or traits (Lunenberg, 2012). Use of competencies is also a way for an organization to define the types of workplace intelligence and aptitudes that will be influential in the particular organization (Pulakos, 2004). Evaluation of employee competencies requires the supervisor to speculate about an employee's traits by observing his or her behavior (Kline & Sulsky, 2009).

The Role of Customer Service in Higher Education

This year, two noted higher education news forums, *The Chronicle of Higher Education* and *Inside Higher Ed*, included faculty essays on an increasing use of the term customer service in higher education. Perry (2014) writing in *The Chronicle*, was critical of the use of the term customer service, and argued that by equating the educational experience as a good to be purchased, students may have a limited perspective of the amount of work required, in the form of studying, to obtain the desired good – their diploma. On the other hand, in his *Inside Higher Ed* essay, Kreuter (2014) described reasons why students see themselves as customers of higher education, pointing out that universities: (a) use advertising to attract students; (b) extend credit to students in the forms of loans so they can attend; and (c) market their themselves as a brand. He further noted that one benefit of referring to students as customers is a reminder that those who are employed in higher education fulfill an important mission of service to students (Kreuter).

Similarly, researchers are divided about whether non-teaching employees at universities perform customer service work. Also, researchers have not determined the

true customer of higher education (Scott, 1999; Svensson & Wood, 2007). There are few studies that have advanced the discussion and measurement of customer service in higher education. While the customer in the corporate literature has been identified as the individual who uses the product or service, this distinction is not as clear in higher education.

The Case Study as a Way to Understand University Staff Performance Management

The case study framework provided an appropriate conceptual framework, as this study involved an assessment of one university's implementation of its performance management policy. As recommended by Woodside (2010), this study describes the institution's current policy and intentions with its performance management system, as well as presents how this system was actually utilized, using institutional staff performance and demographic data from calendar year 2012. Case studies are traditionally connected with ethnographic research (Creswell, 2002), and this study is unique in that the ethnographic details will be provided by mostly quantitative data collected from this institution's staff performance appraisal process.

Presentation of Research Questions in the Study

This quantitative case study used demographic data of one institution to understand more about the demographics about the population of university staff at this particular institution and how it has implemented its performance appraisal process. Similarly, this study also sought to provide insights into the complex topic of employee customer service in higher education, an area that has not been clearly defined or well-documented in research. It was hoped that these insights could be useful first and foremost to this institution to provide an in-depth understanding of the demographic

characteristics of its non-teaching, non-research employee population and how it implemented its performance appraisal process. An additional goal of this study was to provide research-based insights for this institution about how to improve its performance appraisal process. Also, as the U.S. Department of Education (2011) reported that there are 1,453,049 full-time, non-instructional employees working at four-year American universities, it is anticipated that management of these institutions will find the results of this research useful as they seek to refine their own performance management tools.

Three research questions were used to guide the focus of this study, which were conceptually grounded in prior research largely from the corporate sector. Research questions for this study were: 1) Within a university setting, how are employee competencies valued by job title within colleges and divisions? 2) How are competencies of individual university staff valued in comparison with job responsibilities, manager responsibilities, job goals and customer service? 3) How is university staff customer service valued in higher education, and are there individual and college/division differences in customer service?

Key Terms

Competencies: For purposes of this study, competencies are defined as an underlying ability, trait or characteristic organized around a specific construct (Boyatzis, 2008; Boyatzis, 2009; Draganidis & Mantzas, 2006; Gangani, McLean & Braden, 2006; Grote, 1996; Kochanski, 1997; Woodruffe, 1993). In the workplace, they can be used to predict how an employee will respond in a particular situation (Grote). They are observed in employee behaviors and an employee's intent or motivation can be observed through how the employee enacts the competency in various workplace situations (Boyatzis, 2008;

Boyatzis, 2009; Gangani, et al.). In employee performance data analyzed for this study, this institution of higher education defined competency in its performance management system in a similar manner as “the specific behavior, knowledge, and motivation that an employee must demonstrate in order to be effective in a given job or role” (Human Resources, n.d.a)

Customer service: For purposes of this study, this term is defined as the outcome of contact between a customer and a service employee (Parasuraman, Zeithaml & Berry, 1985). Service quality is described as an attitude held by the customer that reflects the customer’s comparison of how he or she believed the service firm should perform with the perception of actual performance of the service (Parasuraman, Zeithaml, & Berry 1988). In higher education, there is disagreement about the true customer in higher education, and whether the customer is the student, parents, taxpayers or some combination of higher education users (Scott, 1980).

Performance appraisal: A process in the workplace conducted annually or semi-annually, during which employees are rated on strengths and weaknesses by their supervisor (Cleveland, Murphy, & Williams, 1989, Kondrasuk, 2011; Lunenberg, 2012; Moussavi & Ashbaugh, 1995; Spence & Keeping, 2011). In some cases, these instruments are used to make decisions about employees, such as pay, promotion and training needs (Cleveland et al., Kondrasuk; Lunenberg; Moussavi & Ashbaugh; Spence & Keeping)

University staff: This institution defines university staff as employees of this institution who are not student or faculty employees (Human Resources, 2009).

The remainder of this paper is organized in the following sections: (a) the presentation of the review of literature, including gaps in the related higher education literature that this study addressed; (b) the methodology used to answer each of the three research questions in this study; (c) the key findings from each of the analyses undertaken in this study; (d) the discussion of findings and recommendations for revisions to policy and practice; and (e) the next steps for future research and conclusion.

Chapter 2

Review of Literature

In this section, the following literature will be described and discussed: (a) an overview of the employee performance appraisal and its uses; (b) problems identified by researchers with the performance appraisal; (c) processes used by supervisors when conducting employee performance appraisals; (d) the use of weightings in the performance appraisal; (e) the history of competency use in the employee performance appraisal process, including studies finding from prior research; (f) definitions of customer service from a corporate and higher education perspective, including differences between customer service in the corporate sector and higher education; and (g) gaps in the current literature that will be addressed in this study.

Overview of the Employee Performance Appraisal and Its Uses

In general, the employee performance appraisal has been described in the research literature as typically conducted annually or semi-annually, and employees are rated on strengths and weaknesses (Cleveland, Murphy, & Williams, 1989, Kondrasuk, 2011; Lunenberg, 2012; Moussavi & Ashbaugh, 1995; Spence & Keeping, 2011). Researchers point to two specific ways that employee performance is rated by a reviewer, typically a supervisor, and these include evaluating an employee using behavior-based measures or trait based measures (Kline & Sulsky, 2009). In a behavioral-based format, the rater is making a determination about the frequency an employee exhibits a specific behavior or how the employee has met a particular behavioral standard in performing the task or duty (Kline & Sulsky). In a trait-based, or competency performance format, the rater is observing employee behaviors and determining if the way an employee exhibits the

behavior is indicative of a particular trait (Kline & Sulsky; Scott & Einstein, 2001). These two different ways of measuring employees are rarely supported by a single system (Pulakos, 2004). The following sub-sections will discuss the differences between behavior-based systems and competency systems in measuring employee performance.

Behavior-based employee performance measurement systems. Behavior-based employee performance appraisal formats are used to rate the frequency with which an employee is observed exhibiting a specific behavior or to measure the quality of the outcome of a particular goal or task (Kline & Sulsky, 2009). These systems are regularly quantitative and objective (Kondrasuk). Typical instrument forms used for these types of appraisals are the Behavioral Observation Scale (BOS) and the Behaviorally-Anchored Rating Scale (BARS) (Kline & Sulsky). The BOS format is used by raters to document the frequency by which an employee is observed completing a behavior (Kline & Sulsky). The BARS provides scale points and behavioral illustrations for each scale-point to delineate expected performance at each scale point (Kline & Sulsky). When rating an employee on the BARS, the rater is expected to choose the behavioral example that best matches the employee's performance (Kline & Sulsky).

To understand the ease of use of these three types of instruments in the workplace, Wiersma and Latham (1986) conducted a study that compared the use of BARS, BOS and a competency or trait-based performance appraisal. They found that employees and supervisors at a financial institution as well as attorneys who specialize in employment litigation preferred the BOS instrument (Wiersma & Latham). Attorneys in this study specifically noted they believed the BOS was more defensible than the other performance appraisal forms (Wiersma & Latham). One year after implementing a BOS

appraisal format, senior management at the financial institution reported use of the BOS reduced personality disputes over appraisals, provided a way to defend lower employee ratings, and enhanced feedback employees received from their supervisors on the appraisal (Wiersma & Latham).

Competency-based employee performance measurement systems. Researchers have also described the recommended formalized process for the development of competencies and competency models within an organization. They noted this process requires a long time commitment to work with a sample population, and develop and validate competencies that will be used in the process (Draganidis & Mantzas, 2006). By way of example, in a case study describing how a competency management system was implemented at one corporation, Gangani et al. (2006) described how the firm used job analysis interviews, focus groups and current job descriptions to develop competencies. This firm also assigned higher weightings to competencies that were viewed as more important to the firm (Gangani et al.).

Competencies selected for performance management may be used to measure all employees at an organization, or a specific job family (Grote, 1996). One way of developing competencies to be used in employee performance appraisals is an approach in which a group of managers write examples of model performance, and those that emerge out of this process are adopted for use (Kline & Sulsky, 2009). Another approach used is competency modelling, or competencies that generalize across jobs are used and specific behaviors that exhibit these competencies are identified and described (Kline & Sulsky).

Problems Identified by Researchers with the Employee Performance Appraisal

Employee appraisals are used to make decisions about employees, such as pay, promotion, and training needs (Cleveland et al., 1989; Kondrasuk, 2011; Lunenberg, 2012; Moussavi & Ashbaugh, 1995; Spence & Keeping, 2011). Researchers have identified a number of problems with employee performance appraisals, whether the format of the appraisal is behaviorally-based or competency-based. In this section, research findings of these varied studies will be discussed. For example, in their study, Hennessey and Bernardin (2003) analyzed employee performance ratings after a large state government transitioned from a simple performance instrument to a work planning and review instrument. Prior to completing their study, these researchers obtained feedback that the work planning and review instrument was more objective than the prior instrument (Hennessey & Bernardin). They found minimal support that greater criterion specificity in the performance appraisal was related to less bias against minorities, females or older workers (Hennessey & Bernardin).

Likewise, in a laboratory study by McIntyre and James (1995), 146 undergraduate student raters from a large Southeastern university rated six hypothetical professors using short narratives to determine performance for specific dimensions and overall performance. The performance characteristics rated were typical of common course evaluations (McIntyre & James). These researchers found that employee characteristics may influence how raters consider and combine performance information (McIntyre & James). As an example, if a professor were described in the narrative as disinterested in students, the ability to motivate was an important competency by which this professor was rated (McIntyre & James).

Other researchers pointed out that the problem is not with the appraisal or format itself, but that raters have their own biases when conducting performance appraisals. For example, in his paper comparing and contrasting the analytic and non-analytic performance appraisal processes, DeNisi (1992) pointed out that raters and their desired outcomes in the process will find a way to influence any performance system that is implemented. Likewise, Borman et al. (1991) found high intercorrelations between eight competencies used in one performance appraisal to measure employee performance. This led these researchers to question whether supervisors were measuring overall employee competence or performance when evaluating employees on individual competencies.

Processes Used by Supervisors to Conduct the Employee Performance Appraisal

Researchers have described the cognitive and non-cognitive processes raters use when creating and conducting employee performance appraisals. The cognitive process involves how individual raters make decisions, translate employee behavior into ratings, and judge performance during the appraisal process (Spence & Keeping, 2011). DeNisi, Cafferty and Meglino (1984) proposed a six-step cognitive process they believe raters use to conduct performance appraisals. A summary of these steps includes the process in which the rater observes and develops a mental representation of an employee's behavior, the way in which the behavior is stored and remembered by the rater at the time of rating, and how this memory is integrated into the assignment of a rating by the rater (DeNisi, et al.).

An example of cognitive processes was noted in a study by Judge and Ferris (1993), who sought to understand social influences on how supervisors process information during the administration of the performance appraisal. They found when

that similar demographic characteristics between supervisors and their subordinates was an influential factor for supervisors and had a modest, indirect relationship with employee performance rating as mediated through affect (Judge & Ferris). They posited that positive feelings toward a subordinate would cause the supervisor to recall more favorable incidents when rating the employee, and result in a more favorable overall rating for the employee (Judge & Ferris). This was similar to study findings noted by Varma, DeNisi and Peters (1996) in their study on memory and supervisor ratings as these researchers compared a group of supervisors assigned to keep an employee diary to a control condition. They found that supervisors' feelings about an employee were a greater factor in the employee appraisal when the supervisor recorded notes about employee performance in the diary (Varma, et al., 1996). One explanation for this finding was that the information documented by supervisors was consistent with supervisor feelings about the employee (Varma et al.). They thought this finding might also mean that positive or negative viewpoints about an employee are related to behaviors that have been observed by the supervisor in the past (Varma et al.).

The non-cognitive processes described by researchers consist of social and environmental conditions that impact how a rater makes a decision about an employee's performance (Spence & Keeping, 2011). These non-cognitive processes involved in these decisions include raters protecting their own self-interests in the process, such as avoiding conflict in the workplace and ensuring that their own employees receive the highest merit increases (Spence & Keeping). In their qualitative study on how executives conducted performance appraisals, Longenecker, Sims, and Gioia (1987) found that executives admitted that protection of self-interests was part of the appraisal process.

These executives reported protecting their self-interest when completing the performance appraisal by intentionally misrepresenting employee ratings to help employees obtain higher compensation, even going so far as to decide an employee's overall rating, and then completing the individual appraisal items to attain the desired rating (Longenecker et al.)

The Use of Weightings in the Employee Performance Appraisal

In this section, the process of how weightings are used in the various sections of performance appraisals is described. For example, Grote (1996) in his guide for development of the employee performance appraisal noted that when determining the weight for each section of the employee performance appraisal, the weight of each section should be determined by the importance of that section to the organization. For instance, if accomplishments are important to the organization, then the highest weighting should be allocated to this section of the appraisal (Grote, 1996). Additionally, Pulakos (2004) described the development of a weighting formula for competencies. She noted that competencies, whether weighted or not, are likely to produce the same overall rating on the appraisal (Pulakos).

Likewise, researchers have found that the development of weightings for employee performance criteria is often subjective. By way of example, Zammuto, London and Rowland (1982) found in their two studies that when employees were rated by several individuals in their work setting, raters by group tended to assign different weights to particular rating criteria. Similarly, Ogunfowora et al. (2010) found in their laboratory study that rater personality also influenced the importance the rater placed on certain performance characteristics. For example, raters with a high personality trait of

openness weighted characteristics of adaptive performance higher than those raters with low openness trait levels (Ogunfowora, et al., 2010).

Studies Depicting Effective and Ineffective Use of the Employee Performance Appraisal

Some researchers have sought to understand how performance appraisals have been used effectively to rate employee performance. Williams and Levy (1992) found in their study that employees, who had an in-depth knowledge of the organization's employee performance appraisal system and how it functioned, had self-ratings that were congruent with their supervisor's rating of their performance. Additionally, in a study of how employee performance is used in municipal governments, Roberts (1994) found there was higher acceptance of the performance appraisal process when: (a) employees perceived that their supervisor had many opportunities to observe employee behavior; (b) the supervisor had an awareness of contextual factors affecting performance; (c) the supervisor was trained to use the performance appraisal system; (d) supervisor ratings were evaluated; and (e) documentation was used to monitor employee performance. Similarly, Taylor et al. (1995) found in a study of employees who were exposed to more engagement with their supervisor in developing goals and having performance discussions throughout the year that satisfaction with the process was higher for both managers and employees than employees who did not have more supervisor engagement.

Conversely, other researchers studied how use of the performance appraisal can be ineffective and potentially problematic for employees. Moussavi and Ashbaugh (1995) found in a study of governmental employees that a performance system in which employees and supervisors collectively developed goals did not improve employee perception of their work environment. These researchers speculated that a reason for this

failing was that there are too many contingencies in real work settings that made prescribed implementation this program difficult (Moussavi & Ashbaugh).

Other problems with the performance appraisal process documented in the literature include biases that supervisors bring to the performance appraisal process. For example, Duarte, Goodson, and Klich (1994) noted in their study that the quality of the relationship and the amount of time an employee spends with a supervisor impacted the employee's performance ratings. Those employees who interacted on a regular basis with their supervisor received higher ratings regardless of actual performance (Duarte et al.). In a similar way, Greenhaus, Parasuraman, and Wormley's (1990) study findings included that supervisors rated Black employees lower than White employees on certain components of performance. These researchers also found in their study that supervisors were less likely to recommend Black employees as promotable in comparison with White employees (Greenhaus et al.).

Other studies and analyses of ineffective performance appraisal usage have further illustrated the biased nature of the employee performance appraisal process. In their literature review, Spence and Keeping (2011) found that supervisors reported inaccurately rating employees across key themes. These themes included distortion of ratings to positively impact an employee's compensation and avoiding a confrontation with an employee by awarding a lenient rating (Spence & Keeping). These findings were consistent with a study by Longnecker, Sims and Gioia (1987). In their study of 60 executives from seven large organizations, they noted these executives increased employee performance ratings so employees were able to receive higher pay increases, to avoid a difficult conversation with a subordinate, to circumvent having a written record

of an employee's poor performance, and with the intent to try to promote an employee out of the department (Longnecker et al.). Similarly, they also found that supervisors lowered employee ratings in subjective ways as well, such as with the intent of provoking an employee to perform better, creating a documentation trail for termination of an employee, or to make a statement that the employee should look for work elsewhere (Longnecker et al.).

The History of Competency Use in the Performance Appraisal

In this section, the following discussion of competencies will be presented including: (a) detailed definition of competencies and competency management as they relate to measuring employee performance; (b) history of competency usage in the performance appraisal; and (c) findings from research studies on competency usage in employee performance management.

Definition of competencies and competency management. Competencies in the context of employee performance appraisal have been defined by researchers as an underlying ability, trait or characteristic organized around a specific construct (Boyatzis, 2008; Boyatzis, 2009; Draganidis & Mantzas, 2006; Gangani, McLean & Braden, 2006; Grote, 1996; Kochanski, 1997; Woodruffe, 1993). Grote (1996) noted competencies are similar to an individual's personality and can be used to predict how an employee will respond in a particular situation. Competencies are observed through behaviors and some researchers have noted that intent or one's motivation can be observed through how the employee enacts the competency in various workplace situations (Boyatzis, 2008; Boyatzis, 2009; Gangani, et al., 2006). According to Lievens, Sanchez, and De Corte (2004), competencies are often used by employers in identifying potential candidates for

positions, promotions, performance appraisals, making compensation decisions, and for determining employee development needs.

Similarly, competency management has been described as the formalized process of identifying competencies or traits that are used to distinguish outstanding from average employees (Kochanski, 1997; Martone, 2003). This identification of competencies results in competency models, or developing competency groupings, that relate to success in a specific position within the organization, and is connected to overarching organizational goals (Draganidis & Mantzas, 2006; Lievens et al., 2004). Researchers have also described the recommended formalized process for the development of competencies and competency models within an organization. They noted this process requires a long time commitment to work with a sample population, and develop and validate competencies that will be used in the process (Draganidis & Mantzas). By way of example, in a case study describing how a competency management system was implemented at one corporation, Gangani et al. (2006) described how the firm used job analysis interviews, focus groups and current job descriptions to develop competencies. This firm also assigned higher weightings to competencies that were viewed as more important to the firm (Gangani et al.). A concern mentioned by Grote (1996) and Pulakos (2004) is that employers should not use too many competencies in the development of a competency model. Grote (1996) warned that when too many competencies are used, the importance of any one competency might be devalued.

Researchers and practitioners noted that one of the most critical components of the competency development process is the development of behavioral descriptions that will be used to evaluate employees on each competency (Grote, 1996; Martone, 2003;

Pulakos, 2004; Woodruffe, 1993). Woodruffe (1993) further added that the wording describing the behavior associated with each competency should be verbiage familiar to employees in the organization and descriptions should be easy for all employees to understand. Providing behavioral descriptions of each competency also helps employees understand expectations and provides a standard that managers can use when evaluating employees (Pulakos). As an example, Grote (1996) noted that a national firm made it a practice to use one page to define each competency, provided behavioral expectations for how employees could exhibit the competency, and also provided examples of behaviors employees might exhibit that would not meet competency standards.

History and evolution of competency use. The use of competencies as a way to measure performance has been credited to McClelland (1973), who offered that instead of using tests to measure skills, people or employees should be observed in their environments to determine their skill level. To explain his original description of competencies, he noted if one wanted to understand the skills and abilities of an outstanding employee in a particular field, it was important observe this employee and make a list of this employee's qualities or characteristics to understand the competencies needed to be an exceptional performer (McClelland). The practice of determining competencies of outstanding performers later evolved into the behavioral event interview, as described by Boyatzis (2009).

The behavioral event interview process included using a nomination process, in which top performers and average performers are selected (Boyatzis, 2009). This process involved asking both groups to describe a recent event in which the employee felt successful and to provide narrative details about his or performance (Boyatzis). The

employee typically answers four questions during the interview, providing details about: (a) how the situation occurred; (b) who spoke during the situation and what was said by each person; (c) details about what the employee being interviewed said in the situation; and (d) details about the outcome of the situation.

McClelland (1998) noted that in his behavioral event interview, different from Boyatzis' process, he typically would ask each employee to describe six different episodes, three in which the employee felt successful and three in which the employee felt unsuccessful. McClelland (1998) noted that these interviews were then coded to determine competencies for outstanding employees. McClelland (1998) explained that some organizations have used expert panels to develop competencies that are then in turn used to rate employees. He questioned whether the expert panel process of rating employees in comparison with using interviews of the employees themselves would have the same predictive power of determining and distinguishing outstanding employees (McClelland). Shippmann et al. (2000) noted that there is concern among many human resource scholars about the rigor applied to the creation and determination of organizational competencies. These researchers added that competencies have an appeal to many employers because competencies focus on what is similar across jobs, and not on what differentiates one position from another (Shippmann et al.).

Likewise, Pulakos (2004) noted that competency-based performance measures are often misused by supervisors. Competencies used to measure individual employee performance should be connected to the organizational mission, and provide a common organizational vernacular about employee expectations (Lievens, Sanchez & De Corte, 2004). A common mistake organizations have made is selecting a large number of

competencies for supervisors to use to rate employees (Pulakos, 2004). Pulakos (2004) recommended that when using competencies to measure performance between 5 to 10 competencies should be selected at the organizational level and that these competencies be connected to organizational strategic initiatives and performance success in a particular job (Pulakos).

How competencies differentiate high and low performing employees. Several researchers have sought to understand how competencies differentiate low-performing from high-performing employees. For example, Dreyfus (2007) found in her study of high- and low-performing managers at a federal research center that high-performing managers had better relational skills than low-performing managers. She also noted that abilities to relate with people appeared to be a competency that could be developed, as several managers that reported they were insensitive to others earlier in their career learned ways to relate better to others (Dreyfus). Likewise, Hopkins and Bilimora (2008) found in their study of male and female executives that those leaders classified as more successful at the organization by peers, managers and clients were seen to be more self-possessed, motivational to others, more oriented to accomplishing goals, and were seen as change agents in the organization. Similarly, Scudder and Guinan (1989) found in their study of high-performing computer system employees in various Midwestern organizations that these employees also had higher scores on communication competencies than those employees perceived to be low performers.

Definitions of Customer Service

The term used to describe the construct of customer service in the corporate literature is service quality. Service quality is defined by researchers as the outcome of

contact between a customer and a service employee (Parasuraman, Zeithaml & Berry, 1985). Service quality is described as an attitude held by the customer that reflects the customer's comparison of how he or she believed the service firm should perform with the perception of actual performance of the service (Parasuraman, Zeithaml, & Berry 1988). According to Lewis and Mitchell (1990), service quality involves both the outcome of the transaction as well as the way the firm and its employees delivered the service. Parasurman et al. (1988) described the five dimensions of service quality in their SERVQUAL instrument that are summarized as: (a) the physical features of service, such as a company's facilities and appearance of employees; (b) the importance of dependability to service; (c) the importance of helpfulness and timeliness to service; (d) the importance of considerate and confident employees to resolve problems; and (e) the importance of empathy and attention to customers. Others such as Ma, Harvey and Hu (2007) extended this work and noted three primary dimensions for service quality that include the physical features of service, the process of the service and the overall outcome of the service.

At the individual employee level, researchers have described that there may be an underlying component of individual personality that predisposes employees to exhibit behaviors that are seen by customers as courteous and caring (Alge, et al., 2002; Brown, Mowen, Donovan, & Licata, 2002), and they use the term customer orientation to describe this individual-level characteristic. In their study on restaurant employees, Brown et al. sought to understand individual personality characteristics associated with different levels of individual customer orientation. They also sought to determine connections between individual personality traits, customer orientation and employee

performance (Brown et al.). Measures of personality used in this questionnaire were for the basic personality traits of introversion, instability, agreeability and conscientiousness (Brown et al.). These researchers found that the individual personality characteristic of emotional instability was negatively related to customer orientation and that agreeability was positive associated with customer orientation, but negatively related to employee performance (Brown et al.). They also found that within a customer service setting, employee personality characteristics of conscientiousness were predictive characteristics of supervisor rated employee performance (Brown et al.).

Customer Service Research in the Corporate Sector

There have been a number of studies that have sought to advance the understanding of customer service in the corporate sector. This research seems to be divided into two branches – one branch has sought to understand service quality by sectors. Another branch has sought to understand the important role of the individual employee to the customer's perception of service quality exhibited by a firm. The following sub-sections include a summary of this research.

Measurement of service quality. In the late 1980s and early 1990s, Parasuraman, Zeithaml and Berry (1985) launched a three-phased approach to developing more of an understanding of service quality in the retail industry. Their first step was an exploratory study and the construction of a model for service quality (Parasuraman et al., 1985). In this first phase, they conducted interviews with customers and executives of firms to develop their proposed model (Parasuraman et al., 1985). During these interviews, they discovered challenges executives faced in the delivery of consistent quality service to customers, even though executives could articulate that they knew what

customers desired (Parasuraman, et al., 1985). This study resulted in the development of categories that customers consistently used to evaluate service quality of a firm, regardless of the service industry being measured (Parasurman, et al., 1985).

Parasuraman, Zeithaml and Berry (1988) used this model to construct the 22-item SERVQUAL instrument. They proposed that this instrument could primarily be used to measure service quality trends in any industry in the retail sector and they recommended that this instrument be used by retailers in conjunction with an employee survey to provide a holistic picture of service quality (Passuraman et al). Items on the questionnaire loaded on five factors, namely: (a) the physical features of service, such as a company's facilities and appearance of employees; (b) the importance of dependability to service; (c) the importance of helpfulness and timeliness to service; (d) the importance of considerate and confident employees to resolve problems; and (e) the importance of empathy and attention to customers. The SERVQUAL instrument was later extended by Ma et al. (2007) when they determined service quality seemed to be a multilevel construct. They proposed that the new primary dimensions of service quality included the physical and process components proposed by Passuraman et al. (1985) and a dimension for the outcome of the transaction between the customer and the employee (Ma, et al.). Ma et al. (2007) found that their new model that included the original 22 SERVQUAL items plus items that measured the outcome of the transaction were a better fit for the data.

The role of the individual employee in customer service. One of the critical challenges in service delivery expressed by executives in Parasuraman, et al.'s (1985) study was that execution of customer service was performed by an employee. Given individual differences among employees, it was reported that it would be difficult for

customer-employee interactions to be standardized (Passuraman et al). These researchers noted this meant that individual employees wield a great deal of power in the overall service quality of the firm (Parasurman, et al.). The importance of the individual employee to quality customer service has been noted in other research as well. Kelley (1992) found in a study of four financial institutions in the Midwestern United States that the ability of individual employees to meet customer needs impacted the type and length of the relationship between the customer and the firm. Kelley (1992) further found that the way employees were socialized by the firm impacted the way these employees were able to respond to customer needs.

Similarly, researchers have found individual personality characteristics to be related to one's ability to provide quality customer service. As an example, in their meta-analysis, Frei and McDaniel (1998) noted that three personality traits are associated with customer service measures. They described that agreeableness, emotional stability and conscientiousness appeared to be related to employees who were approachable, emotionally steady and reliable (Frei & McDaniel). Likewise, Liao and Chuang (2004) found that personality traits of conscientiousness and sociability were positive predictors of an employee's ability to provide quality customer service.

Researchers have also discussed problems in measuring customer service at the individual employee level. For example, Brown et al.'s (2002) study found that the personality characteristic of emotional unpredictability was a negative predictor of an employee's customer orientation and sociability was a positive predictor of customer orientation. In their model, sociability was a negative predictor of supervisor performance and they posited supervisors believe friendly employees might spend too much time with

customers and other employees talking about matters unrelated to work. Lynn and Sturman (2011) also found challenges with measuring customer service at the employee level, specifically a reliance on customer feedback. Their study of customer evaluations of restaurant server performance found racial bias in customer evaluations of server performance (Lynn & Sturman). These researchers noted that customers tended to express a preference toward their own racial group when evaluating server performance (Lynn & Sturman). This finding caused these researchers to question the use of customer evaluations when rating employee performance (Lynn & Sturman).

Differences Between Customer Service in the Corporate Sector and Higher Education

In higher education, there is limited research on the topic of customer service, in part because one of the biggest challenges in describing and defining customer service is agreeing on the definition of the true customer of higher education. Scott (1999) described that students enrolled at colleges and universities are only one set of the customers of the university. The long list of university customers includes parents, humanity, government, and agencies that fund research (Scott). In contrast with this perspective, Svensson and Wood (2007) argued students are not customers of universities but rather citizens of the university community. According to Svensson and Wood (2007) students believe they are customers because of the way they are treated by the institutions, including being asked for feedback about university services. Students in turn have responded by applying their traditional market model to their university experiences believing they are a customer, one who is obligated to complain when service perceptions do not match their expectations (Svensson & Wood).

In contrast, other researchers such as Van Andel, Pimental Botas and Huisman (2012) have provided evidence that students are the main customers of the university. In the qualitative component of a mixed-methods study on students as customers, they found that students see their role at universities as customers who are purchasing a service from the institution (Van Andel et al). Further, they found that students behaved like customers with expectations of having autonomy to choose classes that interest them, when those classes are scheduled, and have preferences for how those classes are taught (Van Andel et al.). They further noted that when students have this autonomy, they are more motivated and engaged in the learning process (Van Andel et al.). Obermiller and Atwood (2011) also argued that when universities view students as the primary customers of a university this attitude helps university administrators understand how to recruit students, how to support them during their studies, and how to continue to be connected with students after they graduate. Szekeres (2006) pointed out that the shift of students to customers has been an increasing source of stress for university staff, who attempt to keep up with student demands for expeditious service.

There appear to be several differences between the definition of customer service in higher education and the corporate sector. One of the differences is that the notion of customer service in higher education is multifaceted (Chaffee, 1998). While the customer in the corporate literature has been identified as the individual who uses the product or service, this distinction does not to be as clear in higher education. For example, in Pitman's (2000) study at an Australian university, staff who participated in this study expressed concern about describing students as customers. The majority of the 13 staff members interviewed described a much deeper connection with students than they

believed is illustrated in the term customer (Pitman). This feeling of a deeper connection did not transfer to faculty these administrative staff supported (Pitman). Pitman noted that in their dealings with faculty, administrative university staff understood they provided support to faculty, but had a difficult time describing their support relationship with faculty.

As Svensson and Wood (2007) have pointed out, when measuring customer service at a university, administrators have adopted a marketing perspective. Universities provide opportunities for students to provide feedback about their courses, and to be critical about services they receive at the institution (Svensson & Wood). As described in the corporate literature, it appears to be easier to measure organizational service quality than to understand and measure customer service at the individual employee level. Researchers have documented challenges with measuring customer service in individual employees. For example, in their study on measuring customer service in restaurant employees, Lynn and Sturman (2011) noted that when asked to rate server performance, customers tended to rate restaurant servers of their own ethnic group higher on performance measures such as attentiveness and promptness, but there was no race effect on server characteristics of attractiveness or friendliness. These researchers noted this study illustrated the challenges with using customer evaluations of service performance as a way to measure overall employee performance (Lynn & Sturman, 2011).

Other challenges include agreement on the characteristics that can be used to predict customer service. For example, Brown et al.'s (2002) study illustrated that the personality trait of agreeableness was important for predicting an employee's customer orientation. However, when comparing this to an employee's overall performance, these

researchers found that when they included supervisor ratings of overall performance, agreeableness was a negative predictor of overall employee performance (Brown et al.). Supervisors tended to believe that more agreeable employees would be more likely to engage in friendly conversations with co-workers or employees unrelated to work matters (Brown et al.).

Gaps in the Current Literature

From prior literature, it is known that there are few studies on university non-instructional employees, even though this population represents the majority of employees at colleges and universities. Of the current studies on university staff, there are no studies on how performance of this employee group should be measured, while there are a number of studies that have been conducted on performance of students and university faculty. Additionally, most of the studies on employee performance have focused on biases in the appraisal process, and how supervisor perceptions can impact certain groups. Other studies have focused on effective appraisal use, and how as using collaborative goal-setting and employee engagement with the supervisor in the process, fosters employee trust in the process. Studies that have reviewed competency use in the performance appraisal process, have determined that there are certain competencies that distinguish high and low-performing employees. However, no study to date has sought to understand both university staff performance and how competencies might be different between employee types, as well as how use of competencies in the performance appraisal relates with other, more objective components of the employee performance appraisal.

Similarly, there are two gaps that influence the need for more research on the importance of customer service in a university setting. First, while researchers have developed measures to understand organizational customer service, there continue to be challenges in understanding and measuring customer service at the individual employee level. The focus of the research on individual employees has been on determining traits that are predictive of customer service performance.

From the higher education perspective, one of the biggest gaps in the current research is the continued disagreement among researchers about the primary customer of higher education. While some researchers such as Pitman (2000) and Van Andel et al. (2012) noted that students and administrative staff believed students are the primary customers of higher education, other researchers such as Scott (1999) pointed out that the list of customers of a university extends to parents, the government and society in general. Additionally, Pitman (2000) pointed out that while administrative university staff believed students are primary customers, administrative staff felt that their relationship with students as customers was much deeper than the relationship private sector employees have with customers. The aim of this study was to understand how one post-secondary institution values customer service in its employee appraisal process as a way to provide continue clarity to understanding more about customer service in higher education.

This quantitative case study of one public higher education institution's performance management process fills a critical void in describing a critical component of organizational workplace culture at this institution. As Tierney (1988) noted, having a deep understanding of many aspects of the higher education culture is a critical

component in resolving its challenges. While Tierney (1988) advocated for ethnographic studies of higher education culture, this in-depth case study using quantitative measures aimed to provide rich material that could lead to directions for future work and discovery about the organizational culture of non-teaching, non-research staff employed in institutions of higher education. There has been little study of this population of higher education worker to date, and providing this insight is critical to understanding the population of employees who support students, faculty, and who perform critical functions at these institutions, everything from running the campus physical plant to ensuring employees are paid on time.

Similarly, structure and culture of higher education has been noted to be significantly different from the structured corporate sector. Institutions of higher education culture are traditionally described as “loosely coupled” systems in which individual departments and colleges have independence and autonomy from the larger system, creating their own micro-cultures (Birnbaum, 1988; Gilmore, Hirschhorn & Kelly, 1999; Orton & Weick, 1990). Likewise, any change in the organization may have little effect on a department that belongs in the larger system, and is still able to maintain its own unique culture (Gilmore, et al.; Orton & Weick).

This study examined how two uniquely corporate tools – performance management and the measurement of customer service within the performance management instrument – have influenced this particular institution and its performance culture. As discussed by Giroux (2002), there is growing concern that widespread corporate influences on the culture of higher education will continue to move higher education further away from its important mission as a democratic public good.

According to Birnbaum (2000), it is even more concerning that certain management processes developed for other environments are adopted wholesale by higher education institutions with the promise of being a panacea. Conversely, one of the useful features of considering the implementation of a process or term from another sector forces people and departments to constructively examine current processes and practices (Ewell, 1999). For example, Ewell (1999) noted even a conversation about students as customers of higher education may prove fruitful, as it may evolve into a discourse about faculty and student roles in learning, and how learning actually happens.

According to Birnbaum (2000), a problem with the introduction of management tools from other settings is that they are often implemented without consideration of their impact on a loosely coupled organization, such as higher education. Some management tools that have been implemented and later abandoned in higher education have included zero-based budgeting in the 1970s and 1980s and business process re-engineering in the 1990s (Birnbaum; Lamal, 2001). Similarly, Szekeres (2006) noted in a study on Australian university staff that these employees believed that the infusion of a market-driven culture and treatment of students as customers has significantly increased amount of work required of university staff. Thus, it is important to evaluate real-world examples where management tools have been developed for settings other than higher education and that have been implemented in these institutions. This understanding may help inform practitioners about the influences, if any, these tools have on the culture of higher education and if these tools are appropriate for these institutions, or if practitioners should take extra care in examining and discussing their influence prior to implementation.

Data collected for this study about one institution's performance management process provides insight about how the corporate tool of employee performance management has been implemented and demographic information about the characteristics of higher education staff at this institution. Additionally, as this institution measures university staff customer service, this study provides an analysis and insight about how one institution has determined to measure customer service, a term that has traditionally been used in more market-based and retail settings. The topic of customer service in higher education has generated much discussion, as researchers have not determined the true customer in higher education, and whether the customer is the student, the taxpayers, or society at large.

Chapter Three

Method

Setting and Participants

In a case study that focuses on a particular event in an organization, it is important to provide a thick description for the purpose of contextually situating the study. The intent of this section is to provide details about the institution being studied and provide the policy context for performance management of university staff at this institution. Demographic data as well as information gleaned from the university's policy handbook and web sites were used to develop this description.

The setting of this study was a large, urban research university in the Southwestern United States. Total participants in this study were 2,401 university employees, classified as university non-faculty, non-research staff who were administered a performance evaluation for calendar year 2012 at this institution. These employees comprised a variety of professions at this post-secondary institution including accountants, human resources professionals, student affairs professionals, attorneys, skilled trade employees in the Physical Plant, and clerical staff employed in a variety of departments and colleges. The breakdown of participants by descriptive characteristics is presented in Table 1.

Table 1

*Sample Breakdown of Participants by Ethnicity**N=2,401*

Variable Name	Group	Number of Employees		% of Employees	
		Manager	Non-Manager	Manager	Non-Manager
Gender	Female	338	1,104	60	60
	Male	227	732	40	40
Ethnicity	American Indian	2	4	.40	.22
	Asian	50	264	9	14
	Black	101	494	18	27
	Hispanic	86	457	15	25
	Pacific Islander	1	2	.2	.11
	White	325	615	58	33
Highest Education	Not Indicated	6	51	1	3
	Less Than Bachelor's	146	891	26	49
	Bachelor's	184	459	33	25
	Greater Than Bachelor's	229	402	41	22
Years of Service	Less Than 5	132	550	23	30
	5-10	125	546	22	30
	11-15	116	337	21	18
	16-20	81	179	14	10
	21-25	53	111	9	6
	26+	58	113	10	6
Age	21-30	27	237	5	13
	31-40	129	467	23	25
	41-50	161	432	28	24
	51-60	158	476	28	26
	61-70	85	205	15	11
	71+	5	19	1	1

University staff participants, described above, were evaluated by 863 managers at this institution, which included both manager classified as non-research, non-teaching employees as well as managers classified as faculty at this institution. The largest ethnicity of managers who rated employees at this institution is White at 62%. The remaining ethnicity breakdown of managers at this institution was: 15% African American, 12% Asian American, 10% Hispanic, .5% American Indian and .1% Not

Indicated. The job classification of managers who rated employees at this institution included was 71% professional/administrative staff, 23% faculty and 5% support staff.

As presented in Table 1, there were 1,836 non-supervisory, non-manager employees evaluated through the ePerformance process at this institution in calendar year 2012. These non-supervisory employees were predominantly female, at 60%. They were also predominantly White. The majority of these employees have been employed at this institution 10 years or less. The average age of non-supervisory employees was 45. About 25% of non-supervisory employees that are employed at this institution reported that a Bachelor's Degree is their highest level of education obtained. More than half of these non-supervisory employees have indicated to human resources that their highest education earned is less than a bachelor's degree

As presented in Table 1, there were 565 supervisory, non-manager employees evaluated in the ePerformance process at this institution in calendar year 2012. These supervisory employees were predominantly female, at 60%. They were also predominantly White at 58%. The majority of supervisory employees have been employed at this institution more than 10 years. The average age of supervisory employees was 48. About 33% of supervisory employees that are employed at this institution reported that a Bachelor's Degree is their highest level of education. About 0.4% of these employees reported their highest education is less than a high school graduate.

Background and Use of ePerformance

In its policy on staff performance, this institution provided the three goals of its performance appraisal process. These goals included that this policy is intended:

1. To provide clearly defined performance standards based upon the employee's current job description to ensure that employees know what is expected of them.
2. To encourage supervisors and employees to have face-to-face discussions and provide employees feedback about their job performance.
3. To express appreciation for outstanding contributions and performance; conversely, to discuss performance areas where improvement is possible or needed and to outline plans for improving performance. (Human Resources, 2009, p.2)

According to its policy, performance appraisals are to be used by supervisors in determining employee promotion, training, development and salary increases (Human Resources, 2009). In order to be eligible for a salary increase at this institution, an employee is required to have a current performance appraisal on file indicating exceptional performance (Human Resources, 2009; Human Resources, n.d.c.). All university staff who have been assigned to work at least 20 hours per week are required to have their performance reviewed annually by their supervisor, except student staff and positions designated as teaching or research faculty (Human Resources, n.d.c.)

According to this policy, there are four elements of a successful performance appraisal (Human Resources, 2009; Human Resources, n.d.c.). These elements include: (a) the performance appraisal must be completed by the supervisor using the official form; (b) an in-person meeting must be held by the supervisor with the employee to discuss the appraisal; (c) the appraisal must be reviewed and ratified by the senior manager in the department; and (c) it must be approved by human resources (Human Resources, 2009). Additionally, the appraisal must be completed during the timeframe specified by human resources (Human Resources, 2009).

At this institution, the ePerformance instrument was launched in 2010 to measure individual university staff performance. As they launched ePerformance, the human

resources department noted the intent was to provide a more consistent way for supervisors to rate employees throughout the year, and since this is an on-line tool, they believed this measure would reduce institutional paper costs (Human Resources, 2010). The ePerformance instrument is an electronic performance appraisal form that is divided into four components: (a) job goals; (b) job responsibilities; (c) customer focus; and (d) competencies. (Human Resources, n.d.a). This electronic form is housed in a web-based, password protected human resource management system (Human Resources, n.d.c.)

According to human resources, there are four stages of the ePerformance process that occur at two, discrete time points (Human Resources, n.d.c.). During the first quarter of each calendar year, supervisors should establish the rating and weighting criteria within the four sections of ePerformance (Human Resources, n.d.c.). Human resources policy noted that supervisors should meet with their employees during this timeframe to discuss performance goals and expectations for that calendar year (Human Resources, n.d.c.). Within the first three months of the subsequent calendar year, the supervisor should rate the employee's performance for the prior year and submit the ePerformance document for review by the departmental senior manager (Human Resources, n.d.c.). Following approval by the senior manager, the supervisor is required to meet with the employee to review prior year performance (Human Resources, n.d.c.). The final step in the process is that the ePerformance document should be routed to human resources for review (Human Resources, n.d.c.).

Components of ePerformance

This section will describe and define components of this institution's ePerformance system. There are four general sections of ePerformance, including: (a)

goals; (b) job responsibilities; (c) customer focus; and (d) competencies. Supervisory employees are also evaluated with a fifth category: manager responsibilities. Employees are rated on each section of ePerformance by their supervisor using a scale from one to five, with one being the lowest score. Each section score is then averaged to calculate an overall score for each employee, which becomes the performance rating for the calendar year, which is a value from 1 to 5.

Goals in ePerformance have been described as specific job or service goals, established annually between the employee and supervisor, and employee job responsibilities are the individual duties associated with each job, and assigned by the human resources department (Human Resources, n.d.a). The job responsibilities section of the ePerformance document include employee responsibilities that are directly from the job description for an employee's position (Human Resources, n.d.a.). Similarly, competencies are behaviors identified by the human resources department for a particular employee type, and have been pre-loaded into the design of ePerformance (Human Resources, n.d.a). According to the human resources department (n.d.a.), supervisors should establish behaviors that demonstrate excellent customer service and rate employees on their performance of these behaviors.

The difference between goals, job responsibilities, and competencies was defined by the human resources department to assist supervisors in making the distinction among these three sections of ePerformance. By way of illustration, an example of a goal is "employee will increase service call satisfaction rating from 65% satisfied to 80% satisfied within annual review period" (Human Resources, n.d.a, Section C). An example of a job responsibility provided by the human resource department was "employee is

responsible to provide front line customer service daily by answering the phone, directing customers and taking messages” (Human Resources, n.d.a., section c). In rating the customer focus section, supervisory employees were asked to “identify behaviors that exemplify great Customer Service” (Human Resources, n.d.a, Section c).

The definition provided for a competency is “the specific behavior, knowledge, and motivation that an employee must demonstrate in order to be effective in a given job or role” (Human Resources, n.d.a, Section C). The human resources web site presents information that competencies were identified as behaviors demonstrated by an employee, such as the behavior of adaptability, which is described as: “Maintaining effectiveness when experiencing major changes in work responsibilities or environment; adjusting effectively to work within new work structures, processes, requirements, or cultures” (Human Resources n.d.a, Competency Definition Section). They also indicated that it is the demonstration of knowledge, such as the competency of safety awareness, which is described as “Identifying and correcting conditions that affect employee safety; upholding safety standards” (Human Resources n.d.a, Competency Definition Section). It can be the expression of motivation, such as the competency of passion for results, described as “Driving high standards for individual, team, and organizational accomplishment; tenaciously working to meet or exceed challenging goals; deriving satisfaction from goal achievement and continuous improvement” (Human Resources, n.d.a., Competency Definition Section).

Each section in ePerformance was pre-assigned a minimum weight by the human resources department that was pre-loaded into ePerformance. For example, the minimum weight for the job goals section in 2012 was 10%, and the minimum for customer focus

was also 10%. The required minimum weight for job responsibilities was not less than 40%, and the minimum weight for competencies was not less than 10%, during this ePerformance period. Supervisors were able to adjust these weightings, as long as the weight for the overall ePerformance equaled 100% and that each section weighting was required to meet the minimum weighting requirement. The ratings and weightings for each section were then combined into an employee's overall rating number or index, which then became the employee's performance appraisal rating score for that particular calendar year. The average weightings selected by supervisors for each section of ePerformance data for the study sample are provided in Table 2 below and contrasted with the minimum requirement for each section.

Table 2

Average Weightings Selected by Each Supervisor for ePerformance sections

Component Name	Avg. % Weighting	Minimum % Required
Job Responsibilities	47	40
Job Goals	20	10
Competency	17	10
Customer Service	13	10
Manager Responsibilities	15	(not indicated)

Description of Demographic and Performance Data Collected in the ePerformance Process

Descriptive demographic data and performance appraisal data on 2,401 non-supervisory and supervisory employees were collected from this institution's human resources department after obtaining institutional review board approval. The average overall rating across all employee types in ePerformance for calendar year 2012 was

3.48. The average ePerformance score across employee demographic data was also calculated. The average ePerformance rating for female employees was 3.51 and the average rating for male employees was 3.43. Table 3 presents the average ePerformance ratings and standard deviation across employee race and ethnicity.

Table 3

Average ePerformance Rating by Ethnic Group

Race/Ethnicity	<i>N</i>	Mean (<i>SD</i>)
Asian	314	3.58 (.53)
Black	595	3.34 (.59)
Hispanic	543	3.41 (.57)
White	940	3.56 (.54)

Note: American Indian and Pacific Islander were removed due to the low size of this population.

The average ePerformance rating was calculated for each college and division.

These averages are presented in Table 4.

Table 4

Average ePerformance Rating by College/Division

College/Division	<i>N</i>	Mean (<i>SD</i>)
Athletics	48	3.42 (.56)
Business Administration	129	3.65 (.43)
Chancellor/President	40	3.57 (.34)
Education	55	3.54 (.50)
Engineering	91	3.84 (.62)
Graduate College of Social Work	21	3.80 (.60)
Honors College	10	3.66 (.47)
Hotel and Restaurant Management	36	3.56 (.47)
Humanities	245	3.90 (.50)
Law	70	3.53 (.40)
Library	45	3.54 (.40)
Natural Sciences and Math	155	3.56 (.70)
Optometry	77	3.91 (.65)
Pharmacy	35	3.49 (.41)
Technology	40	3.74 (.51)
Provost	208	3.39 (.45)
Division of Research	108	3.67 (.58)
Student Services	269	3.41 (.56)
Development	63	3.52 (.55)
Administration and Finance	807	3.23 (.48)

Note: College of Architecture was not included due to the small size of the population.

The average ePerformance rating across all sections of the instrument was also calculated. Table 5 illustrates the average rating across all sections of this instrument.

Table 5

Average ePerformance Rating by Section

ePerformance Section	Mean (SD)
Competency	3.39 (.62)
Customer Focus	3.63 (.74)
Job Goals	3.42 (.69)
Job Responsibilities	3.47 (.58)
Manager Responsibilities	3.46 (.73)

The average ePerformance rating across all sections of the instrument was also calculated by college and division. Table 6 illustrates the average rating across all sections of this instrument.

Table 6

Average Rating Across ePerformance Sections by College and Division

College/Division	<i>n</i>	Competency	Section Mean (SD)			
			Cust. Focus	Job Goals	Job Resp.	Mgr. Resp.
Athletics	48	3.09 (.60)	3.62 (.75)	3.68 (.69)	3.25 (.60)	3.78 (.57)
Business Administration	129	3.61 (.48)	3.85 (.53)	3.52 (.58)	3.62 (.47)	3.78 (.59)
Chancellor/President	40	3.55 (.38)	3.63 (.58)	3.56 (.51)	3.56 (.40)	3.75 (.38)
Education	55	3.56 (.60)	3.69 (.81)	3.44 (.52)	3.55 (.53)	4.10 (.58)
Engineering	91	3.76 (.66)	3.95 (.80)	3.69 (.73)	3.87 (.60)	3.93 (.79)
Social Work	21	3.78 (.66)	3.86 (.83)	3.78 (.79)	3.76 (.54)	3.50 (1.12)
Honors College	10	3.67 (.46)	3.70 (.78)	3.69 (.57)	3.63 (.45)	3.83 (.37)
Hotel	36	3.40 (.57)	3.89 (.77)	3.48 (.64)	3.50 (.57)	3.89 (.69)
Humanities	199	3.88 (.54)	4.11 (.64)	3.79 (.70)	3.90 (.51)	4.10 (.64)
Law	70	3.44 (.43)	3.71 (.66)	3.46 (.48)	3.53 (.43)	3.52 (.51)
Library	45	3.44 (.38)	3.64 (.60)	3.48 (.46)	3.53 (.46)	3.38 (.63)
Natural Sciences and Math	155	3.52 (.69)	3.60 (.74)	4.47 (.72)	3.59 (.68)	3.51 (.68)
Optometry	71	3.82 (.72)	4.20 (.76)	3.80 (.73)	3.90 (.74)	4.00 (.87)
Pharmacy	35	3.43 (.41)	3.51 (.55)	3.46 (.66)	3.48 (.42)	3.93 (.09)
Technology	40	3.63 (.57)	3.88 (.64)	3.72 (.60)	3.72 (.50)	3.88 (.61)
Provost	208	3.33 (.54)	3.54 (.66)	3.28 (.57)	3.40 (.47)	3.58 (.50)
Division of Research	108	3.60 (.65)	3.82 (.70)	3.53 (.70)	3.70 (.94)	3.63 (.59)
Student Services	269	3.30 (.62)	3.61 (.73)	3.34 (.70)	3.39 (.93)	3.41 (.55)
Development	63	3.41 (.58)	3.54 (.66)	3.47 (.72)	3.57 (.56)	3.64 (.72)
Administration	807	3.16 (.53)	3.37 (.69)	3.14 (.65)	3.23 (.49)	3.30 (.58)

Note: College of Architecture was not included due to the small size of the population.

Background and Use of Competencies in ePerformance

To develop and include the use of competencies in ePerformance, the human resources department contracted with a human resource consulting firm (Human

Resources, n.d.b). In the ePerformance competency library, competencies have been provided that supervisors can use to rate each staff member (Human Resources, n.d.b).

To help facilitate this process, human resources pre-loaded 12 competencies based on the position type for each staff member, and noted that they clustered these competencies according to job level (Human Resources, n.d.a.). These classifications by job level are director, manager, supervisor, lead, professional, trades, athletics, research and public safety (Human Resources, n.d.a.). An illustration of the classification of positions for pre-loaded competencies is presented in Table 7.

Table 7

Classification of Positions for Pre-loaded Competencies in ePerformance

Position Classification	Positions
Director	Department directors, program directors, associate and assistant directors
Manager	Department/program managers, college and division administrators
Supervisor	Supervisors, assistant managers, department business administrators
Lead	Senior accountants, assistant business administrators, leads in skilled trades, office coordinators, assistant supervisors
Professional	Advisors, analysts, developers, coordinators, specialists, computer professionals
Clerical	Assistants, secretaries, office technicians, operators
Public Safety	Police officers, security officers, safety and dispatch
Research	Lab supervisors, post-docs, researchers and research technicians
Trades	Skilled trades, custodial staff, operations and maintenance staff
Athletics	All non-coaching staff of athletic programs

Pre-loaded competencies for major job categories are presented in Table 8 in the exact order as prescribed by human resources. Pre-loaded competencies for positions classified as trades, athletics, research and public safety are presented in the Appendix A.

Table 8

Pre-loaded Competencies by job level for ePerformance in major job categories

Job Level	Job Competency											
Dir.	Bus.	Build	Build	Coach/	Dec.	Comm.	Empower.	Est.	Lead	Infl.	Sell	Passion
	Savvy	Org	Trust	Dev.	Make			Strat.	Change		the	Res.
		Talent						Direction			Vis.	
Mgr.	Build	Team	Building	Coach/Dev	Dec.	Comm.	Del.	Info	Fac.	Gain	Plan	Drive
	Partnerships	Build	Trust		Make		Resp.	Monit.	Change	Comm.		Results
Sup.	Plan/ Org.	Sel.	Building	Coach/	Dec.	Comm.	Del.	Info	Fac.	Insp.	Man.	Cont.
		Talent	Trust	Dev.	Make		Resp.	Monit.	Change	Others	Con.	Learn.
				Others								
Lead	Build	Team	Gain	Coach	Dec.	Comm.	Plan/	Info	Qual.	Know/	Man	Cont.
	Work Rel.	Build	Commit.		Make		Org	Monit.	Orien.	Skills	Con.	Learn.
Prof.	Build	Manage	Work	Init. Act	Dec.	Comm.	Plan/	Adapt.	Qual.	Know/	Inn.	Cont.
	Work Rel.	Conflict	Standards		Make		Org		Orien.	Skills		Learn.
Cler.	Man. Con.	Collab.	Tenacity	Init. Act	Eng.	Comm.	Managing	Adapt.	Qual.	Know/	Inn.	App.
					Read.		Work		Orien.	Skills		Learn

Source: Human Resources (2010)

According to information from this institution’s human resources department, each employees is required to be rated on at least one competency. Although 12 competencies are pre-loaded for each employee, during the ePerformance process, supervisors are able to add or delete competencies, as long as each employee is rated on at least one competency. Supervisors are able to select competencies from a competency library. In total, supervisors utilized 78 competencies to rate employees at this public institution. On average, each employee was rated on 9.32 competencies. The lowest number of competencies used to rate an employee in ePerformance was 1 and the highest

number of competencies used to rate an employee was 24. The median for this range was 11 and the mode was 12.

A frequency analysis was conducted to understand how competencies were utilized in the ePerformance process in calendar year 2012. The most frequently used competency to rate employees was communication, which was used to rate 1,912 employees (80% of employees at this institution). This was followed by knowledge and skills, which was used to rate 65% of employees. Rounding out the top three competencies used to rate university employees at this institution was the competency decision making. The top 10 competencies, their frequencies and the percentage utilized to rate employees are included in Table 9.

Table 9

Top 10 Competencies Used to Rate Employees in ePerformance

Competency	Frequency Utilized	% Utilized
Communication	1,912	80%
Knowledge & Skills	1,566	65%
Decision Making	1,451	60%
Adaptability	1,220	51%
Initiating Action	1,220	51%
Quality Orientation	1,215	51%
Planning & Organizing	1,187	49%
Managing Conflict	1,174	49%
Continuous Learning	939	39%
Work Standards	839	35%

Similarly, a frequency analysis was used to understand how often supervisors utilized pre-loaded competencies. In this analysis, for five of these employee classifications (clerical, professional, managers, research and trades), all 12 competencies

were selected 50% or more of the time to rate these employees. For the trades employee classification, 11 pre-loaded competencies were selected by supervisors 75% or more of the time to rate this group of employees. For the research classification, eight pre-loaded competencies were selected 75% or more of the time to rate this classification of employees. The complete frequencies tables by position classification are presented in Appendix B.

Variables and Statistical Processes Used in Research Question 1

In this section, the following will be discussed: (a) dependent and independent variables studied and (b) the statistical method used to answer the research question.

Independent and dependent variables. The first research question this study seeks to answer is: Within a university setting, how are competencies valued by job title within college and division? Employee competencies will be operationalized using the individual competencies each supervisor selects for each of individual employee. The independent variables used in this analysis includes employee characteristics including: (a) gender; (b) race; (c) ethnicity; (d) college division employed; (e) type of college/division, as determined by a researcher-assigned function code, as defined by the National Association of College and University Business Officers (NACUBO); (f) years of service; and (g) highest education attained. The dependent variables are the frequencies by which particular competencies are used to rate each employee. These variables are nominal in nature, which will impact the statistical analysis selected for these variables.

Statistical method used to answer the research question. When determining the appropriate statistical method to answer the research question about how employee

competencies are valued by job title within departments and divisions, it is important to note that within these variables there are both nominal and interval data. A statistical method that has been recommended for use when the majority of variables are nominal, categorical or qualitative is multiple correspondence analysis (Hoffman & De Leeuw, 1992). This type of statistical method is a way to help cluster large data sets so that one is able to view relation between data (Hoffman & De Leeuw). For example, this method would be helpful in understanding the relation between one type of employee in a college and an employee within a division, similar to relations between brands of cars (as described by Hoffman and De Leeuw (1992)).

In order to prepare data from this study for multiple correspondence analysis, the first step was to create an indicator or binary matrix, as described by Hoffman and De Leeuw (1992). By way of example, this means that there will be a matrix containing demographic information for each of the 2,401 employees, and each of the competencies used in ePerformance. For each competency, the researcher indicated the category a particular employee is in with a binary code, using a “1” or a “0,” depending on whether this competency was used by the supervisor to rate the employee. This same pattern was used for college/division and department. Following the completion of the indicator matrix, the multiple correspondence analysis was conducted using this data to understand the number of dimensions necessary to explain the data, and dominant eigenvalues was reported, as described by Hoffman and De Leeuw (1992).

Following the creation of plots in multiple correspondence analysis, it was important to test this model to understand its usefulness as a tool in helping understand more about university staff performance. The multiple correspondence analysis was used

to note similarities and differences in competency usage among the colleges and differences at this institution.

Following the completion of the indicator matrix, a multiple correspondence analysis was conducted in XLSTAT 2015 using this data to understand the number of dimensions necessary to explain these data, and dominant eigenvalues, as described by Hoffman and De Leeuw (1992). Since there were 78 competencies utilized to rate employees, it was determined that utilizing all 78 competencies may not provide a clear illustration. Instead, only those competencies that were utilized to evaluate 20% or more of university staff were utilized in the analysis. This reduced the total number of competencies used in the analysis to 17 for non-supervisory employees and 20 for supervisory employees.

The following competencies presented in Tables 10 and 11 were utilized in the analysis for each employee group. Using the symmetric plots provided in the multiple correspondence analysis output, these plots were examined to determine if there were similarities or differences across colleges and divisions at this institution. For example, one might expect that more technical colleges, such as engineering and natural sciences and math may have similar competencies that lend themselves to a cluster of employees. Similarly, one might expect employees in a divisional unit that has little interaction with students, would not be clustered with the student services. A complete list of variables used in the multiple correspondence analysis to analyze both non-supervisory and supervisory employees in the analysis is presented in Tables 12 and 13.

Table 10

Competencies Utilized in the Multiple Correspondence Analysis for Non-Supervisory Employees

Competency	% Utilized
Knowledge & Skills	83%
Communication	80%
Adaptability	65%
Initiating Action	65%
Quality Orientation	65%
Managing Conflict	59%
Decision Making	54%
Planning & Organizing	51%
Continuous Learning	47%
Work Standards	44%
Building Work Relationships	40%
Innovation	40%
Managing Work	37%
Contributing to Team Success	26%
Engagement Readiness	25%
Applied Learning	24%
Tenacity	21%

Table 11

Competencies Utilized in the Multiple Correspondence Analysis for Supervisory Employees

Competency	% Utilized
Decision Making	82%
Communication	79%
Coach and Develop Others	73%
Building Trust	67%
Planning & Organizing	44%
Facilitating Change	37%
Passion for Results	36%
Delegating Responsibility	35%
Information Monitoring	33%
Business Savvy	33%
Building Organizational Talent	33%
Establish Strategic Direction	29%
Empowerment	29%
Leading Change	28%
Building Partnerships	27%
Influence	26%
Gaining Commitment	25%
Driving for Results	25%
Selling the Vision	24%
Team Building	21%

Table 12

Variables Used in the Non-Supervisory Multiple Correspondence Analysis

Gender	Ethnicity	Years of Service	NACUBO Function Code	College/Division	Highest Ed.	Competencies	
Female	Amer.	Less Than	Academic	Architecture	Not	Comm.	
	Indian	Five Years	Support		Indicated		
Male	Asian	Five to	Auxiliary	Athletics	Less than	Cont. Team Success	
	Black	Ten Years	Enterprise	Auxiliary Services	Bachelor's	Decision-making	
	Hispanic	Eleven to	Institutional	Business	Degree	Managing Work	
	White		Fifteen	Support	Administration	Bachelor's	Knowledge/ Skills
			Years	Instruction	Chancellor/President	Degree	Managing Conflict
			Sixteen to	Operation and	Education	Greater	Planning/Organizing
			Twenty	Maintenance of	Education Technology	Than	Building Work
			Years	Plant	Engineering	Bachelor's	Relationships
			Twenty-	Public Service	Graduate College of	Degree	Adaptability
			one to	Research	Social Work		App. Learning
			Twenty-	Student	Honors College		Cont. Learning
			five Years	Service	Human Resources		Engagement
			Twenty-six		Humanities		Readiness
			years and		Law		Initiating Action
greater				Library		Innovation	
				Natural Sciences and		Qual. Orientation	
		Mathematics		Tenacity			
		Optometry		Work Standards			
		Pharmacy					
		Plant					
		Provost					
		Public Safety					
		Teaching Centers					
		Technology					
		VC/VP Admin					
		Student Services					
		Development					

Table 13

Variables Used in the Supervisory Multiple Correspondence Analysis

Gender	Ethnicity	Years of Service	NACUBO Function Code	College/Division	Highest Education	Competencies	
Female	Amer. Indian	Less Than Five Years	Academic Support	Architecture	Not Indicated	Decision-making	
Male	Asian	Five to Ten Years	Auxiliary	Athletics	Less than Bachelor's Degree	Communication	
	Black	Eleven to Fifteen Years	Enterprise	Auxiliary Services	Bachelor's Degree	Coach/Dev. Others	
	Hispanic	Sixteen to Twenty Years	Institutional	Business Administration	Bachelor's Degree	Building Trust	
	White		Twenty-five to Twenty-six years and greater	Instruction	Chancellor/President	Bachelor's Degree	Planning/Organizing
				Operation and Maintenance	Education	Greater Than Bachelor's Degree	Facilitating Change
				of Plant	Education Technology	Bachelor's Degree	Passion for Results
				Public Service	Engineering		Delegating Resp.
				Research	Graduate College of Social Work		Info. Monitoring
				Student Service	Honors College		Business Savvy
					Human Resources		Building Org. Talent
					Humanities		Est. Strategic Direction
					Law		Empowerment
					Library		Leading Change
		Natural Sciences and Mathematics		Build. Partnerships			
	Optometry		Gain. Commitment				
	Pharmacy		Driving for Results				
	Plant		Selling the Vision				
	Provost		Team Building				
	Public Safety						
	Teaching Centers						
	Technology						
	VC/VP Admin						
	Student Services						
	Development						

Variables and Statistical Processes Used in Research Question 2

The second research question was: Within a university environment, in comparison with employee ratings on job goals, job and manager responsibilities, and customer service, how were employee competencies valued by job title within departments and divisions? In this section, the dependent and independent variables studied, as well as the statistical method used to answer the research question are presented.

Independent and dependent variables. Independent variables used in the analysis were each employee's score on the four components of ePerformance: (a) job goals; (b) job responsibilities; (c) customer focus; and (d) competencies. (Human Resources, n.d.a). For supervisory employees, who were rated on a fifth performance component, the independent variables used were each manager's scores on the five components of ePerformance: (a) job goals; (b) job responsibilities; (c) customer focus; (d) competencies; and (e) manager responsibilities. (Human Resources, n.d.a). The dependent variable was an employee's overall score on the ePerformance instrument, which was the average score across all sections of ePerformance.

Statistical method. The purpose of analyses in this study was to determine if variables used to measure employee performance in ePerformance for this institution were unique variables or if these variables were measuring the same employee constructs, and understand more about the relation between the sections of ePerformance. As such, principal components analysis was used to understand the relation between these sections of ePerformance and the employee's overall score on the instrument. This was important to understand if there were similarities and differences between how performance of

managers and employees was evaluated. This use of principal components analysis to understand relations between variables that comprise an overall index value, in this case, the employee's overall rating score was a method recommended by Longden (2011). He initially recommended this method as a way to understand college and university ratings or rankings indices, and as they are similar indices, it also seems to apply to ePerformance data collected for this study.

When conducting the principal components analyses for employees and managers, it was expected that there would be correlations between these variables, so an oblique rotation was initially used; however, since the ultimate solution was a single factor solution, no rotation was conducted by SPSS. Additionally, the researcher reported on the Kaiser-Meyer-Olkin measure of sampling adequacy to ensure these data were suitable for principal component analysis. Similarly, a Bartlett's test of sphericity was conducted to ensure significance ($p < .001$), indicating sufficient correlation between variables to proceed with the analysis. When reporting findings from these principal components analyses, eigenvalues greater than 1.00, and their cumulative variance were reported. Analyses of these findings were connected back to the literature on the employee performance appraisal processes.

Variables and Statistical Processes Used to Answer Research Question 3

The research question this study sought to answer was, how is university staff customer services valued in higher education, and are there individual and college/division differences in customer service? This study focused on characteristics of customer service, operationalizing customer service for purposes of this study by using the customer focus section of ePerformance. This study sought to understand unique

differences in customer service rating for employees by demographic characteristics and by the college or division they work in. Initially, it was desired to use a hierarchical linear model (HLM) as this method provides the ability to analyze nested data (Raudenbush, 2004), such as employees nested within specific colleges and universities. To see if these data were appropriate for this statistical technique, an unconditional model was constructed for both 1,836 non-manager employees rated in calendar year 2012 at this institution.

The sample of 29 colleges and divisions at this institution were part of this two-level multilevel modeling study on employee customer service at this large, public institution in the Southwestern United States. It was desired to use a level one model to understand relations in predictors such as employee demographics and the top five competencies used to rate employees with the overall section of customer focus. It was desired to understand nuances in customer service at this institution by determining if employees who were rated higher on the top five competencies also had higher scores on the customer focus section of ePerformance. The unconditional model yielded a statistically significant estimated college/division variance of 11%. Since the college/division variance was deemed very small, it was determined that multilevel model may not be effective to understanding the effect of college and division on an employee's customer service score. Instead, a multiple linear regression technique was used to understand the relations between predictors and the dependent variable of the customer focus section of ePerformance.

Independent variables. The independent variables that were used in the regression to understand more about customer service at this institution included: (a)

employee gender; (b) employee ethnicity; (c) years of service; (d) employee score top five employee competencies used to evaluate non-supervisory employees; (e) a dummy coded variable that represented the type of college or department of employment; (f) number of employees in each college and division, as determined by National Association of College and University Business Officer function codes (e.g., instruction, research, student services, auxiliary services, etc.); and (g) employee's highest educational degree attained. The top five competencies for each employee group was determined by using the five competencies used to rate each employee, or those competencies with the least number of missing variables. Variables used to in the regression model are presented in Table 14.

Table 14

Independent Variables Used in the Regression

Categorical Variables	Quantitative Variables
Employee Gender (as indicated by a dummy coded variable; 1 for female; 0 for male)	Employee Years of Service
Employee Ethnicity (as indicated by a dummy coded variable; 1 for White all other ethnicities 0)	Number of Employees by College-Level
Employee Highest Degree Attained	Employee Competency Rating – Adaptability
College/Department of Employment (as indicated by dummy coded variables; reference variable was public service)	Employee Competency Rating – Communication
	Employee Competency Rating – Knowledge and Skills
	Employee Competency Rating – Quality Orientation
	Employee Competency Rating – Initiating Action

Dependent variables. The dependent variable for each level of the model was the employee's overall score on the customer focus section of ePerformance.

Chapter 4

Results

Results for all three research questions are presented in this section. These results are organized into three sections, one for each question.

Research Question 1 Findings

The technique of multiple correspondence analysis was used to analyze descriptive information about non-research, non-faculty staff, using data from one public research university's ePerformance process. Specifically, this research question was focused on understanding how employee competencies were evaluated across employee position types and colleges and division at one public institution with the purpose of learning more about this particular population. These descriptive cross-tabs and symmetric plots from the multiple correspondence analysis are presented in the following sections: (a) an overall analysis of the ePerformance process at this institution; (b) an overall analysis of competency usage in ePerformance; (c) an analysis of non-supervisory employee descriptive data and description of how non-supervisory employees were rated in ePerformance; and (d) an analysis of supervisory employee descriptive data and description of how supervisory employees are rated in ePerformance.

In the multiple correspondence analysis output, the symmetric plots in Figures 1 and 2 below present the relations between these categorical variables. As described by Williams and Vogt (2011) and Abdi and Valentin (2007), multiple correspondence analysis is interpreted based on visual distances in the map. This means that the distance between the variables reflects similarities and differences between the variables, and those variables that are closer together are more similar (Abdi & Valentin; Hoffman & de

Leeuw, 1992). For the purposes of this study, when competencies are closer to one another this means that these competencies were selected by similar frequency.

In Figure 1, competencies that were frequently used to rate non-supervisory employees are in the center of the figure. This is observed by noting that competencies such as communication, knowledge and skills and planning and organizing, which were some of the most frequently used competencies to rate non-supervisory employees, are closer to the center of the plot. Those competencies that were used less frequently are located closer to the border of the graph. This is observed by looking at competencies such as tenacity, applied learning and engagement readiness, which were used less frequently to rate non-supervisory employees

Analysis of Multiple Correspondence Analysis Output in Non-Supervisory Employees

The first dimension (the horizontal axes) accounted for 65.11% of adjusted inertia, or explained variance. The second dimension (vertical axis) accounted for 23.89% of adjusted inertia, or explained variance. By reviewing the symmetric plots and comparing this to frequencies of competencies utilized to rate non-supervisory university employees, it appears that the first dimension represents competencies. The second dimension, or vertical axis, represents employee demographic data.

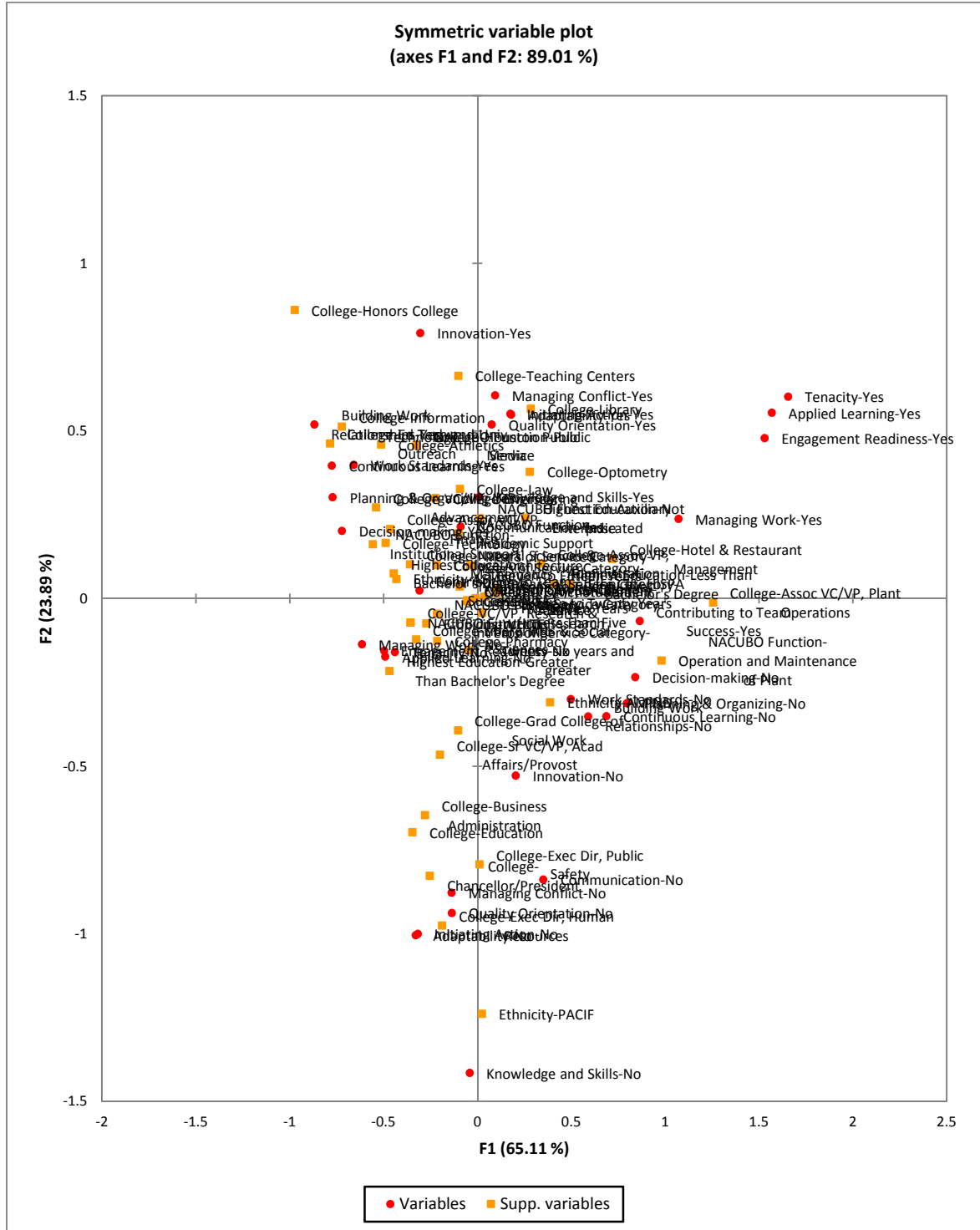
It is by using this visual plot that one can analyze relations among the categories in ways that are not possible with spreadsheets. For example, in the top left-hand quadrant the department information technology is overlaid with one competency, building work relationships. This indicates that non-supervisory employees in this department were frequently rated on this competency. In the left-hand quadrant, there are

three overlapping departments, which include athletics, education technology and public media. These departments are located near the competencies of continuous learning and work standards, meaning these competencies were used frequently by supervisors in these departments to rate their employees. Also, by reviewing the graphic plot, it was noted that those non-supervisory employees in division with NACUBO functions of auxiliary services and academic support were very likely to have been rated on the competency communication because the competency and the NACUBO function were very close together in the output.

There were other relations observed in the multiple correspondence analysis output. Employees whose NACUBO function code was categorized as operation and maintenance of plant and who worked in plant operations were likely to be rated on the competency contributing to team success. In reviewing these data it was also observed that non-supervisory employee in most other divisions were not likely to have been rated on this competency. Figure 1 below illustrates the output for non-supervisory employees.

Figure 1

Relations Between Competencies Selected, College/Division, and Demographic Characteristics for Non-Supervisory Employees



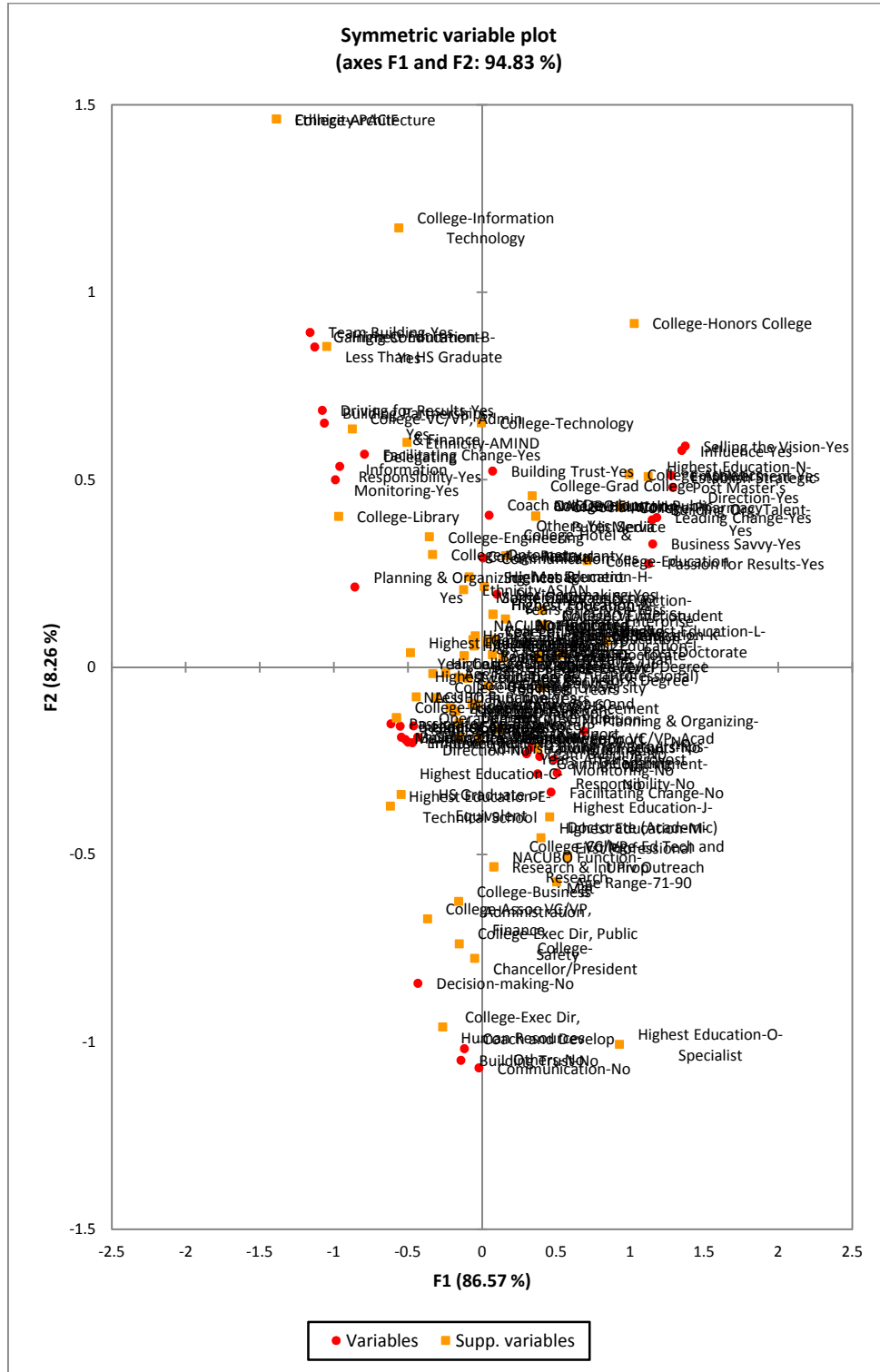
Analysis of Multiple Correspondence Analysis Output in Supervisory Employees

The first dimension (the horizontal axes) accounted for 86.57% of adjusted inertia, or explained variance. The second dimension (vertical axis) accounted for 8.26% of adjusted inertia, or explained variance. By reviewing the symmetric plots and comparing this to frequencies of competencies utilized to rate supervisory university employees, it appeared that the first dimension reflects competencies used to rate these employees. The second dimension reflected demographic characteristics, such as ethnicity and college/department in which the employee works. Figure 2 provides a presentation of this output.

The vertical axis overlaid demographic characteristics on the competency dimension and this provided additional detail about how competencies were used to rate employees at this institution. For example, supervisory employees rated on the competency selling the vision were also likely to have been rated on the competencies of influence and establishing strategic direction as these competencies are close together in the plot. Employees employed in an area with a NACUBO function code of public service, which included the public media department were likely to have been rated on the competency coach and develop others. Employees in the colleges of natural sciences and mathematics and hotel were also most likely to have been rated on the competency communication during this performance period given the proximity of this competency to these colleges in the plot. It was also noted by reviewing the graphic that the honors and architecture colleges, as well as information technology and the human resources departments, appeared to be outliers in the ePerformance process, as these colleges and departments were further away from all other colleges and departments in the plot.

Figure 2

Relations Between Competencies Selected, College/Division, and Demographic Characteristics in Supervisory Employees



Research Question 2 Findings

Two initial principal components analyses were performed using employee scores on sections of ePerformance. One principal components analysis was performed using manager data and a separate principal components analysis was conducted using data from non-manager employees. Results from the principal components analyses conducted for this study are presented in the below sections.

Results from Non-Manager Principal Components Analysis

A principal components analysis was completed for the four sections of one post-secondary institution's e-Performance instrument, which included: (a) competencies; (b) job responsibilities; (c) job goals and customer focus. This analysis was performed using a sample of 1,836 non-manager, non-research, non-teaching staff. Because of the large sample size, the variables-to-sample-cases ratio was deemed adequate. The Kaiser-Meyer-Olkin measure of sampling adequacy was .83, indicating the present data were suitable for principal components analysis. Similarly, Bartlett's test of sphericity approximate Chi-Square of 4,474.552 was significant ($p < .001$), indicating sufficient correlation between the variables to proceed with the analysis.

A total of 1 factor had eigenvalues greater than 1.00, cumulatively accounting for 75.74% of the total variance. Because there was only one factor with an eigenvalue greater than 1.00, it was not appropriate to rotate these variables. In the component matrix, all sections of ePerformance had absolute value loadings greater than .800. The four variables appear to represent the construct "employee proficiency." The highest loading was for the competencies section of ePerformance, with a loading of .914, and the variable with the lowest loading across all non-supervisory employees was the

customer focus section, with a loading of .814. This single factor solution had good reliability, as $\alpha = .885$. Loadings across all non-supervisory employees are provided in Table 15.

Table 15

ePerformance Section Loadings Across all Non-Managerial Staff

ePerformance Section	Loading
Competencies	.914
Job Responsibilities	.906
Job Goals	.843
Customer Focus	.814

To understand if there were nuances in how different colleges and divisions valued the ePerformance sections, a principal components analysis was conducted using ePerformance data for non-manager university staff employed in colleges/divisions with 20 or more employees and that had a Kaiser-Meyer-Olkin measure of sampling adequacy greater than .70, a requirement for suitability for principal components analysis. There were 17 of the 21 colleges and divisions at this institution that fit these criteria. The following colleges and divisions met these criteria: natural sciences and mathematics, education, business administration, engineering, humanities, optometry, pharmacy, technology, hotel and restaurant management, law, provost, administration, athletics, president, student services and development. Four colleges did not meet these criteria of employing 20 or more staff and when the principal components analysis was conducted a Kaiser-Meyer-Olkin measure of sampling adequacy greater than .70 was not obtained: architecture, graduate college of social work, honors and library.

After completing these principal components analyses for these colleges and divisions within this university, these findings were analyzed to determine if common loading patterns existed. In all, seven different loading patterns were found among these colleges and divisions, indicating that these units within the larger university valued sections of ePerformance differently. The below sub-sections summarize these various loading patterns. The loading patterns that emerged in this analysis are illustrated in Appendix C. In the review of these loading patterns, it is noteworthy that any reference to high or low loadings is relative as all loadings were high, and only one factor was extracted.

Pattern 1. Pattern 1 was the most common, and was the same loading pattern from the primary principal components analysis for non-management staff. Colleges and divisions with loadings in pattern 1 had the highest loadings for the competencies section and lowest loadings for the customer focus section of ePerformance. Colleges and divisions that had this loading pattern included: sciences and mathematics, technology, administration, research and student services.

Pattern 2. Only one college and one division fit the pattern 2. These included athletics and the education. In this loading pattern, the competencies section had the highest loading and customer focus the lowest loading, similar to the first loading pattern. The difference between loading patterns 1 and 2 was that the order for the job goals section and job responsibilities section were reversed in this loading pattern. Unlike the first loading pattern, job goals had a higher loading than job responsibilities.

Pattern 3. Two colleges and one division fit the loading pattern 3. These included the colleges of business and engineering and the division of the provost. In loading pattern 3, the job responsibilities section had the highest loading and customer focus the lowest loading. The loading for the customer focus section was similar to both patterns 1 and 2.

Pattern 4. Two colleges fit loading pattern 4. These included the colleges of humanities and optometry. In this loading pattern, the job responsibilities section had the highest loading and job goals the lowest loading.

Pattern 5. Three colleges fit the loading pattern 5. These included the colleges of law, pharmacy and hotel and restaurant management. In this loading pattern, the competencies section had the highest loading and job goals the lowest loading. The customer focus section had the second lowest loading.

Pattern 6. One division fit loading pattern 6, the chancellor/president. In this loading pattern, the competencies section had the highest loading and job responsibilities the lowest loading. The customer focus section had the second lowest loading in this pattern.

Pattern 7. One division fit the loading pattern 7, development. In this pattern, the job goals section had the highest loading and the customer focus section had the lowest loading. The loading for the customer focus section for this was similar to the loading for this ePerformance section in loading patterns 1, 2 and 3.

Results from Manager Principal Components Analysis

A principal components analysis of the five sections of one institution's ePerformance was performed on data from 565 managerial, non-research, non-teaching staff. Because of the large sample size, the variables-to-sample-cases ratio was deemed adequate. The Kaiser-Meyer-Olkin measure of sampling adequacy was .88, indicating the present data were suitable for principal components analysis. Similarly, Bartlett's test of sphericity approximate Chi-Square of 2,063.015 was significant ($p < .001$), indicating sufficient correlation between the variables to proceed with the analysis.

A total of 1 factor had eigenvalues greater than 1.00, cumulatively accounting for 74.17% of the total variance. Because there was only one factor with an eigenvalue greater than 1.00, it was not appropriate to rotate these variables. In the component matrix, all sections of ePerformance had absolute value loadings greater than .731. The five sections appear to represent the construct "manager proficiency." The highest loading was for the competencies section, with a loading of .934 and the lowest loading was for the customer focus section, with a loading of .731. This single-factor solution had good reliability, as $\alpha = .905$. Loadings across all manager staff are provided in Table 15.

Table 16

ePerformance Section Loadings Across all Managerial Staff

ePerformance Section	Loading
Competencies	.934
Job Responsibilities	.916
Job Goals	.866
Manager Responsibilities	.845
Customer Focus	.731

To understand if there were nuances in how different colleges and divisions valued the ePerformance sections for manager staff, a principal components analysis was

conducted using ePerformance data for manager employees employed in colleges/divisions with 20 or more manager staff and that had a Kaiser-Meyer-Olkin measure of sampling adequacy greater than .70, a requirement for suitability for principal components analysis. Eight of the 21 colleges and divisions at this institution fit these criteria. These included the following colleges and divisions: natural sciences and mathematics, business, humanities, law, provost, administration, research, student services and development.

After completing these principal components analyses for these colleges and divisions within this university, these findings were analyzed to determine if common themes existed. In all, seven different patterns of loadings were found among these colleges and divisions, indicating that these units within the larger university valued sections of ePerformance differently. The loading patterns that emerged in this analysis are illustrated in Appendix D. The below sub-sections summarize these loading patterns. In the review of these loading patterns, it is noteworthy that any reference to high or low loadings is relative as all loadings were high, and only one factor was extracted.

Pattern 1. Pattern 1 was the most common loading pattern, and was the same loading pattern from the primary principal components analysis for all management staff. Colleges and divisions with loadings in pattern 1 had the highest loadings for the competencies section and lowest loadings for the customer focus section of ePerformance. Colleges and divisions that had this loading pattern included: natural sciences and mathematics, development and student services.

Pattern 2. Pattern 2 was the second-most common loading pattern. Colleges and divisions in loading pattern 2 had the highest loadings for the competencies section and lowest loadings for the manager responsibilities section of ePerformance. Colleges and divisions that had this loading pattern included: colleges of business administration and humanities.

Pattern 3. The college of law was the only college or division with this loading pattern. In this pattern, the highest loading was for the ePerformance section job goals and the lowest loading was for the section customer focus.

Pattern 4. The division of academic affairs was the only college or division with loading pattern four. For this loading pattern, the highest loading was for the ePerformance section competencies and the lowest loading was for the section customer focus. The difference between loading patterns 1 and 4 was that the manager responsibilities section had a higher loading in pattern 4 than pattern 1. In pattern 4, the manager responsibilities section was the second-highest loading, and for pattern 1, this section had the second-lowest loading.

Pattern 5. The division of administration and finance was the only college or division with loading pattern five. For loading pattern 5, the highest loading was for the ePerformance section competencies and the lowest loading was for the section customer focus. The difference in loading patterns between loadings patterns 1 and 5 was that the job goals section in loading pattern 5 had the second-lowest loading and for pattern 1, the second-lowest loading was for manager responsibilities.

Pattern 6. The division of research was the only college or division with loading pattern six. In this loading pattern, the highest loading was for the ePerformance section competencies and the lowest loading was for the section customer focus. The difference in loading patterns between loading patterns 1 and 6 was the order of loadings between the job goals and job responsibilities sections of ePerformance. For loading pattern 6, the job goals section had the second-highest loading, and for loading pattern 1, the job responsibilities section had the second-highest loading. In loading pattern 6, job responsibilities had the third-highest loading, and for loading pattern 1, job goals had the third-highest loading.

Research Question 3 Findings

Non-supervisory gender, race, years of service, education, department and college type, and the top-five competencies that were utilized to rate non-supervisory employees were used in a standard multiple linear regression analysis to understand these variables impact as predictors of an employee's customer service score. The correlations of these variables are presented in Table 15. As can be seen, many of the correlations were statistically significant, and the highest correlations were between the top five competencies used by supervisors to rate non-supervisory employees and an employee's score on the customer focus section of ePerformance.

N=1,836

Table 17.

Correlations of Variables in the Analysis

*p<.05.

Variable	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Cust.	.12*	.06*	-	.26*	.06*	-.00	-	-	-.03	-.03	.25*	.13*	.27*	.21*	.20*	.06*	-
Focus			.16*				.04*	.31*									.20*
Ethnicity	---	.05*	-	.11*	.01	-.3	.02	-	-	.08	.15*	.03	.14*	.12*	.12*	-	-
			.20*					.16*	.05*							.11*	.04*
Years		---	.09*	-	-.03	.02	.12*	-	-.01	-.00	.02	-.01	.07*	.32	-	.04*	-.01
			.05*					.07*							.05*		
Educ.			---	-	-	-	-	.39*	.01	.02	-	-	-	-	-	.08*	.25*
			.18*	.06*	.04*	.13*					.25*	.05*	.25*	.19*	.25*		
Instruct				---	-	-	-	-	-	-	.18*	.10*	.17*	.16*	.24*	.05*	-
			.17*	.19*	.31*	.38*	.27*	.17*									.29*
Res.					---	-	-	-	-	-.05	.04	.02	.01	.02	.12*	.02	-
					.06*	.09*	.11*	.08*									.10*
Aca. Supt.						---	-	-	-	-	-.02	-.02	.01	.02	-.03	.03	-
					.10*	.12*	.09*	.06*									.28*
Ins. Supt.							---	-	-	-	.09*	-.03	.09*	.03	-.03	-	-
					.20*	.14*	.09*									.06*	.20*
Plant								---	-	-	-	-	-	-	-	-	.59*
								.17*	.10*	.28*	.07*	.32*	.24*	.26*	.10*		
Stu. Serv.									---	-	.01	.03	.06*	.06*	.04	.07*	.42*
								.08*									
Aux.										---	-	-.01	-.04	-.04	-	.05*	-
										.05*					.07*		.20*
Adapt.											---	.26*	.76*	.53*	.57*	.02	-
																	.24*
Comm.												---	.32*	.33*	.30*	.07*	-.02
Init. Act.													---	.56*	.52*	.04*	-
																	.22*
Know/Skills														---	.54*	.03	-
																	.20*
Quality															---	-.03	-
																	.24*
Female																---	-
																	.04*
# Emps.																	---

The prediction model was statistically significant, $F(16, 1826) = 24.27, p < .001$, and accounted for approximately 17% of the total variance of an employee's score on the customer focus section of ePerformance ($R^2 = 0.18, \text{Adjusted } R^2 = 0.17$). An employee's

score on the customer focus section of ePerformance was primarily predicted by whether the employee worked in a college or department that performed the primary functions of instruction, research, academic support, institutional support, student services or auxiliaries. An employee's score on the customer focus section of ePerformance was also primarily predicted by years of service to the institution, and to a lesser extent ethnicity. The raw and standardized regression coefficients together with their correlations with employee customer focus score, their squared semi-partial correlations and their structure coefficients are shown in Table 18.

Table 18

Standard Multiple Linear Regression Results.

Model	B	SE-b	Beta	Pearson r	sr ²	Structure Coefficient
Constant	2.79	0.11				
Female	0.03	0.03	0.22	0.06	0.00	0.14
White*	0.10	0.04	0.06	0.12	0.00	0.29
Years of Service*	0.00	0.00	0.04	0.06	0.00	0.14
Education	-0.01	0.04	0.06	-0.16	0.00	-0.38
Instruction*	0.66	0.10	0.43	0.26	0.02	0.62
Research*	0.64	0.12	0.19	0.06	0.01	0.14
Academic Support*	0.45	0.11	0.15	0.00	0.01	0.00
Institutional Support*	0.49	0.10	0.23	0.04	0.01	0.95
Plant	0.07	0.12	0.04	-0.31	0.00	-0.74
Student Services*	0.34	0.12	0.15	-0.30	0.00	-0.72
Auxiliaries*	0.40	0.12	0.11	-0.02	0.01	-0.05
Number of Employees	0.00	0.00	0.02	-0.20	0.00	-0.48
Adaptability	0.01	0.01	0.06	0.25	0.00	0.60
Communication	0.10	0.02	0.01	0.13	0.00	0.31
Initiating Action*	0.02	0.01	0.04	0.27	0.00	0.65
Knowledge and Skills	0.01	0.01	0.05	0.21	0.00	0.50
Quality Orientation	-0.01	0.01	-0.03	0.20	0.00	0.48

N=1,836; *p<.05

Note: The dependent variable was employee customer focus score in ePerformance. R²=0.18. Adjusted R²=0.17. sr² is the squared semi-partial correlation.

Summary of Findings by Research Question

The following sub-sections will present key findings that were observed in the analysis of each research question.

Research question 1. The key finding from this section is that there are too many competencies being utilized by supervisors to rate employees in the ePerformance process. During the construction of data for the multiple correspondence analysis, it was noted that 78 competencies were used by supervisors to rate employees at this institution, and in one case an employee was rated on 24 competencies during the 2012 performance period. Even when utilizing the top competencies utilized by supervisors to rate employees, it was observed that there were colleges and departments that were outliers in the types of competencies that these supervisors used to rate their employees.

Research question 2. The key finding from this section was that all sections of ePerformance had high loadings, and all sections loaded on one component. It appeared from the component loadings that these sections of ePerformance were measuring employee proficiency. While the section of competencies had the highest loading, this finding is relative, as all loadings were greater than .800, so the different sections of ePerformance appeared to be redundant.

Research question 3. One key from the regression analysis were that White employees had a significant and small advantage over other ethnicities in the rating on the customer focus section of ePerformance. Additionally, a predictor of an employee's customer focus score was the type of department or college in which an employee worked, except if the employee worked in a department or college whose primary function is categorized by the NACUBO function of plant.

The discussion of these findings in greater detail and their relation to prior literature are discussed further in the next section of this paper. Additionally, the next section of this paper will discuss in detail recommendations for policy and practice based on these study findings.

Chapter 5

Discussion

The purpose of this study was to use one institution's demographic and employee performance data to provide insights about the population of university staff at a large, urban public research university located in an urban setting in the Southwestern United States. A case study approach was used to analyze the implementation of this university's performance management policy for staff employees. Three discrete research questions guided this work, and were aimed at understanding: (a) the value of competencies in relation to other sections of an employee performance instrument; (b) whether there were differences by college/division or position type in the usage of competencies to rate employees; and (c) whether there were differences by college/division in terms of how employees were rated on customer service. Unlike the traditional qualitative case study approach, this study utilized a quantitative method to guide the ethnographic work, and it is the intent that these data will tell the story of one institution's performance management process and the employees impacted by it.

Following completion of the statistical techniques to analyze these data, themes were developed about the overall performance management process at this institution. These themes were also used to provide recommendations for revisions to the policy and practices at this institution, and next steps for research. The discussion is presented in the below sections, including themes that emerged from each study, as well as global themes that emerged from this study. Following this discussion of findings, recommendations for policy and practice will be presented, along with potential directions for future study, as well as a conclusion.

Discussion of Findings Related to Research Question 1

The theme that emerged during the analysis of research question 1 was that too many competencies were used by supervisors to rate employees at this institution. There were 78 competencies used to rate 2,401 employees in 2012, and when constructing data for the multiple correspondence analyses, it became clear that not all competencies could be used in the analysis to produce useful information. Even when reducing the competencies used in the analysis to competencies those that were used at least 20% of the time by supervisors to rate employees, there were still competency outliers, including applied learning, tenacity and engagement readiness that were used so infrequently that they could not be connected to a college, department or any employee demographic. The use of too many competencies to rate employee performance is a common error made by human resources departments (Pulakos,2004). Organizational competencies used to rate employees should also be connected to the employee mission and reflect organizational values and language (Lievens et al, 2004; Pulakos).

The use of the multiple correspondence analysis provided important insights into the use of competencies across supervisory and non-supervisory employees, college and division by answering the research question about how employee competencies were valued by job title within colleges and divisions. For example, on a global level by reviewing the symmetric plots of the multiple correspondence analysis it was evident that certain competencies were more highly valued by specific colleges and departments at this institution. For example, it was also clear due to the proximity of variables on the plots that non-supervisory employees in the honors college were more likely to be rated on the competency of innovation and employees who work off-campus at teaching centers were most likely to be rated on the competency of managing conflict by their

supervisors. The multiple correspondence analysis symmetric plots also provided evidence about colleges and departments that were most alike in terms of competencies utilized to rate their non-supervisory employees. As an example, the multiple correspondence analysis identified that the business and education colleges were most alike in the competencies utilized to rate their employees. Similarly, the departments of safety and the president also tended to use the same competencies to rate their employees, a distinction that would not have been made, except for the usefulness of the graphical symmetric plots in multiple correspondence analysis.

Also, multiple correspondence analysis symmetric plots offered insights about differences between different colleges and departments, and as Shippman et al. (2000) noted, many employers focus on the similarities but ignore the differences between employee types. For example, due their distance from other colleges on the plots, it was apparent that the business and honors colleges are different from one another and different from the other colleges in terms of competencies selected to rate their employees. These distinctions are helpful for human resources to be aware of when analyzing competency usage at this institution and when looking to enhance and refine the ePerformance tool. These differences could point to unique characteristics of the colleges or they could reflect unique characteristics of the cognitive and non-cognitive way these supervisors rated their employees. As noted by Judge and Ferris (1993), similar demographic characteristics between supervisors and their subordinates can be influential factor for supervisors in rating employees, an example of types of processes used by supervisors in the performance appraisal process.

Discussion of Findings Related to Research Question 2

The research question that guided this study was to understand how competencies in ePerformance were valued in comparison with the other sections of ePerformance, including: (a) job responsibilities; (b) manager responsibilities; (c) job goals; and (d) customer focus. For both manager and non-manager employees, the principal components analysis technique illustrated that while component loadings for sections of ePerformance were high for both manager and non-manager employees, the highest component loading for both groups was for the competency section of ePerformance.

The four sections of ePerformance for non-supervisory employees (customer focus, job goals, job responsibilities and competencies) and five sections of ePerformance for supervisory employees (customer focus, job goals, job responsibilities, manager responsibilities and competencies) appeared to be used to rate employees on “employee proficiency” or “manager proficiency” and not four separate performance constructs. The usage of four or five sections of ePerformance, each with separate definitions, indicates that the human resources appears to be interested in measuring four distinct constructs. Even though all loadings across the ePerformance sections were relatively high, the competency section had the highest loading. This illustrates that this section needs the most attention by human resources in terms of refinement, which was also demonstrated in the multiple correspondence analysis symmetric plots.

The human resources department defined a competency as “the specific behavior, knowledge, and motivation that an employee must demonstrate in order to be effective in a given job or role” (Human Resources, n.d.a). The human resources web site presents information that competencies were identified as behaviors demonstrated by an

employee, such as the behavior of adaptability, which is described as: “Maintaining effectiveness when experiencing major changes in work responsibilities or environment; adjusting effectively to work within new work structures, processes, requirements, or cultures” (Human Resources n.d.a, Competency Definition Section). They also indicated that it is the demonstration of knowledge or expression of motivation, such as the competency of passion for results, described as “Driving high standards for individual, team, and organizational accomplishment; tenaciously working to meet or exceed challenging goals; deriving satisfaction from goal achievement and continuous improvement” (Human Resources, n.d.a., Competency Definition Section). In the literature on employee competencies, McClelland (1973), described if one wanted to understand the skills and abilities of an outstanding employee in a particular field, it was important observe this employee in his work setting and make a list of this employee’s qualities or characteristics to understand the competencies needed to be an exceptional performer (McClelland).

However, while well-intentioned in the establishment of competencies for use in its rating system, it does not appear that the human resources department provides enough clarity about behaviors that exhibit successful performance of these competencies. This is a concern that researchers have noted in the development of competency-based performance systems. Researchers and practitioners noted that one of the most critical components of the competency development process is the development of behavioral descriptions that are used to evaluate employees on each competency (Grote, 1996; Martone, 2003; Pulakos, 2004; Woodruffe, 1993). Woodruffe (1993) further added that the wording describing the behavior associated with each competency should be verbiage

familiar to employees in the organization and descriptions should be clearly understood by employees. Providing behavioral descriptions of each competency also helps employees understand expectations and provides a standard that managers can use when evaluating employees (Pulakos).

Discussion of Findings Related to Research Question 3

This study sought to understand how university customer service was valued at this institution, including if there were observable differences in individual colleges and divisions. Using a multiple linear regression model to understand predictors of an employee's customer focus score on ePerformance, this study found that being employed in certain colleges and departments is a small and significant predictor of an employee's customer focus score, except for employees who are employed in departments, classified with the NACUBO function code plant, which is the classification for employees who work in the facilities and safety and security departments. An employee's score on the customer focus section of ePerformance was also primarily predicted by years of service to the institution, and to a lesser extent ethnicity, or whether the employee's ethnicity was White.

This was similar to findings from Lynn and Sturman's (2011) study on customer evaluations in which they found evidence of racial bias in customer evaluations of server performance (Lynn & Sturman). These researchers noted that customers tended to express a preference toward their own racial group when evaluating server performance (Lynn & Sturman). In this study, White employees had a slight, significant advantage in terms of customer focus score over other ethnicities employed at this institution.

Likewise, the population of supervisors rating employees was very similar in terms of demographic composition with employees being rated on customer service.

Only one of the top five competencies used to rate employees at this institution was a statistically significant predictor of an employee's score on the customer focus section of ePerformance. For every additional point on the competency of initiating action, there was a .10 predicted gain on an employee's score on the competency section of ePerformance. The other top five competencies of communication, adaptability, quality orientation and knowledge and skills were not significant predictors of an employee's score on the customer focus section of ePerformance.

Overall Discussion of Study Findings

There were some study findings that were consistent across two or more of these studies. While all sections of the ePerformance instrument had high loadings for all factors, the lowest or second lowest of the loadings across all colleges and divisions was for the customer focus section. As an example, when reviewing reliability coefficients of the ePerformance single component solution, the overall reliability coefficient for non-managerial staff is $\alpha=.885$. When the ePerformance section of customer focus was removed, the reliability coefficient remained the same. If the competencies section of ePerformance was deleted, the reliability coefficient decreased to $\alpha=.826$ and if the job responsibilities section was deleted, $\alpha=.834$.

This was a similar finding when reviewing manager ePerformance loadings. The reliability coefficient for managerial staff of the single-factor solution was $\alpha=.905$. When customer focus was eliminated, the reliability coefficient improves to $\alpha=.918$, and decreased when any other sections of ePerformance are eliminated. Likewise, this theme

of the customer focus not being a good fit for ePerformance in its current composition seemed to relate to findings from the regression model.

Also, when reviewing predictors of employee customer focus nested within colleges and divisions, higher scores on the top five competencies used to rate employees were in almost all cases not good predictors of an employee's score on the customer focus section of ePerformance. This seems to indicate that being a top performer in certain competencies does not always translate into being a top performer in customer service.

Both of these findings illustrated that customer focus may be an ineffective measure of university staff employee performance at this institution unless the human resources department can articulate more clearly the true customer of this institution and provide behavioral exemplars of customer service. This may be a difficult task, given researchers have noted it is challenging for customer-employee interactions to be standardized due to individual differences among employees (Passuraman et al). These researchers noted this meant that individual employees wield a great deal of power in the overall service quality of the organization (Parasurman, et al.).

Similarly, it was evident in findings from the multiple correspondence and principal components analyses that if this institution intends to continue to use competencies, refinement of competencies as a measure of employee performance and training of supervisors will be important. In almost all cases, the competency section of ePerformance had the first or second-highest loading in the principal components analysis and as the construction of the multiple correspondence analysis illustrated, the

continued use of a library of 78 competencies will create measurement and analysis challenges for the human resources department. Likewise, data collected for this study indicated that the highest number of competencies used to rate an employee was 24. The median for this range was 11 and the mode was 12. This is counter to the advice of Pulakos (2004) who advocated that no more than 10 competencies be selected to rate an employee's performance.

Recommendations for Policy and Practice

The policy surrounding this institution's performance management system is well-intentioned. The stated goals of this university's performance management police are to provide: (a) defined performance standards and (b) formal opportunities for supervisors and their subordinates to discuss individual employee performance (Human Resources, 2009). Additionally, it is framed as an opportunity for supervisors to recognize outstanding performance and to discuss opportunities for performance improvement (Human Resources, 2009). This study provided several insights to enable the human resources department to develop and implement a policy and practice of university staff performance management that can facilitate these stated goals. This section will detail and analyze potential policy alternatives to the current ePerformance process.

In order to analyze the proposed policy alternatives, it is important to discuss goals that were used to conduct this review. The policy goals that guided this analysis included the development of an alternative that was: (a) efficient and easy to administer; (b) equitable and fair for supervisors and employees; (c) likely to improve employee performance; and (d) politically feasible, or had a high probability of adoption at this institution.

First, employee performance appraisal processes that are efficient, meaning they are well-organized and easy to implement across all staff levels, will be well-received by supervisors, which means that efficiency is an important policy goal to be considered. Concerns about fairness or equity should also be considered when evaluating these policy alternatives. Prior research has documented that the inclusion of certain mechanisms in an employee's performance appraisal, such as opportunities for the employee to receive provisional feedback prior to the formal appraisal, can increase an employee's perception of fairness and equality in the process (Taylor et al., 1995). Additionally, Mayer and Davis (1999) noted that employees make themselves open to criticism in the performance of job duties. If employees expend extra effort in the performance of job duties, they rely on the performance appraisal system to be an opportunity for this effort to be recognized, but if they are not recognized for their hard work, employees may not trust the system or believe it is unfair (Mayer & Davis).

Additionally, it is important to evaluate policy alternatives on the likelihood they will provide a means for performance improvement in university staff. Researchers such as Spence and Keeping (2011) have noted that the primary reason organizations conduct employee appraisal is to improve individual and organizational performance. Likewise, the political feasibility of the alternatives should be addressed, as alternatives need support from a variety of stakeholders – from the university president to front-line managers - in order to be implemented.

Similarly, the implementation of a policy alternative should be structured to fit the loosely coupled structure of higher education. In the loosely coupled organizations, even if a policy change is made in one area, this does not mean that it will affect the culture of

all departments in the desired manner (Birnbaum, 1990; Gilmore, Hirschhorn & Kelly, 1999; Orton & Weick, 1990). Thus, the human resources department should include stakeholders from across campus in the development and implementation of any policy alternative as well as provide on-going training to employees and supervisors regarding performance management, if the policy alternative is to have a sweeping effect on the entire culture of the organization. The following sections will address each of the proposed policy alternatives and evaluate how these alternatives address the goals of: (a) efficiency; (b) fairness and equality; (c) likelihood of improving staff performance; and (d) political feasibility.

Maintaining the status quo. Maintaining the status quo, and continuing to use the current ePerformance system may be seen as efficient for managers and supervisors, as they will not have to complete additional training or become familiar with a new system. However, by not making changes and continuing to use competencies and measuring customer service without the benefit of a consistent measurement tool, each supervisor becomes responsible for developing his or her own measure of each competency and customer focus, which is not an efficient use of time and may not be seen as objective or fair by employees. Also, the supervisor will need to clearly define the nature of the customer for each employee or department. Then, each supervisor will need to explain this method to the employee in the formal appraisal interview. If this method does not provide adequate descriptions of how to improve performance, the risk is that the employee may not understand actions that need to be taken to improve performance. For example, Tata (2002) found that when employees received specific feedback from

supervisors and examples of how to change behavior, they were more likely to be committed to change than employees who did not receive specific feedback.

Likewise, when one considers the status quo in terms of equality and fairness, similar problems can be observed. In the current process, not all staff members were rated on the same number of competencies, which could be seen as inequitable. Additionally, other challenges that point to inequities in the current process include a lack of clarity about the standard for measurement of competencies and customer focus which could cause some staff to mistrust the current process. As Spence and Keeping (2011) noted, each supervisor brings different goals to the performance appraisal process, including giving certain ratings to maximize benefits to employees, avoiding arguments with an employee, and giving ratings that make the manager look better either to management or to his or her staff. These underlying goals may impact the equality of competency measurement across employees.

In considering whether use of competencies and customer service in the performance appraisal is likely to improve staff performance, it is important to consider prior research on effective performance appraisal strategies. Tata (2002) noted that employees who received clear performance feedback and direction on how to improve their behavior had more intention to change behavior than employees who reported not receiving clear supervisor feedback. In considering an appraisal process in which a staff member is being evaluated on a large number of competencies that it may be difficult for the supervisor to document different, clear descriptions about how an employee can improve performance. Finally, in terms of political feasibility, some supervisors might believe the current process meets their needs because they are familiar and comfortable

with the process. Supervisors and university leaders may believe it would be challenging to change the current process, as it is uncertain if the new process would be more effective than the current process.

Reducing the number of competencies measured in ePerformance. Reducing the number of competencies measured in ePerformance to establish a common set of competencies across the university also presents challenges. Supervisors would no longer be able to select different competencies rate different employees. Some supervisors might see this as unfair, especially if they believe strongly that employees performing a specific job should be measured on a specific competency. Conversely, by having fewer competencies, the human resources could provide consistent measurement tools, which would allow each employee to be measured on each competency using the same criteria. This recommendation is consistent with the recommendations outlined by Pulakos (2004) as she recommended fewer competencies be selected for measurement in the performance appraisal. Also, competencies selected should be connected to the strategic organizational mission and that are critical for success in the organization (Pulakos).

Consistency in the application of competency measurement might help staff trust and understand the performance appraisal process, and make it more efficient. This uniformity in the application of competencies across all staff will establish clear performance standards, as noted in Tata's (2002). Employees would have clear directives from management about types of competencies valued in the organization, and how they will achieve them, which will provide clarity about how staff can improve performance.

The biggest challenge is the political feasibility of this option, and obtaining support across a large organization, with many unique cultures, as one set of

competencies would be used in this alternative to rate all staff. These differences among departments and colleges were visible in the multiple correspondence analysis symmetric plots, as some colleges and departments, such as the honors and architecture colleges and information technology were outliers in terms of the competencies these supervisors selected to rate their employees. It may be difficult to obtain agreement across all line supervisors and vice presidents about competencies to use in measuring staff performance. Additionally, it may also be difficult to obtain commitment from the human resources department to lead the entire process from refining competencies to the development of rating instruments, instructions, and training all staff and supervisors on the new process.

Eliminating competency and customer focus sections. Eliminating the use of competencies and focusing on use of job goals in performance measurement requires more collaboration between supervisors and staff to develop job goals that can be measured over the course of the year. While it may take time for supervisors to complete the goal-setting process with each staff member, implementation of this more objective measurement may make the process of completing the performance appraisal more efficient. Explanation of individual performance to employees will also be more straightforward than in the current process, in which supervisors have to develop measures for employees on competencies. The method of using an objective approach that provides clear feedback is also preferred by employees, according to Tata (2002). Conversely, Tata (2002) noted that employees, who did not receive clear feedback and instructions about how to improve, were more likely to emerge from performance reviews frustrated.

Additionally, because the employee included is the goal development process, the employee will not be surprised at the performance review. The importance of employee participation in goal setting as a fair and equitable process has been documented by researchers. In Taylor et al.'s (1995) study of a new employee performance system, when work organizations used processes that included employees in the goal-setting process and when equal evaluation standards were applied to all employees, employees saw the process as more equitable and perceived their supervisors as better managers. Roberts (1994) noted that employee participation in the goal setting process was influential in employee acceptance of performance appraisal in the workplace.

Also, collaborative goal setting between supervisor and employee provides an opportunity for the employee to discuss contextual issues or barriers to being successful in completing a particular goal (Pulakos, 2004). These barriers might be an economic downturn that impacted student enrollment or it could be that the barrier is human barrier, such as an uncooperative department or employee. Opportunities for discussion between supervisor and staff member provide a way for the supervisor to assist in removing a barrier, adjust a goal to be more realistic, and give advice to the employee to overcoming the barrier to successful performance (Pulakos, 2004).

Likewise, use of collaborative goal-setting has been shown by researchers to increase an employee's motivation for improvement. Researchers have documented that when supervisors worked collaboratively with employees to establish goals, these employees had more desire to meet goals they created together (Wexley & Snell, 1987). An enhanced focus on use of goals in the performance appraisal process may impact supervisor performance as well. Employees who received specific feedback from their

supervisors about performance reported making more attempts to improve performance and rated their supervisors as better managers than those employees who did not receive specific feedback (Ilgen, Mitchell & Fredericksen, 1981).

This alternative should be politically feasible to implement for this institution, as extensive use of goal development is modeled by the institution's president, who maintains a progress card, reporting performance on the institution's web site. This performance report card is divided into categories that support the institution's mission such as: (a) nationally competitive research university; (b) student success; (c) community advancement; (d) local and national recognition; (e) community advancement; and (f) athletic competitiveness (Office of the President, n.d.). Use of the progress card to develop and measure performance goals also appears to have spread to other departments within the institution, based on a search of the institution's web sites. Departments and colleges who have posted progress cards on the institution's web site performance are presented in Table 17. A summary of the evaluation of the analysis of policy alternatives is presented in Table 18.

Table 19.

University Departments, Divisions and Colleges Using Progress Cards to Monitor Performance

Department/College Name	Institutional Mission Goals Measured
College of Technology	Competitive Research University, Student Success, Community Advancement, Competitive Resources
Department of Educational Psychology	Nationally Competitive Research University, Student Success, Community Engagement, Local and National Recognition, Competitive Resources
Provost Division	Nationally Competitive Research University, Student Success
Development Division	Local and National Recognition, Competitive Resources
Department of Administration	Nationally Competitive Research University, Student Success, Community Advancement, Competitive Resources

Table 20

A Summary of Competency Alternatives in Terms of Policy Goals

Goals	Impact Category	Policy Alternatives and Documented Findings from This Study and Research Literature		
		Current Policy: Use Competencies and Customer Focus	Reduce the Number of Competencies	Eliminate Measurement of Competencies and Customer Focus. Instead, Use Goals to Measure Performance
Performance Appraisal Tool is Easy to Use	Ease of Use for Employees	Poor – Unclear guidelines and difficult to measure. Does not appear to meet the current human resource policy standard of clear and consistent measurement standards of employee performance.	Good – There would be more clarity for employees about institution-wide competencies. This alternative is a better fit in meeting the human resource policy standard of clear and consistent measurement of employee performance.	Excellent – Major improvement over status quo. The focus of ePerformance would be on job goals. This would also meet the human resources' policy standard of clear and consistent measurement standards for employee performance. Since it was observed that all sections of ePerformance appear to be measuring employee proficiency, the reduction to one section of ePerformance, specifically a measure of employee performance on goals, would provide an appropriate way to measure employee proficiency.
	Ease of Use for Supervisors	Poor – Evidence of supervisors not following instructions as they are using numerous competencies to rate employees.	Poor to Good – Supervisors would no longer be required to develop individual competency or customer service measurement instruments.	Excellent – Clear and collaborative goal development easier to use/administer. While this would require time and investment in order to develop measurable goals working with employees, supervisors may be more willing to make this time investment in the process.
Fair and Equitable Performance Appraisal Process	Equitable for Employees	Poor – Difficult to understand how to improve performance and trust the process. Researchers have found that when employees trust the process their performance improves (Scott, 1999; Svensonn & Wood, 2007 & Van Andel et al., 2012).	Good – Criteria would be easier to understand.	Excellent –Employees may have more trust in the process, as they would be able to work with their supervisors in collaboration to develop annual goals
	Equitable for Supervisors	Poor – Supervisors have to develop measurement tools for each competency and	Poor – Process of developing competencies and behavioral exemplars to fit each position would	Excellent – Supervisors may be more respected by employees.

		customer service and explain rationale to employees.	be time-consuming (Shippman et al.).	
Likelihood to improve performance	Impact on Employee Performance	Poor – Without clear performance feedback, employees continue to mistrust the process and have little direction about how to improve performance. .	Good – More clarity may improve performance.	Excellent – Clear, collaborative feedback has been cited by researchers as most likely to improve employee performance.
	Impact on Supervisor Performance	Poor –Lack of clear measurement and instructions not able to improve staff performance.	Good – Clarity of competencies being measured will help establish clear performance guidelines.	Excellent – Clear, collaborative goal setting has best likelihood of improving staff and supervisor performance.
Political Feasibility in Higher Education	Likelihood of Adoption	High – in place and a change in process will require significant time/effort by supervisors, employees and human resources.	Low- Time required by supervisors, human resources and employees would be significant. Organizational values may change over time so this program may be difficult to evaluate over time.	High- Attractive to administration as goal development is the method used of reporting utilized by the university president at this institution and in use by some departments and colleges at this institution.

Summary policy alternative recommendation. Based on the policy analysis of the university’s use of competencies in ePerformance and three policy alternatives, it is recommended this institution should revise its current performance appraisal process to eliminate use of competencies and customer focus in the appraisal process. Implementing this initiative would include a renewed focus on collaborative goal development between supervisors and staff. This policy change meets the policy goals of: (a) an efficient and easy to use process for performance appraisal; (b) a fair and equitable process for both staff and supervisors; (c) a likelihood of improving staff performance; and (d) a policy that is politically feasible to implement. This section summarizes why this is the best

alternative and provides concluding remarks about how this analysis applies to similar colleges and universities.

An efficient and easy to use policy tool. The elimination of measuring competencies and customer focus in ePerformance and a renewed focus on measuring objective employee goals provides an efficient and easy to administer tool for both staffs and supervisors. When supervisors work with staff to develop performance goals, they also are establishing expectations for staff. Buy-in for a process that is applied consistently has been found by researchers to increase employee trust in the process. By having a consistent process, supervisors may find completing ePerformance for staff is not as time-consuming as in the past, and provides an opportunity for more discussion and collaboration with their employees.

A fair and equitable policy tool. In addition to being more efficient, collaboration with staff to develop goals has been documented by researchers to be more fair and equitable. Tracy et al. (1995) found that in organizations where employees were rated consistently, had an opportunity to participate in the process, and in which performance was evidence-based, employees perceived greater fairness in the process even when they were rated lower than employees who did not receive this treatment. Supervisors using a performance appraisal process that engaged the employee in goal development also reported greater satisfaction in this appraisal process, and an increased ability to resolve workplace problems (Tracy et al., 1995).

A viable policy for improving performance. The policy alternative of eliminating competencies and focusing on use of collaborative goal development has the greatest

potential to improve staff performance. This model is currently used by the institution's president, who reports annually to the community on her own progress. Also, an institutional web search revealed several divisions, colleges and departments have followed the president's model, and are using progress cards to track goal measurement that corresponds to the institutional mission. Additionally, numerous researchers have documented that collaborative goal development provides more opportunities to engage employees in the process, and consequently employees have shown a desire to improve their performance.

A politically feasible alternative. Since university staff members at this institution have been exposed to use of the progress cards and a focus on goal-based performance, the elimination of competencies and customer focus from ePerformance, and a focus on collaborative goal development with their supervisors may be well received by institutional leaders and employees. A web search of this institution's web pages found this practice is currently in use by at least the president's office and five colleges, divisions and departments. Prior research has indicated that employees desire more direct feedback from their supervisors than they actually obtain (Roberts, 1994) and that university staff enjoy being connected with senior administration (Rosser, 2004).

A collaborative goal development process in the performance appraisal may have the added benefit of engaging more university staff in understanding the mission and overall institutional goals, so these employees can connect specific outcomes in their own jobs to this focus. As an example of this, Williams and Levy (1992) found that the more awareness employees had of the performance process, the more congruence there was between employee self-appraisals of performance and supervisor ratings of performance.

Implications for Future Research

This case study provided a starting point for research on the population of university staff employees, and illustrated that there is much to be learned about these university workers. There is much future work that could be undertaken to learn more about these employees who undertake the daily functions of operating American universities. It would seem important to understand how employees within the loosely coupled organization of higher education remain connected to the larger organizational mission of these universities, and how and if they are able to maintain this connection, even while belonging to cultures within their own departments and colleges.

Likewise, this case study provided an important review of one public institution's employee performance management process. It would be important for future research to examine other institution's performance management process. It is likely that within the higher education sector, there are many differences in how performance management is implemented. Zammuto et al. (1982) noted that implementation of performance management policies is affected by the organizational atmosphere and the overall tasks within a particular unit or department.

It also seems important to understand how supervisors within different departments and colleges construct employee goals, and the relation these goals have, if any, to the institution's mission statement or larger institutional goals. Likewise, ethnographic studies within colleges and departments could help identify multiple workplace cultures and missions within the larger institutional framework, and could seek to understand these connections. These ethnographic studies would also be important in understanding employee identity development in higher education employees, and if the

employee's identity is shaped by being a higher education employee, by the college or department in which they work, or by the type of work they perform. There is a rich body of study that needs to be completed in order to further describe the nuances and nature of being a non-teaching employee working in the loosely couple organization of higher education.

Limitations

There were several limitations that should be noted in this study. Importantly, as this was a case study of one institution, findings are generalizable only to this institution. Future study is needed of multiple institutions and multiple institution types to understand similarities and differences among different populations of university employees. Similarly, the study was limited by the institution's own processes. For example institutional data were not available on the particular competency template used to rate each employee in the ePerformance process. This analysis could only be conducted by using the institution's policy and definitions to categorize each employee into a particular template so the analysis could be conducted. Additionally, as this institution utilized 78 competencies in the rating of employees in the competency section of ePerformance, analysis and measurement of the process was further complicated.

A further limitation of this work due to the institution's ePerformance process is that the sections of ePerformance were noted to be not distinguishable from one another. This resulted in high loadings on one factor in the principal components analysis. This means that terminology referencing high and low loadings should be considered to be relative to this finding.

Conclusion

The purpose of this study was to provide initial insights on the large population of non-teaching, non-research at American universities with the goal of beginning a new strand of research on these employees. These employees represent more than half of the population of the workforce at these institutions, and in many instances these employees feel they are marginalized because they are non-faculty employees (Szekeres, 2006). Additionally, this work fulfills a call by Tierney (1988) who advocated for more studies of the culture of higher education in order to be prepared to address problems facing it. Likewise, this study fulfilled the purpose of studying effects of implementation of management tools, such as performance appraisal, developed for corporate environments that are implemented almost wholesale in higher education settings with the goal of resolving or correcting a perceived challenge. Implementing these tools without consideration of impacts and challenges to higher education culture has been an on-going issue, as described by researchers (Birnbaum, 2000; Lamal, 2001).

This study also illustrated the challenges of implementing a system such as ePerformance that has been developed for the corporate sector and was implemented at an institution of higher education almost wholesale. First, this study revealed that too many competencies were used to rate employees, 78 in total, were available for selection by supervisors. Additionally, findings from this study illustrated that the four sections of ePerformance seemed to measure the same construct – employee proficiency. This means that one section may suffice for measuring employee performance. Similarly, findings from the regression analysis on the ePerformance section of customer focus illustrated that departments and colleges with different functions may differ in how they value

customer service. Also of concern was that the regression analysis findings noted a small but significant advantage for White employees on the ePerformance component of customer focus.

Findings from this study provided important insights about university employees that can be used as a springboard for future work. First, demographic data about employees at this institution illustrated that overall both supervisory and non-supervisory employees working at this institution were primarily female. Likewise, more than half of the non-supervisory employees at this institution were classified as minorities, while almost 60% of supervisory employees were classified as White. Also of note was that almost half of the non-managerial staff reported that their highest education was less than a bachelor's degree while more than 70% of managerial staff either had a bachelor's or graduate degree as their highest education.

Finally, this study offered recommendations for this particular institution on its ePerformance process by recommending the use of collaborative goal development as an important way to create a performance management tool that is clearly understood by all participants. This recommendation included the elimination of all other ePerformance sections. By focusing its employee performance management on collaborative goal development, the revised instrument has the best likelihood of meeting the desired human resources goal of a performance instrument that has clearly defined standards, affords employees opportunities to collaboratively develop goals with their supervisors, and provides a means for employees and supervisors to discuss goals for performance improvement. This study and its recommendations provided important insights into the world of being a non-faculty, non-teaching employee in higher education and provided

next steps for research on this population. Similarly, it also provided an important cautionary tale using a real-world example that echoed researchers' concerns about using processes developed outside higher education and overlaying them wholesale on these institutions without understanding or examining the ramifications. This study and its findings reinforce the unique workplace culture of higher education. More work is necessary on this workplace culture to further understand its nuances and help higher education leaders address its unique challenges.

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Appendix A

Pre-loaded Competencies by Job Level for Specific Position Types

Table 1.

Pre-loaded Competencies by job level for ePerformance for trades, research, public safety and athletic positions (specialized categories)

Job Level	Job Competency											
Public Safety	Risk Taking	Drive Res.	Work Stds	Init. Action	Comm.	Dec. Make	Man. Work	Adapt.	Stress Tol.	Ten.	Safe Aware	Cont. Learn
Research	Plan./ Org.	Cont. to Team Succ,	Work Stds	Init. Action	Comm.	Dec. Make	Man. Work	Adapt.	Cont. Imp.	Know/ Skills	Inn.	Cont. Learn
Trades	Man. Con.	Cont. to Team Succ.	Ten.	Init. Action	Comm.	Engagement Readiness	Man. Work	Adapt.	Qual. Orient	Know/ Skills	Safe Aware	App. Learn
Athletics	Coach	Align. Perform. for Succ.	Build Trust	Dev. Others	Comm.	Dec. Make	Selecting Talent	Drive Res.	Gaining Commit	Know/ Skills	Man. Con.	Cont. Learn.

Source: Human Resources (2010)

Appendix B

Pre-loaded Competencies by Position Type and Frequency Used

Table 1.

Pre-loaded Job Competencies for Clerical Employees and Frequency Utilized

	Comm.	Man. Conflict	Collab.	Ten.	Initiate Act.	Engage. Readiness	Man. Work	Adapt.	Qual. Orient	Know/Skills	Inn.	App. Learn
Frequency	186	171	197	119	187	147	211	200	179	204	136	158
Used												
% Staff Rated	78%	72%	83%	50%	79%	62%	89%	84%	76%	86%	57%	67%
N=237												

Table 2.

Pre-loaded Job Competencies for Professional Employees and Frequency Utilized

	Comm.	Building Work Rel.	Manage Con.	Work Stds.	Initiate Act.	Dec. Make	Plan./ Org.	Adapt.	Qual. Orient.	Know/Skills	Innovation	Cont. Learn
Frequency	714	625	550	531	510	674	660	524	629	7325	428	611
Used												
% Staff Rated	83%	73%	64%	62%	59%	78%	77%	61%	73%	84%	50%	71%
N=861												

Table 3.

Pre-loaded Job Competencies for Lead Employees and Frequency Utilized

	Comm.	Build Work Rel.	Team Build	Gain Commit.	Coach	Dec. Make	Plan./ Org	Info Monit.	Qual. Orient.	Know/Skills	Manage Con.	Cont. Learn
Freq.	64	41	25	23	25	43	22	30	54	67	53	42
Used												
% Staff Rated	88%	56%	34%	32%	34%	61%	63%	41%	74%	92%	73%	58%
N=73												

Table 4.

Pre-loaded Job Competencies for Supervisors and Frequency Utilized

	Comm.	Plan/ Org.	Sel. Talent	Build Trust	Coach/Dev.	Dec. Make	Del. Resp.	Info Monit.	Fac. Change	Inspire Others	Man. Con.	Cont. Learn
Frequency	99	101	42	65	70	101	64	71	59	52	83	80
Used												
% Staff Rated	79%	81%	34%	52%	56%	81%	51%	57%	47%	42%	66%	64%

N=125

Table 5.

Pre-loaded Job Competencies for Managers and Frequency Utilized

	Comm.	Build Partner.	Team Build	Build Trust	Coach/ Dev.	Dec. Make	Del. Resp.	Info Monit.	Fac. Change	Gain Commit	Plan/ Org	Drive/ Res.
Frequency	193	150	123	156	159	177	142	135	136	144	185	134
Used												
% Staff Rated	78%	61%	50%	63%	65%	72%	58%	55%	55%	59%	75%	54%

N=246

Table 6.

Pre-loaded Job Competencies for Director Employees and Frequency Utilized

	Comm.	Bus. Savv y	Build Org Talen t	Buil d Trus t	Coach / Dev.	Dec. Makin g	Empower	Est. Strat. Directio n	Lead Chang e	Influenc e	Sellin g Vision	Passio n Results
Frequenc y Used	247	196	185	202	224	272	180	178	159	164	151	221
% Staff Rated	80%	64%	60%	66%	73%	89%	59%	58%	52%	53%	49%	72%

N=307

Table 7.

Pre-loaded Job Competencies for Athletics Employees and Frequency Utilized

	Coaching	Align Per./Success	Build Trust	Dev. Other	Comm.	Dec. Making	Sel. Talent	Drive Results	Gain. Commit	Know/Skill	Man. Con	Cont. Learn
Frequency Used	4	5	6	5	24	24	3	5	6	26	26	22
% Staff Rated	14%	17%	21%	17%	83%	83%	10%	17%	21%	90%	90%	76%

N=29

Table 8.

Pre-loaded Job Competencies for Research Employees and Frequency Utilized

	Plan/Org.	Cont. Team Succ.	Work Stds.	Initiate Action	Comm.	Dec. Making	Man. Work	Adapt.	Cont. Imp.	Know/Skills	Inn.	Cont. Learn
Frequency Used	121	126	127	117	134	130	103	111	108	141	101	119
% Staff Rated	77%	80%	81%	75%	85%	83%	66%	71%	69%	90%	64%	76%

N=157

Table 9.

Pre-loaded Job Competencies for Public Safety Employees and Frequency Utilized

	Risk Take	Drive Results	Work Stds.	Initiate Action	Comm.	Dec. Make	Man. Work	Adapt.	Stress Tol.	Ten.	Safe Aware	Cont. Learn
Frequency Used	0	0	65	49	58	11	13	25	4	0	3	8
% Staff Rated	0%	0%	92%	69%	82%	15%	18%	35%	6%	0%	64%	11%

N=71

Appendix C

Loading Patterns of ePerformance for Non-managerial University Staff

Table 1

Loading Pattern 1

ePerformance Section	College of Science and Math Loadings	College of Technology Loadings	Division of Administration Loadings	Division of Research Loadings	Division of Student Services Loadings
Competencies	.951	.957	.873	.942	.902
Job Responsibilities	.939	.916	.860	.910	.898
Job Goals	.859	.908	.819	.763	.872
Customer Focus	.824	.880	.808	.742	.763
α		.933	.851	.85	.872
N			651	87	200

Table 2

Loading Pattern 2

ePerformance Section	College of Education Loadings	Division of Athletics Loadings
Competencies	.887	.949
Job Responsibilities	.870	.920
Job Goals	.877	.939
Customer Focus	.630	.785
A	.801	.909
N	45	32

Table 3

Loading Pattern 3

ePerformance Section	College of Business Administration Loadings	College of Engineering Loadings	Division of Academic Affairs Loadings
Competencies	.896	.908	.873
Job Responsibilities	.910	.926	.860
Job Goals	.835	.844	.819
Customer Focus	.896	.908	.873
A	.864	.879	.852
N	85	72	76

Table 4

Loading Pattern 4

ePerformance Section	College of Humanities Loadings	College of Optometry Loadings
Competencies	.850	.928
Job Responsibilities	.891	.929
Job Goals	.767	.818
Customer Focus	.804	.832
α	.829	.899
N	142	62

Table 5

Loading Pattern 5

ePerformance Section	College of Law Loadings	College of Pharmacy Loadings	College of Hotel and Restaurant Management Loadings
Competencies	.913	.916	.903
Job Responsibilities	.879	.905	.885
Job Goals	.797	.628	.295
Customer Focus	.825	.831	.758
A	.86	.796	.675
N	40	32	23

Table 6

Loading Pattern 6

ePerformance Section	Division of Chancellor/President Loadings
Competencies	.889
Job Responsibilities	.795
Job Goals	.795
Customer Focus	.737
α	.773
N	28

Table 7

Loading Pattern 7

ePerformance Section	Division of Development Loadings
Competencies	.914
Job Responsibilities	.877
Job Goals	.915
Customer Focus	.766
α	.882
N	38

Appendix D

Loading Patterns of ePerformance for Managerial University Staff

Table 1

Loading Pattern 1

ePerformance Section	College of Science and Math Loadings	Division of Development Loadings	Division of Student Services Loadings
Competencies	.946	.945	.963
Job Responsibilities	.942	.934	.909
Job Goals	.922	.919	.895
Manager Responsibilities	.906	.876	.865
Customer Focus	.805	.536	.713
α	.940	.899	.912
N	22	24	69

Table 2

Loading Pattern 2

ePerformance Section	College of Business Administration Loadings	College of Humanities Loadings
Competencies	.910	.933
Job Responsibilities	.868	.931
Job Goals	.779	.871
Manager Responsibilities	.680	.823
Customer Focus	.718	.852
A	.833	.57
N	44	.924

Table 3

Loading Pattern 3

ePerformance Section	College of Law Loadings
Competencies	.831
Job Responsibilities	.944
Job Goals	.957
Manager Responsibilities	.903
Customer Focus	.525
α	.871
N	30

Table 4

Loading Pattern 4

ePerformance Section	Provost Division Loadings
Competencies	.922
Job Responsibilities	.794
Job Goals	.726
Manager Responsibilities	.846
Customer Focus	.768
α	.865
N	28

Table 5

Loading Pattern 5

ePerformance Section	Division of Administration Loadings
Competencies	.915
Job Responsibilities	.894
Job Goals	.801
Manager Responsibilities	.833
Customer Focus	.682
α	.867
N	156

Table 6

Loading Pattern 6

ePerformance Section	Division of Research Loadings
Competencies	.937
Job Responsibilities	.923
Job Goals	.930
Manager Responsibilities	.912
Customer Focus	.730
α	.931
N	21