

Developing a Web-Based
Hiring Resource at a State Medical College

by

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ABSTRACT

This study uses a sequential, mixed method, action research, quantitative to qualitative research design. The purpose of this study was to develop a useful standardized hiring process at a state medical college that brings clarity to the hiring process and policies. Two conceptual frameworks guided the innovations in this study – communities of practice and Kotter’s change theory. To implement a standardized hiring process, a web-based intranet site was created through collaboration between the Academic Affairs and the Human Resources Departments of the medical college. The web-based intranet was built to be a hiring resource directed at training hiring managers and hiring committees. The hiring resource assists the departments hiring by bringing clarity to the hiring process, assisting in creating a standardized process for posting, recruiting, hiring, and on-boarding new employees, and allowing managers quick access to hiring tools.

Three sources provided data for this study: (1) Pre/Post Hiring Manager/Committee Questionnaire, (2) Interviews with key hiring managers, and (3) Google Analytics.

The study found that all participants found the overall hiring resource “useful” and “effective.” All measured components of the hiring resource were also found to be “useful” and “effective.” The site continues to increase in new users and returning users weekly. The hiring resource is used regularly by the college’s Human Resources Department and is sent to all hiring managers when they begin their hiring process and is introduced in “Managing the UA Way” which is a professional development program for new managers at the college. This study shows that web-based resources are a useful and

effective instrument for training staff in a medical school context. More research needs to be conducted to measure the full potential of training higher education staff via web-based and online programs. This research project hopes to inspire other higher education institutions to create, measure, and implement training programs for staff.

DEDICATION

This dissertation is dedicated to my husband Reed Michaelsen for his patience, insight, and support of my academic, personnel, and professional endeavors. I also dedicate this project to my family and friends for their unwavering support of my educational goals.

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	viii
LIST OF FIGURES.....	ix
CHAPTER	
1 INTRODUCTION	1
Situational Context.....	2
Preliminary Internal Needs Assessments.....	4
Purpose Statement.....	7
Innovation	7
Research Questions.....	7
2 LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK	9
Employee Turnover Cost and Retention.....	9
Pre-Employment Assessments.....	12
Web-Based Trainings.....	13
Use of Intranet Sites.....	15
Web-Based Interactions	17
Higher Education Staff Trainings and Research.....	18
Conceptual Frameworks	19
Communities of Practice.....	19
Kotter’s Change Theory.....	21
Implications for the Study.....	23
Contribution to the Field.....	23

CHAPTER	Page
3 METHOD.....	25
Research Design.....	25
Setting.....	27
Materials.....	27
Hiring Tool.....	27
Questionnaires.....	28
Interviews.....	29
Procedure	29
Data Collection Plan	31
4 RESULTS.....	35
Research Question 1	36
Additional Findings: Google Analytics Comparisons	40
Research Question 2	44
Research Question 3	52
Research Question 4	58
Additional Themes.....	60
Additional Findings	60
Enumeration.....	63
5 DISCUSSION.....	65
Summary of Findings.....	65
Complementarity of Quantitative and Qualitative Data	66
Research Question 1	66

CHAPTER	Page
Research Question 2	67
Research Question 3	67
Research Question 4	68
Results in Relation to the Literature	69
Strength of the Study	72
Limitations of Study/Lessons Learned	72
Impact/Implications of the Study.....	74
Future Research	75
REFERENCES.....	77
 APPENDIX	
A WEB-BASED RESOURCE	80
B PRE-QUESTIONNAIRE: HIRING COMMITTEES.....	83
C POST-QUESTIONNAIRE: HIRING COMMITTEES	88
D STRUCTURED INTERVIEW QUESTIONS: HIRING MANAGERS/ COMMITTEE MEMBERS	99
E PARTICIPANT INTERVIEW CONSENT LETTER	101
F PARTICIPANT QUESTIONNAIRE CONSENT LETTER	104
G INSTITUTIONAL REVIEW BOARD APPROVAL	107
H CODE BOOK..	110

LIST OF TABLES

Table	Page
1 Overall Usefulness of the Hiring Resource	44
2 Descriptive Statistics: Post-Test: Usefulness.....	45
3 Paired Sample t-Test: Usability	47
4 Overall Usefulness of the Hiring Resource	52
5 Descriptive Statistics: Post-Test: Effectiveness.....	54
6 Paired Sample t-Test: Effectiveness	56
7 Overall Usefulness of Web-Based Resources.....	61
8 Overall Effectiveness of Web-Based Resources.....	61

LIST OF FIGURES

Figure	Page
1 Quantitative and Qualitative Instruments and Related Research Question(s).....	33
2 Google Analytics July 12, 2016 - December 12, 2016 Displayed by Day	38
3 Google Analytics July 12, 2016 - December 12, 2016 Displayed by Week	39
4 Google Analytics July 12, 2016 - December 12, 2016 Comparing Number of Sessions vs. Number of Users by Week	41
5 Enumeration of Transcription.....	64

Chapter 1: Introduction

According to the United States Bureau of Labor Statistics, higher education occupations are predicted to grow by 13% from 2014-2024 (Bureau of Labor Statistics, 2016). This percentage of growth is one of the highest occupational projection in the United States (Bureau of Labor Statistics, 2016). The growth in higher education jobs is due to an increase in student enrollment populations across the country. Nursing and health specialties positions are projected to grow much faster than the average educational jobs due to an aging populations increasing demand for healthcare services, thus driving the need for healthcare instructors and administrators (Bureau of Labor Statistics, 2016). Currently, little research has been done on the hiring, onboarding, training, and retention of higher education administrators in the United States since the 1970s. With the exponential growth in university student population as well as administrators who operate the university, research that focuses on university administration and hiring process is needed.

Currently, a state medical college located the southwestern United States is increasing in size similar to other non-profit organizations. For example, 40% of nonprofits indicated that their staff size increased in 2012 and 44% of nonprofits had plans to increase their staff in 2013 (Non-Profit HR Solutions, 2013). The state college experienced a similar trend in growth in 2012 and 2013. According to the 2014 projections for the state medical college campus population, between 5,000 and 8,000 people were projected to be employed, studying, and conducting research, etc. by 2020. Currently in 2015 there are between 800 and 1000 people operating on the college campus on a regular basis.

In addition to growth, it is important for companies to have a formal retention strategy (HR Solutions, 2013). However, when HR Solutions conducted a survey of non-profit organizations, they found that 90% of the organizations surveyed did not have a formal strategy for retaining and hiring new staff despite many non-profit organizations indicating that staff hiring and retention was a challenge. This statistic was similar to the one for the state medical college. Prior to this research study, there was no formalized structure in place for hiring, onboarding, or training new employees. Each hiring manager is responsible for the hiring, and onboarding of their employees with minimal oversight from the Human Resources department. Prior to beginning research for this study, there was no specific training or resource to assist the hiring managers.

Situational Context

The state medical college where the study was conducted was established as a new college in 2007. The college's atmosphere is student-centric. Students participate in work groups and serve on committees to provide feedback on almost every facet of the university including the curriculum, facilities, faculty, staff, and programs. Moreover, administrators, staff, and community members have been involved in the creation of the new college; if there is a new, more efficient way of conducting business, it has a strong chance of being incorporated/tested. With the college being a new entity, many of its policies have been and continue to be in flux, which leads to a very innovative environment. In addition, the upper administration within the college has encouraged research in almost all facets of its operations, faculty, students, staff, and so on. Conference presentations have been encouraged and many research topics have been supported. The state medical college originally began with only 24 students and has

grown to 310 students in just eight years, with an eventual goal of having 480 students on campus. The rapid growth in student population has also led to swift growth in hiring. This growth has put strain on the hiring and training of individuals at the college as some professionals are operating in many different roles; given the situation, many managers may not have sufficient time to train other individuals.

The researcher currently works as the Assistant Director of Student Wellness and Engagement within the Academic Affairs department at a state medical college. The Academic Affairs department is composed of three sub-departments – Admissions and Recruitment, Curricular Affairs, and Student Affairs. Admissions is in charge of recruiting students, student applications, student interviews, and the orientation of the new student classes. Curricular Affairs is responsible for the development and execution of the curriculum. This ranges from making sure the curriculum is up to national standards as well as organizing all major course requirements and confirming the university has enough clinical and clerkship opportunities for the students. Student Affairs oversees financial aid, student course registration, career advising, learning techniques, and the overall wellness and participation of all students on campus. Essentially, these three sub-departments of the Academic Affairs department act as the core for the administrative operations of the medical school.

As an Assistant Director at the state medical college, the researcher observed the college's state of change in the hiring, training, and retention of staff members. A major reason for the frequent change in staff members has been that the college is a relatively new campus that has doubled its staff in the last four years. This rapidly growing atmosphere requires a large amount of hiring. Rapid hiring of new employees has put

stress on hiring managers, as hiring requires time, resources, and skilled professionals to hire and on-board new employees. With the lack of time to hire and train new employees, some new employees have been unqualified, have not been a right fit, or have not been trained adequately for their positions. This has led to employee termination, employee probation and remediation plans, or hiring of additional staff to assist the work of other administrators. New hiring is done, and the cycle is repeated. To prevent this costly cycle, a web-based, standardized hiring process and on-boarding resource was implemented into the college's Academic Affairs department.

Preliminary Internal Needs Assessments

A series of internal needs assessments were conducted prior to the study that indicated that hiring was seen as an issue at the state medical college. Three semi-structured interviews, two observations, six focus/work groups, and a needs-based questionnaire were conducted to measure the department's impression of the hiring process and helpful training mechanisms for conveying hiring information.

The three semi-structured interviews were conducted with two hiring managers in the Academic Affairs department as well as one Human Resource manager. The interviews took approximately 30 minutes and focused on growth, hiring, and management. The three interviews were transcribed and coded for themes. The themes from each interview were then compared to each other to see if there were any commonalities between the interviews. Three themes stood out: how growth is impacting the college, issues with frequently changing hiring policies, and the need to train hiring managers and committee members in hiring practices.

In addition, two observations were conducted by the researcher. Each observation witnessed two hiring members throughout the entire applicant review and selection process. The purpose was to note how the hiring managers and committee members conducted the recruitment, review, interview, and selection of new employees for the college. In both instances, the committee seemed to work well together. The committees were diverse in terms of range of experience, job functions, races, sexual orientations, and personality types. This diverse approach in a committee worked well as there were varying levels of agreement, interpretations, and explanations for selecting or not selecting applicants. Each individual seemed to approach hiring differently. Although each person's approach was different, the groups always came to an agreement in both cases. After interviewing the selected candidates, each committee noticed similar traits in the applicant. At the end of each processes, the hiring manager and the committee were in complete agreement on which candidate to hire. The only issue that the committees had was their lack of understanding regarding hiring and human resource policies and procedures for the college.

After candidates were hired and had been on-boarded for at least four weeks, I asked the hiring managers how things were going with their new hires. To my surprise both hiring managers seemed to doubt their hiring decisions due to the new employees' lack of technical skills. Although there were questions in the interview process that attempted to screen for skills related to specific computer programs, each applicant was reported to lack the appropriate abilities needed for the job by their managers. This led to extended training periods that were not accounted for when initially hiring the employees. However, after several months, with the appropriate skills training, one of the

two hired employees is doing exceedingly well, and the other has been terminated for lack of technical skills. These observations showed that the hiring committees seemed to be completing the traditional steps for reviewing an applicant; however, the hiring process was lacking supplementary skills assessments that could highlight an applicant's technical writing and programming skills.

The informative interviews and informal observations led to developing a hiring resource where managers could learn and keep up-to-date with the college's hiring process, and it contained a tool box of checklists, supplementary skills assessments, and management guides that lead managers through the hiring process. The intent of the hiring resource was to connect the departments of Human Resources and Academic Affairs. The hiring resource was developed by the researcher and the Human Resources department through a series of workgroup meetings. Each work group meeting lasted about an hour and the focus was on the information that should be included in the resource.

Once the resource was completed, the information contained in the resource was tested for usability via a needs-based questionnaire. The questionnaire was sent to six hiring managers in the Academic Affairs department. Based on findings from the questionnaire, the resource was tailored to the needs and recommendations made by the hiring managers.

Conducting these needs-based interviews, observations, and questionnaires created the foundations for the research project and informed the innovation.

Purpose Statement

The purpose of creating a web-based hiring resource was to assist the department's hiring managers by bringing clarity to the hiring process, to assist in creating a standardized process for posting, recruiting, hiring, and on-boarding new employees, and to allow managers quick access to hiring tools and contacts. The purpose of the study was to test the efficacy and usability of the implemented hiring resource.

Innovation

The innovation is a web-based hiring resource for the Academic Affairs Department at a medical college in the southwest. The innovation takes a hiring manager/hiring committee member through the college's hiring process from creating a new position to on-boarding a new employee. In various sections of the resource, there are charts, timelines, checklists, and downloadable documents. The goal of this innovation was to help to educate hiring managers and committee members about the hiring process so that they could more effectively hire and train incoming employees. See Appendix A for a sample of the hiring resource.

Research Questions

In order to measure the usefulness and effectiveness of this resource, four research questions were established.

1. To what extent is the hiring resource used?
2. To what extent do Academic Affairs personnel find the hiring resource useful?
3. Do Academic Affairs personnel find the hiring resource effective?

4. What information would make the hiring resource more useful to Academic Affairs personnel?

Chapter 2: Literature Review and Conceptual Framework

Employee Turnover Cost and Retention

Literature is presented that discusses employee turnover cost, and retention with supporting evidence that web-based trainings, skills assessments, and internal intranets improve staff training and retention. Kotter's Change Theory (2007) and Wagner's (Wenger & Snyder, 2007) Communities of Practice provided the conceptual frameworks for the creation and implementation of this study.

According to David Allen (2008), employee turnover has been considered to be important for three reasons: 1) it is costly, 2) it affects business performance, and 3) it is difficult to manage. The cost of replacing an employee has been shown to be substantial (Allen, 2008; Dube, Freeman, & Reich, 2010; Holzer, 2000; Grigoryev, 2006; Mitchell, Holtom, & Lee 2001). Depending on the organization and industry, replacing an entry-level employee has been shown to cost an average of \$4,000 overall (Dube et al., 2010). This number increases even more when replacing professional and managerial staff, which averages about \$7,000 per employee. These numbers increase with the size of the organization, as well as with managerial and leadership roles (Grigoryev, 2006). On average, it takes 2.6 months to fill the role of a professional and lower level management, whereas it takes an additional 3.3 months for the employee to begin reaching optimal levels of independent productivity (Dube et al., 2010). There are also estimates that indicate that not retaining an employee results in a direct replacement cost as high as 50% to 60% of an employee's annual salary with a total associated cost ranging from 90% to 200% of the employee's annual salary (Allen, 2008; Grigoryev, 2006; Hendrick & Rapiller 2011). Direct cost is the number associated with money labor lost and spent to

hire an employee while total associated cost includes training, retaining, and getting employees accustomed to the work to produce at a high level (Dube et al., 2010). Other soft costs that come with turnover in hiring the incorrect employee are the loss of confidence in a manager's decision-making ability, potential for the destabilization of a productive workforce, and morale issues that can extend into many of the organization's operations (Grigoryev, 2006). A study conducted by a Washington-based research firm, Leadership IQ surveyed 5,000 hiring managers from 312 organizations that had over 20,000 new hires (Murphy, 2015). The research showed that 46% of the 20,000 new hires failed within the first 18 months of being hired for a position. Eleven percent of the new hires failed due to technical abilities, while the other 35% failed for one of the following reasons: not being able to accept feedback, lack of motivation, inability to manage their emotions, and temperament. Eighty-two percent of the hiring managers reported that they were pressed for time during the interviews, were focused on other departmental issues, or lacked confidence in the interviewing abilities (Grigoryev, 2006; Murphy 2005). The research shows that hiring is complex and can have devastating results on an organization's resources and morale. Training employers to adequately select the most competent applicant could have beneficial financial outcomes.

The state medical college, like all organizations, is seeking to recruit employees who have strong skills sets upon hire. New employees are expected to have an understanding of technical skills, but are also expected to have good reasoning, problem solving, teamwork, and technological skills (Hendrick & Raspiller, 2011). In addition, organizations are not only looking for highly skilled workers, but are also looking for employees who can learn quickly, adapt to change, communicate effectively, and foster

relationships (Rodriguez, Patel, Bright, Gregory, & Gowing, 2002). Similar to other organizations, the state medical college has been trying to retain skilled employees in a work force that is highly mobile by attempting to identify workers with adaptive abilities, problem solving, communication, and transferable skills that work well at the college level (Hendrick & Raspiller, 2011). Rodriguez et al. (2002) stated the challenge with which a majority of organizations struggle is the identification of the most effective means to recruit, select, train, and retain high-performing individuals. One of the best ways to contribute to an organization's achievement in hiring strong employees is to provide managers and employees with information and tools to meet these challenges and "maximize human capital" (Rodriguez et al., 2002, p 309). David McClland (1973) is credited with launching the testing for competencies movement (Rodriguez et al., 2002). Using competencies to select high-performing individuals is becoming increasingly more prevalent in the business world (Boyatzis, 1982; Lawler, 1994; Rodriguez et al., 2002; Spencer & Spencer, 1993; Ulrich, 1997). As noted by Hendrick and Raspiller (2011), finding accurate and effective tools that provide a glimpse at employees' skills sets is difficult with a pass-through educational system that cannot always be relied upon for reflecting actual skills and knowledge. Testing for competencies such as interpersonal skills and teamwork can be just as important as testing for knowledge, but are typically not assessed (Rodriguez et al., 2002).

As indicated by Hendrick and Raspiller (2011), there are many factors with which employers struggle in hiring the correct employee: demographic, educational, monetary, and legal. Not only must applicants meet specific sets of standards set forth by the hiring organization, but there must be a matching of individual's knowledge, skills, abilities,

and characteristics to the team with which the new employee will be working (Hendrick & Raspiller 2011; Jamieson & O'Mara, 1991). Even if an employer is able to attract an employee with the right educational, demographic, and personality fit, Holzer (2000) suggests that many employers are frequently unable to identify the correct applicant because of preconceived notions about race, gaps in work history, or education breaks among other factors.

Pre-Employment Assessments

Pre-employment assessment has been shown to be a critical component to the hiring process. Pre-employment assessment has been shown to be beneficial in assisting employers in selecting individuals who have proven skill sets for a given position (Henrick & Raspiller, 2011). Such skills testing can provide another component in the review process in addition to applications, interviews, and reference checks, because applicants' information can often be inaccurate and unreliable (Cook, 2009). Job applications are often completed online which inhibited the employer's ability to accurately judge an applicant's ability to write, follow a set of designated instructions, or complete a process within a given timeframe. Moreover, interviews have been shown to be subjective and this matter is exacerbated because many employers often lack sufficient time to adequately evaluate an applicant (Cook, 2009; Hendrick & Raspiller, 2011). When employees have been hired without adequate skill sets for a position, the results may be early termination by the employer or the employee leaving their position. Allen (2008) notes that losing workers in smaller organizations can be more consequential than in larger organizations.

Departing workers are more likely to be the only ones possessing a particular skill or knowledge set, a small company's culture suffers a more serious blow when an essential person leaves, there is a smaller internal pool of workers to cover the lost employee's work and provide a replacement and the organization may have fewer resources available to cover replacement costs. (p. 5)

With the state medical college being a smaller organization, the workload is large and many of the positions have little crossover.

One way to assist in the correct selection of an employee is through the use of pre-employment selection tools (Hendrick & Raspiller, 2011). According to an article by Cascio (1998), hiring the wrong employee occurs 86% of the time when hiring managers rely on interviews and resumes alone. Effective pre-employment testing and assessments help to reduce hiring the incorrect employee 25% of the time (Blecher, 2001; Hendrick & Raspiller, 2011). When an inappropriate employee is hired, it is harder to retain the new employee. Pre-employment/supplementary skills assessments are a beneficial tool for hiring managers and could help in hiring new employees. One way to implement pre-employment assessments is through a web-based hiring resource.

Web-Based Trainings

The use of web-based trainings and instruction rises every year in educational and training domains due to the increased use of technology in evaluation (Olson & Wisher, 2002). Web-based instruction has the ability to provide learning experiences that are open, flexible, and circulated, providing opportunities for engaging in interactive and efficient instruction (Khan, 2001). Web-based learning is also increasingly used in higher education institutions because web-based trainings allow for remote access, convenient participation times, and rapid access to information (Berman, Bowman, West, & Van

Mart, 2016). It is for this reason that Berman et al. (2016) and others believe that online learning and web-based trainings are here to stay and likely go further.

Higher education is a main source of web-based education and online learning platforms. In 2012, 5.5 million students had taken at least one online course with roughly half being enrolled full time in web-based/online learning (Straumsheim, 2014). The flexibility of online classes, the growth of hybrid models, the increased accessibility to technology, and the ability to use smartphones and apps to conduct classwork has made distance learning more appealing to students (Olson & Wisher, 2002; Smith, 2015). The increased use of web-based platforms in higher education for students has not been associated with a concomitant increase in web-based training for staff and faculty.

In increasingly complex and competitive marketplaces, training groups need to keep current with quickly changing knowledge and trainings. Traditional classroom models of instructor-led training require a large amount of resources and time. Many work environments and departments have insufficient resources to support large-scale training efforts and therefore rely on web-based trainings because web-based trainings can eliminate the logistical issues of cost, location, and staffing problems (Coppela & Myer, 2002). Web-based instruction can be conveniently modified and redistributed, readily accessed, and quickly linked to related sources of knowledge, thus establishing a foundation for “anytime, anywhere” learning (Fletcher & Dodds, 2001).

A study was conducted in 2010 by the United States Department of Education on the effects of online instruction vs. face-to-face instruction (Means et al.). Their findings concluded that “instruction conducted entirely online is as effective as classroom instruction, but no better” and that “blends of online and face-to-face instruction, on

average, had stronger learning outcomes than did face-to-face instruction alone” (Means, 2010, p. 18-19). The fact that online instruction has been shown to be just as effective as face-to-face instruction is an important factor to consider in weighing the possible implications for using web-based trainings for higher education staff members. As discussed previously, face-to-face trainings are costly and require a lot of resources. Therefore, higher education could benefit from online training tools to not only save money but to effectively train their employees.

To further show that web-based resources are cost effective, Fletcher (2001), developed a “rule of thirds” based on a review of the empirical findings in educational and training technology. The rule of thirds states that the use of web-based instruction reduces the cost of instruction by about one-third and either reduces the time of instruction by one-third or increases the effectiveness of instruction by one-third.

Use of Intranet Sites

Sanford (2005) notes that more sophisticated companies develop dedicated intranet sites as a means of distributing standardized information to provide a consistent process so that managers can be held accountable. The implementation of a new hiring resource at the state medical college to assist hiring managers in recruiting and selecting the proper applicant can have many beneficial significances for the institution. Sanford (2005) states that creating managerial toolkits gives hiring managers the ability to improve their recruitment and retention process. Sanford also says that more sophisticated companies develop dedicated intranet sites as a means of distributing standardized information to empower hiring managers and to provide a consistent process, so that managers can be held accountable for both successful and unsuccessful

hiring decisions. Violetta Bottazzo (2005) emphasizes the importance of intranet sites as, “Generating, submitting, storing, and efficient integration of knowledge represent an important source of value added in company’s internal organization and mainly at productivity of an individual employee, who in this way becomes an information catalyst” (p. 77). Bottazzo also states that employees themselves will become generators of knowledge, adding to the intranet site to improve the whole of the organization.

The Intranet becomes “an independent organism,” which will be organized by a skilled manager so that it won’t depend only on knowledge existing in the organization, but at permanent import of external sources it will also “grow” proportionally to the perceived usefulness and its efficiency. (Bottazzo, 2005, p. 78)

Thus, an intranet site becomes a never-ending project, constantly changing and updating based on the uses and efficiency required by its users. Intranets are imperative in the workforce where information is often complex and ever-changing and where managers do not have the time to cope with all of these changes in process (Bottazzo, 2005). The following objectives are typically achieved with the proper implementation of an intranet site:

1. to improve information flows (who, what, when, to whom, how, with what),
2. to put two-way forms of communication into effect (reverse loop),
3. to put team work into effect (composition, structure, rules, remuneration),
4. to raise the level of participation of employees in the management in accordance with organization’s policy,
5. to define the required conduct, profiles of heads and employees, communication styles of individuals and organizations (standards, examples),
6. to define (required) values of the organization and to build them into the base of the business policy and conduct of individuals, groups and organization,
7. to define criteria for the satisfaction of employees, methods for establishing, measuring, and reporting,
8. to improve motivation, responsibility, initiative, affiliation, innovative capability (management of organization culture and creating of stimulating microclimate),
9. to put an appropriate management style into effect (criteria, training),

10. to improve interpersonal communication and communication with customers, mainly at those employees, who directly contact with them,
11. to build communication into the business policy of the organization and to provide adequate training (knowledge, know-how, skills) and connection between communication and policy of promotion, remuneration and personal and professional development,
12. to improve acquaintance and identification of employees with basic strategic documents (vision, strategy, business plans, etc.),
13. to raise the capability of solving of interest and interaction conflicts and disputes. (Bottazzo, 2005, p. 78-79)

Intranet sites provide a hub for managers, departments, groups, and individual employees to stay current and consistent with updated, real-time information (Denton, 2007). The use of intranet sites for internal improvement are limitless with the correct implementation and use of the site. With the increased use, access, and affordability of using web-based trainings and the evidence that online instruction works just as well as face-to-face instruction, higher education industries should utilize web-based trainings for its administration and faculty.

Web-Based Interactions

In *A Model of Internet Usage for Course Delivery*, Galloway (1998) identified three different levels of instructional web-based interactions. In Level 1, the Web is used to post material with very little online instruction. The information is simply presented in and interactive manner. Level 1 requires very little technological skills. In Level 1, the instructor or site provides much or all of the information to students, rather than having them search for information. In Level 2, the instructor's role is to help guide students through information, rather than giving them the information directly. This is typical of hybrid face-to face and online courses. Level 3 is essentially completely online courses. The only interaction between the instructor and students is online. This type of interaction

requires users that are very tech-savvy (Olson & Wisher, 2002). It is important to list these three levels because the best level for web-based trainings and resources would be at Level 1. This would require very little technical knowledge of the user and would also provide all of the information that they could possibly need. This would help to insure that those utilizing the web-based resource were comfortable using the platform as well as being able to find and learn given information. Having a Level 1 web-based resource in an environment such as higher education where individuals often lack sufficient time and resources and staff have a range of experience and skills, is important because if the resource/training is not user-friendly it will not be utilized, and therefore is pointless.

One of the major arguments against web-based trainings is the lack of immediate instructor feedback and shortage of developed content for specialty subjects (Berman et al., 2016). However, with recent additions to technology and email, getting feedback or assistance can be almost as immediate as face-to-face interaction (Berman et al., 2016). Also, if there is a specific training content that needs to be developed, technology has also made it easy to create sites or to pay companies to create customizable and professional sites quickly. Essentially, the world is operating on large technological platforms, where web-based interactions are becoming the international norm.

Higher Education Staff Trainings and Research

At a national level, there is very little research that covers the topic of staff development in higher education, let alone the effects of a web-based instruction in staff development. Much of the research that has been conducted in higher education has been done with students' interactions with web-based curricular platforms. The research that has been done with web-based and computer based instruction in the professional world

was done in the late 90s and the early 2000s. Most of this research focused on private corporations using web-based programs for employee development. It could be argued that current research regarding the positive effects of web-based programs/trainings with students in higher education and the private business world would support the idea that web-based training platforms would work well for staff development in higher education institutions.

As indicated by the literature, providing hiring managers with information and tools can assist in the challenges of hiring employees. The state medical college could potentially save money in recruitment and training costs of employees as illustrated above, by being more strategic, effective, and knowledgeable when hiring through the use of a web-based hiring resource tailored to the needs of hiring managers.

Conceptual Frameworks

This research project has been informed by two conceptual frameworks including communities of practice (Wenger & Snyder, 2007) and change theory (Kotter, 2007).

Communities of Practice

Communities of practice (CoP) have been groups of people who are informally bound together by shared expertise, interest, and/or subjects in which they wish to communicate to improve their practice (Wenger & Snyder, 2007). Further, when CoPs have been implemented, they have not generally had established standards, meetings, agendas, or formal organizations, but typically CoPs have been places in which ideas are free-flowing for the purpose of creatively approaching problems from different angles. CoPs have been shown to be characterized by three critical elements: a *domain*, a *community*, and a *practice* (Wenger, McDermott, & Snyder, 2002). The domain has been

described as a similar interest, focus, or topic that all participants have or are interested in having. A community consists of groups with direct interaction where individuals share information, help each other, and interact for the sake of learning and the betterment of the group and its members. A practice is described as individuals who are practitioners, who have multiple conversations over a period of time and share and build different case studies, and outcomes based on the interactions and shared experiences (Wenger et al., 2002).

The primary output of CoPs is *knowledge*. “Communities of practice can drive strategy, generate new lines of business, solve problems, promote the spread of best practices, develop people’s professional skills, and help companies recruit and retain talent.” (Wenger & Snyder, 2007, p. 140). CoPs can be diverse and have been formed for a variety of reasons. They have not been bound to a given environment or institution but can stretch across a multitude of industries, organizations, and trades. It is important to note that communities of practice are not teams. Teams are constructed based on individuals’ skills and a desired outcome, whereas a community of practice is assembled out of interest, with no given end date or desired outcome (Wenger & Snyder, 2007).

For example, at the state medical college, a community of practice has been created around this research project. The purpose of the state medical college hiring CoP was to assemble a tool or a resource to assist hiring managers in the hiring and retention of new employees. Participation in the state medical college CoP includes individuals from two departments – Human Resources and Academic Affairs. The goal is the sharing of ideas to improve the overall hiring and retention practices of the Academic Affairs and Human Resources department with the goal of affecting change throughout the entire

college. The community came together not out of forced participation, but because individuals volunteered. “The strength of communities of practice is self-perpetuating. As they generate knowledge, they reinforce and renew themselves. That’s why communities of practice give you not only the golden eggs but also the goose that lays them” (Wenger, 2000, p. 143). With a variety of work experiences and talents in the state medical college CoP, the outcomes of the hiring resource cover a variety of topics that each department deemed useful and important to the overall goals of the college.

Kotter’s Change Theory

According to John Kotter (2007), no organization has been able to survive over a long period of time unless it has the ability to reinvent itself. Nevertheless, a tension exists between reinvention and the human desire to create consistency, which can cause individuals to resist the changes strong organizations so desperately needs (Kotter, 2007). Creating change is essential, but also difficult. To assist with creating change, Kotter Developed eight stages of the process of putting ideas into practice. The eight stages are: (a) establishing a sense of urgency, (b) forming a powerful guiding coalition, (c) creating a vision, (d) communicating the vision, (e) empowering others to act on the vision, (f) planning for and creating short-term wins, (g) consolidating improvements and producing more change, and (h) institutionalizing new approaches. Kotter emphasizes that when this model is implemented in the correct order, using the specific techniques and recommendations conveyed, it can lead to an effective change and transformation of the entire organization.

In step one, Kotter (2007) described establishing a sense of urgency as a way to get started and expressing the need for individuals to go beyond their comfort zone and be willing to grasp new ideas to foster large improvements. He stressed that step one was one of the most important phases because it is difficult to develop initial buy-in by members of the organization. In step two, a core group of individuals with a shared commitment and enough political power is assembled to lead change, establish legitimacy, and support the length of the project. Essentially, organizing this group provides the energy and political support for developing the desired transformation.

Steps three and four describe the creation of a successful transformation process, first, through an understandable vision of the transformation project and second, the actual implementation of that vision by a group of invested colleagues.

The implementation of steps five and six, have resulted in substantial buy-in, the overcoming of large obstacles, and the production of proof/data/wins. Specifically, Step five requires the implementer to empower others to carry out the new efforts. In those efforts, obstacles must be overcome to keep the innovation moving along. Further, in step six, the innovator has sought small wins, which adds to the momentum of implementation.

In steps seven and eight, Kotter describes the final stages of developing an organization in which the new changes are the social norms and values of the organization. Specifically, at step seven, it is important to form policies that help support the change, as well as to eliminate other policies or persons impeding the change. Step eight describes the full implementation and incorporation of the change into the

organization's culture, while establishing systems and individuals that will keep the newly implemented change up to date and part of the organization's culture.

Implications for the Study

After considering the research and theories reviewed here, two implications arose from the literature. Kotter's model was used to establish and implement the innovation at the state medical college. This model will act as a guideline for the researcher to reflect and improve the changes occurring within the college. This model will also be shared with the participants so that they can understand how change is developed and how to better ensure systematic engagement at each step so that they can create effective change at the state medical college. Second, the researcher formed a community of practice to create the initial group that was responsible for the creation of the web-based training. This group's main goal was to provide expertise to add the appropriate and needed information to the web-based training so that it could be implemented and tested in the Academic Affairs department.

Contribution to the Field

The innovation is intended to encourage colleges to develop a standardized hiring resource. This study hopes to show that by making hiring resources easily accessible and easy to follow for hiring committees and managers, their understanding of how to recruit, train, and onboard new employees will increase. This study seeks to add knowledge about the effects of standardized processes, their effectiveness in a higher education environment, and the usefulness of web-based resources. Different facets of the study can be replicated and designed to adapt to different contexts. Action research's goal is to

make small changes with the hope of large impact. Therefore, this study will contribute to the larger field of action research.

Chapter 3: Method

This chapter discusses the setting and participants, research design, materials, procedures, data storage, data collection, and data analysis plan for this action research study.

Research Design

The research design of the study is a mixed methods action research (AR) model with a sequential quantitative to qualitative design. A mixed methods action research approach was selected by the researcher as AR works within a given context to create solutions that directly affect the researched community and its participants (Herr & Anderson, 2014). AR is conducted in conjunction *with* the participants, compared to conducting research *on* or *to* participants (Herr & Anderson, 2014). Conducting AR leads to influential change because the solutions address real issues within a particular organization or group. Because the directed AR is so specific to an organization, the outcomes and research of a given study typically have not been scaled to a larger size, as the outcomes of AR are heavily context oriented. Nevertheless, because of the specificity of AR outcomes to a given context, the context in which the research study is developed tends to have stronger and lasting change. As stated by Herr and Anderson (2014), “The unique feature of the questions that prompt practitioners’ inquiry is that they emanate from neither theory nor practice alone, but from critical reflection on the intersection of the two” (p. 93).

AR is conducted in a set of cycles. The typical cycle includes four basic components— identifying an area of focus, collecting data, analyzing and interpreting the data, and developing a plan of action. The cycles’ purpose is to focus on creating

outcomes for the betterment of the researched community, not the improvement of the study. All data gathered in each cycle is reflected upon to produce new plans of action in the following cycles. In AR, data analysis is not something that begins after the data are gathered; it begins at the start of the study and remains at the heart for the entirety of the action research study (Herr & Anderson, 2014, p. 128). Because there tends to be large amounts of qualitative data in action research, the study can often take a new course of action as new factors become known. Through a process of reflection in research, data are created through social interactions, theory, practice, and feedback. Essentially, “through a cyclical process of reflection and research...the researchers formed a basis for social theorizing and proposals for action research” (Herr & Anderson, 2014, p. 128). This enables a researcher to develop innovations that attempt to solve the direct problems in a given context. Because the research is so specialized, developed with others in the research environment, and adapted to the needs that arise, action research can be a powerful tool in creating positive, lasting results.

The sequential quantitative to qualitative design was selected by the researcher to provide a numerical representation of the hiring resources’ usefulness and to determine whether the information contained in the resource is being utilized. The qualitative interview methods supplemented the quantitative data to provide more in-depth understanding of the resource’s usefulness to the managers and committee members within the specific context. This enables the researcher to draw stronger conclusions and discussion regarding the overall applicability of the hiring resource.

Setting

The study takes place at a state medical college located in a large metropolitan area in the southwest United States. The sample population(s) for the study are individuals who have served on a hiring committee at the state medical college. The population is a product of purposive sampling. Research participants were chosen to specifically find out more detailed information pertinent to the specific Academic Affairs population. Academic Affairs is the largest department on-campus and was selected as the context for the study due to the researcher being involved in the context and where the study was seen as most impactful by the researcher.

Participants

All hiring managers/committee members (n = 40) in the Academic Affairs department at the medical college were asked to participate in the study. The population is approximately 34 females and 6 males. The average degree held by a committee member is a master's degree or higher with only four in the population holding a bachelor's degree or lower. The average age of participants is estimated at 38. All 40 managers in the Academic Affairs department were contacted to participate in the study, but only 29 participated in the pre-survey and 25 in the post-survey. Twenty participants took both surveys. Nine participants were selected to partake in the individual interviews. These nine individuals were selected based on their seniority, influence, job function, and sub-department. The average age of those interviewed is 38 and all female as they comprise the majority of hiring managers.

Materials

Hiring tool. The hiring resource was developed in a partnership consisting of the researcher and the Human Resources department. The resource was created in Google Sites and is housed on the college's intranet site. The site walks hiring managers through the site via a navigation bar located on the left side of the site. The navigation is outlined in six steps with subsequent categories beneath each of the steps. The six steps are:

- Creating a New Position
- Posting a New Position
- Recruitment
- Candidate Selection and Interviews
- Hiring
- Employee Pre-boarding and On-boarding

These six steps walk hiring managers through the hiring process from inception to employee on-boarding. The hiring resource has images, charts, question recommendations, assessments, and checklists that cater to different hiring manager styles, needs, and preferences. A sample of the hiring resource can be found in Appendix A.

Questionnaires. There were two questionnaires used to measure the usability and effectiveness of the hiring resource. The pre-questionnaire was 15 questions—10 descriptive questions, four 4-item Likert scale questions, and one open-ended question (Appendix B). The post questionnaire was 23 questions with 10 descriptive questions, six 4-item Likert-scale questions, and two open-ended questions (Appendix C). The questions were about the informational components contained within the hiring resource.

The questions measured whether the information provided in the informational components was useful and effective for them. Some of the questions also focused on how frequently they planned on using the resource and what information they would add to the resource for improvement.

Interviews. Nine interviews were conducted by the researcher. Interview questions were structured, written, asked, transcribed and coded for themes by the researcher; they were then also interpreted by the researcher. The researcher did not use second raters to assist in coding as the structured interview led to targeted responses from participants. The interviews took between 10 to 25 minutes. Any anomalies that fell outside of the structured question were noted by the researcher. Examples of questions that were asked were:

- What are your general thoughts about the web-based hiring resource?
- To what extent do you find the hiring resource useful?
- What information in the hiring resource was the most useful?
- What information in the hiring resource was the least useful to you?
- Do you find the hiring resource to be an effective medium to convey hiring information?
- Do you find the hiring resource to be an effective instrument when hiring new employees?

A complete list of questions can be found in Appendix D.

Procedure

IRB approval was granted for the study by Arizona State University in July 2016 (Appendix G). All participants asked to participate in the study gave consent prior to

participating in the questionnaires or interviews (Appendix E & F). Questionnaires were emailed to the participants by the researcher. Questionnaires were sent to all hiring managers in the Academic Affairs department. Each questionnaire and invitation to participate was sent to individual participants to help insure anonymity. The participant gave consent through his or her participation in the study. Each questionnaire took the participants no longer than 15 minutes. The first questionnaire was sent to hiring managers and committee members in early July of 2016. After the hiring resource was implemented in early mid-July, the second hiring manager and hiring committee member questionnaire was sent in late July of 2016.

The researcher conducted nine interviews with prominent hiring managers and committee members. These prominent members were selected by the researcher to get a broad range of experiences, skills, ages, and job functions. All nine interviews were recorded using the researcher's iPhone. Interview participants were given an additional informed consent form authorizing the audio recording of their interview responses. The recordings were destroyed after the interviews were transcribed. Transcription was done via Rev.com. Each interview was coded for themes by the researcher.

The hiring resource site uses Google Analytics to monitor the external user traffic on the site. Google Analytics monitors which specific links are being used, the average time spent on a specific page, and whether the user is a returning user or a new user. Google Analytics was turned on by the researcher in early July 2016 and remained active until December 2016. Participants were naïve to the monitoring. There is no identifying information that a researcher gains from Google Analytics. Only metadata is received regarding site activity.

Wordle, an online enumerator, was used to identify popular/frequent words that participants used in the interviews. This was one of the last items collected for the study as all interviews had to be completed first. The researcher placed each individual interview in the program to see if there were any common words consistent with the researcher's coded themes. Also, each Wordle was compared to one another for any similarities in common words. Additionally, all interviews were run through Wordle together to see if the words that appear larger are consistent with the individual interviews.

Data Collection Plan

To answer the first research question, "To what extent is the hiring resource used by the Academic Affairs department?" the researcher used Google Analytics from summer 2016 through fall 2016 to record how often the site was used, in which months the site was used, what links/resources were the most utilized, and the length of time each user spent on the site. The researcher's intent was to measure whether the resource was being used, what parts of the resource were or were not being used, and when the resource was most used.

For Research Question 2, "To what extent do Academic Affairs personnel find the hiring resource useful?" a pre- and post-questionnaire was sent out via email to all hiring managers within the Academic Affairs department two weeks prior to the implementation of the hiring resource and one week after the implantation of the hiring resource. An identical questionnaire (post-test) were sent out after the hiring resource is put in place. The questionnaire measured whether the hiring resources informational components that the participants reported on earlier were useful and practical for hiring managers and

committee members to use when hiring and on-boarding new employees. Essentially, the pre-test/post-test measured whether the hiring resources information was as useful as originally thought.

To measure the third research question, “Do hiring committees find the hiring resource to be an effective instrument when hiring new employees?” nine focused structured interviews were conducted. Structured interviews were selected because, “with this method you can study objective viewpoints in different social groups...also the deeper interpretation of experimental finding” (Flick, 2014, p. 155). Focused interviews are most appropriate as the target population is known, and the greatest point of the interview is to further explain experimental findings. The nine individuals who were interviewed are key hiring managers in each unit within the Academic Affairs department. The questions focused on the usefulness of the resource, how often they used the resource, how often they have seen others use the resource, if there is anything that could be added to the resource, and their thoughts on the effectiveness of the hiring resource (Appendix D). The interviews were coded for themes, analyzed individually, and analyzed as a set looking for shared themes. According to Saldaña, in *The Coding Manual for Qualitative Research* (2013), themes function as a way to categorize sets of complex data into groups of repeating ideas and similar topics. In addition to coding the interviews, each interview will be entered into a web-based program called Wordle. Wordle, a type of computer based enumeration, will create a pictorial representation of the most used words and themes found in the inputted text. The more frequently the word is used, the larger the word will appear in the visual representation. This provided a different representation of possible themes in the interviews.

For Research Question 4, “What information would make the hiring resource more useful to hiring managers?” qualitative participant responses from the questionnaire that was sent to the Academic Affairs hiring managers were measured. A sample question is “Would any other information be useful to add to the hiring resource?” (Appendix C). This research question was also included in the nine structured interviews with the hiring managers/committee members (details regarding the interview are located in the preceding paragraph).

	Instrument	Timeline	Measuring/Ties to RQ Number	Expected Outcomes
Quantitative	Google Analytics	July 12-Dec. 12	Traffic, users, and interactions with resource RQ1	New and repeating visitors to the hiring resource to indicate when the resource is used.
Quantitative and Qualitative (open-ended questions)	Pre-Academic Affairs Survey	July 2016	Will measure what is currently known by staff and whether they think hiring information will be usable RQ2 & RQ3 & RQ4	I expect participants to not be well versed in hiring topics and assume that the pre-selected hiring topics will be seen as usable.
Quantitative and Qualitative (open-ended questions)	Post-Academic Affairs Survey	July 2016	Gauge the perceived effectiveness and usability of the hiring resource RQ2 & RQ3 & RQ4	A large number of users will find the information effective and usable.
Qualitative	Interviews	August 2016	Dig further into what users found most useful in the resource and where improvements can be made RQ2 & RQ3 & RQ4	Will show more depth into what participants find useful and effective about the resource and show that having a web-based resource/training is more convenient than face-to-face interaction
Quantitative and Qualitative	Enumeration	Dec. 2016	Displays common words and frequency by size of word in an artistic display RQ2 & RQ3 & RQ4	I believe the words resource, useful, and effective will be some of the largest/most frequently used words

Figure 1. Quantitative and qualitative instruments and related research question(s).

Participants' audio recordings of interviews and the data derived from questionnaires was archived and stored on a secured, password-protected computer inside of a locked file cabinet in a locked office at the state medical college. Data was stored using a computer hard-drive and back-up on the co-investigator's flash drive, which remained in the locked office. Data will be kept for the duration of the study beginning in January 2016 through the published dissertation period in spring 2017; data will be discarded after three years of the dissertation publication date. The researcher maintains the key to the office where data and other applicable files will be kept. No other individuals have access to the office besides campus security.

The investigator will be responsible for providing consent forms for participants. The consent process will take place in spring semester of 2016, prior to participants partaking in the study. Participants will be made aware of the study's purpose and intended outcomes via an email inviting them to participate in the study.

Chapter 4: Results

The data are arranged by research question with both quantitative and qualitative data presented.

Google Analytics measured the traffic and use of the hiring resource from July 2016 to December 2016. Google Analytics recorded the number of sessions, users, page views, average session duration, and bounce rate. In addition, the percent of new sessions was compared to all sessions in order to compare the number of repeat visitors to new users. This data was used to determine how frequently the hiring resource was used by the college staff between the months of July and December.

The Academic Affairs Pre- and Post-Hiring Resource Questionnaires measured the effectiveness and usability of the hiring resource by measuring each of the resource's individual topics, components, and features. The questions for the survey were formatted with a variable four-point Likert scale with lower numbers (1) being more negative and higher numbers (4) being more positive (i.e., Not Very Useful vs Very Useful and Not Very Effective vs Very Effective).

The researcher also conducted nine one-on-one, structured interviews with academic affairs hiring managers. All of the hiring managers had hired over two employees within the Affairs Department prior to the implementation of the hiring resource. Those interviewed were selected because of their influence (power of their title, diversity of work experience, ability to change policy, and hierarchical seniority) within the department and diverse experience and backgrounds. The interview questions were strategically themed to provide responses targeted at answering the four research questions. The responses are arranged by research question. Following the research

questions, there is an additional explanation about other themes that were derived from the interviews.

All interviews were processed through an online word enumerator, Wordle, to develop a visual representation of common words that appeared in the interviews to give a sense of themes found in all the interviews. Common words such as and, or, if, then, the, etc.) were removed from the enumeration to more prominently display other words/themes. In addition to the interviews and enumeration, open-ended responses from the post-test were also collected and evaluated. All of the open ended responses can be found under Research Question 4 in this section.

While all 40 managers in the Academic Affairs Department were contacted, only 29 participated in the pre-survey and 25 in the post. Twenty participants took both surveys. For consistency, only data from the 20 participants that participated in both the pre- and post-hiring resource questionnaires was used. Findings of the web traffic and questionnaires are listed below.

Research Question 1

To what extent is the hiring resource used?

Figures 2 and 3 depict the use of the hiring resource between July 2016 and December 2016. Figure 2 displays the use by day and Figure 3 displays the same data by week. Figure 1 shows a large spike in use on Monday, August 1, 2016 with 26 sessions and again on November 22, 2016 and November 30, 2016 both with 28 sessions on each day. The data indicate the use of the hiring resource is most utilized during the month of November. These data points are in line with the college's hiring cycle. There was a hold on hiring from June 2016 until August 2016 which is why the graphic shows a spike in

the hiring resources use in August. The November data is also congruent with the spike in need for new employees typically seen at the conclusion and beginning of academic semester. Figure 3 shows that during the week of November 20th to November 26th, there were 112 sessions. The data indicate that the hiring resource is used by the college and is more frequently used during periods of time where hiring is needed/occurring.

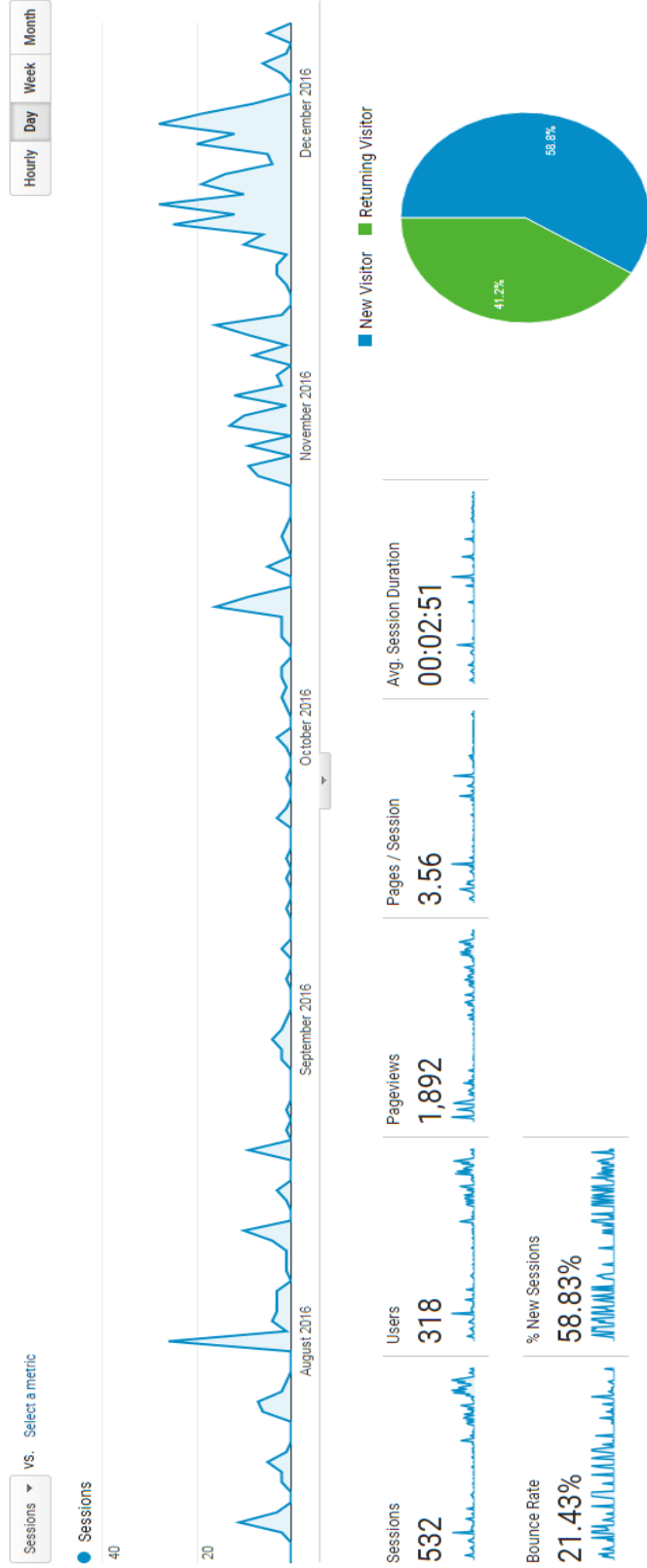


Figure 2. Google Analytics July 12, 2016 - December 12, 2016 displayed by day.

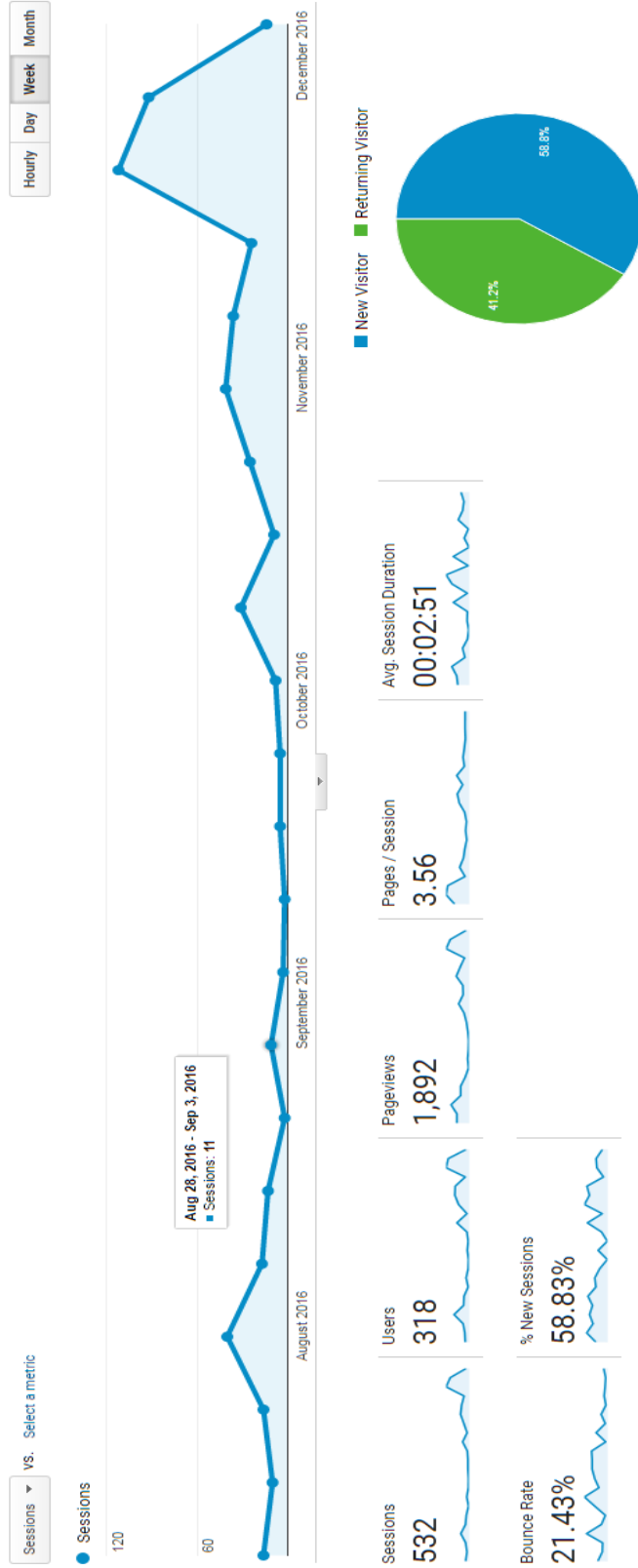


Figure 3. Google Analytics July 12, 2016 - December 12, 2016 displayed by week.

Additional Findings: Google Analytics Comparisons

Additional analytics were run to compare the number of sessions to the number of users (Figure 4). The data in Figure 4 showed that during the months of July 2016 through mid-November 2016, the percentage of new users per session was high compared to the conclusion of November and December. It can be surmised that this is due to the resource being new, thus those going on to the resource would be new compared to those returning. This data demonstrates that individuals are returning to use the hiring resource.

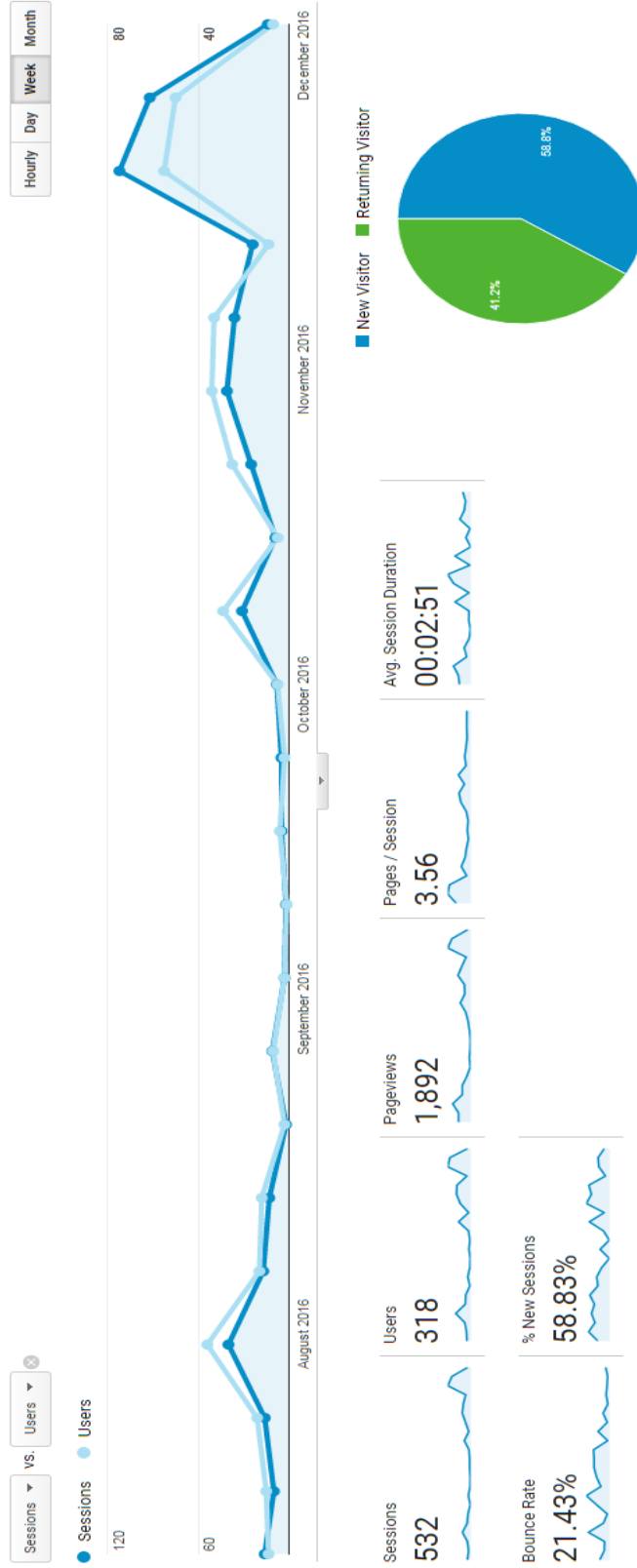


Figure 4. Google Analytics July 12, 2016 - December 12, 2016 comparing number of sessions vs. number of users by week.

Qualitative data were also collected to answer Research Question 1. Two interview questions focused on Research Question 1: *To what extent do you think you will use the hiring resource in the future?* and *Do you see yourself using the hiring resource more as hiring committee member or a hiring manager?*

To the first question, all of the interviewees reported that they used the tool and would use the tool in the future. The following quotes represent some of the participant's feelings towards the extent that they believe they would use the hiring resource:

I think at first, until I get used to the source, I'll use it a lot. Especially if things change and there's updates, then we should be using it every time to make sure we're using the accurate information. Yeah, I probably would use it every time, at least review it.

100%, the next person I hire I will make sure I use this as the Bible.

I would definitely use it every time I was hiring somebody, or starting to go through that process. I would definitely, now that that's out there, I would probably go to it more at first, and say, "Okay, let me make sure I'm covering all my bases," and then depending on how long it was in between hiring, I would definitely go back to it every time I was hiring somebody, but maybe only certain parts that I was more concerned with, but I would definitely use it, luckily, we don't have to hire people all the time, so it's nice to just go back when you need it to make sure, "Okay, am I covering all my bases? Yes."

I guess if I were HR, I would even refer people to this and that would save them some time as well that they would not necessarily have to repeat information that was already here...

When the hiring managers were asked whether they would use the hiring resource more as a hiring manager or as a committee member, the responses were split. Two of the nine interviews said that they would use it in both instances while the rest said they would mainly use it as a hiring manager. The following quotes represent some of the participants' feelings towards the extent that they believe they would use the hiring resource:

I would say both because I think it would be great for everyone to be on the same page because that never happens, which sometimes can be a good thing as far as having the hiring committee be a little bit diverse, but as far as process, I think everyone needs to be on the same page.

Probably being the hiring manager, because I would be the one negotiating the salary and maybe directing the committee of what questions we want to ask. I mean, obviously you want everybody's input, but instead of having the whole committee go through this whole resource, I'd probably pull out the information that I thought would be valuable to the committee cause I know everybody's got kind of time constraints.

Probably more as a hiring manager to make sure as a hiring manager I was doing my due diligence to make sure I was covering all my bases. As a committee member, probably not as much, because I would be supporting the hiring manager in that process, so I would hope the hiring manager would be leading that process, which is why I think the hiring, using it as a hiring manager would be probably more helpful for me, or more useful than if I were on just a selection committee.

Probably, right now, more for hiring managers. I could see where it could potentially help committees too but I feel like it definitely is more information that pertains to the manager currently.

With the Human Resources Department currently utilizing and sending the hiring resource to hiring managers during the hiring process and the strong response of support of the resource by the hiring managers, it can be deduced that the hiring resource will be greatly used during the hiring process of new employees at the college. It can also be inferred that the main use of the resource will be by hiring managers compared to the entire hiring committee.

Research Question 2

To what extent do Academic Affairs personnel find the hiring resource useful?

Table 1 shows that 100% of participants indicated that overall, the hiring resource was useful with 65% of participants rating it as “Very Useful.” The average participant saw the overall resource as “useful” ($M = 3.68$). The median (4.00), mode (4.00), and standard deviation (.478) which means there was little variability between participant’s responses, which indicates that the overall hiring resource was viewed as “useful” by all participants. Table 2 shows that 100% of questionnaire participants found every component of the hiring resource useful. The three items that were rated the most “useful” each with a mean of 3.68 ($SD = .478$) were the Supplementary Skills Assessments, Required Training for New Employees, and the Interview Question Bank.

Table 1

Overall Usefulness of the Hiring Resource

	Frequency	Percent
Useful	6	31.6
Very Useful	13	68.4
Total	19	100.0

Table 2

Descriptive Statistics: Post-Test: Usefulness

	N	MIN	MAX	M	SD
Approval Process for Creating a New Position	19	3	4	3.58	.507
Posting a New Position Timeline	19	2	4	3.47	.612
Recruitment Committee Checklist	19	3	4	3.47	.513
Compensation Calculator	19	2	4	3.37	.597
Posting a New Position Checklist	18	2	4	3.44	.616
Assembling Jobs Descriptions	19	3	4	3.53	.513
Common Verbs for Job Description	19	2	4	3.58	.607
Recruitment Timeline	19	1	4	3.26	.991
Confidentiality Policies and Documents	19	3	4	3.53	.513
Common Questions and Mistakes with Recruitment	19	3	4	3.63	.496
Assembling a Hiring Committee	19	3	4	3.47	.513
Quick Tips for Resume Reviewing	19	3	4	3.47	.513
Overview of the Interview Process	19	3	4	3.42	.507
Supplementary Skills Assessments (Skills Tests)	19	3	4	3.68	.478
Reference Checks Tips	19	1	4	3.26	.991
Offering a Position to a Candidate	19	3	4	3.58	.507
Negotiating Salary	19	3	4	3.58	.507
Important New Hire Information	19	3	4	3.63	.496
Required Training for New Employees	19	3	4	3.68	.478
Questions Not to Ask in an Interview	19	3	4	3.58	.507
Interview Question Bank	19	3	4	3.68	.478
Interview Checklist	19	3	4	3.58	.507
Employee Pre-boarding and On-boarding Checklist	19	3	4	3.58	.507
Creating New Positions	19	3	4	3.53	.513
Posting a New Position	19	3	4	3.47	.513
Recruitment	19	3	4	3.42	.507
Candidate Selection and Interviews	19	3	4	3.42	.507
Hiring	19	3	4	3.47	.513
Employee Pre-boarding and On-Boarding	19	3	4	3.47	.513

To further examine if any of the components of the hiring resource were more or less useful than participants initially postulated, a paired sample *t*-test compared the pre- and post-questionnaires. Table 3 shows the results of a paired-samples *t*-test that was conducted to compare the information participants believed to be useful in a hiring

resource to what information they actually found useful in the hiring resource. There was no significant difference in the scores regarding information believed useful as a pre-hiring resource and what information was useful in the hiring resource conditions. These results suggest that what people believed would be useful in a hiring resource was actually useful to them in a hiring resource. The only significant finding ($p < 0.05$) was that participants found the Creating New Positions section more useful ($M = -.579$; $SD = 1.170$) after interacting with the hiring resource. All other items in the hiring resource had no significant difference ($p > 0.05$) between the pre- and post-tests.

Table 3

Paired Sample T-Test: Usability

	<i>M</i>	<i>SD</i>	Std. Error Mean	t	df	Sig. (2-tailed)
Creating New Positions	-.579	1.170	.268	-2.157	18	.045*
Posting a New Positions	-.421	1.071	.246	-1.714	18	.104
Recruitment	-.158	0.898	.206	-0.766	18	.454
Candidate Selection and Interviews	.053	0.705	.162	0.325	18	.749
Hiring	-.158	0.958	.220	-0.718	18	.482
Employee Pre-boarding and On-boarding	.000	0.882	.202	0.000	18	1.000
Approval Process for Creating a New Position	-.333	0.970	.229	-1.458	17	.163
Compensation Calculator	.000	0.907	.214	0.000	17	1.000
Posting a New Position Timeline	-.111	0.832	.196	-0.566	17	.579
Assembling Jobs Descriptions	-.167	0.618	.146	-1.144	17	.269
Common Verbs for Job Description	-.222	0.732	.173	-1.288	17	.215
Posting a New Position Checklist	.059	1.088	.264	0.223	16	.826
Recruitment Timeline	.167	1.339	.316	0.528	17	.604
Confidentiality Policies and Documents	.000	0.767	.181	0.000	17	1.000
Common Questions and Mistakes with Recruitment	-.111	0.758	.179	-0.622	17	.542
Assembling a Hiring Committee	-.444	0.984	.232	-1.917	17	.072
Quick Tips for Resume Reviewing	-.167	0.924	.218	-0.766	17	.454
Recruitment Committee Checklist	.000	0.907	.214	0.000	17	1.000
Overview of the Interview Process	-.278	0.752	.177	-1.567	17	.135
Questions Not to Ask in an Interview	-.111	0.758	.179	-0.622	17	.542
Interview Question Bank	-.056	0.639	.151	-0.369	17	.717
Supplementary Skills Assessments (Skills Tests)	-.333	0.970	.229	-1.458	17	.163
Interview Checklist	-.222	0.548	.129	-1.719	17	.104
Reference Checks Tips	-.222	0.878	.207	-1.074	17	.298
Offering a position to a candidate	-.167	1.043	.246	-0.678	17	.507
Negotiating Salary	.167	0.618	.146	1.144	17	.269
Important New Hire Information	.056	0.639	.151	0.369	17	.717
Required Training for New Employees	.056	0.539	.127	0.437	17	.668
Employee Pre-boarding and On-boarding Checklist	-.056	0.998	.235	-0.236	17	.816

Notes. n=19; *p < .05

Qualitative data were also gathered to answer Research Question 2. All nine interviewees (100%) believed that the hiring resource was useful. Several of those interviewed expressed that simply having a centralized resource with the information was useful all on its own, while the organization and step-by-step process made it even better. All of the participants seemed to agree that the hiring resource would be beneficial to use in the future and since the launch of the hiring resource, the Human Resources Department uses the hiring resource in their in-person manager trainings, sends the hiring resource to all college hiring managers when they begin their hiring process as well as incorporating it as part of their web-based resources, four interview questions targeted what the interviewees believed to be useful about the hiring resource: *To what extent do you find the hiring resource useful? What information in the hiring resource was most useful? What information in the hiring resource was least useful? and What are your general thoughts about the hiring resource?* The following quotes represent some of the participants' thoughts about the usability of the hiring resource:

I think it's going to be a great tool. I haven't used it for a hire yet, but I have one coming up soon and I would definitely like to use it, to walk through that one...Like I said, just having one place to go and a checklist that you can use to make sure you're crossing all your T's and dotting all your I's.

Well, I think first of all it's nice that we have something because previously when I was hiring manager here, we pretty much had no resources. It was just a long issue of back-and-forth emails with our HR Department...Like depending on who you talked to, there wasn't any really set guidelines, so it was a little frustrating.

I think we need it because as hiring managers you forget from time to time what needs to get done for setting up an interview, selection committees, for the selection process, the onboarding. Because you're not doing it that often, it's nice to have one resource to go back to to walk you through that process.

To summarize, in general participants liked that there was a one-stop-shop resource for hiring and they liked that the resource was organized in a step-by-step

process. When the participants were asked what information they found most useful, the results were drastically different. Each hiring manager found different components of the resource to be more usable for them depending on their experience with hiring and the sections for which they felt most comfortable. There was most agreement surrounding the new employee on-boarding checklist as a useful component.

The onboarding part, I think for me, would be the most useful. I think it would all be useful to a certain extent, but I think the most useful one would be the onboarding, kind of the checklist for what not to forget as you are bringing this person on. I think some of the rules and regulations, too, around hiring: negotiating salary, things like that, that were helpful. It had a lot of helpful links that I thought would be cool for a hiring manager, too, so I think very useful.

These common verbs for job descriptions and other templates and things like that. It has a direct link. All of this information is useful in some degree.

I think the skills assessment was good. I liked the templates that you provided. Then even talking about salary negotiations, stuff like that, that is stuff that I've never really been part of, but it was interesting to read about.

The [most useful] being the supplementary skills assessment, the checklist, mind blown. There was another one that I really liked... the new hire, the onboarding, the pre-boarding and onboarding... I feel like that's been such a kind of cluster and very disorganized in years past of who does what? Even down to the campus tour... I think it's useful because it's got the timeline, which again I felt like was a little inconsistent in previous[ly]... I think the timeline is a good resource. I also liked the questions, I think there was a question bank in there somewhere, where you could go in and find the questions that are going to be valuable to the specific job you're looking to hire. I think that was very useful.

Most useful was posting a new position... That was a big one for me, and then, actually, in the actual candidate selection, I think that that was helpful because it helps you think twice about it instead of just going with your gut. ... Lastly, the actual onboarding [was useful].

I liked the list of interview questions because normally you can come up with those on your own but it's nice to get some ideas with ones you hadn't thought of. I like the idea of what not to ask about. I wish they were more specific, like, "You can ask this question," but, "Don't ask this question." That kind of thing. I also liked the after hiring, there was a checklist for on-boarding that was helpful.

The items participants saw as the most useful were somewhat sporadic and dependent upon the hiring managers' needs. However, the most commonly mentioned item hiring managers seemed to find the most useful was the On-boarding section.

When asked what information they found least useful, the interviewees had different responses depending on their previous experience with hiring and what role they believed that the Human Resources Department took in the hiring process.

The hiring piece would be [the least useful] because that's more hands-off for me now. I think HR's doing more of that, or they're doing the interviewing, the references and then talking to the candidate about the salary and all of that so I wouldn't need to know as much of that, but it's still a good resource.

I thought all of it was very relevant to being on a hiring committee. That was my thought. I don't think there was anything that was bad.

Some of this doesn't really apply to positions that I would be working with, like the compensation calculator, unless I have more power than I think. HR has been very specific about the actual compensation and they've always said it comes at the midpoint and I have requested more than that on both of the ones that I've been hiring manager for. It was approved once and denied once. I wouldn't use that because I don't think I have any input in that.

For me, specifically, I felt like the recruitment piece was least useful because the positions I've been involved in personally are not necessarily higher level. They were actively seeking someone with a niche skill set. It's more of a general administrative assistant, program coordinator, operations type work, where I think that we're not necessarily recruiting as much, but it did make me think of a few things because sometimes our pools were really shallow, like nine candidates to choose from, and they were all awful. You're so desperate to have someone come in and help you that, I think, lesson learned just for me was, you know what? You don't need to hire. If it was a failed posting, that's okay. Let's try again.

The parts about posting a position and how to get approval for the position. I recognize that it's hard to be specific with those, but I felt like they were the most generic, and the most obvious information, so not as much a resource.

Participants found various parts of the resource as less useful to them depending upon the interaction and believed responsibility of the Human Resources Department.

The hiring resource will hopefully allow a more consistent execution of hiring responsibilities so that hiring managers are not confused as to what their duties are as a hiring manager. In addition, one participant noted that a couple of sections seemed too vague to help them with very specific issues in regard to the Approval for a New Position.

When the participants were asked their general thoughts about the hiring resource, they were all in consensus that they saw the resource as a useful. The interviewees seemed to find having a one-stop-shop for hiring was generally useful and created consistency in the process.

Number 1, is that there's a place to go. That's the biggest thing. It can be daunting when you first look at it because there's a lot of information, but having a dedicated place to go and then having succinct order of this is step 1. This is step 2. This is step 3. I could see over time the steps not changing, but maybe the folders underneath those could change as policy's change or things like that. I like having, I'm very black and white I guess. I like order, so it's good for me to see, this is what you need to do. You can have an idea in your brain what you're supposed to do, but having a place to just do a checkoff. I love stuff like that, so it's great.

I think it's phenomenal. I think it's amazing to have a centralized location for all of those resources. I think it's very long overdue for this department and this campus.

I think it's really useful. Basically, as I was reading through it, I was going through the process in my mind, because I just recently went through this process, and it hits basically everything that I went through, "Okay, this is what happened here, here, here, here, and here," and it captures all of that. I think, for someone who's new to the hiring process here, it's going to be very useful, very helpful to guide them along and to know what the expectations are within the process rather than just getting to that point in the process and learning as they go.

Research Question 3

Do Academic Affairs personnel find the hiring resource effective?

Table 4 indicates that 100% of participants reported that overall, the hiring resource was effective with 50% of participants selecting that it was “Very Effective.” The mean (3.50), median (3.50), mode (3.50), and standard deviation (.513) also support the finding that participants viewed the overall hiring resource as effective.

Table 4

Overall Effectiveness of the Hiring Resource

	Frequency	Percent
Effective	10	50.0
Very Effective	10	50.0
Total	20	100.0

Table 5 shows that on average, 100% of questionnaire participants found every component of the hiring resource effective. Table 5 also shows that there were two items where the participants used the minimum (1) and maximum (4) range—the Recruitment Timeline and the Reference Check Tips sections—although the average ($M = 3.25$; $M = 3.10$) in both of these sections show that a majority of responses believed these sections were effective. While data support that all items were effective (all averages of each individual item had a mean equal to or greater than 3.0), it is noteworthy to indicate one participant found a couple of items not effective. However, participants rated ($M =$

3.60) the Required Training for New Employees, Questions Not to Ask in an Interview, and the Interview Questions Bank as the most effective sections. It is also important to point out that one participant did not respond to the Approval Process for Creating a New Position. It is unknown why the participant skipped the question.

Table 5

Descriptive Statistics: Post-Test: Effectiveness

	N	MIN	MAX	M	SD
Approval Process for Creating a New Position	19	3	4	3.26	.452
Posting a New Position Timeline	20	2	4	3.40	.598
Recruitment Committee Checklist	20	3	4	3.50	.513
Compensation Calculator	20	2	4	3.25	.639
Posting a New Position Checklist	20	2	4	3.55	.605
Assembling Jobs Descriptions	20	2	4	3.20	.523
Common Verbs for Job Description	20	2	4	3.50	.688
Recruitment Timeline	20	1	4	3.25	.851
Confidentiality Policies and Documents	20	2	4	3.35	.587
Common Questions and Mistakes with Recruitment	20	2	4	3.30	.571
Assembling a Hiring Committee	20	3	4	3.45	.510
Quick Tips for Resume Reviewing	20	3	4	3.50	.513
Overview of the Interview Process	20	3	4	3.45	.510
Supplementary Skills Assessments (Skills Tests)	20	2	4	3.40	.598
Reference Checks Tips	20	1	4	3.10	.912
Offering a Position to a Candidate	20	3	4	3.45	.510
Negotiating Salary	20	2	4	3.30	.657
Important New Hire Information	20	3	4	3.35	.489
Required Training for New Employees	20	3	4	3.60	.503
Questions Not to Ask in an Interview	20	2	4	3.60	.598
Interview Question Bank	20	2	4	3.60	.598
Interview Checklist	20	3	4	3.55	.510
Employee Pre-boarding and On-boarding Checklist	20	2	4	3.50	.607
Creating New Positions	20	2	4	3.30	.571
Posting a New Positions	20	2	4	3.45	.605
Recruitment	20	3	4	3.35	.489
Candidate Selection and Interviews	20	3	4	3.40	.503
Hiring	20	3	4	3.30	.470
Employee Pre-boarding and On-boarding	20	2	4	3.35	.671

To further examine if any of the components of the hiring resource were informing or teaching the participants new information, a paired sample *t*-test was conducted, comparing what the participants believed they knew about hiring information prior to reviewing the hiring resource to the information they believed was effectively informing them after interacting with the hiring resource. Table 6 shows the results of the paired-samples *t*-test which compared the differences between participants' initial self-assessment of what hiring information they believed they "knew well" prior to utilizing the hiring resource to what information was "effective" to teaching them about the hiring information after interacting with the hiring resource. These results indicate that the hiring resource is effective at conveying hiring information to participants as all items were $p < 0.01$. Specifically, the results suggest that participants found the hiring resource to be effective at conveying information to help them through the steps of hiring. It is important to note that this measure only indicates whether people find the information in the resource effective in providing the information they need to know for specific components of hiring. This measure does not indicate whether a participant has now learned the information that is in the hiring resource.

Table 6

Paired Sample t-Test: Effectiveness

	<i>M</i>	<i>SD</i>	Std. Error Mean	<i>t</i>	<i>df</i>	Sig. (2-tailed)
Creating New Positions	-1.950	.826	.185	-10.563	19	.000*
Posting a New Positions	-1.650	.813	.182	-9.079	19	.000*
Recruitment	-1.700	.923	.206	-8.233	19	.000*
Candidate Selection and Interviews	-.850	1.226	.274	-3.101	19	.006*
Hiring	-1.250	1.209	.270	-4.626	19	.000*
Employee Pre-boarding and On-boarding	-1.550	.759	.170	-9.131	19	.000*
Approval Process for Creating a New Position	-1.947	.705	.162	-12.040	18	.000*
Compensation Calculator	-1.950	.887	.198	-9.831	19	.000*
Posting a New Position Timeline	-1.895	.737	.169	-11.199	18	.000*
Assembling Jobs Descriptions	-1.600	.940	.210	-7.610	19	.000*
Common Verbs for Job Description	-1.600	.995	.222	-7.193	19	.000*
Posting a New Position Checklist	-2.150	.813	.182	-11.831	19	.000*
Recruitment Timeline	-1.700	1.031	.231	-7.373	19	.000*
Confidentiality Policies and Documents	-1.350	1.040	.233	-5.805	19	.000*
Common Questions and Mistakes with Recruitment	-1.600	1.188	.266	-6.025	19	.000*
Assembling a Hiring Committee	-1.200	1.152	.258	-4.660	19	.000*
Quick Tips for Resume Reviewing	-1.500	1.051	.235	-6.381	19	.000*
Recruitment Committee Checklist	-1.850	1.040	.233	-7.955	19	.000*
Overview of the Interview Process	-1.250	1.118	.250	-5.000	19	.000*
Questions Not to Ask in an Interview	-1.250	1.251	.280	-4.467	19	.000*
Interview Question Bank	-1.650	1.089	.244	-6.773	19	.000*
Supplementary Skills Assessments (Skills Tests)	-1.750	1.118	.250	-7.000	19	.000*
Interview Checklist	-1.650	.988	.221	-7.468	19	.000*
Reference Checks Tips	-1.250	1.209	.270	-4.626	19	.000*
Offering a Position to a Candidate	-1.450	.945	.211	-6.866	19	.000*
Negotiating Salary	-1.800	.894	.200	-9.000	19	.000*
Important New Hire Information	-1.650	.933	.209	-7.906	19	.000*
Required Training for New Employees	-1.750	.786	.176	-9.952	19	.000*
Employee Pre-boarding and On-boarding Checklist	-2.050	.945	.211	-9.706	19	.000*

Notes. n=20; *p < .01

Qualitative data was also collected to answer this research question. Two interview questions focused on determining whether Academic Affairs personnel found the resource effective – *Do you find the hiring resource to be an effective instrument when hiring new employees?* and *Do you find the hiring resource to be an effective medium to convey hiring information.* All nine of the interviewees believed that the hiring resource was both effective for hiring new employees and was an effective medium for conveying information. Participants responded with the following when asked if the resource was effective for hiring new employees:

Yes, absolutely.

Yes, I would use this in lieu of probably trying to get hold of somebody in HR to get some of these questions answered.

I would definitely use it every time I was hiring somebody, or starting to go through that process.

When the hiring managers were asked whether they found the hiring resource as an effective medium to convey hiring information, they overwhelmingly responded that they believed the resource was the best way to convey the hiring information.

Absolutely. To me, the way that I've always had to do it is I either have to find the information and that could take lots of time, or I have to ask others for it, and then I have to wait for that to come back and then maybe not getting the right information. This is a one-stop shop from what I can tell.

Absolutely. I do. I think it's sorely needed because, like I said, the information that you get from HR is inadequate at best. Having everything in 1 place is fantastic...

Yes, it is very effective.

Yes... I think this is great because it's everything in one place and you don't have to wonder about various things.

I do. I think it's thoughtfully organized. The only worry I would have, and I don't know what your follow-up questions are, would be it's maintaining the info. What I find, even like our internet in our college, it's a wonderful resource but, as soon as it's outdated, it's like a book. It's just ancient. It's not useful. This snap judgment of this moment, I feel like it's incredibly useful but, six months from now, would it continue to be useful?

Research Question 4

What information would make the hiring resource more useful to Academic Affairs personnel?

This research question was addressed solely via qualitative methods through the interview process. Participants seemed to be in agreement that there were no new topic areas or subjects that should be included. Some participants requested the inclusion of additional information such as including the parking fees to the salary calculator, as well as a few additional items on the on-boarding process. However, overall the majority of participants did not see a need to add any extra information.

Not at this time. It looks fairly inclusive, but like I said, as I get ready to start writing the job description for our new admin assistant that we're going to bring on board, I want to use this and see how it really works.

No, I think there are some areas where I think it could be more robust but not necessarily new information, like the what not to ask section, or maybe more on the different training that's required once employees are hired. There might be more pieces to make it more complex and complicated to include the things that need to happen, but not brand new subjects.

Let's see. The one thing I would say is, on the calculator, which obviously is a link to the calculator, but to put an average of the parking cost, because that's a big thing.

Open-ended questions were included in the post-questionnaire. They explored whether participants would add any additional information to the hiring resource and if

they had any additional information that they wanted to provide. Below are the responses participants provided:

- Short videos (dos and don'ts); video walk-throughs of critical processes
- It's a lot of information. Perhaps a Manager Summary Sheet or process at a glance would be helpful.
- In the Hiring Committee Assembly section, there is a point about Sign a Confidentiality agreement. I like this idea. Perhaps include a template for this?
- In the Hiring Committee Assembly section, sometimes the same person is in all the hiring committees. Maybe include a point about providing opportunities to other managers and staff to participate in interviews, even if it is secondary level interview round.
- Adding a skills assessment on data entry and attention to detail type of work.
- As a hiring manager, I would definitely use it as a tool to keep myself organized and following the policies and procedures of the college.
- More detail from departmental perspective on "orientation packets" of information for new hires, suggestions on integration of new hires,
- If implemented an H.R. contact for questions would be useful to list on the resource site.
- This is a wonderful tool that can be utilized by anyone at any level of the hiring process. This tool creates a transparency that is greatly needed.
- Tips should be included on the question to ask or not to ask when checking references.
- The posting of a new position checklist is very vague. I would recommend adding details about what should be discussed at meetings instead of having a check item to meet. In addition, I had trouble interpreting the recruitment timeline. Finally, the reference check tips, are not tips at all, they are general information- recommend adding info or renaming section.

All items provided in this section have been sent to the Human Resource Department for review. They will determine what should be changed, made more accessible, or edited in the hiring resource based on the survey feedback.

Additional Themes

There were six additional themes that were apparent in the coded interview transcripts (see Appendix H for Code Book). Over 50% of those interviewed liked that there was a centralized location for the hiring information and commented that it was nice to have all the information in one place (one-stop-shop). They liked that they could use the resource whenever they saw fit which improved the convenience of staying up to date with hiring resources. Several participants believed the Human Resources Department was ineffective in assisting the department and providing accurate information and the hiring resource helped to make the hiring process clear. The organization of the hiring resource into step-by-step instructions was also praised by those interviewed. The interviewees also mentioned in multiple cases that the resource would only be effective and useful if it was maintained and kept up-to-date. If the information was to become outdated, the usability of the resource would drastically decrease.

Additional Findings

The post-test questionnaire asked participants what they thought about the overall usefulness of web-based resources and the overall effectiveness of web-based resources. Table 7 shows that 95.83% (23/24) of participants believed that overall that web-based resources are useful. Table 8 demonstrates that 88% (22/25) believe overall that web-based resources are effective.

Table 7

Overall Usefulness of Web-Based Resources

		Frequency	Percent
Valid	Somewhat Useful	1	4.16
	Useful	8	33.33
	Very Useful	15	62.50
	Total	24	100.00

Table 8

Overall Effectiveness of Web-Based Resources

		Frequency	Percent
Valid	Somewhat Effective	3	12.00
	Effective	10	40.00
	Very Effective	12	48.00
	Total	25	100.00

In the individual interviews, participants were asked if they believed that a web-based platform was a good medium for higher education staff training, whether the College should develop more web-based tools for higher education staff, and whether they had any other opinions about the hiring resource or web-based platforms. Below are selected excerpts of participants' responses to the question:

Based off of your experience, do you see web-based platforms being a good medium for higher education staff training?

Oh yes. Where else could you go? You don't have to go anywhere else, I can access this from home. I can access it on my phone or my iPad, so it's always there for me... Yeah, I think it's definitely a tool that should and needs to be

considered for the future now. I don't think it's going to replace in-person or group on-boarding, but it's definitely a medium that should be used.

Oh, yeah. I personally ... Again, I think it's the same type of thing, is that I'm a self-motivated learner. I like learning things on my own pace, versus sitting in and having others learn and having to adapt my learning to other people in the room. Where I can maybe get through something in an hour, someone, it might take them two or it might take them a half hour. I like doing things at my own pace, and I think having the web-based platform allows for ease of use. You can do it at your own pace and at your own convenience. That is super helpful.

Yes. Because I think that everybody, because of the time constraints everybody has, they can do it at their leisure, they can do it at their own time, when it's convenient for them. I think just requiring that maybe everybody go to a web-based whatever it is, seminar or whatever you want them to look at and to review it, then we'll discuss it next week at a meeting, and it's a great idea, and it's not forcing everybody to partake at the exact same time, kind of do it at their leisure.

Do you think that it would be beneficial for the college to develop more tools and trainings for higher education staff?

Yeah, I think so. Where I used to work at University of Phoenix, we had web-based instructions for Advanced Excel spreadsheets, I've wanted to work on that for all different types of access the database program. I would love to see more of that, something like that that we could access for employees. I know a couple of people here aren't maybe real comfortable with doing anything in Excel, more than just like an addition or something like that. Maybe just different levels of training, stuff like that.

That's a good question. I think it's nice when it comes from just your college, like this is specifically for the college versus the big university, which I think some things get lost in the shuffle. I would probably pay attention more if it's college-based.

Do you have any other thoughts or opinions about the hiring resource or web-based platforms that you would like to share?

Other than, I think I stated before, I think the hiring resource is awesome. I think it was well-needed and long overdue, and it's comprehensive and I think that it's going to be a valuable asset. I think we need to make sure that everybody's aware of it and that it's kept up-to-date, and it's accurate.

I think the web-based platforms are helpful for training if they're done right, if they're easy to navigate, if they're short and sweet, and I think that's what's good about your hiring resources, that a hiring manager can go right to where they need to go. I want to go right to interviewing, boom, and see what I need to do for that, or see what I need to do for setting up a selection committee, and it's just really easy to navigate, instead of having to go to 10 different websites, or call somebody and wait for them to get back to me. I think if they're done well, you can be doing different types of training with web-based formats, but they just need to be done well, easy and quick, kind of like yours.

These excerpts help to show that continuing research in web-based platforms for higher education staff training would be beneficial. With such an overwhelming acceptance and desire for web-based resources and training, it would benefit the education community to continue the development and measure web-based platforms for higher education staff.

Enumeration

The transcripts were analyzed using an online word enumerator – Wordle. Figure 5 is the image that was produced. At a glance, the largest words (words that appeared most frequently in the interview) were “hiring,” “go,” “know,” “useful,” “information,” “resource,” “one,” “time,” “something,” “process,” “HR,” and “need.” These themes further support the findings in the interviews. The word enumeration indicated that the “hiring resource” was the most frequently mentioned item, while other words like “time,” “go,” “one,” and “know” showed that participants liked that there was one place to go for a hiring resource that saved them time. Additionally, “HR,” “process,” and “need,” seemed to exemplify the issues some participants had with the Human Resources Department and the lack of process that was needed when hiring new employees. Overall, the word enumeration helped to visually represent common themes among all of the interviews.

Chapter 5: Discussion

This chapter discusses the summary of findings, the complementarity between qualitative and quantitative data, the results in relation to the literature, strengths of the study, limitations to the study, implications of the study, and future research.

Summary of Findings

The goal of this mixed- methods action research study was to investigate the usefulness and effectiveness of implementing a web-based hiring resource in the Academic Affairs department at a medical school in the Southwest. The findings both reflect and extend research about web-based trainings and resources for higher education staff. The results of the hiring resource study showed significant implications for employing a web-based resource for medical college staff. With 100% of participants indicating that they found the web-based hiring resource useful and effective in both the post-test questionnaire and interviews and with a steady increase in the traffic of the hiring resource, this type of resource seems to be effective in a higher education medical school environment. The hiring resource had 50% (20/40) of the Academic Affairs hiring managers participate in both the pre- and post-test questionnaires and 22.5% (9/40) of hiring managers participated in personal interviews. Thus, the sample data is representative of the departments hiring managers' thoughts and opinions regarding the usability and effectiveness of the resource. The remainder of this chapter will discuss the complementarity of the data, results in relation to literature, strength of the study, limitations of study, implications of study, assumptions, and future research that can be conducted.

Complementarity of Quantitative and Qualitative Data

This mixed methods study was designed as a quantitative to qualitative study where the quantitative data results are supported by the qualitative findings. When compared to one another, results from the quantitative and qualitative data provide an enhanced interpretation of outcomes. This comparison provides greater confidence into the inferences made regarding the results of the study as it offers a more comprehensive view of participants' thoughts, interactions, and use of the hiring resource.

Research Question 1. *To what extent is the hiring resource used?* Quantitative data confirmed that the hiring resource continues to increase in users the longer the resource is available. The quantitative results also show that the hiring resource is used around typical hiring times for the college. The qualitative data supports this finding as the interviews show that all nine interview participants believed that they would use the hiring resource in the future. The qualitative findings also found that participants believed they would use the resource more as a hiring manager as compared to using the resource as a committee member. Other explanations as to the increased and consistent use of the hiring resource are that the Human Resources Department now uses the hiring resource as the starting resource for hiring managers when they begin the process of hiring new employees. Moving forward, the department also incorporates the hiring resource into its manager training. With the infiltration of the hiring resource being used as the main resource piece for hiring between the Human Resources Department and the external campus partners, it can be surmised that the use will continue to increase as hiring is increased on the college's campus.

Research Question 2. *To what extent do Academic Affairs personnel find the hiring resource useful?* The quantitative data obtained from the survey indicated that 100% (n = 20/20) of participants found the overall/complete hiring resource useful and each section of the hiring resource useful. The qualitative findings also revealed that all of those interviewed believed the hiring resource was useful. Interviewed participants did have a different perspective as to which of the resources was most and least useful to them in their respective roles. This is important to address as the resource tailors itself to a wide range of staff needs, capabilities, and hiring experiences. With a wide range of flexibility, the resource's utility is apparent. It is important to note, however, that the majority of those interviewed did mention to one extent or the other that a helpful part of the hiring resource was the new employee on-boarding section. The researcher postures that this is a popular section as there are a long list of requirements and items that are universal to hiring any employee. This long list can be hard to remember, especially if one has to hire someone every couple of years. Therefore, it will probably be a very popular item that is used in the resource going forward.

Research Question 3. *Do Academic Affairs personnel find the hiring resource effective?* The qualitative survey data showed that overall, 100% of participants believed the hiring resource was effective. There were two items where one participant used the minimum and maximum range – the Recruitment Timeline and the Reference Check Tips sections – although the average in both of these sections show that a majority of the respondents believed these sections were effective. The qualitative data gathered by the open-ended questions at the conclusion of the post-test questionnaire shed some light on

why these two responses in particular were rated by one participant as ineffective. One participant stated:

The posting 'A New Position Checklist' is very vague. I would recommend adding details about what should be discussed at meetings instead of having a check item to meet. In addition, I had trouble interpreting the recruitment timeline. Finally, the reference check tips, are not tips at all, they are general information- recommend adding info or renaming section.

An interpretation of the qualitative data also indicated that one participant felt that a couple of the items were vague, or they did not understand what the information was conveying. This data provides some formative feedback for certain sections that need to be re-examined to determine whether the sections can be made more effective to a larger audience of individuals. When re-examining these sections, one would need to be careful about altering sections/components too drastically as the majority of responses indicate that many found the majority of sections effective. Additional qualitative data from the interviews also showed that interviewees found the resource to be effective, but did suggest some small edits and editions to improve the hiring resource.

Quantitatively, the majority of participants found the hiring resource to be effective, but the qualitative data revealed that there is still some room for improvement needed in order to make the resource more effective to a wider range of hiring managers.

Research Question 4. *What information would make the hiring resource more useful to Academic Affairs personnel?* There was no direct quantitative data gathered that directly pertains to this research question. However, it can be inferred that the items that received any response range lower than 3 on a 1 to 4 Likert-scale could be examined as items that should be looked at for additions, subtraction, or review. The qualitative data provided greater insight into any deviations from the average participant response and

also directly asked participants in both the post-test questionnaire and the individual interviews if there were any additional items that could be added to the resource. The responses provided focused information as to items that could be added or altered to make the hiring resource more useful and effective. The direct qualitative feedback led to an evaluation by the researcher and the Human Resources Department as to any alterations that should be made to the hiring resource for improvement. In the future, the Human Resources Department will maintain the resource and alter the resource as needed.

Results in Relation to the Literature

The results of this study seem to complement current literature on the topic of web-based resources. First, utilizing an internet site to host and display the large amount of content seemed to work well with the hiring resource as it provided a centralized, convenient, and known location for hiring managers to go to compared to relying on individual or face-to-face training. Bottazzo (2005) stated that intranets are imperative in the workforce when information is complex and ever-changing, and where managers do not have the time to cope with all of these changes in process. She also stated that utilizing a company's intranet helps to improve motivation, responsibility, initiative, affiliation, and innovative capability and also helps to put an appropriate management style into effect. The data showed that hiring managers found the site to be useful and effective in conveying the large amount of hiring information. The resource was also seen as a helpful tool in training hiring managers as evidenced by the Human Resources Department utilizing the resource in their hiring process and trainings. Another reason for the resource's documented success as indicated by Google Analytics and the interviews is

due to its ease of use and the convenience of being web-based so users can access it at any time. According to Khan (2001) web-based instruction has the ability to provide learning experiences that are open, flexible, and circulated, providing opportunities for engaging in interactive and efficient instruction. Intranet sites provide a hub for managers, departments, groups, and individual employees to be current and consistent with updated, real-time information (Denton, 2007). Berman et al. (2016) also noted that web-based learning is increasingly used in higher education institutions because web-based trainings allow for remote access, convenient participation times, and rapid access to information. When asked if web-based platforms are an effective medium to convey information, one interview participant stated:

Yes... you can do it on your own time. You can make sure that the information is provided consistently. It seems the most important thing is just efficiency of resources which you don't have to tie somebody up, pull people away, coordinate schedules... it can be done in your own time and you can also have an electronic record of your completion.

The study's results support Berman's comments as it shows the utility and effectiveness of using a web-based platform to convey long, complex information.

The study also supports the existing literature because it involved hiring managers in the process of giving feedback about the hiring resource in both the post-test survey and the interviews. Bottazzo (2005) states that employees themselves will become generators of knowledge, adding to the intranet site to improve the whole of the organization. Essentially, by being able to give input and feedback, the hiring managers were able to improve the resource for the greater use of the college.

As concluded by Berman et al. (2016) and later discussed in this chapter, it is believed that web-based trainings and online learning is here to stay and will likely go further in their utility and effectiveness.

Finally, Kotter's (2007) change theory end goal was "institutionalizing new approaches". This study implemented a successful new approach to hiring and onboarding staff following Kotter's eight step approach. Kotter's eight stages were replicated in this study by: (a) "establishing a sense of urgency" by showing that there was a need to create a hiring resource via the needs based pilot test, (b) "forming a powerful guiding coalition" which was accomplished by getting both Academic Affairs and Human Resources leadership to buy-in to solving the issue, (c) "creating a vision" through focus groups and discussions about desired outcomes from the leadership of each department, (d) "communicating the vision" to other members of the departments that would assist in developing the hiring resource, (e) "empowering others to act on the vision" by allowing others to add their input, experience, and perspective into the hiring resource, (f) "planning for and creating short-term wins" through pre-test data collection and interviews, (g) "consolidating improvements and producing more change" was accomplished due to editing the resource and information based off of the feedback in the interviews, and pre- and post - tests, and (h) "institutionalizing new approaches" by implementing the resource into how the college trains and assists hiring managers through the hiring process in. The eighth step of program was achieved as the change was implemented, maintained, and utilized by the Human Resources department at the college. Therefore, creating a new institutionalized approach to hiring.

Strengths of the Study

The first strength of the study was that the research and resource was contextually relevant to the population. The product, the hiring resource, was developed in-house through a collaboration between the Humans Resources and Academic Affairs staff. Thus, the information directly addressed the hiring information that each department saw as necessary when hiring and on-boarding a new employee. The second strength of the study was the large amount of buy-in and participation in the study. Upper management and the entire Human Resources Department were supportive of the researcher's chosen research topic. The Human Resource's staff spent hours going over the hiring process at the college and evaluating the resource with the researcher prior to the resource being released and measured. Academic Affairs staff had a high response rate (50%) to the surveys and everyone that I asked to participate in an interview was more than willing to give up their time. This lead to a smooth execution of the project. The final strength to this study is that it is easy to apply the concept to other contexts. The study does not require a vast knowledge of technology, nor does it require a vast understanding (initially) of hiring theories. It does however require time, dedication, and buy-in from the context. If an individual has the three situational traits, then this study would be easy to replicate in another college or university.

Limitations of Study/Lessons Learned

Although also listed as a strength, one limitation of the study was that the study occurred in my personal and specific context. Thus, it cannot necessarily produce identical outcomes if replicated in another context due to the other influences, individuals, and needs of other different environments. The study can only be translated

as far as how one can go about producing a useful and effective resource, it cannot guarantee that a useful and effective resource will be created and utilized.

Some might believe that the study would have been more reflective of the hiring managers' true opinions regarding usefulness and effectiveness, contending that there might have been participant bias, leading subjects to respond in a positive manner in order to please the researcher. However, on the other hand, if the researcher were not from the same community, the participants may not have responded at all or may not have felt that the researcher knew enough about their community's needs in order to be respected.

There was a text error in the pre- and post-test questionnaires' Likert-scale when addressing usefulness in question 14 in the pre-test and question 13 in the post-test. The second Likert-scale item in both of the questions was missing the word "somewhat" in front of the word "useless." This made the item look like the second Likert-scale items was a worse option than the first. When analyzing the data, the researcher analyzed the data according to the Liker-scale number and not the provided anchor due to the fact that the directions stated "On a scale from 1-4 with 1 being 'Very Useless' and 4 being 'Very Useful', how useful is the information in the hiring resource regarding the following hiring information:" Therefore, the researcher assumed that any item that was indicated as a 1 was seen as "very useless" and any item indicated as a 2 was "somewhat useless" for those two questions.

A lesson learned with creating and implementing a study is timing. My study originally focused on how web-based resources can help with employee retention by hiring the correct employee for a position. The original idea had to be morphed into what

the study is today due to several members of upper leadership in the college as well as the Director of Human Resources, leaving the college or going on maternity leave. This exodus caused a temporary delay in hiring as budgets were delayed as administration were transitioning in new leadership. This situation also made me aware of a failing in Kotter's Change Theory. Kotter discusses how to effect change within your context through a series of steps. What the theory does not address is how to continue the internal change when external change completely interrupts the original change process. Therefore, anyone who plans to translate the study to their own site should plan on completing the compilation of information and measurements in a timely fashion in an attempt to mitigate the effects of external change.

The other theory that I used in my study was Communities of Practice. This theory really played a role in the development of the resource. It brought two departments (Human Resources and Academic Affairs) to work on a shared purpose to improve the overall practice at the college. This helped to improve the applicability of the resource while also conveying accurate and required information. In the future, I think it would be even more beneficial to bring in more departments to see if the resource can be edited and applied to a larger population. It would also be interesting to see other universities' feedback on the resource and how they could improve their practice through both internal and external collaborations.

Impact/Implications of the Study

The study has created a local impact with anticipation of influencing change on a state or national level. The local impact of the study affected the way the Academic Affairs team interacts with the Human Resources Department. Due to the resource being

a successful compilation of work between the two departments, it received a large majority of buy-in and support from key stake-holders. The resource is now the main training source used for the college's hiring managers and is sent to every hiring manager when they begin the hiring process. The hiring resource has also been included as a component in general manager training and development which occurs two to three times a year. Furthermore, the college has developed an interdisciplinary work group that focuses on developing web-based and in-person professional development and trainings. Therefore, the impact of this study may also lead to the production of more college and university wide web-based resources. It is hoped that this research inspires others to develop and measure the effects of web-based trainings and resources for higher education staff. It is also hoped that this is a beginning to further research in staff development and retention.

Future Research

This action research study explored the usability and effectiveness of a web-based resource for hiring. Because the study showed excellent support and results regarding this particular resource, future research could focus on the use of additional web-based resources and also explore the general effectiveness and usability of web-based resources for higher education staff on a state and national level.

To conclude, this study only begins to look into the effects of web-based resources for staff development. More research needs to be conducted to further look at the implications and outcomes of web-based trainings. For example, to further this research study, the researcher could observe and measure new employees fit and retention to see if there are other issues found in hiring even when a manager is given the

appropriate information. This would help to further target employee, hiring, on-boarding and retention.

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APPENDIX A
WEB-BASED RESOURCE

Hiring Resources

- Resources**
- Welcome
 - ▼ **Step 1: Creating New Positions**
 - Approval Process
 - Compensation Calculator
 - ▼ **Step 2: Posting a New Position**
 - Timeline
 - Assembling Job Descriptions
 - Common Verbs for Job Descriptions
 - Checklist
 - ▼ **Step 3: Recruitment**
 - Timeline
 - Confidentiality Policies and Documents
 - Common Questions and Mistakes with Recruitment
 - Assembling a Hiring Committee
 - Quick Tips for Resume Review
 - Checklist
 - ▼ **Step 4: Candidate Selection and Interviews**
 - Overview
 - Questions Not to Ask
 - Question Bank
 - Supplementary Skills Assessments
 - Checklist
 - ▼ **Step 5: Hiring**
 - Reference Checks Tips
 - Offering a Position to a Candidate
 - Negotiating Salary
 - ▼ **Step 6: Employee Pre-boarding and On-boarding**
 - Important New Hire Information
 - Required Training For New Hires
 - Checklist

Hiring Resources for Managers

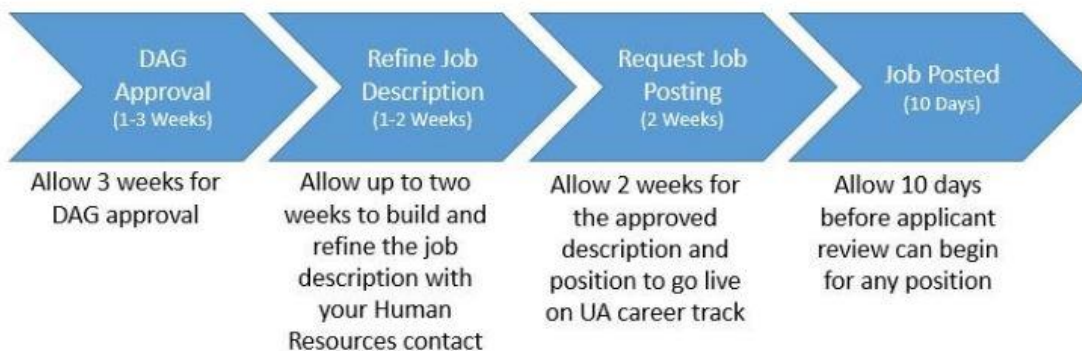


Welcome to the University of Arizona College of Medicine - Phoenix Hiring Manger Resource site. This site provides detailed information specifically tailored to hiring and on-boarding employees at the College of Medicine - Phoenix. This site was designed with collaboration by the Human Resources and the Academic Affairs Departments.

Use the process chart and word document below for clarification on roles and sequence of tasks for recruitment. Links to the tools on this site will accompany the instructions in the word document. (Note: Internet Explorer users may need to use Firefox or Google Chrome to access the folder below)



Timeline



Checklist

The Human Resources office can be reached at 602.827.2600 or comphx-hrservices@email.arizona.edu



Department of Academic Affairs New Position Hiring Manager Checklist

- ___ Meet with unit leader
- ___ Meet with Human Resources
- ___ Assemble job Description (Recommended: Use Action Verb List in Hiring Resource)
- ___ Submit DAG Request
- ___ DAG Approval
- ___ Schedule recruitment appointment with Human Resources to develop final job description with HR, set compensation strategy, and discuss timeline
- ___ Submit final draft for posting
- ___ Discuss advertising and recruitment strategies with Human Resources

[Step 6: Employee Pre-boarding and On-boarding >](#)

Required Training For New Hires



Online Training for New Employees

- [FERPA Training](#)
- [Preventing Discrimination and Harassment for Nonsupervisory Employees](#)
- [Preventing Discrimination and Harassment for Supervisors and Faculty](#)
- [Arizona Public Service Orientation](#)
- [Information Security Essentials](#)
- [Understanding your timesheet](#)

New Employee Resources/Online Information

- [Benefits and Retirement Plan Options](#)
- [Parking Permit](#)
- [UA Alert](#)

APPENDIX B

PRE-QUESTIONNAIRE: HIRING COMMITTEES

Q1 What are the first three letters of your mother's maiden name and the last 3 digits of your phone number?

Q2 With which gender do you identify?

- Male (1)
- Female (2)
- Other (3)

Q3 What is your age?

- 18-25 (1)
- 26-35 (2)
- 36-45 (3)
- 46-55 (4)
- 56-65 (5)
- 66-75 (6)
- 76+ (7)

Q4 With which race do you identify?

- African American/Black (1)
- Asian/Pacific Islander (2)
- Native American (3)
- Caucasian/White (4)
- Hispanic/Latino (5)
- Other (7)

Q5 How many years have you worked in higher education?

Q6 How many years have you worked at the College of Medicine – Phoenix?

Below you will be asked a range of questions focused on hiring information and resources within the Academic Affairs department at the College of Medicine – Phoenix. You are free to answer or disregard any questions that you are uncomfortable with or do not have an answer to.

Q7 Have you ever served on a hiring committee?

- Yes (1)
- No (2)

Q8 How many hiring committees have you served on?

- 0-1 (1)
- 2-3 (2)
- 4-5 (3)
- 6+ (4)

Q9 Have you ever served as a hiring manager on a committee (person responsible for making the hiring decision)?

- Yes (2)
- No (3)

Q10 If you selected yes to having been a hiring manager, how many people have you hired?

- 0-1 (1)
- 2-3 (2)
- 4-5 (3)
- 6+ (4)
- N/A: I have not served as a hiring manager/I have not hired anyone

For the following questions, please answer to what extent that you agree with the proceeding statements regarding general hiring information.

Q11 On a scale of 1-4 with 1 being 'Not Very Well' and 4 being 'Very Well', how well do you know general information regarding the following hiring procedures at the College of Medicine - Phoenix:	Not Very Well (1)	Somewhat Well (2)	Well (3)	Very Well (4)
Creating New Positions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posting New Positions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruiting Applicants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assembling a Hiring Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Selecting the Appropriate Candidates for an Interview	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interview Process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring New Employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee On-boarding Procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 On a scale of 1-4 with 1 being 'Not Very Well' and 4 being 'Very Well', how well do you know specific information regarding the following hiring procedures at the College of Medicine - Phoenix:	Not Very Well (1)	Somewhat Well (2)	Well (3)	Very Well (4)
Approval Process for Creating a New Position	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compensation Calculator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posting a New Position Timeline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assembling Jobs Descriptions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Verbs for Job Description	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posting a New Position Checklist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruitment Timeline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confidentiality Policies and Documents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Questions and Mistakes with Recruitment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assembling a Hiring Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quick Tips for Resume Reviewing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruitment Committee Checklist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overview of the Interview Process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Questions not to ask in an Interview	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interview Question Bank	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supplementary Skills Assessments (Skills Tests)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interview Checklist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reference Checks Tips	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Offering a Position to a Candidate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Negotiating Salary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Important New Hire Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Required Training for New Employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee Pre-boarding and On-boarding Checklist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 On a scale from 1-4 with 1 being 'Not Very Useful' and 4 being 'Very Useful', how useful would information on the following information be to you when hiring a new employee?	Not Very Useful (1)	Somewhat Useful (2)	Useful (3)	Very Useful (4)
Creating New Positions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posting New Positions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruiting Applicants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assembling a Hiring Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Selecting the Appropriate Candidates for an Interview	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interview Process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring New Employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee On-boarding Procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14 On a scale from 1-4 with 1 being 'Very Useless' and 4 being 'Very Useful', how useful would information on the following information be to you when hiring a new employee?	Not Very Useful (1)	Useless (2)	Useful (3)	Very Useful (4)
Approval Process for creating a New Position	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compensation Calculator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posting a New Position Timeline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assembling Jobs Descriptions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Verbs for Job Description	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posting a New Position Checklist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruitment Timeline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confidentiality Policies and Documents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common Questions and Mistakes with Recruitment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assembling a Hiring Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quick Tips for Resume Reviewing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruitment Committee Checklist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overview of the Interview Process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Questions not to ask in an Interview	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interview Question Bank	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supplementary Skills Assessments (Skills Tests)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interview Checklist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reference Checks Tips	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Offering a Position to a Candidate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Negotiating Salary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Important New Hire Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Required Training for New Employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee Pre-boarding and On-boarding Checklist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 Is there any information that you would like to provide that was not acknowledged or asked in the survey?

APPENDIX C

POST-QUESTIONNAIRE: HIRING COMMITTEES

Q1 What are the first three letters of your mother's maiden name and the last 3 digits of your phone number?

Q2 With which gender do you identify?

1. Male
2. Female
3. Other

Q3 What is your age?

4. 18-25
5. 26-35
6. 36-45
7. 46-55
8. 56-65
9. 66-75
10. 76+

Q4 With which race do you identify?

1. African American/Black
2. Asian/Pacific Islander
3. Native American
4. Caucasian/White
5. Hispanic/Latino
6. Other

Below you will be asked a range of questions focused on hiring information and resources within the Academic Affairs department at the College of Medicine – Phoenix. You are free to answer or disregard any questions that you are uncomfortable with or do not have an answer to.

Q5 How many years have you worked in higher education?

Q6 How many years have you worked at the College of Medicine – Phoenix?

Q7 Have you ever served on a hiring committee?

11. Yes
12. No

Q8 How many hiring committees have you served on?

- 13. 0-1
- 14. 2-3
- 15. 4-5
- 16. 6+

Q9 Have you ever served as a hiring manager on a committee (person responsible for making the hiring decision)?

- 17. Yes
- 18. No

Q10 If you selected yes to having been a hiring manager, how many people have you hired?

- 19. 0-1
- 20. 2-3
- 21. 4-5
- 22. 6+
- 23. N/A: I have not served as a hiring manager/I have not hired anyone

For the following questions, please answer to what extent that you agree with the proceeding statements regarding the hiring resource (<https://sites.google.com/a/email.arizona.edu/daniel-site>).

Q11 On a scale from 1-4 with 1 being 'Not Very Effective' and 4 being 'Very Effective', how effective is the information in the hiring resource regarding the following hiring information:	Not Very Effective (1)	Somewhat Effective (2)	Effective (3)	Very Effective (4)
Approval Process for Creating a New Position	○	○	○	○
Compensation Calculator	○	○	○	○
Posting a New Position Timeline	○	○	○	○
Assembling Jobs Descriptions	○	○	○	○
Common Verbs for Job Description	○	○	○	○
Posting a New Position Checklist	○	○	○	○
Recruitment Timeline	○	○	○	○
Confidentiality Policies and Documents	○	○	○	○
Common Questions and Mistakes with Recruitment	○	○	○	○
Assembling a Hiring Committee	○	○	○	○
Quick Tips for Resume Reviewing	○	○	○	○
Recruitment Committee Checklist	○	○	○	○
Overview of the interview process	○	○	○	○
Questions Not to Ask in an Interview	○	○	○	○
Interview Question Bank	○	○	○	○
Supplementary Skills Assessments (Skills tests)	○	○	○	○
Interview Checklist	○	○	○	○
Reference Checks Tips	○	○	○	○
Offering a Position to a Candidate	○	○	○	○
Negotiating Salary	○	○	○	○
Important New Hire Information	○	○	○	○
Required Training for New Employees	○	○	○	○
Employee Pre-boarding and On-boarding Checklist	○	○	○	○

Q12 On a scale from 1-4 with 1 being 'Not Very Effective' and 4 being 'Very Effective', how effective is the information in the hiring resource regarding the overall information in the below sections in the hiring resource:	Not Very Effective (1)	Somewhat Effective (2)	Effective (3)	Very Effective (4)
Creating New Positions	○	○	○	○
Posting a New Positions	○	○	○	○
Recruitment	○	○	○	○
Candidate Selection and Interviews	○	○	○	○
Hiring	○	○	○	○
Employee Pre-boarding and On-boarding	○	○	○	○

Q13 On a scale from 1-4 with 1 being 'Very Useless' and 4 being 'Very Useful', how useful is the information in the hiring resource regarding the following hiring information:	Not Very Useful (1)	Useless (2)	Useful (3)	Very Useful (4)
Approval Process for Creating a New Position	○	○	○	○
Compensation Calculator	○	○	○	○
Posting a New Position Timeline	○	○	○	○
Assembling Jobs Descriptions	○	○	○	○
Common Verbs for Job Description	○	○	○	○
Posting a New Position Checklist	○	○	○	○
Recruitment Timeline	○	○	○	○
Confidentiality policies and documents	○	○	○	○
Common Questions and Mistakes with Recruitment	○	○	○	○
Assembling a Hiring Committee	○	○	○	○
Quick Tips for Resume Reviewing	○	○	○	○
Recruitment Committee Checklist	○	○	○	○
Overview of the Interview Process	○	○	○	○
Questions Not to Ask in an Interview	○	○	○	○
Interview Question Bank	○	○	○	○
Supplementary Skills Assessments (Skills tests)	○	○	○	○
Interview Checklist	○	○	○	○
Reference Checks Tips	○	○	○	○
Offering a position to a candidate	○	○	○	○
Negotiating Salary	○	○	○	○
Important New Hire Information	○	○	○	○
Required Training for New Employees	○	○	○	○
Employee Pre-boarding and On-boarding Checklist	○	○	○	○

Q14 On a scale from 1-4 with 1 being 'Very Useless' and 4 being 'Very Useful', how useful is the information in the hiring resource regarding the overall information in the below sections in the hiring resource:	Not Very Useful (1)	Somewhat Useful (2)	Useful (3)	Very Useful (4)
Creating New Positions	○	○	○	○
Posting a New Positions	○	○	○	○
Recruitment	○	○	○	○
Candidate Selection and Interviews	○	○	○	○
Hiring	○	○	○	○
Employee Pre-boarding and On-Boarding	○	○	○	○

Q15 Please rank the order the usefulness of the hiring resources sections. The most useful section would start with '1' and the least useful section would be '6'.

- _____ Creating New Positions (1)
- _____ Posting a New Positions (2)
- _____ Recruitment (3)
- _____ Candidate Selection and Interviews (4)
- _____ Hiring (5)
- _____ Employee Pre-boarding and On-boarding (6)

Q16 On a scale from 1-4 with 1 being 'Not Very Useful' and 4 being 'Very Useful', how useful overall is the hiring resource?

	Not Very Useful (1)	Somewhat Useful (2)	Useful (3)	Very Useful (4)
Overall usefulness of the hiring resource	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q17 On a scale from 1-4 with 1 being 'Not Very Effective' and 4 being 'Very Effective', overall, how effective is the hiring resource?

	Not Very Effective (1)	Somewhat Effective (2)	Effective (3)	Very Effective (4)
Overall Effectiveness of the hiring resource	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q18 On a scale from 1-4 with 1 being 'Not Very Useful' and 4 being 'Very Useful', how useful are web-based resources?

	Not Very Useful (1)	Somewhat Useful (2)	Useful (3)	Very Useful (4)
Overall usefulness of the web-based resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 On a scale from 1-4 with 1 being 'Not Very Effective' and 4 being 'Very Effective', how effective do you find web-based resources?

	Not Very Effective (1)	Somewhat Effective (2)	Effective (3)	Very Effective (4)
Effectiveness of the web-based resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q40 On a scale from 1-4 with 1 being 'Not Very Likely' and 4 being 'Very Likely', how likely do you think you will use the hiring resource when:

	Not Very Likely (1)	Somewhat Likely (2)	Likely (3)	Very Likely (4)
Serving on a Hiring Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Serving as a Hiring Manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q20 Should the College of Medicine - [REDACTED] establish additional web-based resources for staff?

- Yes (1)
- No (2)
- Maybe (3)
- No Preference (4)

Q21 Is there any other information that should be added to the hiring resource?

Q22 Is there any other information that you would like to provide?

APPENDIX D

STRUCTURED INTERVIEW QUESTIONS:

HIRING MANAGERS/COMMITTEE MEMBERS

1. How long have you worked in higher education?
2. Roughly how many hiring committees have you served on?
3. How many times have you been the main hiring manager on a hiring committee?
4. Have you viewed and read the new web-based hiring resource?
5. What are your general thoughts about the web-based hiring resource?
6. To what extent do you find the hiring resource useful?
7. What information in the hiring resource was the most useful?
8. What information in the hiring resource was the least useful to you?
9. Do you find the hiring resource to be an effective medium to convey hiring information?
10. Do you find the hiring resource to be an effective instrument when hiring new employees?
11. Were there any problems you encountered with using the hiring resource?
12. Is there any information or items that you would add to the hiring resource?
13. To what extent do you think you will use the hiring resource in the future?
14. Do you see yourself using the resource more as a hiring committee member or as a hiring manager?
15. Based off of your experience, do you see web-based platforms being a good medium for higher education staff training?
16. Do you think that it would be beneficial for the College of Medicine – [REDACTED] to develop more tools and trainings for higher education staff?
17. Do you have any other thoughts or opinions about the hiring resource or web-based platforms that you would like to share?

APPENDIX E

PARTICIPANT INTERVIEW CONSENT LETTER

Title of research study:

Developing a Standardized Process for Hiring to Improve Retention at State Medical Colleges Study

Investigator: Dr. Linda Caterino ***Co-Investigator:*** Daniel Drane III, M.Ed.

Why am I being invited to take part in a research study?

We invite you to take part in a research study because you are or have been a hiring manager/on a hiring committee within the past 24 months.

Why is this research being done?

The purpose of this research study is to obtain feedback on how to further develop and provide useful information to hiring managers to improve hiring and retention within the Academic Affairs department.

How long will the research last?

We expect that individuals will spend no more than 30 minutes on research related topics over the Summer and Fall 2016 academic semesters. Participants will be asked to participate one individual interview.

How many people will participate in the study?

No more than 5 individuals will be asked to interview in the research study. No more than 80 individuals will be asked to participate in the entirety of the study.

What happens if I say yes, I want to be in this research?

You will participate in an in-person interview focusing around an implemented hiring resource. You will gauge the hiring resources' usefulness to you in your role as a hiring manager and be able to provide any feedback about the resource and the hiring process within the Academic Affairs department. The interview will be audio recorded to allow the researcher to transcribe the document.

We are also asking your permission to record the interview. These recordings will be deleted after being transcribed, and any identifiers will be removed. Only the research team will have access to the recordings. The recordings will be deleted immediately after being transcribed and any published quotes will be anonymous. Please let me know if, at any time, you decide you do not want to be recorded and we will stop recording you

What happens if I say yes, but I change my mind later?

You can leave the research at any time it will not be held against you. In addition, participants may skip any questions they don't want to answer.

What happens to the information collected for the research?

Efforts will be made to limit the use and disclosure of your personal information, including research study records, to people who have a need to review this information. The results of this study may be used in reports, presentations, or publications but your name will not be used.

Who can I talk to?

If you have questions, concerns, or complaints, talk to the research team at (509) 592-8289, or by emailing the principle investigator, Dr. Linda Caterino, at Linda.Caterino@asu.edu. This research has been reviewed and approved by the Social Behavioral IRB. You may talk to them at (480) 965-6788 or by email at research.integrity@asu.edu if:

- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research participant.
- You want to get information or provide input about this research.
- Your questions, concerns, or complaints are not being answered by the research team.

In order to participate you must be participants must be 18 years of age or older.

Your verbal agreement indicates your consent to participate.

APPENDIX F

PARTICIPANT QUESTIONNAIRE CONSENT LETTER

Title of research study:

Developing a Useful and Effective Web-based Hiring Resource for Hiring

Investigator: Dr. Linda Caterino ***Co-Investigator:*** Daniel Drane III, M.Ed.

Why am I being invited to take part in a research study?

We invite you to take part in a research study because you are or have been a hiring manager/on a hiring committee within the past 24 months.

Why is this research being done?

The purpose of this research study is to obtain feedback on how to further develop and provide useful information to hiring managers to improve hiring and retention within the Academic Affairs department.

How long will the research last?

We expect that individuals will spend no more than 30 minutes on research related topics over the Summer and Fall 2016 academic semesters. Participants will be asked to participate in an online questionnaire.

How many people will participate in the study?

We expect that no more than 80 people will participate in this research study.

What happens if I say yes, I want to be in this research?

You will be asked to participate in a pre and post questionnaire focusing around information that would be useful in a hiring resource and information the information after the hiring resource is implemented. You will gauge the hiring resources' usefulness to you in your role as a hiring manager/committee member and be able to provide any feedback about the resource and the hiring process within the Academic Affairs department. These surveys will be linked by the first three letters of your mother's maiden name and the last three digits of your telephone number.

What happens if I say yes, but I change my mind later?

You can leave the research at any time it will not be held against you. In addition, participants may skip any questions they don't want to answer at any time.

What happens to the information collected for the research?

Efforts will be made to limit the use and disclosure of your personal information, including research study records, to people who have a need to review this information. The results of this study may be used in reports, presentations, or publications but your name will not be used.

Who can I talk to?

If you have questions, concerns, or complaints, talk to the research team at (509) 592-8289, or by emailing the principle investigator, Dr. Linda Caterino, at Linda.Caterino@asu.edu. This research has been reviewed and approved by the Social Behavioral IRB. You may talk to them at (480) 965-6788 or by email at research.integrity@asu.edu if:

- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research participant.
- You want to get information or provide input about this research.
- Your questions, concerns, or complaints are not being answered by the research team.

Participants must be 18 years of age or older to participate in the study.

Completion of the questionnaire will be considered your consent to participate.

APPENDIX G
INSTITUTIONAL REVIEW BOARD APPROVAL



APPROVAL: MODIFICATION

Linda Caterino Kulhavy
 Division of Educational Leadership and Innovation - Tempe
 480/965-7524
 Linda.Caterino@asu.edu

Dear Linda Caterino Kulhavy:

On 8/29/2016 the ASU IRB reviewed the following protocol:

Type of Review:	Modification
Title:	Developing a Standardized Process for Hiring to Improve Retention at a State Medical College
Investigator:	Linda Caterino Kulhavy
IRB ID:	STUDY00003852
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • DRANE Clarifying Research Questions IRB 08.26.2016.pdf, Category: Other (to reflect anything not captured above); • Pre-Survey_Needs_Assessment_Hiring 2016.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Drane PARTICIPANT INTERVIEW CONSENT LETTER 08.24.2016.pdf, Category: Consent Form; • Drane PARTICIPANT QUESTIONNAIRE CONSENT LETTER 08.24.206.pdf, Category: Consent Form; • Daniel UPDATED IRB FINAL 08.12.2016.docx, Category: IRB Protocol; • Recruitment letter, Category: Recruitment Materials; • Dissertation Interview Questions 08.03.2016.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Post-Survey_Resource_Assessment_Hiring_2016.pdf,

	Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);
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The IRB approved the modification.

When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Daniel Drane III
Daniel Drane III

APPENDIX H
CODE BOOK

Code Book

Structured Themes

01. Perceived use
 - 01.PU.01: Future Use
 - 01.PU.02: Hiring Manager vs. Committee Member
02. Usability
 - 02.US.01: Most useful
 - 02.US.02: Least useful
 - 02.US.03: General thoughts about resource
03. Effectiveness
 - 03.EF.01: Effective for hiring
 - 03.EF.02: Effective at conveying information
04. Frequency of use
 - 04.FU.01: Perceived future use
 - 04.FU.02: Likelihood of using
05. Additions
 - 05.AD.01: What would make it more useful
 - 05.AD.02: Additional Information

Additional Themes

06. Centralized location
07. One-stop-shop
08. Convenience
09. Human resources ineffective
10. Step-by-step guide
11. Maintenance