

FACTORS INFLUENCING WOMEN FACULTY TRANSITIONING INTO TENURED
ACADEMIC ROLES AT LAND-GRANT INSTITUTIONS WITHIN COLLEGES OF
AGRICULTURE

By

CAROLYNN SUE NATH KOMANSKI

A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

2017

© 2017 Carolynn Sue Nath Komanski

To the women who supported me in conducting this study: your collegiality and willful support was not in vain and is much appreciated. I hope to continue the cycle and pay it forward. To the women who participated in this study: thank you for sharing your time, energy, and experiences so others may learn from your journey. Each one of you is an inspiration. To the men who supported me in the conducting this study; your affirmations and encouragement cannot be overlooked, and I am forever grateful as you helped me move forward. To my husband, children, and family: your patience and grace afforded me the opportunity to fulfill a dream that so many thought was impossible. Together we made my dream possible.

ACKNOWLEDGMENTS

Being a mother, I understand that it takes a village to raise a child. I believe this holds true to graduate a Ph.D. student. Without my village of supporters and nay-sayers, I would not have had the intrinsic and extrinsic motivation to accomplish this labor of love.

Prioritizing a family, raising two children (having birthed one around the time of my qualifying exams), being a wife to my selfless husband in addition to working full time, and lastly being a doctoral student, is not for the faint of heart. There is no perfect balance; there is no secret to making this work. It is only what you make of the experience and who you surround yourself with.

I was afforded the opportunity to make it through this labyrinth, my way and in my timeline. To the people who I surrounded myself with, it is because of you that I have accomplished this feat. Without the support and friendship of my advisor and chair, Dr. Nicole Stedman, who saw my drive and potential when others did not. My committee which challenged and supported me in ways that I didn't even know I needed: Dr. Kirby Barrick, Dr. Lisa Lundy, and Dr. Angel Kwolek-Folland. My former supervisor, TJ Logan, who listened, encouraged, and never batted an eye when I shared what may have been lofty or overly ambitious goals. To my employers at the University of Florida: Division of Student Affairs and Department of Housing and Residence Education, without you as my vehicle I do not know if I could have become a Gator grad. To the wonderful women in my life during this portion of my life which I am calling "organized chaos;" this dream would have never become a reality if so many of you all weren't a part of my journey. The time, mental support and encouragement, and financial investment in me are something I am eternally grateful.

My family and children, you may never understand why I would have ever chosen to go down this road. I learned how to read, write, and spell late in life (thanks to the dilapidated education system in the state of Maryland). I was a part of an “experiment.” People in my life didn’t think I would amount to much, particularly in middle school. Later on, they never thought I would attend a four-year college, let alone graduate. Little did they know these barriers only kept me going; I wanted to prove them wrong and most importantly, I wanted to prove to myself that I could be triumphant. Just as I have done throughout my life, I can do anything. I can learn anything. Achieve anything I set my mind to. I will hit roadblocks and fall, but I will ALWAYS get up. I will brush myself off, and I will succeed. You and every other person in this world can do the same. This is the “American Dream” I was raised with. I hope anyone reading this will stay after their dream and accomplish it, just as I have. But this is not my final dream. This is only the beginning; I look forward to what is next.

TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGMENTS.....	4
LIST OF TABLES.....	10
LIST OF FIGURES.....	11
LIST OF DEFINITIONS.....	12
ABSTRACT.....	15
CHAPTER	
1 INTRODUCTION.....	16
Context and Background of the Study.....	16
Background.....	18
Role of Land-Grant Universities.....	18
Land-Grant Institutions and Higher Education.....	20
Faculty Tenure Pipeline at Institutions of Higher Education.....	23
Increase in female enrollment.....	24
Barriers to access positions.....	24
The decline of women.....	25
Western culture factors.....	26
Self-esteem impacts.....	27
Faculty Tenure Processes and Influences.....	28
Process of promotion.....	29
Support for promotion.....	30
Compensation for promotion.....	31
Problem Statement.....	32
Purpose and Objectives.....	32
Significance of the Study.....	33
Assumptions.....	36
Limitations.....	36
Chapter Summary.....	37
2 REVIEW OF THE LITERATURE.....	39
Critical Feminist Theory.....	39
Intersection of Critical and Feminist Theories.....	42
Career Models.....	43
Boundaryless Careers.....	44
Kaleidoscope Careers.....	46
Women in the Workplace.....	50
Microaggressions in the Workplace.....	51

Women’s Leadership	52
Metaphorical Illustrations for Women in Leadership	53
Leadership Advocacy and Charisma	56
Higher Education and Leadership	59
Women in Higher Education	60
Pathway to Leadership in Higher Education	62
Women Faculty in Higher Education	63
Theoretical Foundation for this Study	66
Theoretical Support	66
Conceptual Framework	67
Chapter Summary	68
3 RESEARCH METHODS	69
Research Objectives	70
Methods	70
Qualitative Inquiry	70
Interview Method	71
Dynamics and Concerns of Women Interviewing Women	71
Interview Schedule and Pilot Test	72
Sample Selection	73
Data Collection Methods	75
Critical Incident Technique	75
Interviews	75
Validity through Member Checking	77
Document Collection	78
Data Collection Plan	78
Data Analysis	79
Data Analysis Method	79
Constant Comparative Method	79
Data Storage	81
Alternative Methods	81
Bias Statement	82
Chapter Summary	83
4 FINDINGS	87
Introduction to Results	87
Participant Information	87
Demographic Information	88
Participant Sex and Achievement of Tenure	88
Age and Ethnicity	88
Education and Work Credentials	89
Institutional Representation	90
Years Employed	91
Factors that Helped	92
Work Ethic	93

Opportunities	96
Support Systems	99
Factors that Hindered	105
Children and Family.	107
Politics of the Environment.....	109
Request for Summary of Findings	116
Document Reference	116
Further Comments	117
Chapter Summary.....	119
5 DISCUSSION AND RECOMMENDATIONS.....	121
Summary of the Study	121
Overview of the Problem	122
Purpose Statement and Research Questions	123
Review of the Methodology	124
Major Findings	125
Demographics	125
Factors that Helped	125
Factors that Hindered.....	126
Request for Findings	127
Document Reference	127
Further Comments	127
Findings Related to Literature.....	128
Power	129
Interruptions	129
Leadership and Advocacy	132
Vulnerability.....	133
Mentorship	133
Mentorship Helped.	134
Mentorship Hindered.....	135
Mosaic Mentoring.....	135
Culture	136
Tenure Standards	136
Profiles for Success.....	137
Career Models	137
Boundaryless Careers.....	138
Kaleidoscope Careers	138
Surprises.....	139
Recommendations for further Research	141
Recommendations for Practice.....	142
Summary	144
APPENDIX	
A DEPARTMENT ADMIN CONTACT INFORMATION REQUEST E-MAIL	151

B	FACULTY CONTACT REQUEST	152
C	INVITATION TO PARTICIPATE/INFORMED CONSENT	154
D	INTERVIEW SURVEY QUESTIONS	156
E	E-MAIL CONFIRMATIONS FOR STUDY REPLICATION	165
F	IRB APPROVAL LETTER.....	167
	LIST OF REFERENCES	168
	BIOGRAPHICAL SKETCH.....	195

LIST OF TABLES

<u>Table</u>	<u>page</u>
3-1 Interview Questions for Women Faculty	85
3-2 Pseudonym Code Reference.....	86
4-1 Reported Demographics for Age and Ethnicity	89
4-2 Reported Demographics for Education and Work Credentials	90
4-3 Reported Demographics for Employment at Universities	91
4-4 Reported Demographics for Employment at Land-Grant Universities	92
4-5 Factors that Helped Women Faculty	93
4-6 Factors that Hindered Women Faculty	107
5-1 Reported Demographics Summary	145
5-2 Factors that Helped Women Faculty	146
5-3 Factors that Hindered Women Faculty	147
5-4 Interview Questions for Women Faculty	147

LIST OF FIGURES

<u>Figure</u>	<u>page</u>
2-1 Conceptual Model: Critical Feminism’s Role in Women Faculty Achieving Tenure	67
3-1 Gantt Chart for Research Timeline.....	84
3-2 Interview Process Map for Women Faculty Participants.....	84
4-1 Administrative Snowball Responses.....	87
4-2 Regional Participation within Continental United States	119
4-3 Regional participation by Land-Grant Institutions beyond saturation.....	120
5-1 Conceptual model: Critical Feminism’s Role in Women Faculty Achieving Tenure	149
5-2 Regional Participation by Land-Grant Institutions Beyond Saturation	149
5-3 Interview Process Map for Women Faculty Participants.....	150

LIST OF DEFINITIONS

Academic Pipeline	The academic pipeline refers to people entering academia as an undergraduate student, achieving advanced degree's, and then transitioning into faculty roles (Van Anders, 2004).
Administration	A branch of university or college employees responsible for the maintenance and supervision of the institution and separate from the faculty or academics, although some personnel may have joint responsibilities (Administration, 2006).
Administrative Heads	Those individuals in positions recognized by the National Association of State Universities and Land-grant Colleges (NASULGC) as Administrative Heads of agriculture. According to NASULGC, these individuals are the chief administrators of the member universities agricultural programs (Moore, 2003). NASULGC is now the Association of Public and Land-Grant Universities (APLU).
Authentic Leadership	A leadership theory that focuses closely on the leader and what goes on within the leader. Authentic leadership incorporates the leader's self-knowledge, self-regulation, as well as self-concept (Northouse, 2013). Authentic leaders exhibit genuine leadership, lead with conviction, are originals, not copies and emphasize life experiences and the meaning he or she attaches to those life experiences as being critical to their authentic leadership development (Shamir & Eilam, 2005).
Career goal mechanisms	Career plans, aspirations, decisions, and expressed choices (Lent et al., 1994).
Decision-making	A process that involves problem identification, solution generation, evaluation, and implementation (Delbecq & Mills, 1985).
Department	A university division, unit or other organizational entity in which an employee is primarily employed. (Tucker, 1999).
Faculty	The academic staff of a university such as senior teachers, lecturers, and researchers. The term also includes professors of various ranks, usually tenured or tenure-track (Blackburn, Lawrence, 1995).
Gender	The term used for perceived or projected (self-identified) masculinity or femininity of a person (Lindsey, 2015).

Glass Ceiling	Metaphor that describes the invisible barriers or deficiencies that women in leadership can face that could keep them from attaining their ultimate career goals (Morrison & Von Glinow, 1990).
Glass Cliff	Metaphor to describe women who have made it through the glass ceiling to obtain a position of power but are set up to fail because of the lack of resources and support from the organization (Ryan & Haslam, 2005).
Informal and Incidental Learning	Learning outside of formally structured, institutionally sponsored, classroom-based activities (Marsick et al., 2010).
Goal	The determination to engage in a particular activity or to affect a particular future outcome (Bandura, 1986, p. 468).
Land-grant institution	Formed in response to a nation's cry for education to meet the needs of a broad citizenry, public state-sponsored sites of higher learning have a three-fold mission of teaching, research, and service (Herren & Edwards, 2002).
Leadership	The process by which influence is exerted over individuals and groups to achieve goals (Yukl, 2002; Northouse, 2006).
Resilience	The process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress (American Psychological Association, 2017)
Self-awareness	The ability to recognize and understand one's moods, emotions, and drives (Flanagan, 2013).
Self-efficacy	A belief in one's capabilities to organize and execute the course of action required to produce given attainments (Bandura, 1997, p. 3).
Shared-governance	A dynamic set of processes which provide a critical foundation that actively supports the university's two primary functions, the creation, and dissemination of knowledge. Processes openly receive input from all campus constituencies and students to provide advice, direction, and perspective to the institution's administrative leadership. Advice pertains to issues, policies, and procedures that impact the direction and quality of the university's instruction, research/creative activity, and service programs (Montana State University, 2003).
Sponsorship	Sponsorship is focused on advancement and predicated on power. Sponsorship is active support by someone appropriately placed in or about an organization which has a significant influence on decision-making processes or structures. The sponsor is advocating

for, protecting, and fighting for the career advancement of an individual (Ibarra et al. 2010).

Abstract of Dissertation Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Doctor of Philosophy

FACTORS INFLUENCING WOMEN FACULTY TRANSITIONING INTO TENURED
ACADEMIC ROLES AT LAND-GRANT INSTITUTIONS WITHIN COLLEGES OF
AGRICULTURE

By

Carolynn Sue Nath Komanski

December 2017

Chair: Nicole Stedman
Major: Agricultural Education and Communication

The purpose of this study was a critical inquiry of tenured women faculty to identify factors that helped or hindered their transition into tenured academic roles. The study was conducted at land-grant institutions, specifically within colleges of agriculture. A qualitative approach was used in this study to capture narrative interviews to understand the participants' learning through critical incidents. Document analysis was also a part of this study with the collection of participant vitae.

Participants were obtained through a snowball method, with a total of 87 participants and 50 participants' responses are the level of saturation. Data were analyzed to identify words, themes, and examples in the critical incident narratives to identify what helped or hindered these tenured women faculty. Findings from this study should encourage associations, institutions, academic departments, and faculty to evaluate and examine what systems and resources they have in place for faculty who will be going through the tenure and promotion process.

CHAPTER 1 INTRODUCTION

Context and Background of the Study

While women have advanced into university leadership roles, gender imbalance among senior university academics is an acknowledged problem globally, with slow progress being made towards equity (Aiston & Jung, 2015; Blackmore et al. 2015; Lee, & Won, 2014; Hult et al., 2005; Davidson & Burke, 2004). The American Association of University Professors (2005; 2003; n.d.) reported that in 2003-2004, among full-time faculty, women were disproportionately represented in lower ranks and poorly represented among full professors. Only 23% of full professors were women, but women made up over half of instructor and unranked positions (Curtis, 2004). Beintema (2006) found that at the professional level, women comprised only about 20% of agricultural researchers in developing countries. The National Science Foundation (NSF) and Burelli (2008) reported that women comprise 35% of faculty positions within biological/agricultural/environmental life sciences and related fields at four-year institutions across the United States (NSF, 2008). Comparatively, only 3.7% of women serve in senior administrative roles as dean of the college of agriculture at their institutions (NSF, 2008; Burelli, 2008). More recent publications from the NSF (2016a, b) report a slight increase, approximately 7%, for women achieving tenure roles between 2003 (22.8%) to 2012 (29.5%). However, the NSF (2016b) also report also shows there is an overall decline in doctoral graduates securing full-time faculty positions from 62% in 1997 to-58% in 2013. NCSE (2017) most recent report from 2016-2017 indicated that only 33% of all full professors are women, and only 44% of

women represent all levels of academic positions, at federally founded institutions (p.7).

Despite the increasing representation of women in senior academic positions, especially in English-speaking countries (Crabb & Ekberg, 2014; Baker, 2010), the current state of women representation is not at a level that could be expected to mirror student enrollment ratios (Lee & Won, 2014; Lockwood, 2006). Large numbers of women who entered senior academic roles in previous decades were promoted at the same rate as their male counterparts (Crabb & Ekberg, 2014; Dever et al., 2008; Doherty & Manfredi, 2006; Bailyn, 2003; Benschop & Brouns, 2003; Krefling, 2003). Yet, women have remained under-represented in senior university-level administrative positions at universities (Blackmore, et al., 2015; Blackmore, 2014; Davidson & Burke, 2004; Hyer, 1985; Reinert, 1946). Griffeth (2013) remarked:

The glass ceiling may seem shattered from the perspective of some, but research continues to demonstrate that there are key issues that afford dialogue and discourse as it relates to women's leadership in the workplace, especially in male-dominated settings such as the agricultural sciences at land-grant institutions of higher education. (p.1)

Some of the key issues shared throughout the body of literature have included the growing number of female students enrolling in higher education and how they have been served through the visual presence of women faculty members (Johnson, 2014; Lee & Won, 2014). In reference to the demonstrated statistics, female perspectives should be included in decision-making at the institutions of higher education, and support mechanisms are needed to retain women leaders through the academic tenure process (Beddoes, 2016; Hannun et al., 2015; MacPhee & Canetto, 2015; Corbette, & St. Rose, 2010).

Background

Role of Land-Grant Universities

In the late 1700s and early 1800s, higher education was considered a privilege for the social elite (National Association of State Universities and Land-Grant Colleges [NASULGC], 1995). Universities such as Harvard and Yale offered study in philosophy and literature, along with other majors within fields of humanities and fine arts. However, there was a continued need for educating the common person who could not afford these elite institutions.

Justin Smith Morrill was instrumental in passing the Morrill Act of 1862 in response to the nation's cry for advanced education to meet the needs of the United States (NASULGC, 1995). Signed into law by President Abraham Lincoln, land-grant institutions were established with the mission to, "teach agriculture, military tactics, and the mechanic arts as well as classical studies so that members of the working classes could obtain a liberal, practical education" (NASULGC, 1995, p.3). Women did not enroll at land-grant institutions until 1870, but it is more widely documented that enrollment of women increased starting in 1890 (Thorne, 1985). Colleges of Agriculture historically included Home Economics where women enrolled; these programs were often a school within the college (Silverberg, 1998; Stage & Vinventi, 1997; Herren & Hillison, 1996; Newland, 1990). The leader within these departments (often referred to as a Dean) was historically documented as a male while the school director was traditionally a woman (Schwartz, 1997; Bowman, 1962). Historical analysis of employment records shows that women were not in leadership positions at land-grant colleges (Enns & Martin, 2015; Christy & Williamson, 1992; Bowman, 1962).

The Second Morrill Act (1890) extended access to higher education at universities that made no distinction in race admissions. However, states that provided a separate institution for blacks were still eligible to receive funds (NASULGC, 1995, p.3). As a result of this legislation, in mostly southern states where desegregation had not occurred, 17 historically black colleges (for example, Tuskegee University, Florida A&M University, and West Virginia State University), often referred to as 1890 land-grants, were formed (NASULGC, 1995). In subsequent years, the land-grant system expanded to include United States jurisdictions beginning in 1967, and, most recently, tribal colleges in 1994, as a provision of the Elementary and Secondary Education Reauthorization Act (NASULGC, 1995).

The agenda of the land-grant university, its management, and its political base have grown far more complex (Perkins, 2015; Posner, 2009). In states with little or no commercial agriculture, the colleges have evolved away from agriculture toward a broad natural resource and environmental focus, or have become the university's life science colleges (Kellogg, 1999; Bonner 1996). The land-grant colleges of agriculture, which previously had common cultures and missions, have evolved into a far more diverse educational curriculum. They were no longer just colleges of agriculture. These colleges included diverse majors of study, and in very few cases, agriculture remained the sole focus (Kellogg, 1999; Bok, 1990; Bonner 1996).

As graduate programs evolved at land-grant institutions, Bonner (1998) shared that graduate research programs collaborate in the U.S. and abroad with communities or societal organizations. These collaborations act as a laboratory for problem-solving, research and education. The collaborations foster a global intersection for the land-

grant. As our world has gotten smaller, and more interconnected through technology, there is a continued need to adapt and serve the mission of land-grant universities (Woodward, 2009; Stukel, 1998).

Land-Grant Institutions and Higher Education

Characteristics of the faculty at land-grant colleges have been fundamental to an institution's ability to attract students (Paulsen, 2013; National Research Council, 1996). "Demographic characteristics of agricultural scientists holding doctorate degrees suggest that these faculties are slightly older on average than their peers in life and natural sciences", which has been attributed to the ranks of agricultural scientists being replenished at a slower rate (Kulis, et al., 2002; National Research Council, 1996, p. 56). "Women, although increasingly well represented, have remained a substantial minority on the faculties of many agricultural colleges, and members of ethnic minorities remain uncommon" (ASHE, 2011; University Leadership Council, 2008; NASULGC, 1995, p.56).

The public has been particularly concerned about the land-grant university's commitment to teaching (DeZure et al., 2014; Greenwood, 1995).

The Center for Instructional Development at Syracuse University found that university faculty and university administrators shared the view that their institution favors research over teaching. However, each of these two groups thought that members of the other group also favors research over teaching (National Research Council, 1996, p.58).

In the results, the National Research Council's 1995 survey of the general public reported, a majority of respondents thought that undergraduate teaching, graduate teaching, off-campus extension, continuing education, and research were all "very important" responsibilities of their state's land-grant university (Greenwood, 1995). Yet, the results showed that a significantly higher percentage of respondents ranked

teaching "very important," about the percent of respondents that ranked the other activities "very important" (National Research Council, 1996, p.58; Greenwood, 1995).

Most land-grant colleges of agriculture have had a unique advantage beyond other colleges and departments of the university concerning their capacity to devote faculty resources to students. Planned funding has allowed many colleges of agriculture to maintain a relatively low faculty-student ratio. In fact, the National Research Council (1995a, p. 61) showed that USDA-administered grants accounted for slightly less than five percent of all federal research and development dollars allocated to extramural research at universities and colleges (p. 58). The NSF (2016b) and report shows that teaching is becoming less of a priority than research. Duderstadt (2000) also provides context as to why there has been a growing demand for research at the land-grant institutions, which is in due to funding. The land-grant faculty in colleges of agriculture support recruitment of student that results in an enrollment of approximately one to two percent of all undergraduate and graduate students at these institutions nationwide (Collins, 2008; Dyer et al., 2002; National Research Council, 1996). This suggested, that on average, faculty focus more on making connections with students rather than on seeking grants, although not all faculty have had defined responsibilities for student advising or teaching (Matter, 2015; Collins, 2008; Dyer et al., 2002; National Research Council, 1996). Therefore, colleges of agriculture have been in a particularly strong position to commit to student learning (Collins, 2008; Dryer et al., 2002; National Research Council, 1996).

In some parts of the country, students continue to be drawn to colleges of agriculture through their contacts with Cooperative Extension Programs (CEP) in their

communities (Niewolny & Lilard, 2016; National Research Council, 1996). Colleges' tied to these programs have a relationship with their students and their families, especially those from farm and rural backgrounds. These relationships lend opportunities to create a nurturing environment for this group of students (Condon et al., 2106; Leeuwis, 2013; Irlbeck, et al.; 2014; National Research Council, 1996). Connections have been made by men and women, but fewer women are making these connections, as noted in research previously cited (Irlbeck et al., 2014).

Colleges of agriculture should connect with communities in rural, urban, and suburban settings to recruit students and diversify their student bodies (Henry et al., 2014; Lichter & Brown, 2014; National Research Council, 1996). Participating in K-12 science education projects and involving more college faculty in urban-based extension programs are ways to build the needed bridges within all agriculture communities (Ahmed et al., 2017; AAAE, 2011). Although colleges of agriculture may have had opportunities to devote relatively more faculty resources to students, agriculture faculty, like their counterparts in other colleges, perceive that the rewards are in research, where federal funding is concentrated (Stevens & Gebre-Medhin, 2016; Bok, 2015; Jaeger et al., 2015; National Research Council, 1996 p.61). Some college of agriculture faculty feels disadvantaged in the tenure and reward process at the university level because of their explicit responsibilities for extension, in addition to their responsibilities with teaching and research (Childress, 2015; Bisbee, 2005; National Research Council, 1996). The tenure and reward system transcends colleges of agriculture and land-grant universities and has captured the attention of all higher education nationally (Geiger et al., 2015; Helms, 2014; Bonner, 1995; 1996). Since no recent research has been

conducted regarding this process, other than Helm's (2014) case study, colleges of agriculture at land-grant institutions and their faculty have had a special interest in and the potential to shape the future. The need for additional research has been noted in the publication collaboratively produced by The American Council on Education, The American Association of University Professors, and United Educators Insurance Risk Retention Group (2000). Recent literature produced today identified gaps between men and women academics' salaries and retention, and share recommendations for evaluating what occurs to academics during the tenure process (Cavanaugh; 2017; Almer et al., 2016; Ceci et al., 2014; Duetsch & Yao, 2014).

Faculty Tenure Pipeline at Institutions of Higher Education

The faculty tenure process that starts for higher education with undergraduate students and leads all the way through academia to tenured professorships is referred to as the pipeline (Almer et al., 2016; van Anders, 2004). Reductions in grouped representations at various stages in academic rank are referred to as leaks in the pipeline. Statistics show there are fewer women than men in tenured or tenure-track positions, as has traditionally been the case across the world (Allen & French, 2016; Deutsch & Yao, 2014; van Anders, 2004; Canadian Association of University Teachers [CAUT], 2003; European Technology Assessment Network [ETAN], 2002; National Center for Education Statistics [NCES], 2008, 2004, 2002). Historically, these differences were attributed to the smaller number of women who pursued undergraduate degrees, and even fewer who obtained graduate degrees (NCES, 2008, 2004, 2002). Since the 1970s, however, increasing numbers of women have entered the academic pipeline. The academic pipeline refers to people entering academia as an undergraduate student, achieving advanced degrees, and then transitioning into faculty

roles. In recent years women have outnumbered men at the undergraduate level (NSF, 2016b; Almer et al., 2016; CAUT, 2003; NCES, 2008, 2004, 2002), which has led many to assume the inevitability of more women in tenured academic roles in the near future.

Increase in female enrollment

A dramatic enrollment increase of women at the undergraduate level occurred between 1960 (35%) and 2000 (57%). The most recent NSF (2016b) report shows that between 2004 and 2014 there are over a million more women than men enrolled in undergraduate 4-year institutions. Even with this dramatic increase of enrollment women still, makeup approximately 40% of the professoriate in the United States (NSF, 2016b; NCES, 2002), and this figure includes lecturer/instructor positions. Women have been predominant figures in lecture/instructor positions but these positions, have little opportunity for advancement (van Anders, 2004, Fouad et al., 2000). Additionally, women comprise a considerable minority of assistant professors compared to the number of women who attend graduate school (NSF 2016b; CAUT, 2003; NCES, 2002). The underrepresentation of women on faculty, and the issues academic women have faced, have been noted as an area in need of more research (Cavanaugh; 2017; Almer et al., 2016; Ceci et al., 2014; Duetsch & Yao, 2014; Fouad et al., 2000; Aisenberg & Harrington, 1988; Caplan, 1993; Collins, Chrisler, & Quina, 1998; Simeone, 1987;). Since no recent research has been conducted regarding the decline of women faculty in a broad sense, there continues to be a demonstrated need (Cavanaugh; 2017; Almer et al., 2016; Ceci, et al., 2014; Duetsch & Yao, 2014).

Barriers to access positions

Reasons for the scarcity of women in tenured positions focus on experienced and perceived covert or systemic barriers (Cavanaugh; 2017; Almer et al., 2016; Ceci et

al., 2014; Duetsch & Yao, 2014). Self-selection has not been supported by previous research, as women made up 36% of the Ph.D. graduate pool (CAUT, 2002), but comprised only 29% of the applicant pool for academic jobs (van Anders, 2004; Kimura, 2002). NCUE (2016) report shows the growing number of women earning doctoral degrees. The 2009-2010 figures demonstrate 1% more women than men earned a doctoral degree, and 2014-2015 there were 1.1% more women than men who earned a doctoral degree. The NCUE (2016) report shows that there are more women than men in lower level academic positions (instructors: 55% women and 44% men; assistant professors: 52% women and 48% men) the percentages for associate and full professors are substantially lower (full professor: 33% women and 67% men; associate professor: 44% women and 55% men).

The decline of percentages between assistant and associate professor and then again to full professor demonstrates a leaky pipe. Despite some claims that men have been discouraged from applying for tenure-track positions (Cavanaugh; 2017; Almer et al., 2016; van Anders, 2004, Kimura, 1997), it is women who are, in fact, discouraged (Cavanaugh; 2017; Almer et al., 2016; van Anders, 2004, Kimura, 2002) and not achieving these positions.

The decline of women

Indeed, the proportion of women has declined at the teaching stage along the pipeline a student moved from undergraduates (59%), to masters programs (52%) to doctoral programs (36%), and then to academic job applications (20%) (CAUT, 2002; Kimura, 1997). The most recent NSF (2016b) report shows that number of graduates from continues to increase respectively, but the yield of these doctoral graduates into faculty positions (39%) has only slightly increased in 2014. Figures for job applicants

frequently included applicants for lecturer/instructor positions, so the proportion of women applying for tenure-track positions may have been considerably lower (NSF, 2016b; van Anders, 2004). Several types of systemic barriers have led to female graduate students to downgrade academia as a career choice as reported by the most recent NSF (2016b; van Anders, 2004) report, but there is further need for research as to why this is occurring (Cavanaugh; 2017; Almer et al., 2016; Ceci et al., 2014).

Research has been conducted within niche populations to explore this phenomenon. Those disciplines include medical (Vilablanca et al, 2017; Girod et al., 2017) STEM fields (Rodriguez, 2017; Nogaij et al., 2017; Highes et al., 2017) as well as women of color (Corner, et al., 2017; Han & Leonard, 2017; Carter et al, 2016; Yun et al., 2016), but there still remains a significant void within colleges of agriculture.

Western culture factors

Western cultures, women have engaged in a much larger proportion of childrearing responsibilities throughout history (Harding, 2016; van Anders, 2004; Pittman, Teng, Kerpelman, & Solheim, 1999), even when the culture has evolved to both parents being professionally employed (Harding, 2016; van Anders, 2004; Biernat & Wortman, 1991; Wilkie, Ferree, & Ratcliff, 1998). Evolution is far removed from supporting the past biological disposition toward childrearing. Evidence shows that this difference in responsibilities only occurred for mundane tasks; men and women spent equal amounts of time playing with their children (Sennett, 2017; Hanna et al., 2016; Biernat & Wortman, 1991; Kotila, Schoppe-Sullivan, & Dush, 2013) and women were reported to be discontent with unequal distribution of household labor (Sennett, 2017; Hanna et al., 2016; Ruble, Fleming, Hackel, & Stangor, 1988; Kotila et al., 2013). Valian (1998) and Kotila et al. (2013) detailed how gender schemas (masculinity and

femininity) lead to expectations of different behaviors and roles from men and women. Women have internalized the feminine gender role concerning expectations of being a primary caregiver and have come to see this role is incompatible with the long work hours required or associated with academia (Cavanaugh; 2017; Almer et al., 2016; Ceci, et al., 2014; Duetsch & Yao, 2014; Jaschik, 2008; Martin & Barnard, 2013; Mayor, 2015; van Anders, 2004).

Self-esteem impacts

Self-esteem research has shown that women generally score lower than men on ratings of self-esteem, though the difference is small (Brown, 2014; van Anders, 2004; Kling, Hyde, Showers, & Buswell, 1999), indicating that women have felt less fit for the rigors of academic roles. Additionally, studies have shown that women, particularly those with higher level degrees, have been more likely to prefer men who are highly educated for long-term relationships (Slaughter, 2015; Pedulla & Thebaud, 2015; van Anders, 2004; Blackwell & Lichter, 2000; Buunk, Dijkstra, Fetchenhauer, & Kenrick, 2002). Conceivably, women have been more concerned about the difficulties of a dual-career or dual-academic couple. While mobility has generally been required to pursue an academic career, it has particularly been discouraging for women. For example, married women in postdoctoral positions reported more uncertainty than men about remaining in academia (Damaske et al., 2014; Mason & Goulden, 2002), due in part due to mobility concerns. Golde and Dore (2001) surveyed doctoral students to examine their education and career expectations. The study found that fewer women than men planned on a faculty career (van Anders, 2004). An article by Cook (2001) presented additional results by Golde and Dore indicating that, for women, family balance and geography were negatively associated with planning for a faculty career. Cook (2001)

also suggested that other variables that may affect graduate students' intentions to pursue academic careers have remained unexplored.

Faculty Tenure Processes and Influences

AAUP (2017; 2008; 1940) defined a tenured appointment as an indefinite appointment that can be terminated only for cause or under extraordinary circumstances, such as financial exigency and program discontinuation. The purpose of a tenured appointment is to safeguard academic freedom, which is viewed as necessary for all who have taught and conducted research in higher education (AAUP, 2017). Tenure has been valued since faculty members have been known to lose their positions due to their speech, views, or published research findings (AAUP, 2017). Without tenure, the AAUP (2017; 2008; 1940) believes that faculty cannot properly fulfill their core responsibilities to advance and transmit knowledge. Although tenure processes have not protected individual faculty members, tenure has historically served society as a common good by protecting the quality of teaching, research, and the integrity of institutions of higher education (AAUP, 2017; 2008; 1940).

If faculty members have the opportunity to lose their positions for what they say or write, they are unlikely to risk addressing controversial issues (AAUP, 2017; 1940). The AAUP (2017; 1940) states that common people are not served when business, political, or other entities can threaten the livelihood of researchers and instructors, and thereby suppress the results of their work or modify their judgments.

Education and research benefits society, but society does not benefit when teachers and researchers are controlled by corporations, religious groups, special interest groups, or the government (AAUP, 2017; 1940). Free inquiry, expression, and open dissent are essential for student learning and the advancement of knowledge in

society. This is why the tenure process is important, and why systems have had to be in place to protect academic freedom (Levinson, 2007). Tenure serves that purpose within the confines of higher education.

Process of promotion

The past four decades have been called a failure of the social contract as it relates to faculty employment (AAUP, 2014; 2015; 2016). The tenure system was designed as a *big tent*, which focused on uniting faculty of tremendously diverse interests within a system of common professional values, standards, and mutual responsibilities (Watkins & Marsick, 2016; Shaker & Plater, 2016; Carney, 2013; AAUP, 1940). Tenure processes aim to secure reasonable compensation and to protect academic freedom through continuous employment for academics (Watkins & Marsick, 2016; Shaker & Plater, 2016; Carney, 2013). Financial and intellectual security has enabled faculty to carry out the public trust in teaching and research, which sustain a rigorous system of professional peer scrutiny in hiring, evaluation, and promotion. Today, the tenure system has all but collapsed (AAUP, 2015; AAUP 2016; Watkins & Marsick, 2016; Shaker & Plater, 2016; Carney, 2013). Institutions and their academic bodies seek to sustain a systematic structure for tenure and promotion processes (Fitzgerald et al., 2016; Smith et al., 2016; Jones et al., 2015; Lawrence et al., 2014).

Hiring, selection and promotion processes in academic institutions are guided by overarching national or international organizations (Smith et al., 2016; Lawrence et al., 2014; Euben, 2000). Individual institutions and then the academic disciplines have been required to document and outline these respective processes and have them well documented for employees, most often within a handbook (OECD, 2012). From hiring to promotion, groups or committees are involved with such processes to establish

recommendations for moving forward (Smith et al., 2016; Lawrence et al., 2014; Euben, 2000; USOPM, 2011; OECD, 2012). Such processes and committees review candidate materials and information through an evaluative process. These processes provide a benchmark for qualifications and, based upon the candidate's performance measures, and determinations are made (Smith et al., 2016; Lawrence et al., 2014; OECD, 2012; USOPM, 2011; and Euben, 2000).

When it comes to hiring and promotion, tenured positions can be achieved in a sequential time frame with a scaffolding leadership progression, based on time and contributions of research (Smith et al., 2016; Lawrence et al., 2014; OECD, 2012). Such decisions are also influenced by professional work experience (van der Velde, 2003). For example, someone who has worked professionally in the industry for over twenty years may negotiate a tenured rank based on the progression of their experience and contributions, compared to a true academic researcher who may not have worked in business or industry.

Support for promotion

Researchers have shown that tenure promotion processes, particularly for minorities (such as women) necessitate support for the candidate. Books about negotiating faculty life tend to fall into two general categories. The first category include research about faculty and the tenure process (Yun, Baldi, & Sorcinelli, 2016; Campell & O'Meara, 2014; Lawrence, Celis, & Ott, 2014; Turner & Myers, 1999; Tierney & Bensimon, 1996; Boice, 1992) while the second includes guides or handbooks that offer practical advice about navigating some of the nuances of faculty life (Sanders, 2017; Virick & Strange, 2016; Gonzales & Terosky, 2016; Boice, 2000; DeNeef & Goodwin, 1995; Garcia, 2000; Lucas & Perry, 2002). Across various academic disciplines and

national organizations, there are pockets of query as to what the tenure process should be and that more research is needed.

However, this information has substantial gaps of over ten years in many cases. The types of support factors that help or hinder women in the tenure process have not been well researched; in these processes though, there are assumptions as to what these factors are.

Compensation for promotion

Part of the promotion process includes both an increase in monetary compensation and an academic title or rank within the scaffolding leadership. Aspects of the salary gap in academia, as well as society, have been viewed as a form of discrimination. Although percentages vary, research has proven that women are consistently paid less compared to their male counterparts, regardless of the institutional type and faculty rank (Guarino & Borden, 2017; Torres Bernal et al., 2017; Lee & Won, 2014; AAPU, 2010, Barbezat, 2002, Barbezat & Hughes, 2005). For example, the average salary for female faculty members on 9 or 10-month contracts has been approximately 81% of the salary for their male counterparts in 2001-2002; in 2010-2011 and again in 2014-2015, this gap remained unclosed (Clery, 2016, 2012; Lee & Won, 2014). Some researchers noted that the salary gap for assistant level professors has been even greater with women earning 91-97% less than male associate professors (Leslie et al., 2017; Slaughter, 2015; Lee & Won, 2014; Shen, 2013; West & Curtis, 2006). While the initial gap has put women at a career-long disadvantage, there are women in the pipeline who can influence or advocate for themselves to help change this gap (Cavanaugh; 2017; Almer et al., 2016; Ceci et al., 2014; Duetsch & Yao, 2014; Lee & Won, 2014).

Problem Statement

The purpose of this study was to discover the factors that helped or hindered women academics to advance to tenured roles within colleges of agriculture at land-grant institutions. What enables or blocks access to tenured faculty roles at land-grant institutions was not clearly understood from the perspective of women. Specifically, research is limited on how this phenomenon affects women faculty within agriculture-related fields at land-grant institutions (Bisbee, 2007, 2005). Without further knowledge, factors that help or hinder female faculty in the tenure process cannot be determined. This will be important to the academy, as female enrollment continues to rise within agriculturally related fields of study (Sachs et al., 2016; Lockwood, 2006). Women are underrepresented in agriculture (Johnson et al., 2017; Bielby et al., 2014). A need exists to have women faculty in agriculture-related fields to continue in academic leadership positions, which include tenure-track positions (Lockwood, 2006). Research can uncover the complex factors that both help and hinder the development of women as faculty at land-grant institutions and to identify both the deficits and credits that exist personally, professionally and organizationally so women may be proactively advanced or supported. These factors can be utilized to create support programs to promote, recruit, and retain junior and tenured women faculty within the academy.

Purpose and Objectives

The purpose of this study is to examine factors that helped and hindered women academics through the tenure process in colleges of agriculture at land-grant universities. Examining data through a critical feminist lens, this study analyzed self-disclosed narratives from a representative sample of women in agricultural academic leadership positions, specifically tenured women faculty at 1862 land-grant institutions

of higher education. This information will hopefully be utilized to provide context and platform to advocate for the creation of programs and resources for women academics working to achieve a tenured position within a college of agriculture.

The objectives of this study are as follows:

1. Discover factors that help women at land-grant institutions advance to tenured positions, as reported by currently tenured women faculty members in agriculture disciplines.
2. Discover factors that hinder the advancement of women at land-grant institutions to advance to tenured positions, as reported by women in agriculture disciplines.
3. Discover the changes needed to enable women to advance to tenured positions at land-grant institutions in agriculture disciplines, as reported by women faculty who have participated in this study.

Significance of the Study

This study is significant in a number of ways; however, the following reasons were most directly related to this research and the subsequent results, which can aid aspiring women who hope to achieve tenure, and that can help colleges of agriculture who want to increase support measures for women academics through the tenure process, and universities who seek to retain women in academia. By utilizing study replication of a pre-existing instrument in addition to researching a population which has been noted as an area of need within national and international association agendas, this study provides advancement for these knowledge bases.

Airini, Collings, Conner, McPherson, Midson, and Wilson (2011) identified factors that helped or hindered women attaining leadership positions at higher education institutions in New Zealand. They analyzed a targeted female population within higher education at some institutions to identify factors which helped or hindered goal attainment within higher education fields. This study provided a foundation to build and

expand this research to the western world. Replication of this pre-existing instrument is utilized for this study. Analysis of the data, from training to coding and analysis, were also replicated from the prior study.

The American Association for Agricultural Education (AAAE) published its National Research Agenda for 2016-2020 which has two priorities that align with this research. Priority Three focuses on “strategies [for] recruiting diverse populations into agriculture and natural resource careers” and “methods, models, and practices [for] recruiting agricultural leadership, education, and communication practitioners (teachers, extension agents, etc.) and supporting their success at all stages of their careers” (American Association for Agriculture Education [AAAE], 2015, p.31). Priority Six focuses on how “...agricultural leadership, education, and communication teaching, research, and extension programs impact local communities” (American Association for Agriculture Education [AAAE], 2015, p.51).

Factors that help or hinder women faculty in agriculturally related fields within land-grant institutions directly influence future women’s educational and career aspirations. The Association for Public and Land-Grant universities (APLU) Commission on Access, Diversity, and Excellence (CADE) identified two priorities that support the need for this research. Priority Two sought to develop initiatives for increasing diversity of the United States teaching workforce, and Priority Three sought to develop initiatives toward enhanced recruitment and retention of a diverse and qualified professoriate at public four-year universities (CADE Executive Committee, 2011).

The Association for Leadership Educators (ALE) published its research agenda in Fall 2015. The research agenda includes overarching areas and priorities within each

area. Area two is supportive of this research, which is content-based considerations- the applied what and who of leadership education. The priorities within this area which complement this research include: Priority Three, the psychological development of the leader, learner and follower; Priority Four, the sociological development of the leader, learner, and follower; Priority Five, the influences on social identity; Priority Six, social change and community development; and Priority Seven, global and intercultural capacity.

Lastly, the International Leadership Association (ILA) (2015) published its declaration and call to action on women and leadership. In this declaration, five areas are supported by this research: increasing equality in power and decision-making; helping girls and young women become leaders; expanding leadership education and development worldwide; advancing women in leadership and identifying critical areas for future research. Each of these five areas has been supported by this study. The findings of my study have filled the significant gap in the literature on the positive and negative factors which affect women faculty on their journey to tenured roles within agriculturally related fields.

Groups that may benefit from my research project include aspiring women faculty, leadership educators, national and international associations supporting faculty, faculty training and development programs or resources, associations which support women academics, faculty who are supporting graduate students who aspire to be a tenured faculty member, human resources departments, colleges and departments which have junior faculty that are women, colleges or departments who wish to recruit and retain women faculty.

Assumptions

Assumptions of this study are as follows:

4. That tenured women faculty have achieved tenure in a traditional process of application or through negotiation, based on prior professional work experiences that were not related to academic positions.
5. That leadership power has to be positional, by holding tenured title within academia.
6. Women had similar work and non-work experiences which either helped or hindered their tenure process.
7. That women faculties can be better supported by work and non-work related entities as they navigate the journey of becoming a tenured faculty member.
8. That women will respond openly and honestly to the research questions by sharing their personal experiences and views of what has helped and hindered them through the tenure process.

Limitations

This qualitative study aimed to gain in-depth knowledge of women's experiences in the tenure process. Limitations of this study included the narrowed focus of the population to land-grant institutions, academic affiliation within the field of agriculture, and tenured women faculty members. Gaining access to these tenured women included challenges with gate-keeping by college deans or department heads who chose to protect their women faculty either by not sharing contact information for their tenured women or share the information regarding this study so they could decide whether or not they wanted to participate in this study. Finally, as a qualitative study, it is limitedly generalizable to the whole academic population of the tenured female faculty.

The population was estimated to be less than 500, for all tenured women identified in colleges of agriculture at land-grant universities in this study, but the sample size met saturation. This study provided an in-depth but limited view of experiences,

due to the small number of tenured women faculty, which may not be a true representation of the larger population. The means of obtaining narrative interviews from these women electronically or on paper provided a barrier to personal connection and trust. However, these barriers outweighed the associated expenses and time to conduct the interviews in another format, including in-person or phone interviews. These required additional time for transcription and expenses for travel.

Replication of a pre-existing instrument for this research provided a set number of questions and format design; however, additional questions would have been beneficial for the researcher and results. Analysis of the data, from training to coding and analysis, were also replicated from the prior study. This can constrain the needs for this different population culturally or geographically, as the initial study was designed and conducted in New Zealand.

Chapter Summary

Historically, women were not an initial part of the land-grant culture as students or academics. As time progressed, women became a part of the land-grant institution. Today, tenured women faculty at land-grant institutions have had a unique academic leadership position of inherent power by interacting with students and through the research that they conduct. Understanding the factors which have helped or hindered their growth, development, and retention within academia has unlocked areas in which institutions of higher learning can better support women academics.

Colleges of agriculture have differed greatly within their academic offerings of both social and behavioral sciences. The challenges of the range of offerings of these colleges provided a unique perspective. As the gender gap still exists, it has been imperative for our educational vessels of higher education, at land-grant institutions, to

be aware of the population we serve and how we serve them through faculty representation.

CHAPTER 2 REVIEW OF THE LITERATURE

This literature will first examine Critical Feminist Theory, the macro-level theory informing this study. Then, the mid-level theoretical framework of career models will be discussed. Finally, this section will explore the literature surrounding women in the workplace, higher education, and leadership.

The research surrounding these topics is expansive. However, there is limited literature that explores experiences and factors of women faculty within the context of higher education and even less literature on women faculty in agriculture-related disciplines which is the focus of this study.

Critical Feminist Theory

The grand level theory that guided the work of this research is Critical Feminist Theory. Feminism is defined as “the belief that men and women are equal and should have equal respect and opportunities in all spheres of life personal, social, work, and public” (Evetts, 2014; Griffith, 2014; Wood, 2008, p.324). In feminist theories, the concept of sex is different from that of gender where sex is a biological category that is determined genetically: male or female sex (Bergvall, 2014; Griffith, 2014; Connell, 2014; McNay, 2013). Gender comprises “social definitions of masculinity and femininity at specific historical moments and in specific cultural contexts” (Bergvall, 2014; Connell, 2014; Griffith, 2014; McNay, 2013; Wood, 2008, p. 324). “Gender is known as the social construction of women as women, reinforced through socialization that occurs in everyday life” (Connell, 2014; Griffith, 2014, p.15). Butler (1990) and Carter (2014) suggested the notion that gender is not merely learned behavior, it is a learned behavior through socialization. The learned behavior is then repeated daily through interactions.

Examples include conversational patterns, presentation of self, listening and speaking behaviors, or even observing others. As a result, women find themselves creating and recreating the female gender (Carter, 2014; Griffith, 2014; Butler, 1990)

Rosemary Tong is a leader in feminist thought. Tong (2009) discussed feminist theorists who could identify their approach as liberal, Marxist, radical, psychoanalytic, socialist, existentialist or postmodern. Each feminist theorists have a methodological lens through which to answer questions about feminine lived experiences. Tong (2009) stated,

In any type of feminist theory, we lament the ways in which women have been oppressed, repressed and suppressed and...celebrate the ways in which so many women have beaten the system, taken charge of their own destinies, and encouraged each other to live, love, laugh, and to be happy as women. (p.2)

Understanding the female experience is a part of making meaning of power relationships and leadership dynamics in work settings.

Critical viewpoints have focused on power, control, competing sets of ideologies, and group dominance (Heywood, 2017; Haraway, 2013; Griffith, 2014; Stead & Elliott, 2009). Discovering how power has been created, destroyed, resisted, and reproduced are all focuses of critique in critical theory (Heywood, 2017; Haraway, 2013; Griffith, 2014). Astin and Leland (1991) defined power as, “empowerment treating power as an expendable resource that is provided and shared through interaction by leaders and followers alike” (p.1). Carroll (1984) noted that “views [act as] power as energy that transforms one’s self and others, and identifies the effective leader as one who empowers others to act in their own interests.” Foucault’s (1982) notion of power relations, capacities, and communication informed feminist work around this area. These notions of power have expanded and have been tested within critical feminist

theory (Creswell & Poth, 2017). Foucault (1982) further acknowledged that power relations are often interwoven with other types of relations, and these overlaps have since been proven to be true (Heywood, 2017; Haraway, 2013). In some cases, “critical theorists wanted to understand how minority groups become empowered and how to change dominant patterns and perhaps the ideologies that underlie them” (Wood, 2008, p. 326). Historical patterns, absent voices, and group beliefs among other indicators were analyzed to discover that power dynamics (Foucault, 1982). It has since been proven that these power dynamics could be changed to provide freedom to individuals to find philosophical perspectives (Creswell & Poth, 2017; Griffith, 2014; Morris, 2014; Foucault, 1982).

“Critical Theories aimed to identify prevailing structures and practices which created or upheld disadvantages, inequity, or oppression, and to point the way toward alternatives which promoted more egalitarian possibilities for individuals, relationships, groups, and societies” (Wood, 2008, p. 325; Kirton & Greene, 2015; Cho et al., 2013). In critical theory, scholars were not appeased by the explanation of power and control in relationships, but rather they wanted to move towards finding ways to affect solutions for social change (Santamaría, 2014; Griffith, 2014).

“A transformative reach, from personal empowerment to collective global action, has been vital to any critical analysis” (Ledwith, 2009, p.695). Critical theorists had looked for practical application strategies and ways to advocate for equality in societal and cultural systems (Creswell & Poth, 2017; Morris, 2014; Santamaría, 2014; Griffith, 2014). This research provided an opportunity to study women leaders who, “offered an

opportunity to enhance knowledge and behavior which involved transformational leadership and empowerment” (Astin & Leland, 1991, p.1).

Intersection of Critical and Feminist Theories

Critical Feminist Theory is a body of thoughts which have enabled researchers to deconstruct power relationships in the context of women’s real-life events (Harding, 2016; Tyson, 2014; Griffith, 2014; Stead & Elliott, 2009). Critical feminism combined research and reflection, but it also has called for recognition and action for issues related to empowering women (Creswell & Poth, 2017; Griffith, 2014). Through macro-level theoretical perspectives, the researcher effectively engaged in understanding more about women leaders in male-dominated fields such as colleges of agriculture, and how career models and decision making have guided them in the workplace.

Critical Feminist Theory created an opportunity for informed questions and communication surrounding important issues in the lives of women. It has empowered each gender to discover opportunities, understanding, and behavior. Using a critical feminist lens to analyze career models and leadership in the workplace, we understand more about the power relationships which influence women and their learning through critical incidents, otherwise known as lived experiences.

Antonio Gramsci, a Marxist, contributed concepts to Critical Feminist Theory through cultural hegemony (Ledwith, 2009; Crotty, 2006). Hegemony is when a dominant power group maintains its common sense ideologies at the expense of other non-power groups (Rowbotham, 2015; Ledwith, 2009; Kitzinger & Wilkinson, 1996). An example of this includes white male leadership as a dominant power group in higher education faculty (Charbeneau, 2015; Griffith, 2014; Ledwith, 2009; Kitzinger & Wilkinson, 1996). Instances can include the oppressed group maintained its oppression

through a sense of false consciousness reinforced by the dominant power group ultimately supporting the cycle of oppression (Charbeneau, 2015; Griffith, 2014; Crotty, 2006; Ledwith, 2009).

Feminist thought leads us to the notion that personal experiences are also simultaneously generalizable, as are political experiences; women should be allowed and expected to critically evaluate their lives, realizing that political implications happen around them (Young, 2014; Griffith, 2014; Butler & Scott, 2013; Farmer, 2008). At places of employment, this provides opportunities for women to look at their environments providing an opportunity to ask questions, gain insight, and understanding about their roles as well as the roles of others. Critical feminism has been a large part of the theoretical frame for analyzing the factors which inform the leadership of tenured women faculty (Detweiler et al. 2017; Sprague, 2016; Blackmore, 2014; Sulé, 2014; Stead & Elliott, 2009) in colleges of agriculture at land-grant institutions of higher education.

Career Models

Understanding that critical feminism has implications for women and their environments we can now seek to understand how this impacts women's academic careers. Traditional career models are often categorized into the following constructs: continuous, linear, and developmental (Rowley 2013; Sullivan 1999). These constructs are less useful for women, as female labor patterns are often non-traditional, non-linear and discontinuous and are better captured by boundaryless (Sullivan, 1999) and kaleidoscope models (Rowley, 2013). Rowley (2013) noted there are five considerations that usually shape women's careers: interruptions, organizational culture, mentorship, the profile for success, and culture and location. More recent literature examines what

impedes the success of women's careers. When it comes to faculty, it has become critically important to examine the factors faculty members report being motivations for leaving their academic positions in search of new positions, at other institutions or outside of academia altogether (Aleman, 2017; Martienez et al., 2017; Philipsen & Bostic, 2008). While Rowley's (2013) considerations are framed to business and industry, they apply to any organization. The factors most commonly examined for women faculty are: harassment/discrimination, family-related issues, and recruitment/retention (Matienez et al., 2017; Philipsen & Bostic, 2008) which connect to the five considerations while not considering specific institutional factors.

Boundaryless Careers

Boundaryless career models have a preference for organizations that have a female-friendly organizational culture and provide more work-family balance programs (Rowley, 2015; O'Neil, Hopkins, & Bilimoria, 2008). Boundaryless careers are not a "bounded" or organizational career through employment arrangements achieved through a vertical coordination, mostly in large and stable organizations (Arthur & Rousseau, 2001). Academic positions within higher education are often time restricted especially when it comes to the tenure clock, but the clock can restart if you change institutions while the clock is stick ticking (Philipsen & Bostic, 2008). Tenure often is occurring during this middle of women's careers and often their bearing years which makes boundaryless careers challenging (Alemán, 2017; Rosser, 2017; Martinez et al., 2017; Winslow & Davis, 2016; Sullivan et al. 2004; Bhattacharjee, 2004). "The theoretical significance of this model provides empirical support for a gender-specific model and explains the differential impact of specific variables for female career

success” (Rowley, 2013, p.460). While this may provide some flexibility to women, it does not serve all women faculty member well.

Sullivan (1999) states: “There have been only four major published studies that have specially tested the generalizability of these models to women” related to boundaryless careers (p.460). Gerli, Bonesso, and Pizzi (2015) share within their research that,

Even though, over the last two decades, the boundaryless career concept has stimulated a wide theoretical debate, scholars have recently claimed that research on the competencies that are necessary form an aging across-boundary career is still incomplete. (p. 1)

Gerli, Bonesso, and Pizzi (2015) conducted a longitudinal study over the course of eight years which found evidence that,

emotional competencies positively influence the propensity of an individual to undertake physical career mobility and that career advancements are related to the possession of social competencies and depend on the adoption of boundaryless career paths. (p.1)

The Gerli et al. (2015) study also provided evaluation of the emotional and social competencies of individuals and the measurement of boundaryless career paths by considering physical mobility constructs: organizational, industrial, and geographical boundaries. Flexibility, self-control, and consciousness contribute to building emotional competence which in turn has a relation with the variable boundaryless career. In other words, people can modify behavior and adapt to move forward (O’Connell et al., 2008). Self-control makes it possible to face stressful situations and to avoid the sacrifice of giving up and walking away instead of improving performance and persevere (Rowley et al., 2015; de Boer et al., 2015; Kuijpers et al., 2006; Boyatzis & McKee, 2005). Consciousness is the capability to meet commitments while being accurate, helps maintain focus on the qualitative level of results and details of actions, without reducing

performance, even in different environments (Gerli et al., 2015; Rajadhyaksha, 2005). Verbruggen (2012) reports relationships to unbounded positions are “less inclined to invest in their relationships at work” (p. 289) which does not help them expand their career beyond the traditional boundaries (Gerli et al., 2015). Beyond this research, there has been limited research published on women and boundaryless careers.

Kaleidoscope Careers

This development occurs through individuals own sense-making through shifting entangled elements of “personal, family, work and community lives and three key dynamics: external events; gradual developments; individual actions” (Rowley, 2013, p 322). Key features of kaleidoscope careers are that like a kaleidoscope, which produces changing patterns when the tube is rotated and its glass chips fall into new arrangements, workers shift the pattern of their careers by rotating different aspects of their lives to arrange their roles and relationships in new ways (Mainiero, 2008; Mainiero & Sullivan, 2006). Employees “evaluate the choices and options available through the lens of the kaleidoscope to determine the best fit among their many relationships and work constraints” as well as their opportunities (Mainiero & Sullivan, 2006, p.4). This results in a “sequence of events whereas one decision is made, it affects the outcome of the kaleidoscope pattern” (Mainiero & Sullivan, 2006, p. 5). The pattern encompasses an individual need for challenge, career advancement, and self-worth juxtaposed against a family’s need for balance, relationships, and caregiving, intersected by the person’s need to say “what about me...how can I be authentic, true to myself and make genuine decisions for myself in my life?”(Mainiero & Sullivan, 2006, p.6).

Early tests of kaleidoscope careers showed why females leave the workplace (Mainiero & Sullivan, 2005). Career motives changing over time, and career barriers

across organizations (Cabrera, 2007). Cabrera (2007) argued that the kaleidoscope model offers a more comprehensive understanding of how careers shift over time as needs and interests change. Rowley (2013) expanded by noting early tests of female protean models with career decisions, guided by kaleidoscopic values. These values supported emerging “preferences theory.” Describing differences in careers between men and women begins with similar preferences regarding careers, these preferences change over time due to different experiences (Slaughter, 2015; Cabrera, 2007).

Concepts and theories highlight the importance of gender differences in careers by way of understanding female careers as kaleidoscopic and recognizing careers are evolutionary, unfolding over lived experiences by displaying the impact of personal, family, work and community factors (Lee, 2011; Cabrera, 2007). Rowley (2013) and Evetts suggested consideration that women have different career patterns.

Interruptions. Women experience more career interruptions than males (Cebrian & Moreno, 2015; Rowley 2013; Hayter, 2014; Kearns, 2010; Spivey, 2005). Interruptions can be categorized into parental leave, unemployment, and other types of interruptions (Gerst & Grund, 2017; Cebrian & Moreno, 2015; Grund, 2015; Hayter, 2014; Meures, 2010; Judiesch & Lyness, 1999). Examples of interruptions may include physical mobility or limits to moving for work due to family demands. Women reject career opportunities for personal or family reasons more often than males, whose career interruptions are more likely due to job loss (Pew Research Center, 2013; Rowley 2013; Kerns, 2010; Spivey, 2005; Kirchmeyer, 2002). Serving as a caretaker is another interruption (Kerns, 2010; Spivey, 2005). Caretaking can include bearing a child, adopting a child, fostering a child, or caring for a family member such as an

elderly parent. Interruptions disrupt an employment cycle and impact career progression and salary (Gerst & Grund, 2017; Cebrian & Moreno, 2015; Grund, 2015; Hayter, 2014; Pew Research Center, 2013; Rowley 2013; Kerns, 2010; Meures, 2010; & Spivey, 2005).

Organizational culture. In male-dominated work environments, organizational cultures must shift to allow space for the differences of female careers, otherwise female careers will continue to be hindered (Rowley 2013; Baranik, Rling, & Ebly, 2010; Holton & Dent, 2002; Wajcman, 1998). If the workforce moves away from male-dominated cultures, it is easier for females to assume higher-ranking positions and utilize diverse employees for upcoming shortages of labor and talent (Ferraro & Briody, 2017; Morley, 2014; Rowley, 2013; Rutherford, 2011; Reskin, 1994). Talent management and recruitment have become a way in which organizations intentionally diversify their workforce and impact their culture (Groysberg & Connolly, 2013; Washington, 2010; Williams, 1992).

Mentorship. Organizational and management support for females through mentoring is needed (Rowley, 2013; Washington, 2010; Management Mentors, 2006; Inzer & Crawford, 2005). Since females are noted to suffer from lack of mentoring, it is necessary to develop improved and more structured mentoring programs, as unstructured mentoring has been shown to provide less positive outcomes (Sandberg, 2013; Baranik et al., 2010; Beehr & Raabe 2003).

Through unstructured mentoring, male mentors are likely to choose male mentees and, as a result, female mentees have no choice but to relate with female mentors (Beehr & Raabe 2003; Noe, 1996; Cox, 1994). In comparison, female mentors

tend to possess less influence in their organizations than those of males (Washington, 2010; Inzer & Crawford, 2005). Females with mentoring relationships may experience less career-enhancing outcomes than their male counterparts (Hoobler et al., 2014; Ragins & Scandura, 1994).

Situations such as this explain why mentoring was not found to have a direct effect on training and development opportunities for women, which proved to be the most important predictor of female career success (Inzer & Crawford, 2005; Beehr & Raabe 2003). A growing number of companies in the workforce have implemented structured mentoring programs (Rowley et al., 2015; Allen et al., 2006). Since structured programs are designed to benefit females, it is possible that they may have equal access to mentoring programs in the future (Rowley et al., 2015; Rowley, 2013; Finkelstein & Poteet, 2007).

Mosaic mentoring. The mosaic mentoring model embraces the idea that faculty feel empowered to get their needs met by a team of mentors who work well together and have complementary skill sets (Jackson & Arnold, 2010). While it may be optimal to have at least one mentor with a deeper understanding of junior faculty working towards tenure, in the end, it is the responsibility of the junior faculty to manage their career after weighing the guidance provided by others. This means multiple people and perspectives area required to support and help faculty move forward in the tenure and promotion process.

Profile for success. The successful managerial profile is high on dominance, achievement orientation and self-assurance, all of which are seen as masculine characteristics (Rowley et al., 2015; Melamed, 1995, 1996; House & Howell, 1992).

Women are perceived to be unsuitable for managerial roles, due to a lack of such masculine characteristics in asserting authority (Kloot, 2004; Ruddman & Glic, 1999; Morrow, 1990). Women try to prove personal characteristics being in-line with the job of a manager; asserting authority, direct communication, strong time management, fiscal responsibility, serving in leadership roles, and following through with goals or objectives. While there are drawbacks in becoming higher in such masculine traits, encouraging resistance among males utilizing traditional attitudes or behaviors can interfere with the leadership performance of women (Harman & Sealy, 2017; Ibara & Petriglieri, 2016; Caleo & Heilman, 2014).

Place and location. Perspectives on the culture of an institution and cultural influence impact employees. Institutions differ from one another, even within a singular state or province. Institutions may utilize differing human resource management practices when it comes to human resource offices, and utilize fiscal resources when determining promotions (Rowley, 2013). The other side of the coin organizations that operate outside the United States considers very different operational contexts and environments when it comes to managing diversity and gender equity (Rowley et al., 2010).

Women in the Workplace

Career models and interruptions that women face in establishing a career provide the context to understanding women in the workplace. Astin and Leland (1991) noted that prior studies have focused on traits and leadership styles, and stereotypes that impose on leadership ability within the workplace. Brown (1979) concluded “one of the popular reasons given for the differential treatment of women in management stems from stereotyping females as ineffective leaders... the trait studies consistently

supported the traditional attitude that women lack adequate leadership characteristics.” (p. 595). Most studies have focused on the stereotyped beliefs of women and leadership and not what caused the results. Powell & Butterfield (1984) wrote about the “great man” theory as an anomaly that provided the notion that, “if good managers are masculine what are bad managers” (p.8). Nieve & Gutek (1981) indicated that, “women are seen as not possessing the necessary attributes for leadership. They are believed to be compliant, submissive, emotional, and to have great difficulty in making choices.” (p.83). The leadership debate between sexes continues today (Furnham, 2016; Taylor et al., 2014).

Microaggressions in the Workplace

The term “microaggression” was used by Columbia professor Derald Sue (2014) to refer to, “brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults toward people of color” (p.1). A form of these microaggressions is sexist microaggressions. Sexist microaggressions are often so common that women often do not even notice them and they can be so subtle that men do not notice them happening to the women around them (Weiss, 2015). These microaggressions are normalized and are a pervasive part of being a woman in society, and it has taken constant awareness and toughness to remind women that they are not what the media or other people make them out to be (Basford, Offermann, & Behrend, 2013; Weiss, 2015). Remembering ones worth requires women to actively resist the labels imposed upon them from the time they were born to the day they die. That effort takes a tremendous toll on people’s energy, focus, and social approval: a gender-based

disadvantage in of itself (Sen, 1987; Folbre, 1994; Risman, 2004; Chhachhi & Truong, 2009).

“Microaggressions which women face in the workplace include the following: language, harassment, shaming, blaming, policing, sizeism, objectification, stereotypes, the wage gap, implicit bias, and gaslighting” (Offermann, Basford, Graebner, Degraaf, & Jaffer, 2003; Weiss, 2015).

Women’s Leadership

Within the general context of women in the workplace, a deeper view of women’s leadership provides an understanding of how women can be successful in their work environments. Women’s studies and leadership studies are the direct results of awareness of anomalies in traditional disciplines and their theories. One of these is Thomas Khun’s published classic from 1971, *The Structure of Scientific Revolutions* (1970), which cited fundamental change models, arguing that they are only confronting “anomalies” which have been challenged and reversed to “paradigms” in “normal science.” The study of leadership has no exception in presenting us with both anomaly and crisis; the paradigms developed in women’s studies have offered alternative models in the study of leadership, particularly an interdisciplinary approach to the nature of leadership.

Astin and Leland (1991) assert that the early research on gender (women) and leadership were driven by two main questions: (1) Why were so few women in positions of leadership? and (2) What were the personal or institutional roots of gender differences in access to leadership roles?

Factors which hinder women’s advancement into leadership often relate to a disconnection between the values of many women and the rewards structures and

goals that shape the culture of most organizations (Helgesen & Johnson, 2010). As a result, women may be reluctant to “Lean In” (Helgesen & Johnson, 2010) to their professional advancement opportunities. Fels’ (2004) reported that women’s identities are oriented around giving rather than drawing attention to themselves; that behavior could result in a negative impact on a women’s motivation to pursue leadership. Cultural norms have traditionally contributed to young girls aspiring to be one thing and young boys another (Longman & Madsen, 2015). Highly visible roles which require risk-taking have offered a platform for individualistic accolades. The implications of those risks could be challenging for women leaders (Ibarra et al., 2013; Sandberg, 2013; Morley, 2014; Rhode, 2016).

More recently, evidence of the paucity of women in leadership has been increasingly documented. For example, *The White House Project: Benchmarking Women’s Leadership* (2009) report concluded that on average, women held only 18% of the chief executive positions across ten sectors in the United States. Colorado Women’s College of the University of Denver released *Benchmarking Women’s Leadership* in the United States in 2013; this report expanded on the *Benchmarking* study to also include senior leaders (vice presidents, etc.). The conclusions of this study mirror the results of the *White House Project* (2009).

Metaphorical Illustrations for Women in Leadership

Ashcraft and Mumby’s (2004) feminist communicology of organization has been used to examine, the dialectical tensions between mundane micro-level social practices. This includes when verbal imagery was used in forms of metaphors and stereotypes- and “macro-level institutional processes of reproduction and transformations” in the discussion of women and leadership (Ashcraft & Mumby, 2004, p. 115). Eagly and Carli

(2007a) asked, “What is to blame for the pronounced lack of women in positions of power and authority?” (p.1). The answer was that there is still a double standard in most work environments (Eagly & Carli 2007a). In 1986, Hymowitz and Schellhardt from the Wall Street Journal remarked, “Even those few women who rose steadily through the ranks eventually crashed into an invisible barrier. The executive suite seemed within their grasp, but they just couldn’t break through the glass ceiling” (Eagly & Carli, 2007a).

In the 80s and early 90s the United States was still stuck, “in a culture where such opinions [of women in leadership roles and the household] were widely held, women had virtually no chance of attaining influential leadership roles” (Eagly & Carli, 2007b). However, the culture in the United States has evolved. The glass ceiling metaphor, in today’s culture, has become “more wrong than right” as it has described an absolute barrier at a specific level in organizations (Eagly & Carli, 2007b, p.6). The culture has evolved in which we now have female executives, college presidents, governors, and presidents of nations. This metaphor suggested that women, along with men, have equal access to entry and midlevel positions.

The appearance of a transparent barrier suggested that women are misled about their chances because the obstruction is not easy for them to see. Some obstructions are not subtle, even up-close. Worst of all, by portraying a single unvarying obstacle, the glass ceiling failed to incorporate complexity for the variety of challenges that women have faced along their leadership journeys (Eagly & Carli, 2007b). In reality, women have turned away only as they reach the pinnacle stage of a notable career.

Women, unfortunately, have disappeared in countless numbers at many points leading up to that stage (Brehm & Buchholz, 2014; Swann, 2014).

Stead and Elliott (2009) believed that metaphors matter because they have been a part of storytelling, which may have induced change for women and leadership. Believing in the presence of a glass ceiling, people often emphasize certain kinds of responses to intervene. These interventions included: top-to-top networking, mentoring to increase memberships, requirements for diverse candidates in high-profile positions, and litigation aimed at punishing discrimination in the executive's suite (Eagly & Carli, 2007b). To date, none of these interventions have been counterproductive; all have had a role to play. However, the danger has risen when the interventions have drawn attention and resources away from other kinds of interventions that tackle problems in an intentional way (Eagly & Carli, 2007b).

Eagly and Carli (2007b) strived to make better progress by renaming the challenge. They believed renaming the metaphor for what confronts women in their professional endeavors to the labyrinth would better illustrate the challenges (Kattula, 2011). Eagly and Carli (2007a) found that the labyrinth was an image with a long and varied history from:

Greece, India, Nepal, native North and South America, medieval Europe, and elsewhere. As a contemporary symbol, it conveys the idea of a complex journey toward a goal worth striving for. Passage through a labyrinth is not simple or direct, but requires persistence, awareness of one's progress, and a careful analysis of the puzzles that lie ahead. It is this meaning that we intend to convey. For women who aspire to top leadership, routes exist but are full of twists and turns, both unexpected and expected. Because all labyrinths have a viable route to the center, it is understood that goals are attainable. (p.9)

Carli and Eagly (2016) believed the labyrinth metaphor is “both optimistic in its acknowledgment that women do succeed as leaders and realistic in its reflection of the uncertainty of success” (p.158). The labyrinth neither blames women for their lack of progress nor blames the situation; instead, it resides in an interaction between the motivation and skill as it relates to the challenges of the situation (Carli & Eagly, 2016). The metaphor acknowledged obstacles but has ultimately not been discouraging as an obstruction, which can only be ‘broken’ through such as a glass ceiling. (Stead & Elliott, 2009). The labyrinth metaphor suggests that advancement is difficult but not impossible.

Leadership Advocacy and Charisma

Women must exhibit various leadership characteristics to achieve higher level positions. Two of these characteristics are self-advocacy and charisma. Advocating in a feminist way implied weaving advocacy strategies with feminist values (Association for Women’s Rights in Development, 2003). Antobus (2003) supported this by stating,

advocacy must be based on an analysis of what needs to be changed and why... this analysis must be feminist because only feminism gives an analysis of patriarchy and how it is linked to the structures and relationships of power between men and women that perpetuate violence, poverty — the crises that confront us. (p.1)

House (1977) stated that charismatic leadership has also been considered to be a part of leadership advocacy. In his later works, he has noted its evolution as a change based theory. This theory has an inspiring quality that promotes an emotional connection with its followers.

Advocates have sought changes in policy as ways to achieve the impact that differs from what can be accomplished through direct services or programs alone. Advocates and change makers come to work with a set of beliefs and assumptions

about how the change will happen (Stachowiak, 2013). Those beliefs shaped their thoughts about what conditions are necessary for success, which tactics to undertake in which situations, and what changes need to be achieved along the way (Stachowiak, 2013). Worldviews are theories of change regardless of them being explicitly stated or documented. When worldviews are articulated as theories of change, strategies and beliefs may clarify expectations internally and externally. Views may also facilitate effective planning and evaluation from a leader.

The American Counseling Association (ACA), Advocacy Competencies model, organized advocacy into two dimensions (Ratts, Toporek & Lewis, 2010). The first dimension identified the extent of involvement of client or community in the advocacy process is advocacy taken with the client or on behalf of the client while the second dimension addresses the level of intervention: individual, systems, and societal level (Ratts, Toporek, & Lewis, 2010, p.8). The resulting domains describe six different forms of advocacy that counselors may be involved in, depending on the needs of the situation. Numerous forms of advocacy are needed, while cultural competence and awareness are vital regardless of the type of advocacy.

Charismatic leadership is when leaders display self-confidence, have strength in their convictions and communicate high expectations for their confidence in others (Northouse, 2016; Conger & Kanungo, 1987). Conger and Kanungo (1987) have discussed a behavioral approach to charismatic leadership, or the way they interact with roles to accomplish their goals is a means of studying charismatic leadership.

Shamir et al. (1993) believe charismatic leadership emphasizes attributes of charisma that are enhanced when leaders craft a compelling vision that raises a

collective identity and efficacy for a group and links the mission to values so the group can succeed. Ito and Bligh (2016) argue that when leaders encounter adversity, hit rock bottom, or acknowledge failures either by themselves or with the help of others, they have an opportunity to build resilience. From that experience, they can share vulnerability with followers, and through sharing vulnerability, followers are likely to see the situation from the leader's point of view and relate on an emotional level (Ito & Bligh, 2016). When leaders step down from their pedestals, followers can see the leader as humane and trustworthy. Followers may be willing to approach him/her directly, forming a foundation for a mutually beneficial leader-follower relationship (Ito & Bligh, 2016). Moreover, when the leader's speech has what Hollander (2013) labeled "continuity of communication in providing information and memorable imagery," followers will be more likely to perceive the story about vulnerability as authentic or "real." Repeated use of these communication tools will reinforce the authenticity of a story, even if the story is not fully true. By sharing vulnerability, leaders have an opportunity to create more egalitarian, less hierarchical relationships based on mutual growth and disclosure (Wheatley, 2006; Fletcher, 2004; Fletcher, 1994; and Follett, 1924). Ito and Bligh (2016) note sharing vulnerability is one foundation of the charismatic leadership relationship, it does not suggest that every leader is good at admitting and sharing vulnerability, nor that followers will always respond positively (Ito & Bligh, 2016). Sharing vulnerability is an exercise of retrospection and self-awareness that requires individuals to turn an objective eye on their own behaviors (Ito & Bligh, 2016).

Sharing vulnerability can also have a positive long-term effect because such leaders can provide a voice for a social movement or represent a group of minorities by

tapping into followers' implicit leadership theories (Schyns & Meindl, 2005). As such, they embody "the voice of the voiceless" and use their power to transform a personal cause or experience into a collective cause for the organization or society (Ito & Bligh, 2016). An example of this is how Sheryl Sandberg became a representative of women's empowerment. The result is social construction of leadership, as followers instill the leader with the characteristics and values of the movement as a whole (Meindl, 1995).

Higher Education and Leadership

Higher education plays a major role in shaping the quality of leadership in today's society as it is rapidly changing and we have become an even more diverse global society (Chin, 2011). Contemporary institutions of higher education have posed challenges to how we prepare and educate students to be the leaders of tomorrow. Transformational leadership, adaptive leadership and authentic leadership are theories and models consistent with the goals of higher education. The purpose of enabling and encouraging faculty, students, administrators, and other staff to change and transform institutions to more effectively enhance student learning, generate new knowledge, and to empower students to become their true selves as agents of positive social change in the larger society is congruent with these theories (Chin, 2011).

However, higher education institutions have hierarchical administrations. Budgets at the chair level, within these institutions, often have limited discretionary spending with personnel and are generally controlled by "administration" (Chin, 2011). Simultaneously, faculty who form the bottom rungs of this hierarchy with less or little power also have great power because of their tenure, unions, and principles of academic freedom (Chin, 2011). Faculties operate within this structure through a great deal of autonomy in their primary work of teaching and research.

Tenure and professional statuses within higher education institutions have been structured to be individualistic (Chin, 2011). Astin and Astin (2000) further noted that, contrary to egalitarian and collective systems, current organizational structures in higher education institutions breed competitiveness for attracting funding, the brightest students, and top faculty. The concept of a peer review, as a potential mechanism for collegial and collaborative leadership, could be derailed by faculty who see themselves exclusively as critics to judge rather than as colleagues to offer constructive feedback or by those with personal agendas viewing potential promotions as threats or competitors (Chin, 2011).

A hierarchical approach to higher education assembles alongside the faculty committee structure, which has been noted to be more collegial (Astin & Astin, 2011; Chin, 2011). The typical committee structure is often advisory with little leadership responsibility, while products and recommendations need to be vetted up the line (Astin & Astin, 2011). While committees offer prospects for faculty collegial or collaborative leadership, those leadership opportunities may not always be realized (Chin, 2011).

Women in Higher Education

Higher education was historically not accessible to women. It is documented that as early as 1958 in the United States, the first efforts for supporting women with continuing education programs, or re-entry programs, appeared within Higher Education (Astin & Leleand, 1991, p. 87). One of these programs, at the University of Michigan, stated that their mission was to, "...help women enter and stay within the mainstream in higher education and professional preparation and to help the university respond to their special needs, that is, to attend to issues of equality and to lower the institutional barriers to the equal participation of women" (Van't Hul, 1984, p. 1). Women's concerns

during this time forced institutions to offer broader services and resources to address different female consistencies, and these affected faculty, staff, and student cohorts without family responsibilities, counseling and career resources, health and childcare. In many cases, they developed as policy committees or commissions on the status of women. In other instances, they became stand-alone structures of women's centers or resource centers.

Title IX, part of the Educational Amendments of 1972, was created with the purpose of eliminating sex discrimination in education, including higher education. The hope was it would create equity to ultimately advance women's influence and participation throughout society while, "leveling the playing field" (Gangone & Lennon, 2014). However, the goals of increased presence, achievement, and influence of women across all sectors still leave much to be desired. Solomon (1985) wrote, "...educated women still have not achieved equal status with men either within or outside of the sphere of education" (p. xvii). Over 20 years later, Glazer-Raymo (2008) similarly reported that women are disproportionately concentrated in areas and institutions with the lowest levels of research funding.

By 1972, the number of regional and national associations, in academic disciplines and professions, were more supportive of women (Astin & Leland, 1991). One umbrella organization was the Federation of Organizations for Professional Women. In 1973, the American Council on Education (ACE) opened its office for Women in Higher Education with the mandate, "to improve opportunities associated with American colleges and universities" (Astin & Leland, 1991, p. 90). Another initiative which has supported the larger academic community is the Higher Education Resource Services (HERS). HERS

has evolved to provide vision and strategies for women to advance within higher education, particularly for women who possessed credentials for faculty and administrative positions (Astin & Leland, 1991). After two decades HERS still supports women in higher education in their path to leadership and excellence. HERS, along with ACE, also works to address national issues affecting women and to suggest approaches, and solutions, as well as policy statements. Other organizations and institutes exist to support women in higher education through National and international associations such as the American Associations of University Women (AAUW), Association of Black Women in Higher Education (ABWHE), Women in Higher Education (WHE), Women's Leadership Institute (WLI), Women in the Academic Profession which is within the AAUP, among many others.

Pathway to Leadership in Higher Education

As women's presence increased within higher education a pathway to leadership evolved. Eagly (2007b) described the pathway to leadership for women as, "no longer a glass ceiling where there is no access; rather it is a labyrinth through which must navigate and find their way." This metaphor proposed the need for multiple models of leadership, and recognition that woman leaders within higher education may lead and need support differently. Navigating the labyrinth, of higher education could be easier if women examine their strengths and the advantages they bring to their work environment (Eagly, 2007b). The progressive research on women within higher education shows there impacts which inhibit opportunities for growth and retention (Martinez et al., 2017). Ward and Wolf-Wendel (2017) provide examples of how changes to the labyrinth can ultimately create "good" places to work and succeed as a woman. Their research provides how changes made have allowed women the flexibility

or resources needed to be successful. These include flexible schedules in course schedules, research, hours, committee work, childcare, leave time, and community relationships within the institution.

By investigating experiences of women leaders in higher education (Astin & Astin, 2000; Wolverton, Bower, & Hyle, 2008; and Madsen, 2008), a collective of researchers have made suggestions for navigating the labyrinth:

Articulate your vision--align your statement of personal values with those of the institution toward a common purpose to make a difference

Be authentic--in being true to yourself and anchored in who you are, you transmit such values to the institution; ethics, honesty, and openness are essential.

Be able to adapt--in maintaining cognitive flexibility, you can to lead from multiple perspectives and adapt your leadership behaviors appropriately to the context

Have a supportive network--to discuss the obstacles and challenges along the way

Draw on your strengths and be resilient

Identify change issues and create a leadership group toward a collaborative process. (Chin, 2011, p. 11).

Women Faculty in Higher Education

Women leaders in higher education assume many roles, including that of a faculty member. "The Faculty Compensation Survey has tracked faculty salaries by gender since 1975" (AAUP, 2017 p.7). The American Association of University Professors (AAUP) reported that in 2005–2006 only 31% of tenured positions in American institutions of higher education were held by women and that the gap would not close without substantial modifications in hiring and tenure practices (West and Curtis, 2006). In the 2001 report by AAUP, women were noted to be more likely than

men to have entry-level faculty positions such as lecturers or instructors. Women comprised 50% of instructors and lectures with a slight increase of 2.7% from the prior year's report (AAUP, 2011).

In 2016-2017, male full professors represented 67% and earned an average of \$11,522 more in salary compared to female full professors. The AAUP (2017) report continues with female associate professors represented 44% and earning an average of \$5600 less in salary than their male counterparts, and female assistant professors represented 52% yet earned an average of \$5900 less in salary than their male counterparts (p 16).

While this increase of percentages over the years represented progress, women are still underrepresented among the more prestigious faculty ranks, and there is a steady decline in moving up the ranks (Gangone & Lennon, 2014). Data have consistently shown that non-tenure-track positions held by women exclude them from attaining senior-level roles in academia, as universities draw from tenured faculty to fill those senior-level administrative roles in academia (Gangone & Lennon, 2014). NCES (2017) most recent report validates these statements through its statistical by report, of federally funded institutions, showing male full professors make up 67% of positions while their female counterparts make up 33%, male associate professors make up 55% of positions while their female counterparts represent 44%, and of overall positions (full professor, associate professors, assistant professor, instructor, and lecturer) males represent 53% of all positions while females make up 44% of those positions (p.2). Universities have supported research agendas and professional development for their

tenured faculty. Inquiry is needed for how they support those who are striving to achieve these roles.

Challenges of the Faculty Career for Women have presented how outmoded and patriarchal policies have created obstacles in both the personal and professional lives of women faculty and offer creative solutions for reform (Philipsen & Bostic, 2008).

Philipsen & Bostic (2008) noted that one overarching challenge for women in all of their career stages is the lack of a clear understanding of standards for success within academe. Philipsen & Bostic (2008) acknowledged that prescribing specific benchmarks of a tenure process could encourage “bean counting” and thus could eliminate professional discretion. Instead of setting clear objectives for success, single departments could create a personal plan by setting milestone dates or a timeline for personal success.

The exemplar model could allow faculty members whose professional portfolios have been deemed successful to serve as guides for early-career faculty. Philipsen & Bostic (2008) noted that a model like this would allow “institutions to set standards for tenure according to institutional mission, departments to show multiple avenues for success within academic fields, and would present realistic examples of professional achievement to level the field” (p24). Utilizing an exemplar model could alter the traditional tenure clock by permitting faculty, at any career stage, to set personal and professional goals without limitations of the historical timeline for success in academia in the United States (Philipsen & Bostic, 2008).

Theoretical Foundation for this Study

The theoretical framework for this research layers Critical Feminist Theory, Leadership Advocacy, and theories regarding women in the workplace and women in higher education along with women's leadership.

Theoretical Support

Critical Feminist Theory is the grand theory which provides a framework to take a critical perspective. Critical Feminist Theory provides for poststructuralism questions regarding hierarchical relationships between knowledge and power, thus enabling us to understand leadership in differently defined terms. Poststructuralism questions for this study examine lived experiences by women in their career and non-career environments which helped or hindered their career path. Feminist theory suggests that policy and practices may be problematic, and have long been wrongly conceptualized as disengagement with leadership due to the characteristics of the academic workforce. It argues that corporatism of the academy, or the hierarchical structure, impacts university leadership and the labor force, creating a lack of diversity in leadership, and discouraging women from aspiring to achieve leadership.

Leadership Advocacy provides a framework to look at self, power, competency, and confidence to lead effectively and attain aspired goals. The theory of Informal and Incidental learning is how learning occurs outside of formally structured, institutionally sponsored, or classroom-based activities (Marsick et al., 2010). Learning occurs outside of physical space or in pre-planned ways, and learning occurs through lived experiences. Lived experiences have a variety of factors which impact learning. Factors can include internal and external. Factors influence path and perception within decision-making and goal attainment. Learning occurs through self-advocacy.

Lastly, theories regarding women in the workplace, women in higher education and women's leadership will be utilized to support the macro level issues concerning women in academic leadership roles within higher education.

Conceptual Framework

This study focuses on identifying the factors which have helped or hindered women in achieving tenure at land-grant institutions within colleges of agriculture. Figure 2-1 shows the conceptual model of how critical feminist theory, advocacy, charisma, and leadership theory may be used in understanding what factors help or hinder women faculty through the use of critical incidents.

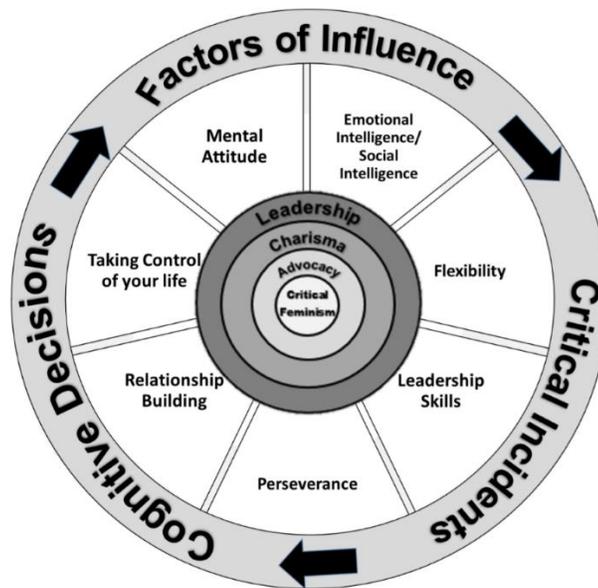


Figure 2-1. Conceptual Model: Critical Feminism's Role in Women Faculty Achieving Tenure

The conceptual model begins with critical feminism at the core, focusing on the population, women, and the lens of critical situations of influence. Critical feminism is then supported by layering advocacy for one's self and others. Charisma is the next

supporting layer, which is focused on the singular person. Leadership is the action of the singular person and how they present themselves in various situations.

The career model illustrates factors which impact the leader. The situations vary and can be influenced by the individual circumstance. To navigate the situations and circumstances, cyclical understanding of the decisions, incident and influences must be taken into account. This combination will result in something that has either helped or hindered the woman to understand the factors of influence on their career.

Chapter Summary

The theories grounding this research are the Critical Feminist Theory in partnership with leadership theories which focus on advocacy and charisma. These theories support the components that interweave the existing literature focused on women, leadership, and higher education. Without understanding these layers, we cannot fully understand the complexity of factors which have helped or hindered in their achievement of becoming a tenured faculty member.

CHAPTER 3 RESEARCH METHODS

This study was a critical inquiry into the factors which help or hinder women faculty in agricultural sciences achieve tenure by seeking to understand their learning through critical incidents. Quantitative and qualitative data collection methods offer different types of assumptions, purposes, approaches, and researcher roles (Glesne, 2006). A qualitative approach was used in this study to capture narratives of the women's lived experiences.

The Critical Incident Technique (CIT) is a form of interview research where participants provide descriptive accounts of events that helped or hindered a particular goal (Hughes et al., 2007; Chell, 1998; Flanagan 1954). A critical incident is one that makes a significant contribution to an activity or phenomenon (Hughes et al., 2007; Chell, 1998; Flanagan, 1954). It is a significant occurrence with outcomes. The CIT research technique facilitates the identification of these incidents by a respondent. These "stories" are then grouped by similarity into categories that can encompass the events, which can guide the construction of professional development initiatives (Griffith, 2014).

To obtain the qualitative responses, a snowball method was used. The interview instrument was adopted from Airini, Collings, Conner, McPherson, Midson, and Wilson (2011). The survey instrument had three parts: i) completion of biographical information, ii) description of respondents' role(s) or a job description, and iii) writing about incidents that have helped or hindered advancement in the tenure process. The structured written interview had eighteen total questions. Additionally, the women were asked to supply their curriculum vita for a document analysis.

Data were analyzed to identify words, themes, and examples in the shared stories. This information was then used to create training and educational workshops, mentorship opportunities, and other programs to support women leaders in the tenure process.

Research Objectives

The objectives of this study were as follows:

1. Discover factors that help women at land-grant institutions advance to tenured positions, as reported by currently tenured women faculty members in agriculture disciplines;
2. Discover factors that hinder the advancement of women at land-grant institutions to advance to tenured positions, as reported by women in agriculture disciplines; and
3. Discover the changes needed to enable women to advance to tenured positions at land-grant institutions in agriculture disciplines, as reported by women faculty who have participated in this study.

Methods

This section describes the methodology that was used to analyze these research questions as laid out in the following sections: design of study, sample selection, data collection methods, data analysis methods, trustworthiness, reflexivity statement, and chapter summary.

Qualitative Inquiry

Due to the in-depth nature of the data sought through this research, qualitative methods were most appropriate. Merriam et al. (2002) stated that qualitative research is a powerful tool for learning more about our lives and the socio-historical context in which we live (p. xv). "Qualitative researchers seek to understand and interpret how the various participants in a social setting construct the world around them" (Glesne, 2006, p.4). Since women faculty in agricultural sciences have not been studied, and descriptive data is sought after to inform the research questions, qualitative data

collection with focused interview methodology was the most appropriate tool for this study.

Interview Method

In an interview situation, both the narrator and researcher can be caught in a crossroads of interaction. Documenting a woman's words, "asking appropriate questions, laughing at the right moment, and displaying empathy are not enough" (Anderson & Jack, 1991, p.9). Each interview is a linguistic, social, and psychological event (Anderson & Jack, 1991; Glesne, 2006). Every experience can be different depending on the contextual factors that come into play. This is why blind interviews were conducted through electronic format and then by paper.

Interviewing each woman was an opportunity for them to share their personal stories, thoughts, or feelings that informed our understanding of their lives (Gluck & Patai, 1991; Kitzinger & Wilkinson, 1996). There are many potential errors throughout an interview process that could affect data collection (Cotterill, 1992; Glesne, 2006). In contrast, interviewing, when engaged in thoughtfully by both parties, can have the opportunity to provide thick, rich data to inform discourse and dialogue surrounding women's issues and the world in which they live.

Dynamics and Concerns of Women Interviewing Women

In the interview, language is a tool used to relay messages portrayed by the narrator and received by the researcher. Scholars have drawn attention to the fact that language is androcentric (Spender, 1980). Understanding language is a form of expression, as during verbal communication there can be hidden aspects of women's lives that are often ignored (Coates, 2015; Loevinger, 2014; Cotterill, 1992). Women often feel guilty for sharing personal feelings that are inconsistent with that of men, and

therefore are reluctant to share those thoughts (Loevinger, 2014; Anderson & Jack, 1991). Women tend to use language to establish relationships and understand other women, which can lead to a sense of natural collegiality in an interview situation when both researcher and narrator are women (Coates, 2015; Routledge. Minister, 1991).

Interview Schedule and Pilot Test

Utilizing interview questions from another geographic region in the world, it was important to make sure the language and context of the interview questions translated to the population being interviewed. A pilot test was used to refine interview questions and to address the lines of questioning, and any data collection issues (Yin, 2003; Creswell, 2013). The pilot test occurred as an interview. An additional graduate student served as a moderator, and the researcher was available to interject and clarify questions. There were eleven participants from a land-grant institution. Several changes were made based on the pilot test:

- Word and language choices were changed to be inclusive of Western higher educational terms. This was done because the degree attainment terms which were utilized for validating education level, were not understood in the pilot test.
- Simpler language replaced the more advanced words in the questions.
- The ordering of the questions was changed so that decision-making, relationships, and behavior questions were asked before self-awareness and self-esteem questions.
- The ability to upload documents for each question was updated.
- The ability to add an additional response for each question was added to encourage the inclusion of multiple examples per question.
- A question regarding any additional thoughts or feedback was added.
- A question if the participant wanted to have a summary of the findings was added, as was a way that they could share their email address.

Sample Selection

To obtain the responses, a snowball method was used to collect the sample. The committee for this research assisted in identifying the initial pool of current female deans, vice presidents, and department chairs within departments of agriculture at 1862 land-grant institutions. These stakeholders were contacted by letter and by e-mail to nominate tenured women working in agricultural disciplines at the 1862 land-grant institutions. A personal thank you note was sent to each person for nominating a woman faculty member. These administrators, often prior or current faculty, were knowledgeable about who the tenured women faculty members are at their institutions as well as other women faculty who may have left their institutions. These women nominated other women and the snowball grew. Figure 3-1 provides the timeline, which notes the snowball method and how participants were contacted. Figure 3-2 shows the process map for contacting prospective participants and inviting them to participate in the interviews.

The women in the sample were vetted through qualifying factors. They were tenured as of July 2016, worked at one of the 1862 land-grant institutions, and served as a faculty member within a college of agriculture, or related discipline.

A total of 300 tenured women faculty within agriculture-related fields were contacted for the interview process with the goal of 47 women completing the written interview and document submission. Saturation would be deemed to be achieved with 50 completed interviews.

The tenured women faculty members were contacted by e-mail, phone, and formal written letter sent to their university office addresses. The letter was personalized with their name and a hand signature on university letterhead to introduce the research

and the researcher's committee. A two-dollar bill was sent to each woman faculty member as an offering of appreciation for them taking the time to participate in this research. Lesser et al. (1999) and Dillman et al. (2014) reported that a two dollar incentive was an effective tool for increasing response rate. A personal phone call was made to each faculty member to answer any preliminary questions and to create a level of trust and buy-in.

A follow-up e-mail was sent to the women with similar information and an online interview questionnaire was administered through Qualtrics™. Two e-mail reminders were sent to the women faculty who had not completed the interview questionnaire within two weeks, as a reminder. The next layer of contact was to mail a printed copy of the interview questionnaire to each woman faculty who had not completed it by that time. The deadline for data collection to close was scheduled for May 26, 2017.

A personal handwritten thank you note was sent to each participant to thank them for their participation in this research. The women were able to note if they wanted to receive the results of the research. If they requested this information a copy of the dissertation will be e-mailed to them.

This method of sampling was chosen as it provides the broadest reach and most current and accurate information as compared to other methods. Utilizing search engines or reviewing websites would not have been the most effective use of time and energy. These information systems are often not accurate, as they rely on someone to update them. This unreliability dismissed this option as a choice for sample collection.

Data Collection Methods

For this study, written interview questions were supported by document analysis as the best method to capture the factors through the critical incidents of the women faculty.

Critical Incident Technique

This study used critical incident technique (CIT) as a method of data collection, as developed by Flanagan (1954). Historically, CIT utilized empirical data collection to document critical incidents for job analysis. Created for World War II pilots, CIT has a five-step technique: creating a general statement of aims/objectives; outlining specific plans regarding data collection; collecting data; analyzing data; interpreting and reporting the findings. An incident is defined as an observable activity that is complete enough to permit inferences and predictions about the person performing the act (Flanagan, 1954). When CIT is used for qualitative analysis such as in this study, participants are asked to determine which incidents are critical. The strength of critical incident methodology is that it solicits thick, information-rich data. Participants were able to share a number of critical incidents during an hour-long interview, which was helpful when studying an undocumented area such as women administrators in agriculture. Corbally (1956) noted that recommendations could be utilized by practitioners immediately upon receipt of the data. Listening to an experience from the participants' perspective can prove to be a more vivid lens than those of experts (Gremier, 2004). CIT is also noted to be successful across a variety of disciplines and fields of study.

Interviews

Unlike other methods, the narrative interview allows the researcher and narrator to gain the opportunity to interact and explore different caverns of emotion (Gluck &

Patai, 1991). Historically, anthropologists have observed that many times in an interview situation, women tend to mute their own perspectives, especially when their interests and experiences are different than those of men (Anderson & Jack, 1991). To hear women's perspectives accurately, "we have to learn to listen in stereo, receiving both the dominant and muted channels clearly and tuning into them carefully to understand the relationship between them" (Anderson & Jack, 1991, p.11).

Spending time reaching out to women to set up the (online) interview setting allowed me to gain a greater understanding of the informal/incidental learning that occurred in the workplace. Through utilizing a semi-structured interview format (Patton, 2002), eight open-ended questions were asked, and pre-established follow-up questions probed to elicit greater responses from the participants. Just as each woman is different, so are her critical incidents and the opportunity to explore different facets of knowing and comprehension during and after the situation. Flexibility in design and protocol was necessary, and anticipated changes due to factors such as time constraints, participant apprehension, uncertainty, or lack of understanding (Kvale, 1996).

The interview format was simple and straight-forward with leading questions about the background and educational experiences of the women. Then, the questions were more specific, asking the women to describe factors and critical incidents that occurred during their career. Then the women laid the foundation for events that happened before the incident, during the incident, and after the incident.

Next, the women were asked to describe what they learned. After the incidents were shared, I asked the women about their plans for the future and if this learning had

impacted their current leadership practices. Included in this chapter is Table 3-1, which provided the questions asked in the interview.

Validity through Member Checking

Member checking occurs when data, analytic categories, interpretations, and conclusions are tested with members of those groups from whom the data were originally obtained (Cohen & Crabtree, 2006). Member checking can be done formally or informally, since member checks may arise during the normal course of observation and conversation in a qualitative process. Member checking is viewed as a technique for establishing the validity of an account within qualitative research (Bowen, 2005).

Lincoln and Guba (1985) claimed member checking is the most crucial technique for establishing credibility. It provides an opportunity for participants to verify, validate, add, and review what has been interpreted and drafted as preliminary results (Cohen & Crabtree, 2006). However, this technique is deemed controversial.

Morse (1994), Angen (2000), and Sandelowski (1993) offered a comprehensive critique of the use of member checks for establishing the validity of qualitative research. Member checking relies on the assumption that there is a fixed truth of reality that can be accounted for by a researcher and confirmed by a respondent.

In this study, member checking occurred during the online interview in which participants transcribed their personal lived accounts. When conducting follow-up communication through e-mail, phone or written correspondence, member checking was included. Participants had the opportunity to respond with clarification, questions, or recommendations in this process (Glesne, 2006).

Document Collection

The next form of supporting data collected were documents. These were collected to gain a broader understanding of the context and experiences of the women faculty members. "Documents can be written, oral, visual (such as photographs), or cultural artifacts" (Merriam & Associates, 2002, p. 13). Altheide (1996) defined documents as "any symbolic representation that can be recorded or retrieved for analysis" (p.2). These materials are important identifiers that give depth and insight into data analysis. Patton (2002) suggests the notion that collecting documents can stimulate new avenues of inquiry that can be pursued through observation and interview.

The participants' curricula vitae were requested for review. Additionally, they were encouraged to submit any other documents that they felt were relevant. These documents were layered with the data to compare and review to support the themes and information discovered.

Data Collection Plan

The structured written online interview comprised of 24 questions was administered through Qualtrics™. There was an upload section where the women were able load their curricula vitae or other documents.

If the women did not respond, they were mailed the structured written interview. Inside the envelope was a paper version of the interview with a pre-stamped and addressed envelope to simplify the return process. Written responses were entered into Qualtrics™ and supplemental documents were scanned and uploaded into Qualtrics™. The documents were deleted from the scanned system after they were uploaded.

Responses were reviewed for transcription errors and coded by participant utilizing a random numbering system. Once one participant was transcribed and coded, the next participant was to be transcribed and coded, so there was no overlap.

Data Analysis

Data Analysis Method

A critical feminist paradigm critiques the historical and structural conditions of oppression, which seeks a transformation of those conditions, and is often used as the lens to analyze data in interviews where women interview women. Rich data produced through qualitative research needs to be analyzed in a strategic and logical fashion (Miles & Huberman, 1984). Utilizing the constant comparative method, the analysis took place concurrently with data collection (Glaser & Strauss, 1967).

The researchers who developed the initial instrument, which was replicated in this study, offered assistance in training and analysis of the data. This provided continuity between the studies and provided expertise in data analysis which was provided through training, examples and other resources for this study.

Constant Comparative Method

The constant comparative method was designed with the researcher in mind. The steps include: 1) begin collecting data; 2) look for key issues, recurrent events, or activities in the data that become categories of focus; 3) collect data that provides incidents of the categories of focus; 4) write about the categories being explored; 5) work with the data to discover the basic social processes and relationships; and 6) engage in sampling, coding, and writing as the analysis focuses on the key categories (Glaser, 1978).

Phenomena were recorded, classified, and compared across categories in this study. Throughout data collection, the process went through constant refinement following the collection and analysis of data. The process continually fed back into itself with each step. As new participant's information was collected there was a continuation of additional participants reaching out. The flow and logic of the communication and follow up became systematic during this timeframe.

After interview collection was complete, I completed participant member checks (Glesne, 2006). If there were no responses or updates provided by the women, formal data analysis was ready to begin.

To begin the analysis process, I downloaded the data Excel file from Qualtrics™ and removed all personally identifying information. I provided each woman with a pseudonym. The pseudonym was a randomized number. I was able to assign randomized numbers for each participant when uploading the profiles of responses. I then imported the file into MAXQDA™. Once the data were imported, I established means of cross-analyzing the data. I was able to establish individual folders noted by participant's number, question response categorization, and then by free coding utilizing the CIT analysis methods.

I began free coding the questions for critical incidents and categorically by themes. Using MAXQDA™, I color-coded words and phrases to identify critical incidents. I themed the incidents by helping, hindering, or both helping and hindering. I ran a text analysis on words used in each question to derive themes and factors of influence within the critical incidents.

The data and vitae were then double-coded by providing each numerical code with name code. The name code is woman's name that had historical significance from

1862. An additional code was also tied to the name code which provides a general field within agriculture that is representative of the participant population. See Table 3-2 Pseudonym code reference.

Data Storage

Electronic files of each interview were stored on my personal laptop computer, which is password protected. There were numerical pseudonyms assigned to each of the participating women, and all their files were kept under those numbers. As the women's curricula vitae were collected, the same numerical pseudonyms were assigned to each document. The data and vita were double-coded by providing each numerical code with a woman's name that had historical significance from 1862, as a quotable pseudonym. An additional code was also tied to the name code which provides a general field within agriculture that is representative of the participant population. Files were backed up through a personal external hard drive that was also password protected. Precautions were taken to ensure that the safety of the data was upheld.

Alternative Methods

Several alternative methods could have been utilized for this study. In-person interviews, Skype interviews, or phone interviews were considered. Additionally, focus groups could have been used. The resources needed to transcribe audio files and to travel to 6 or more locations across the United States would have been costly and time-consuming. Obtaining Institutional Review Board (IRB) approval at each site location to conduct on-site interviews would have further delayed the collection process. Overall, the alternative formats and methods were not conducive to the pre-determined timeline or budget to complete this study.

Bias Statement

As a researcher, I acknowledge that I entered into this research project with a particular view of the world, which could have led to some form of bias and assumptions. Born in a rural town in Maryland, I was raised being exposed to the discipline of agriculture from an early age. I have always had an appreciation for the work that is done to educate others about agriculture. As a university administrator and a woman in an executive leadership role at a land-grant institution, I have a personal understanding of how the political environments impact employee progression within higher education. Being a doctoral student and having a woman faculty advisor and committee members participating in the tenure process, I have witnessed the challenges that come with that as a woman, mother, researcher, and professional. I have experienced working with phenomenal faculty of both genders. Serving in the role as the researcher has allowed me to understand in greater detail the work that the administrators at each college are doing during the data collection and analysis process. I also acknowledge that I likely have preconceived notions or ideas of how colleges of agriculture operate and how tenure processes work, based on my experiences as a student and as an employee. I feel that these previous understandings allow for an enhanced foundation on which to begin the research process.

I understand the sensitivity of this information and recognize that some women who are currently in faculty positions may not be able to share certain incidents for researchers within this study. I also recognize that administrators may not share information for fear of misrepresentation of themselves or others involved within a situation. I built rapport with the women and was very careful in the member check

process to assure that each woman felt as if her unique experience was captured accurately in the data.

Chapter Summary

Through qualitative methods, specifically CIT, I interviewed a target sample of tenured women faculty in colleges of agriculture at land-grant universities across the United States. During an hour-long online interview, I asked questions about past factors and critical incidents that occurred in the course of their work and how they have learned from these incidents and have, in turn, modified their leadership progression. Lastly, a document analysis of the administrators' vitae and individual university web pages allowed for further insight into the nature of the past experiences of the women and current culture of their colleges.

After the data was transcribed, member checks allowed for the interviewees to verify the accuracy of the data. Additionally, data were stored on a personal laptop computer that is password protected. The data and all conversations with the women were kept confidential. The data were analyzed utilizing a constant comparative method and categorized according to themes, and patterns that were identified and noted in reporting. To complement the interview, document analysis included studying the written descriptions of program records, official publications, reports, office memos, correspondence, and/or even written responses to questionnaires and surveys (Patton, 2002). Combining interview and document analysis, allowed for an enhanced descriptive view of the women's words and life experiences in this study.

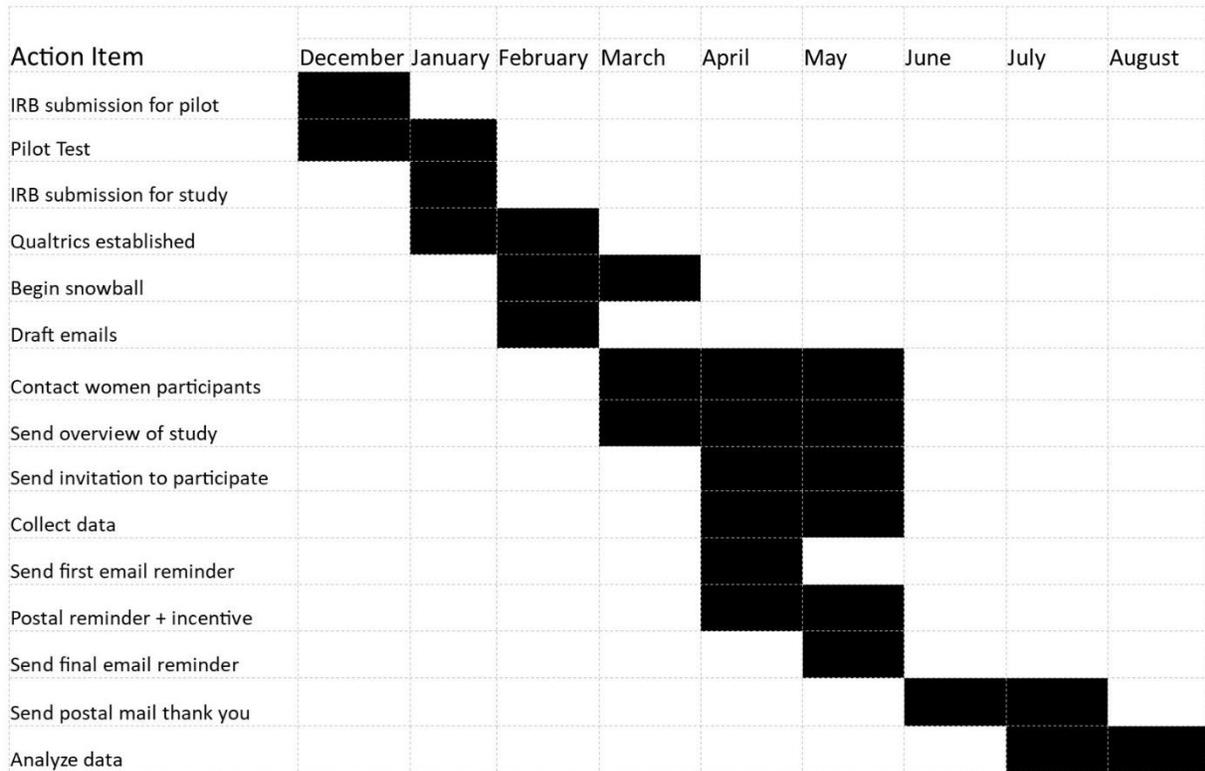


Figure 3-1. Gantt Chart for Research Timeline.

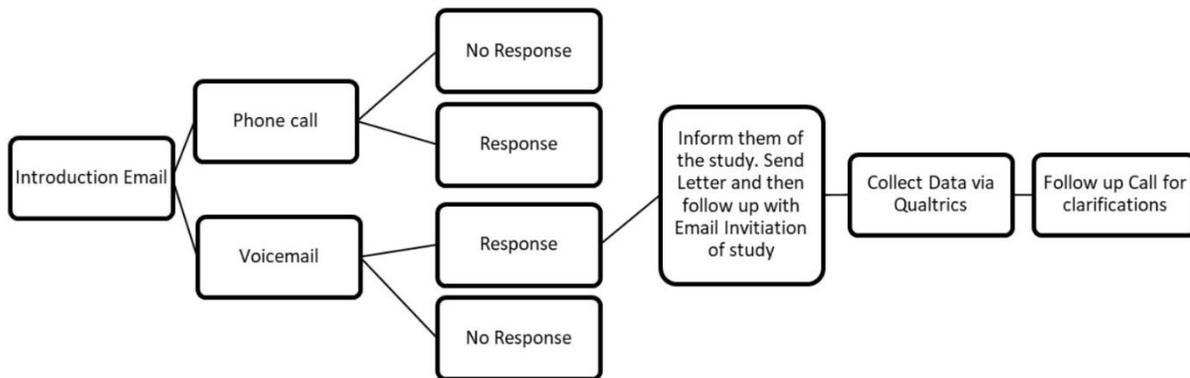


Figure 3-2. Interview Process Map for Women Faculty Participants.

Table 3-1. Interview Questions for Women Faculty.

Number	Question asked to participant(s)
Demographic Information	
1	I agree to take part in this project. Yes/No
2	How old are you (years of age)? 20-29, 30-39, 40-49,50-59,60+
3	This research is examining Women Faculty. Which sex do you identify as? Female, Male
4	What is your ethnicity? African, Asian, European/Pakeha/Caucasian, Latin American, Maori, Middle Eastern, Pasifika peoples, Other
5	Where have you come from and how long have you lived in the United States? a. Country of Birth? b. Nationality? c. How long have you lived in the United States?
What do you do?	
6	What is your University job description? *Choose as many options as appropriate Manager, General Manager, Lecturer, Faculty, Professor, Researcher, Head of Department/School/Institute, Director/Dean, Associate Dean, Pro-Vice Chancellor, Chancellor, Other
7	Are you an academic or general staff member? General, Academic
8	If you are an academic staff member what is your title? Professor, Associate Professor, Senior Lecturer, Lecturer, Other, Not Applicable
9	What is your highest qualification? Bachelors, Honours, Dip Grad, PG Dip, Masters, Ph.D., MD, JD, Dr. of Science, Other, Not Applicable
10	Have you achieved a 'tenure' or terminal appointment by July 1, 2016? Yes, No *Tenure is an arrangement whereby faculty member, after successful completion of a period of probationary service, can be dismissed only for the adequate cause of possible circumstances and only after a hearing before a faculty committee (American Association of University Professors, (AAUP, n.d.)).
How many years have you worked at a University?	
11	How many years have you worked at a University? Scale: 0, 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41+
12	Years in paid employment at a university anywhere in the world? Scale: 0, 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41+
13	Years in paid employment at a Land-grant university? Scale: 0, 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41+
Incidents that have helped or hindered your advancement	
14	Please describe a WORK related incident that has HELPED you advance your career. Please also describe what stage you were at in your career at the time and whether you were working at a Land-Grant University at the time.
15	If you wish, please describe a second incident. Something else that happened to you in a WORK context that HELPED you in your career advancement.
16	Please describe a WORK related incident that has HINDERED you advance your career. Please also describe what stage you were at in your career at the time and whether you were working at a Land-Grant University at the time.
17	If you wish, please describe a second incident. Something else that happened to you in a WORK context that HINDERED you in your career advancement.

Table 3-1. Continued

Number	Question asked to participant(s)
18	Please describe an incident that happened to you outside of the workplace and which HELPED you advance your career. Please also describe what stage you were at in your career at the time and whether you were working at a Land-Grant University at the time.
19	If you wish, please describe a second incident. Something else that happened to you outside of the workplace that HELPED you in your career advancement.
20	Please describe an incident that happened to you outside of the workplace and which HINDERED you advance your career. Please also describe what stage you were at in your career at the time and whether you were working at a Land-Grant University at the time.
21	If you wish, please describe a second incident. Something else that happened to you outside of the workplace that HINDERED you in your career advancement.
22	Would you like to receive a summary of the findings? Yes, No
23	*Yes, Please enter your email address which you would like the summary emailed to To cross analyze responses to your experiences please link your current public CV from a website or in a pdf, word doc, or docx file.
24	Do you have any further comments that you would like to make?

Table 3-2. Pseudonym Code Reference.

Number	Name	Field of Agriculture
1001	Sarah	Youth and educator extension
1002	Dorethea	Plant pathology
1022	Molly	Plant and soil
1025	Phillis	Youth family and global extension efforts
1038	Elizabeth	Youth and educator extension
1038	Clara	Youth and educator development
1058	Julia	Plant and natural sciences
1058	Mary	Plant and environmental sciences
1068	Sojourner	Food and animals sciences
1069	Susan	Food science
1075	Lucy	Sustainable ag
1076	Phobe	Plant and soil
1082	Harriet	Crop management
1111	Kate	Plant and food sciences
1113	Lydia	Bio systems
1113	Martha	Bio science
1117	Biddy	Animal sciences
1121	Rose	Crop management
1126	Lucretia	Human development
1139	Frances	Plant pathology and bio systems
1143	Louisa	Agricultural engineering
1171	Jane	Agricultural engineering
1174	Rebecca	Crop management
1184	Judith	Youth and educator development
1217	Ann	Food and animals sciences
1232	Eleanore	Agro-business
1234	Hellen	Environmental management
1247	Nellie	Animal sciences
1275	Antoinette	Agro-business
1288	Alice	Animal sciences
1289	Margaret	human development
1308	Josie	Plant and soil
1312	Cynthia	Biological and genetic science
1321	Amelia	Bio systems
1322	Celia	Plant and soil
1353	Eilley	Environmental management
1356	Charlotte	Horticulture science
1372	Ida	Plant and soil
1264	Delia	Biological and genetic science

CHAPTER 4 FINDINGS

Introduction to Results

This study utilized CIT qualitative methods to collect electronic interviews. Participants were tenured women faculty at land-grant institutions, specifically within colleges of agriculture. Participants typed their own interview responses which were then examined for critical incidents to identify factors which helped or hindered them. This chapter reports the factors that women noted to be helpful or that hindered, and changes women noted to help others advance into tenured positions.

Forty-seven institutions were contacted. 14 institutions participated in the study while eight requested no further contact. Four additional institutions requested additional time with no follow-through during the study and 21 had no response. Figure 4-1 provides a visual representation of the institutional snowball sample response from all land-grant institutions in this study.

Snowball Responses from Land-grant Insitutions

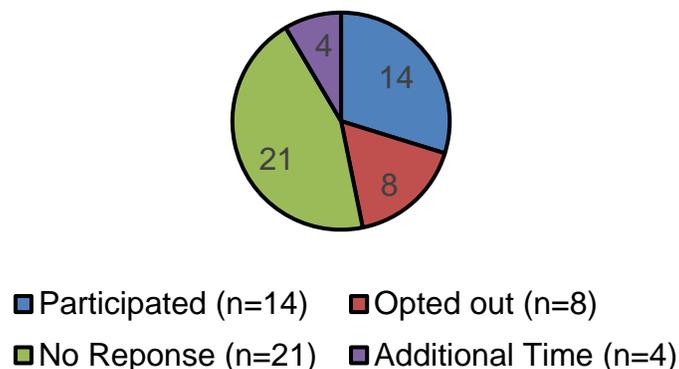


Figure 4-1. Administrative Snowball Responses

Participant Information

Three hundred participants were contacted for this study, 87 women participated, and three men participated. 67 participants fully completed the study. Saturation was

established at 50 participants. 50 participants were randomly selected from the pool of 67 to establish the participant population for this study.

Demographic Information

Participant demographics were obtained in this study. Demographic information was captured in the first part of the interview, including:

- Sex
- Achievement of tenure
- Age
- Ethnicity
- Education credentials
- Positional classification at current institution
- Institutional affiliation
- Years working in higher education

Participant Sex and Achievement of Tenure

Participants who identified their sex as female were eligible for participation. Of the 87 participants, only three participants self-identified as male. All 87 participants confirmed achieving tenure by July 1, 2016.

Age and Ethnicity

Of the participants within the sample, 42% reported being 50-59 years of age ($n=21$), 26% reported being 60+ year of age ($n=14$), and 24% reported being 40-49 years of age ($n=13$). Ethnic classification options included: African, Asian, European/Pakeha/Caucasian, Latin American, Maori, Middle Eastern, Pasifika peoples, and Other. Not all of these terms are commonly utilized at American institutions; however, it is possible participants could identify as one of these ethnicities so they were included. Of the women faculty, 50% reported European/Pakeha/Caucasian ($n=25$), 14% reported Other and all respondents wrote in a response of 'American'

($n=28$). Additionally, 12% reported as Asian ($n=6$), and Latin was reported by 8% ($n=4$).

Table 4-1 reports the participant demographics.

Table 4-1. Reported Demographics for Age and Ethnicity. ($n=50$)

Demographics total percentage			
Category	Number	Percentage	
Age			
30-39	2	4%	
40-49	13	26%	
50-59	21	42%	
60+	14	28%	
Ethnicity			
Asian	6	12%	
European/Pakeha/Caucasian	25	50%	
Latin American	4	8%	
Middle Eastern	1	2%	
Other	14	28%	

Education and Work Credentials

The category of highest education options included: Bachelors, Honours, Dip Grad, PG Dip, Masters, Ph.D., MD, JD, Dr. of Science, Other, and Not Applicable. Not all of these credentials are offered at American institutions, however, it is possible participants could have been awarded one of these credentials so they were included. Honours, Dip Grad, PG Dip are forms of a graduate diploma, also known as GradD, GDip, GrDip, GradDip, These terms are generally a qualification taken after completion of a first degree, although the level of study varies in different countries, from being at the same level as the final year of a bachelor's degree to being at a level between a master's degree and a doctorate (Quality Assurance Agency for Higher Education, 2014). Of the respondents within the sample, 92% reported Ph.D. ($n=46$), and 4% reported having a Doctor of Science or Masters degree. As noted in Chapter 2, some tenured faculty may have industry experience which qualified them for a tenured position.

Position and title were categorized as: Professor, Associate Professor, Senior Lecturer, Lecturer, Other, and Not Applicable. 54% of participants reported having a positional title of professor ($n=27$), 36% reported other by writing in 'Faculty' ($n=18$), and 8% wrote in that they were either a department head or dean. For purposes of anonymity department head and dean categories were joined. Table 4-2 provides the findings for the reported education and work demographics.

Table 4-2. Reported Demographics for Education and Work Credentials. ($n=50$)
Demographics total percentage

Category	Number	Percentage
Highest Degree		
Masters	2	4%
Ph.D.	46	92%
Dr. of Science	2	2%
Position Title		
Professor	27	54%
Associate Professor	1	2%
(Other) Department Head/Dean	4	8%
(Other) Faculty	18	36%

Institutional Representation

Forty-seven institutions were contacted for participation in this study. Of these institutions, eight institutional leaders within the snowball sample shared that their institution would not participate in the study, as they were choosing to protect their faculty, or they were already assessing their faculty satisfaction process and would not recommend or share the study information. 20 participants from three institutions organically reached out as to why they had not been contacted. This provided for an interesting conversation with these women. These conversations were requested, by the seeker, to occur over the phone and not via e-mail due to concerns for anonymity and the relay of information.

To protect the anonymity of participant’s specific institutional representations are not identified. There were 14 institutions represented in this study. Institutional representation covered all six regions of the continental United States: northwest (1), north-central (2), northeast (3), southwest (4), south-central (5), southeast (6). Figure 4-2 provides visual representation of this map. Without compromising the anonymity of the participants and institutions the north-central and southeastern regions were the most represented regions in this study. Figure 4-3 shows the number of participants by region. Four additional institutions requested additional time with no follow-through during the study and 21 had no response.

Years Employed

Participants first reported the number of years that they have been employed at a university. 12% reported to have worked at any university for 12-25 years ($n=14$), and 22% worked 26-30 years ($n=11$). 12% worked 21-25 years ($n=6$), and 10% reported working both 6-10 and 11-15 years ($n=5$). Table 4-3 shows reported demographics for employment at any higher education institution.

Table 4-3. Reported Demographics for Employment at Universities. ($n=50$)

Demographics total percentage		
Category	Number	Percentage
Employed at a University		
1-5	1	2%
6-10	5	10%
11-15	5	10%
16-20	14	28%
21-25	6	12%
26-30	11	22%
31-35	3	6%
36-40	3	6%
41+	2	4%

The number of years participants were employed at any land-grant university was also reported. 38% reported working 16-20 years ($n=19$) while 14% worked both

11-15 and 26-30 years ($n=7$), and 12% worked 6-10 and 21-25 years ($n=6$). Table 4-4 documents the reported participation for employment at land-grant institutions.

Table 4-4. Reported Demographics for Employment at Land-Grant Universities. ($n=50$)
Demographics total percentage

Category	Number	Percentage
Employed at a Land-grant University		
6-10	6	12%
11-15	7	14%
16-20	19	38%
21-25	6	12%
26-30	7	14%
31-35	3	6%
36-40	2	4%

The participants' demographic information provides us a profile of who the participants were for this study. To understand their experiences, we utilized critical incident technique (CIT) to identify factors that helped participants through the tenure and promotion process.

Factors that Helped

Participants of this study were asked to describe at least one if not more, work-related incident and a non-work related incident that helped them advance in their career. They were also asked to describe the career stage they were in and if they were working at a land-grant university at that time. Chapter 3 explained the CIT and the methods of analysis to identify critical incidents.

Of the 50 participants for this study, there were 218 work-related and non-work-related critical incidents identified that helped these tenured women faculty in their careers. Work related critical incidents that helped, ranged from incidents that occurred during their undergraduate experiences to their professional capacity as a faculty member. Non-work related incident ranged from personal and familial experiences to community-related situations. While many incidents themselves were positive and

resulted in helpful situations, there were incidents which were negative, yet resulted in helpful situations. The categories below include work ethic, opportunities, and support systems. Within these categories are subcategories which tie into these three categories.

Table 4-5 summarizes the factor themes from the participants' critical incidents which helped them in the tenure and promotion process. The incidents in these themes were quantified by how many participants had at least one, if not more, incident that fell within the theme category.

Table 4-5. Factors that Helped Women Faculty (*n*=50)

Helped total percentage		
Category	Number	Percentage
Work Ethic		
Reaching Beyond	26	52%
Collaboration	42	84%
Solving Problems	36	72%
Opportunities		
Promotion	13	26%
Correcting Mistakes	18	36%
Responsibilities	35	70%
Feedback	42	84%
Coursework	16	32%
Being the First	18	38%
Opportunities		
Advice	41	82%
Family	23	46%
Coaching	29	58%
Mentorship	36	72%
Sponsorship	24	48%
Association Involvement	38	76%
Personal Wellness	22	44%

Work Ethic

One theme that emerged centered around work ethic. Participants noted how their personal work ethic and drive helped their career.

Reaching beyond. As a junior faculty member working in plant pathology, Dorethea wrote that she,

“did almost everything a tenured faculty member did... wrote grants proposals, had [her] own graduate students, [her] own research program, attended faculty and professional meetings, served on departmental and professional committees, taught courses, etc.”

Participants also spoke of motivations when someone discouraged them. A woman who works in the plant and soil sciences, Phobe who works with plant and soil research, shared when she was a masters student that a mentor, “told [her the] idea would not work and to shift priorities...she changed mentors and [her] idea worked.” This self-advocacy,

taught her to trust her own ideas...as a more junior person [she] had the knowledge and expertise...when [her] first mentor dismissed it because it was unfamiliar.

In another incident, Phobe discussed how she, “learned to take the ‘high road’ rather than succumb to the bullies...keep students at the center, and you will always win.” She claimed that these experiences are what helped her to be promoted several years after.

Harriet, another participant who works with crop management and production, turned a negative situation which hindered her into one that helped her when she felt,

forced to leave [a] positions which led [her] to [her] current position...this ultimately brought much greater career advancement through understanding opportunities in leadership, research, and teaching.

Document analysis provided support for this category by connecting activities, involvement, and productivity of during their careers. Vitae provided examples of this through committee involvement with national associations, projects in progress as well as grants which had been awarded or applied for. The vitae also shared the bridge of community involvement. Examples of this included extension work, non-profit affiliations, volunteerism, and stewardship to the surrounding community beyond what could be implied as work-related functions.

Collaboration. Participants repeatedly noted collaboration helped them in their career. Elizabeth works with youth and educators in extension programs. She shared how even though she was advised to not collaborate with an additional faculty member she did and they,

submitted several grant proposals and began developing a program...the combination of unique strengths [they received] funding and created a program which demonstrated statistically significant results.

The collaboration resulted in, “journal articles, presentations, and national awards.” She claimed this, “contributed to [her] strong tenure document...and paved the way for more collaborative projects and a greater respect for the value of working together.” Lucy works with sustainable agriculture practices. She discussed when she, “became involved in writing a grant to the [agency]...partnered with [diverse groups, across disciplinary roles] and got the grant on the first try.” She explained that what helped was that she felt the “right kind of people were involved and had positions of power to enable the work to be successful.” She concluded by noted that her, “involvement in the project...provided [her] with networking opportunities across campus and leadership experience” which aided in her promotion and advancement.

Solving problems. Several women noted solving problems and having the perseverance to achieve, which ultimately advanced their careers. Julia works with plant and natural sciences at they relate to agriculture. She shared that she, “became aware of a problem...that became an opportunity.” She had to “propose alternative ideas... evaluated them...presented the information” which in turn afforded her, “to meet with [scientific] and industrial representative ...and make professional contacts.” She believes this experience, “served [her] well” in the future, without the contacts and

collaboration she, “would not have been so successful” in solving a problem which impacts almost every human.

Susan who works with agriculture and food-related sciences shared when an,

entrepreneur needed help improving newly developed process...it was a new topic/idea and no other person wanted to deal with the problem... [she] decided to work with him...the more [she] learned the more [she] liked it.

She closed this incident by sharing that she, “became well known for this area and it helped develop [her] career.” Biddy, who works with animal sciences, shared how a training program impacted her work ethic, since, “time management is the thing [she] struggled with the most.” She learned that “scheduling every hour of [her] day and making sure [she got] writing time” has changed how she works. She furthered this to say even though she was eight years into her position she had motivation to change to help her succeed in her career.

Opportunities

Participants noted how opportunities created incidents for advancement in their careers. These opportunities were predominantly work-related but did include some non-work related incidents.

Promotion. Dorethea, who works in the plant pathology field, shared that although a raise was not possible she was asked if she,

would I consider a tenure-track faculty position instead...they created a faculty position that I would have to apply for... and I was hired as an Assistant Professor.

Phillis works with youth, family and global extension efforts, noted that she had not been selected for an internal position which had motivated her to seek other opportunities.

Two years after applying for the internal position, “she applied and was offered a

department head position at another land-grant institution...accepted but with some sadness.”

Promotion was also evident through the document analysis. Positional changes and appointments were noted on documents within the vitae. Positional promotions or additions of additional responsibilities or interim roles were also evident through the document analysis.

Correcting mistakes. Several participants shared how correcting others mistakes provided helpful results. For example, Molly works with plant and soil sciences. Molly shared that she took over a research project which had serious documentation issues. Ultimately, she was able to,

verify acceptable data which could be reported...resulted in... peer-reviewed journal articles...fact sheets...presentations...set me up for future successfully funded research projects.

Responsibilities. Work-related responsibilities were noted in many incidents that helped these women. Sarah works with youth and educators extension programs. Sarah shared when she, “served on the university-wide promotion and tenure committee [as it] gave me the confidence that I really was competitive with other faculty.” Molly, who works with plant and soil sciences, shared she was able to refocus and advance when some, “departmental duties retired” providing her time work on what she needed to. Lucretia works with human development sciences. Lucretia talked about renegotiating responsibilities and that she had a feeling to, “reinvent [herself] and was seeking new projects and challenges.” Her departmental chair recommended speaking with the dean. Lucretia shared that, “[it] would never occur for [her] to do this... [she] was able to negotiate a new position that involves work that is exciting and interesting.”

This re-adjustment of responsibilities was a “good fit for [her], this will assist [her] as [she goes] further into the world.”

Feedback. Participants shared how feedback from colleagues, students, associations, editors, and reviewers helped them in their careers. Clara works within agricultural related fields through youth and educator development. Clara shared that from feedback provided, she made some, “quick course corrections and the next year’s evaluations were much more supportive.” Clara furthered this by stating she was,

Grateful that [she] received feedback after [her] first year and not [her] fourth year...early enough to make changes...later would have been too late to change and recover in time to obtain tenure.

She too shared advice based on her observations of this situation where “other faculty failed to listen and respond to ...feedback and they did not receive tenure.”

Coursework. Several participants discussed situations they experienced when they were still students. Elizabeth, whose work focuses on youth and extension, shared when she was in graduate school in a research course, she was required to, “research and write a journal article that the professor was an editor for...professor gave guidance on topic.” She noted that “even though this was out of [her] comfort zone she revised and [submitted it] was accepted.” Elizabeth commented how, “other students... didn’t take advantage of this opportunity.” In closing, she believed “it gave [her] confidence in writing journal articles and began building [her] scholarly record.” Ann works in food and animal sciences. Ann shared that sustaining contact with past faculty, “has let [her] know that [she] was progressing at the same rate, or faster, than peers in [her] field.” Ann continued that, “[her] major professor provided insight into being successful in the tenure process and receive awards... [she is] surprised how few of [her] colleagues are in contact with their major professors and help them to navigate academia.”

Being the first. Several women shared experiences about being the first at something. Mary works with plant and environmental sciences. Mary noted that she was the first woman, “to achieve [level] in 30 years in the promotion and evaluation system and only the second one in a 65-year history.” Soujourner works with food and animals sciences. Soujourner, reported that she was recommended by a department head to represent her institution on a committee and, “when [she] went to the committee meeting [she] learned that [she] was the first woman to serve on that committee for that region.”

Support Systems

Participants shared how they were provided support by colleagues, mentors, friends, and sponsors. An example of this was shared by Dorethea, when a “colleague approached the administration ...and asked for a pay raise on [her] behalf (I did not ask her to do this).” Dorethea works in the plant pathology field.

Advice. Participants also noted advice regarding self-advocacy. Merriam-Webster defines advice as recommendation regarding a decision or course of conduct. Harriet works with crop management. Harriet shared that a person within her department said it was necessary for her career enhancement to obtain awards. She acknowledged that she has,

not done a good job at doing this... this has changed my views of Honors and awards...[she has] come to see [their] assessment was correct...[she] see’s colleagues that are very proactive at seeking nominations and have more distinguished record of Honors.

Harriet went on to explain an action plan to improve her award record. Dorethea noted, “a few words whispered to a young professional can have profound effects on

confidence, both positive and negative.” Dorethea also noted how research partners could provide support, when she had a conversation with a,

Co-PI at another institution about gambling on the ... program and [they] told [her] to follow [her] instincts and that [they] trusted [her] decision. This gave me confidence.

Phillis works with youth, family and global extension. Phillis noted that during an interview a woman,

gently told [her] privately that the department was ‘family friendly’ and then [she] need not fret about the pregnancy negatively impacting [her] chances...this set the stage for [her] to feel I could succeed in a tenure-track position and still be a mother.

Family. Several participants spoke about family situations which helped their careers. Participants described family as departmental units with whom they worked, as well as marital or immediate affiliations. Dorethea noted how a partner quit their job to become the caregiver of their children which, “freed up more time to more actively pursue [her] own career...stability outside of [her work] was definitely a career boost.” Rose works with crop management. Rose shared how even though she felt her, “husband and family...all seemed to take it for granted that [she] would get tenure... [she] was terrified.” She noted that their “unwavering confidence was transformative support for [her].” Louisa works with agricultural engineering. Louisa shared how a negative incident actually helped her career when she, “had to go through a divorce. This actually freed up time and took away negative distractions in [her] life and this helped [her] university career.” Elizabeth works with youth and educator extension programs. Elizabeth shared an incident of when she was,

Asked to apply for an interim position until a new [person] could be identified...[she] resisted that invitation, but [her] spouse helped [her] to see that [she] could be successful in that position.

This interim position led to her applying for the permanent position in which she was the first permanent female to hold this position within her college. Lucretia works with human development. Lucretia explained how the support of her work family, which included her,

departmental chair and other faculty members, helped [her] not only during her pregnancy, but afterward's, and [she] could not have been successful without their support.

She then added that her spouse's willingness to, "stay at home and parent their [child]" was the,

greatest contributor to [her] professional success...because [she] can focus on taking care of herself and her work rather than being burdened with lots of household and childcare responsibilities which often fall upon women.

Frances works with plant pathology and bio systems. Frances talked about her work family supporting her in a family medical crisis and the,

convergence of faculty members across the university who each offered to teach [her] courses, care for [her] kids, or prepare a meal... [her] colleagues kept [her] and [her] family afloat.

This incident occurred near her tenure decision and she proceeded successfully.

Coaching. Participants often spoke of coaching provided by others to present their best self. Merriam-Webster defines a coach as someone who teaches or training someone in something. An example of this was shared by Julia. Julia works with plant and natural sciences. When Julia's professor, "instructed [her] to...introduce [herself] to the session chair before the meeting so he knew who [she] was." She noted that this made her stand out, which she found out later on in her career when this chair reacted as if he,

was very surprised...and at the break rushed up to [her] absolutely delighted that [she] had stopped him. He had been working on the same question but a different approach.

Her reaction was humbling, as she was “impressed he was delighted and inquired why.”

This interaction resulted in a collaboration and mentorship. He also, “helped [her] find position and advise me on my career.” Julia now, “tries to emulate [him] throughout her career by being a good collaborator and refusing to feel threatened.” Rebecca works with crop management. Rebecca shared that she had a coach who provided a micro level approach when a department leader, “basically came into [her] class every day and provided peer review of [her] teaching.” This caused her anxiousness even when the leader assured her that “she had [her] back.” Rebecca later learned that this,

experience was not unique, but the response from [the leader] was unique...the following years of [leaders] support of [her] bolstered [her] position in the college, thus helping [her] career.

Mentorship. Mentorship was noted by participants as a way in which they were either assigned or identified someone as a mentor. In turn they felt these mentorship relationships helped them in their careers. Molly works in the plant and soil sciences. Molly had, “two faculty who mentored [her] as a young assistant professor. They helped [her] get funding... research projects, provided feedback and ideas” she continued by stating these “individuals stand out as helping me when compared with others.”

Sojourner works in food and animal sciences. Sojourner shared that she,

had a colleague who involved [her] in a variety of significant projects [after starting at the university] from co-authoring fact sheets to grant proposals...having an experienced person to offer help on small day-to-day questions was very beneficial.

Lydia works with bio systems. Lydia shared that she was,

fortunate enough to have an assigned faculty mentor when starting as an assistant professor... met once a month to discuss general issues and offered to read and provide feedback on grant proposals.

Lydia said that it was only because she took the mentor up on this offer,

and also decided to ask two other colleagues... to provide feedback on [her] grant.” As a result, she stated “this was quite helpful and [she] received funding from... major federal agencies before achieving tenure.

After experiencing negative mentoring, Jane shared,

since seeing excellent examples of how new faculty can be mentored- good mentoring can really help, and is especially useful in the confusing and bumpy beginning.

Jane, who works in bio engineering continues that she,

tries to be useful in that process: by stopping by to ask them how things are going, introduce them to other colleagues with whom they might collaborate, actively referencing them to others when potential connections arise, explaining backstory/context and university culture when it’s relevant, etc.

Jane shared that she serves as a formal mentor at her institution, and that she is “giving it better than what [she] got.”

Sponsorship. Many participants noted how sponsors helped them throughout their careers. Sponsors are people who recommend you for things and you may or may not know it directly. Sponsors choose you, at the moment, to support your goal attainment through opportunities or interactions (Sandberg, 2013). Phillis works with global extension efforts. Phillis was,

recommended for a leadership program by [dean]...with others from across the country... I returned with much better understanding of [her] own leadership strengths and challenges and armed with tools to improve.

She believed it was due to this program and support from her dean that she “was promoted to full professor.” Soujourner works in food and animal sciences. She was nominated by a department head to serve on a regional committee, where she,

developed great working relationships and went on to serve [as a leader] on the committee...she found a great mentor and collaborators for research...projects and grants.

Soujourner concluded by stating this was a “launch pad for involvement with other regional, national, and international associations.” Lucy works in sustainable agriculture. Lucy was recommended to serve on a national panel because “a colleague who did not have the time recommended me. It was an excellent way to network and develop credentials...at a national level.” Another helpful factor was the results of this work as “the report written ... was widely read by colleagues and university administrators at many institutions.”

Association involvement. Professional association involvement was noted by several participants as something that helped them in their work advancement. Phillis works in youth, family and global extension. Phillis shared that she, “held several offices in [her] professional association...that experience has helped me learn to organize, mediate, and advocate.” She furthered this by saying “it has been crucial to [her] growth and development.”

Susan works in food sciences. Susan shared that association involvement on a local level with the Rotary club provided here the opportunity to, “get to know many other university administrators and other faculty members...has really helped [her] career.”

Susan clarified that “getting to know other faculty members is an important part of success...this happened early in [her] career.” Harriet works in crop management.

Harriet noted how a professional organization provided her the opportunity to, “meet a well-respected [person] in [her] field... they interacted regularly at...annual meetings and [they] provided advise on research directions.” She noted this interaction led to a,

valued career mentor and [they were] instrumental in helping [her] through the promotion and tenure process... [she has] no doubt that without [their] advice and mentorship, [she] would not have navigated the T&P process as successful or as quickly as [she] did.

Personal wellness. Numerous women shared that personal wellness was essential helping them in their careers. Participants spoke about faith, meditation, exercise, and counseling. Kate works in plant and food sciences. Kate shared an example of how,

counseling has been a very important source of support for [her] through the years in the tenure process...seeking professional help, has helped [her] a lot to stay centered, build [her] self-confidence, and move forward.

Kate shared that as a result of this she has “not given up despite difficulties and [she] has persisted focusing more on the aspects of the job that are important to [her].” Biddy an animal scientist, shared how counseling, “helped relieved stress by trying to take things one day at a time and letting go of things that are out of [her] control.” Judith works in human development. Judith shared that faculty based faith communities have been a, “support system” in connecting with smaller groups of faculty on a spiritual level.

Wellness was evident through the document analysis by awards, achievements, volunteer involvement. This was evident through physical athletic achievements as well as spiritual or religious involvements.

Factors that Hindered

Women participants in this study were asked to describe at least one, if not more, work-related incident and a separate non-work related incident that hindered advancement in their career. They were also asked to describe the stage they were in regarding their career and if they were working at a land-grant university at that time. Chapter 3 explained the CIT and the methods of analysis to identify critical incidents.

Of the 50 participants for this study, there were 141 work-related and non-work-related critical incidents identified that hindered these tenured women faculty in their careers. Work-related critical incidents that hindered ranged from incidents in that occurred during their undergraduate experiences to their professional capacity as a faculty member. Non-work related incidents ranged from personal and familial experiences to community-related situations. While many of these hindering incidents themselves were negative and resulted in positive outcomes there were incidents which were hindered but resulted in negative outcomes, which still loom over the participants. The two categories below include personal and politics of the environment. Within these categories are subcategories which tie into these two categories.

Non-work related incidents blended into work-related incidents or impacts to the participants careers. These incidents involved children, family, health, and wellness. Table 4-6 summarizes the factor themes from the participants' critical incidents that hindered them in the tenure and promotion process. The incidents in these themes were quantified by how many participants had at least one if not more, incident that fell within the theme category.

Table 4-6. Factors that Hindered Women Faculty (*n*=50)

Hindered total percentage		
Category	Number	Percentage
Personal		
Children and Family	28	56%
Health and Wellness	31	62%
Politics of the Environment		
Accountability	41	82%
Mentorship Programs	28	56%
Ambition	32	64%
Salaries	22	44%
Advocacy	42	84%
Inclusivity	23	46%
Leaders Actions	35	70%

Children and Family.

Participants noted on several occasions that children or experiences with their children were a hindrance to their career. Others noted that starting a family while being an academic posed challenges about time, support, and scheduling. Family members of direct or indirect relationship with a household were also noted by participants. These incidents, although outside of work, impacted work by hindering their careers. Ida is a plant and soil scientist. Ida shared an incident in which,

one semester [she] could not get [child] into childcare...we had a gap of a couple months where the childcare fell apart. The new nanny did not work out, and we were left with nothing.

To work through this situation a family member and spouse-assisted. Ida stated, “it was definitely a stressful time, especially since I was pre-tenured at the time.” This participant said that this event hindered her, “that semester in her work-related progression”.

Others noted that family planning was a hindrance. Celia is also a plant and soil scientist. Celia shared, “starting a family... academic career demands focus and complete involvement”. She continued the demands of a child required “complete involvement, mind, time, and body” which she elaborated that those factors are challenging even when someone is not adding a human being to their life. Amelia’s research is in bio systems. Amelia shared that that during her,

next annual review... a senior woman faculty expressed concerns about [her] taking maternity leave...that she thought [she] didn’t take [her] job serious because [she] would not stay for regular meetings scheduled later than 6 p.m.

Amelia had to inform her supervisor that, “parental leave was a standard policy, and that childcare closed at 6 p.m. ... [she] asked for meetings to be scheduled earlier in the working day,” as a result the “meeting schedule did not change and [she] did not participate.”

Margaret researches human development science. Margaret spoke about a family situation which, “certainly hindered [her] career advancement.” Going through, “such an emotionally distressful time caused [her] great difficulty for a long period of time in being able to work as quickly and effectively as [she] could.” Margaret shared that it was not until she, “could channel these negative feelings into a positive outcome by working longer and harder to get ahead, that [she] overcame the obstacles presented by this event.” As it related to academia, it was not easy to, “just change jobs and follow [her] non-academic spouse was a factor. Tenure or tenure-track faculty don’t have a lot of flexibility in that regard.” Margaret continued to speak to how she, “drew from her strength and resilience to bounce back” and support her family and career.

Health and wellness. Several women noted personal and familial health situations ranging from injuries, addiction, terminal illness, death, addiction and other incidents. The personal nature of these incidents could identify participants and therefore cannot be shared as they compromise anonymity. Although these incidents were shared being a hindrance to their careers, each woman noted a point which self-advocacy, support, or resilience was a factor in working through this situation. If they were not able to work through the situation there was an acknowledgment that they were trying to do so.

Politics of the Environment

Participants shared that they had many incidents involving political and environmental factors which ultimately hindered them at some point in their careers. Many spoke to how they overcame these hindrances or how they are still being impacted by these incidents.

Accountability. Accountability is inclusive of holding one's self and others accountable to their personal and professional responsibilities. Accountability includes integrity for laws and ethics related to policies, procedures, and behavior.

Professional integrity. Eilley has a research focus on environmental management and preservation. Eilley shared that she had attended a professional conference and witnessed another colleague present information that she had previously presented on many times and did not reference her prior work. Eilley shared that she was "offended" and others in the audience shared they were also "offended" that credit was not shared. She was encouraged to communicate with this presenter about the concerns. Eilley,

kept it professional and friendly...the reply from this person was antagonistic, nasty, demeaning, sarcastic and threatening...this person sent the reply to every person who worked for [this area].

She stated, “this one incident impacted grant funding, [this incident] caused partners to pull out of collaborative research and has causes stakeholders who support [her and the research teams] problems.” The result of this incident still impacts this professional, her colleagues, and graduate students.

Behavior and personal integrity. Celia is a plant and soil scientist. Celia spoke about her graduate student experience which almost made her leave academia. She shared that the “supervising style of [her] advisor was not a match for [her] personality.” Celia noted she was the only female in the program, and it was a new research program. Though she was doing well in (receiving all A’s) and focused until she,

Was called into the advisor’s office and was asked where [she] was on the weekends and evenings. This was a major setback on [her] motivation... [she] did not mind being the only one working in the lab and studying in the office.

Celia shared that this, “incident made [her] feel that [she] was not trusted and [she] was not studying/working for [herself].”

Laws and policies. Incidents involving sexual harassment were noted by nine participants. Participants’ incidents occurred in work and non-work environments. Antoniette works with agro-business. Antoniette shared that, “these actions were curtailed through discussions among the women and subsequently confrontation with the perpetrators. Resulted in ‘sexual harassment training’ for all hires” within the academic department. Another participant noted being harassed on multiple occasions at male-dominated professional conferences which made her, “choose to not attend the networking and social events.” She provided recommendations to the conference but continued to attend to advance her portfolio.

Mentorship programs. Several participants noted that they were involved in mentorship programs, but were paired with mentors who were forced into the role or who were disengaged, which hindered their success. Jane works in agricultural engineering. Jane shared that she was, “assigned a mentor when [she] arrived as an assistant professor, and that assigned mentor was never comfortable around [her].” She shared her experience with that mentor and that they, “spoke to each other maybe three times total during the period [mentor] was [her] mentor” and when they did meet it was no more than a few sentences at a time. In this incident the mentors were awarded a monetary amount for being a mentor with the institution. Jane continued that she spoke to the [mentor] and they felt badly about the experience which negatively impacted her so the mentor, “gave [her] the mentor incentive... [she] used the funds to go to a conference...but would have preferred mentoring.” Several other women shared similar experiences about being assigned mentors who were not motivated or willing to mentor them.

Ambition. Several women participants noted that they did things to strengthen their portfolio to apply for tenure early. Some were supported, while others had changes of leadership or colleagues and those incidents hindered them. Kate is a plant and food scientist. Kate noted that she had applied for her tenure early and that the tenure committee chose to deny her tenure and promotion. Her unit within the college stood up for her and the decision was reversed. Kate shared “although the outcome was positive for the promotion ... it hurt my relationship with my unit.” Kate noted the personal impacts which,

discouraged [her] from providing service and damage[d] the efforts to have a collaborative environment...[her] drive to achieve and contribute

were hindered by the process and may have prevented [her] from additional achievements.

Phobe research focuses on plant and soil sciences. Phobe shared that she had the, “opportunity to teach a fellow colleagues courses while they were on leave.” This provided her the opportunity to be promoted in position, however, “other faculty in the department would scowl at [her] or simply not acknowledge [her] presence.” The faculty made a decision to not “allow” her to serve in several capacities within her position as a part of this team. Phobe later found out, “they though [she] was handed the job without meeting credentials and going through all the steps that tenure-track faculty hires do...[She] did, but they were not well informed.”

Salaries. Several women participants noted that salary distribution within their departments was a hindrance to their careers. For some, it resulted in them changing institutions, and for others, they have chosen to advocate for change in the evaluation processes. Nellie is an animal scientist. Nellie shared that her,

salary is below the average salary of faculty in the same rank in [her] department...[she] was constantly referred as being on of the most productive faculty...[her] salary is currently 10% less than the average salary.

Nellie stated she is a “strong believer that salary increases should be tied to performance appraisals” and that these decision impact “recruitment and retention efforts for women faculty.”

Advocacy. Several women discussed incidents where they had to self-advocate in a situation that still hindered them. Martha is a biological scientist. Martha, shared that she had to,

educate the chair and other faculty that it was possible to stop the tenure clock and requested course release... [she] requested release for a large

undergraduate course and one [she] was co-teaching at the graduate level.

Although Martha was given the release by the university, not the department, she, was still heavily pressured by the department to return and co-teach the graduate course six weeks after giving birth (although not professionally... required).

Martha continued that she, “did it, but this decreased [her] motivation.” After the fact Martha noted she still, “received several [negative] comments related to the course release [she] requested for the quarter after [she] had [her] child and in [her] faculty evaluations.” Martha concluded by stating this incident,

did affect [her] both personally and professionally...a university can have very progressive policies, but if departments do not buy into those policies, they are wasted.

Charlotte is a plant and soil scientist. Charlotte shared that she has been,

hired into a leadership position and replacing a person who had long been in that role...although retired [that person] still wanted to attend staff meetings... as a result [her] leadership role was compromised.

To change the situation she,

spoke with him privately explaining the situation from [her] perspective and asked [person] not to attend additional meetings. [Person] did not attend and the group dynamics improved significantly.

Inclusivity. Access, roles, expectations, and responsibilities not equitably shared came up in different forms. Amelia works with bio systems. Amelia shared how she was unable to change classrooms for ADA accommodations which were not accessible to anyone who had a need. A suitable room was not available so she moved the class herself so it could be assessable to the individual who needed it and was informed that was not acceptable. She emotionally reacted to the situation and believed the outburst compromised her credibility to some people within the department.

Eleanore's research focus is on agro-business. Eleanore shared that she was the only tenure-track woman and was, "put on a lot of committees," and she noticed that none of her male colleagues were being asked to do this. Eleanore also noted that she also does, "invisible things to make the department run better like reminding [leader] to do stuff, for which they always take credit." She believed this, "took away from her time to focus on other priorities and she was required to focus on others... not herself." Josie is a plant and soil scientist. Josie noted that she was, "not able to attend faculty meetings and [she] could not vote on departmental issues" because of her remote location, and meetings were not offered in an accessible format (e.g., phone or video chat). She shared that these incidents were hindering her. Hellen works with environmental management. Hellen shared that upon hire she was, "often expected to ... put together a gift for a colleague getting married, or celebrating retirement, taking on problems of students, or being responsible for a [sic] program." Hellen explained that she believes, "women might get a greater than average share of 'grunt' admin work" or that she is "expected to do the things that no one else wants to take the time to do, but everyone benefits."

Leaders' actions. A dominant response about hindering incidents were leaders with presumed or positional power who exhibited behaviors and actions which impacted them. The descriptions of the incidents could be identifying so the examples provided have been cleaned to protect anonymity.

Margaret works in human development. Margaret shared an incident which a high positional leader was, "not understanding of [personal and family situations], even though [leader] had a long list of illness and a history of extensive absences." At times Margaret was, "badgered and threatened being told 'if [she] could not do [her] job, [she]

had to give [her] job up.” This participant expressed her frustration by stating, “so much for the many weeks of sick leave ... accrued through the many years of service of faithful attendance.” Margaret concluded with her,

outside of work problem, became an inside of work issue...this hindered [her] because [she] was inaccurately being perceived as someone who could not do their job due to this medical problem.

Even though the leader left, she stated she, “remained somewhat distrustful of [her] supervisors...no one should be made to feel that way. We have benefits that should help us when we need them.”

Amelia works with bio systems. Amelia shared that a high positional leader with whom she worked closely would, “yell and became angry often... [she] was the target of his wrath.” As a result of the leader’s actions she, “talked to the head of HR about this problem” and other complaints were confirmed. Amelia was, “very affected by his aggression, [her] eyes teared and [she] felt sick. [She] was humiliated...the whole office was aware of the incident.” She had to create an action plan with a colleague to avoid interactions with this person and even shared her interest to leave with others. The result of this situation was that this person was soon removed from their role and she still chose to leave her position.

Cynthia’s research examines biological and genetic sciences. Cynthia shared that a higher ranking educator was,

not paying for services [within her unit] and [they] tended to pull paid projects ahead of [educator] in the queue...even though we spent more time on [educator] research project than any other project in the last [number of] years.

Cynthia explained that this educator was still not satisfied and, “came into my office with a graduate student and expressed [educator] anger and frustration inform of [herself]

and the student in an unprofessional manner.” Cynthia concluded by stating that this incident, “stunted [her] productivity for at least 3-4 months.”

Several examples noted discriminatory incidents toward women by male leaders. One example provided by Alice who is an animal scientist. Alice involved a leader being “unsupportive of women faculty.” In several instances, research funding was only given to, “male faculty rather than female faculty.” These incidents, “led to [her] not being promoted ... while [she] was in that department and resulted in an extremely stressful work environment.” The result for Alice was that she, “searched for a new faculty position” and was able to secure one. Alice shared that she, “learned a great deal about what you should look for in a [leader] and how much power a [leader] can have over your academic success.”

Request for Summary of Findings

The participants were asked if they would like to receive a summary of the findings. Of the 50 participants, all noted they were interested in receiving a summary of the findings.

Document Reference

The 50 participants were informed that they could show support for their experiences by sharing a version of their curriculum vitae through a website link, a PDF, Word document, or DocX file. 24 participants shared a web link, DocX, or PDS version of their resume or vitae. These documents provided information on the 24 participants, such as: awards, honors, grants/funding, publications, presentations, courses taught, collaborations, and position and career path.

The documents provided added validity to several themes which emerged from the CIT process. Areas validated included association involvement, reaching beyond,

personal wellness, collaboration, inclusivity, then children and family. Association or committee involvement was noted in various sections of the vitae. Reaching beyond was demonstrated by the amount of work published, presented, or other involvements reported in the vitae by year. Personal wellness was noted primarily through award or other accomplishments which included physical, personal or spiritual wellness.

Collaboration was clearly demonstrated through publications, presentations, instruction, and panel involvement. Inclusivity was visibly seen on vitae through committee or other involvements supporting minority, at risk, or under-represented populations. Lastly, children and family support or contributions were noted by familial activities through positional involvements. These included words such as PTA, youth leader, athletic booster, primary school name, and so on.

Further Comments

Participants had the opportunity to include any additional comments that they wanted to share.

Of the participants, 13 gave additional comments in this section, and seven provided encouraging comments to the researcher. Examples included, "Good Luck," and "I am encouraged by your motivation for helping future women in academia." Other comments shared personal notations about their career paths, and that those paths were non-traditional. Eleanore, who works with agricultural business, reported that she, "worked in between her M.S. and Ph.D." and that time impacted her career significantly. Delia is a biological and genetic scientist within agricultural related fields. Delia shared her view about the tenure process stating, "it would be a shame if something like tenure - the combination of academic freedom and benefits protection, went away, just when women were taking foothold." Ida is a plant and soil scientist. Ida recommended that

while this was a worthy study, “unexplored factors influencing women in academic research is maternal guilt and the perception of extreme competition that is implied in the research world.”

Eilley a researcher within environmental management, shared that she had been, “the first woman hired in two different departments.” Eilley has, “witnessed and been a part of gender bias at both universities, however [she] did not let that impact her career,” and continued that she has taken a,

positive leadership role in resolving ...issues with a win-win attitude that has been proven effective. [She] does not complain nor...expect to be treated differently because [she is] female but [she does] expect to be treated equally.

Eilley shared that she has to do in her position is, “fight for equal pay and [she has] always quietly and effectively won those battles.” She concluded her comments by stating, “slowly it will change but [she] must say that there is still a glass ceiling.” A final participant, Margaret who researches human development provided feedback to the researcher,

it is important for studies like this to be done although [she believes the researcher] may need to add a quantitative component...these are very personal stories that are kept quiet for the most part because people may feel threatened by revealing the difficulties that come with a challenging work situation and personal lives that are stressed by it and outside factors.

Margaret continued to note that,

women have too many conflicting roles to play at once. More flexibility in the workplace is needed for women to be able to maintain a healthy [family life], care for [family/parents/children], and raise their [children/family] while trying to advance their careers.

Margaret concluded her comments by stating, “it is not easy but it well worth the challenge.”

While the additional comments were minimal, there were several which shared philosophical views of tenured women in colleges of agriculture.

Chapter Summary

Participant responses included demographic data, work and non-work related incidents which helped their careers, work-related and non-work related incidents which hindered their careers, and changes noted for the future. There were 50 participants. All participants self-identified as female and had achieved tenure status by July 1, 2016. 14 land-grant institutions were represented in this study and represented all six regions of the United States.

The uniqueness of land-grant institutions and their affiliation to colleges of agriculture, provides inclusivity to multi-disciplinary focuses. These multi-disciplinary focuses are rooted in the land-grant mission. Having the purpose and intent of research to be connected to the needs of the state and the surrounding community which can then support the needs for solving global problems.



Figure 4-2. Regional Participation within Continental United States

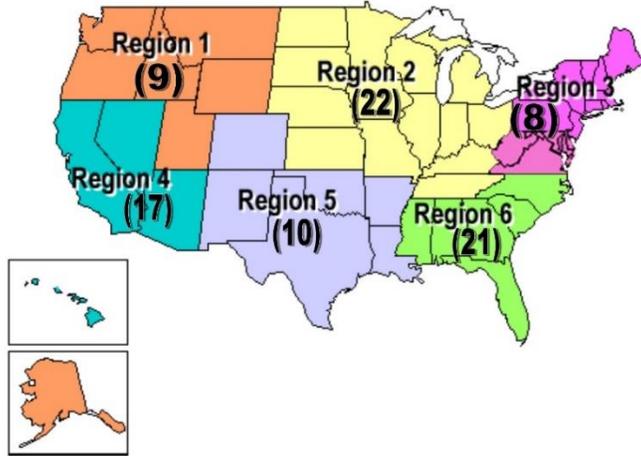


Figure 4-3. Regional participation by Land-Grant Institutions beyond saturation

CHAPTER 5 DISCUSSION AND RECOMMENDATIONS

Chapter 5 provides a summary of the study, discussion, and implications of the findings, conclusions, and recommendations for research and practice from the study. The summary includes the purpose and objectives, methods, and findings in Chapter 4 and the discussion is organized according to the components of what helped or hindered participants while incorporating the literature and previous research highlighted in Chapter 2 of this study. The discussion section includes conclusions from the findings and reflection on the researcher's experience. Finally, recommendations for additional research and practice conclude Chapter 5 and this study.

Summary of the Study

This study examined what helped or hindered tenured women faculty at land-grant institutions within colleges of agriculture during their tenure and promotion process. The conceptual model of this study demonstrates how critical feminism, advocacy, charisma, and leadership may be used in understanding what factors help or hinder women faculty through the use of critical incidents. The conceptual model is sharing in Figure 5-1 Conceptual Model: Critical Feminism's Role in Women Faculty Achieving Tenure. Critical incident technique (CIT) was utilized to capture participants lived experiences. Participants were identified utilizing a snowball sample method yielding in 87 participants completing the electronic interviews. Participants wrote their personal incidents that helped or hindered them in work-related and non-work related environments. Saturation was established at 50 participants, and 14 institutions covering the six regions of the continental United States were represented in this study.

Overview of the Problem

The purpose of this study was to discover the factors that helped or hindered women academics to advance to tenured roles within colleges of agriculture at land-grant institutions. What enabled or blocked access to tenured faculty roles at land-grant institutions was previously not understood from the perspective of women. Specifically, research is limited on how this phenomenon affects women faculty within agriculture-related fields at land-grant institutions (Bisbee, 2005, 2007). Without further knowledge, factors that help or hinder female faculty in the tenure process cannot be determined. This is important to the academy, as female enrollment continues to rise within agriculture-related fields of study (Lockwood, 2006). Women are underrepresented in agriculture. A need exists to have women faculty in agriculture related fields to continue in academic leadership positions, which include tenure-track positions (Lockwood, 2006). Research can uncover the complex factors that both help and hinder the development of women as faculty at land-grant institutions, and to identify both the deficits and credits that exist personally, professionally, and organizationally so women may be proactively advanced or supported. These factors can be utilized to create support programs to promote, recruit, and retain junior and tenured women faculty within the academy.

This study is significant in a number of ways; however, the following reasons were most directly related to this research and the subsequent results, which can aid aspiring women who hope to achieve tenure, and that can help colleges of agriculture who want to increase support measures for women academics through the tenure process, and universities who seek to retain women in academia.

National and international objectives were addressed in this study. The American Association for Agricultural Education (AAAE) published its National Research Agenda for 2016-2020 which has two priorities that align with this research, Priority Three and Priority Six. The Association for Public and Land-Grant Universities' (APLU) Commission on Access, Diversity, and Excellence (CADE) identified two priorities that support the need for this research; Priority Two and Priority Three. The Association for Leadership Educators (ALE) published its research agenda in Fall 2015 where Area Two, Three, Five, Six, and Seven are supportive of this research. Lastly, the International Leadership Association (ILA, 2015) published its declaration and call to action on women and leadership; five areas are supported by this research.

Groups that may benefit from this research include aspiring women faculty, leadership educators, national and international associations supporting faculty, faculty training and development programs or resources, associations which support women academics, faculty who are supporting graduate students who aspire to be tenured faculty, human resources departments, colleges and departments which have junior faculty that are women, colleges or departments who wish to recruit and retain women faculty.

Purpose Statement and Research Questions

The purpose of this study was to examine factors that helped and hindered women academics through the tenure process in colleges of agriculture at land-grant universities. Examining data through a critical feminist lens, this study analyzed self-disclosed narratives from a representative sample of women in agricultural academic leadership positions, specifically tenured women faculty at 1862 land-grant institutions of higher education. This information will hopefully be utilized to provide context and

platform to advocate for the creation of programs and resources for women academics working to achieve a tenure position within a college of agriculture.

The objectives of this study were as follows:

1. Discover factors that help women at land-grant institutions advance to tenured positions, as reported by currently tenured women faculty members in agriculture disciplines;
1. Discover factors that hinder the advancement of women at land-grant institutions to advance to tenured positions, as reported by women in agriculture disciplines; and
2. Discover the changes needed to enable women to advance to tenured positions at land-grant institutions in agriculture disciplines, as reported by women faculty who have participated in this study.

Review of the Methodology

Qualitative methods were used in this study, specifically the Critical Incident Technique (CIT). CIT is a form of interview research where participants provide descriptive accounts of events that enabled or hindered a particular goal. A critical incident is one that makes a significant contribution to an activity or phenomenon (Flanagan, 1954). It is a significant occurrence with outcomes. The CIT research technique facilitates the identification of these incidents by a respondent. These “stories” are then grouped by similarity into categories that can encompass the events, which can guide the construction of professional development initiatives.

A snowball sample method was utilized to identify 300 potential participants who were tenured women faculty in colleges of agriculture at land-grant universities across the United States. During an hour-long online interview, participants typed personal responses to questions about past factors and critical incidents that occurred in the course of their work and non-work environments. Participants were asked to describe how they have learned from these incidents and have, in turn, modified their leadership progression. Lastly, a document analysis of the administrators’ vitae and individual

university web pages allowed for further insight into the nature of the past experiences of the women and current culture of their colleges.

After the data were transcribed, member checks allowed for the interviewees to verify the accuracy of the data. The data were analyzed in MAXQDA utilizing a constant comparative method and categorized according to themes, and patterns that were identified and noted in reporting. To complement the interview, document analysis included studying the written descriptions of program records, official publications, reports, office memos, correspondence, and/or even written responses to questionnaires and surveys (Patton, 2002). Combining interviews and document analysis, allowed for an enhanced descriptive view of the women's words and life experiences in this study

Major Findings

Major findings from this study are segmented into the following groups: demographics, incidents which helped, incidents which hindered, feedback.

Demographics

The study was comprised of 50 participants who were employed at 14 different land-grant institutions within colleges of agriculture. All 50 participants identified their sex as female and having achieved tenure status by July 1, 2016. The land-grant institutions represented in this study represented all six regions of the United States. Detailed demographic information regarding participants' ethnicities, age, academic status, and years working in higher education were reported in Chapter 4.

Factors that Helped

Two hundred and eighteen work-related and non-work related critical incidents were identified that helped the 50 tenured women faculty in their careers. Critical

incidents which helped ranged from incidents that occurred during their undergraduate experiences to their professional capacities as faculty. Non-work related incidents ranged from personal life and familial experiences to community-related situations. While many incidents themselves were positive and resulted in helpful situations there were incidents which were negative but resulted in helpful situations. The categories of these incidents were clustered to include work ethic, opportunities, and support systems. Within these categories are subcategories which tie into these three categories. These subcategories include reaching beyond; collaboration; solving problems; promotion; correcting mistakes; responsibilities; feedback; coursework; being the first; advice; family; coaching; mentorship; sponsorship; association involvement; and personal wellness.

Factors that Hindered

One hundred and fourteen work-related and non-work related critical incidents identified that hindered the participants were identified. Work-related critical incidents which hindered ranged from incidents that occurred during their undergraduate experiences to their professional capacities as faculty. Non-work related incidents ranged from personal life and familial experiences to community-related situations. While many of these hindering incidents themselves were negative and resulted in positive outcomes, there were incidents which hindered but resulted in negative outcomes and are still looming over participants. The two categories below include personal and politics of the environment. Within these categories are subcategories which tie into these two categories including: children and family; health and wellness; accountability; mentorship programs; ambition; salaries; advocacy; inclusivity; and leaders' actions.

Request for Findings

Of the participants, all 50 noted they were interested in receiving a summary of the findings.

Document Reference

Twenty-four participants shared a web link, DocX, or PDF version of their resume or curriculum vitae. These documents provided information on the participants including: awards, honors, grants/funding, publications, presentations, courses taught, collaborations, and position and career path.

Further Comments

Thirteen participants provided additional comments. Of the participants in this section seven provided encouraging comments to the researcher. Other comments shared personal notations about their career paths. One participant shared their view about the tenure process stating, “it would be a shame if something like tenure-the combination of academic freedom and benefits protection, went away, just when women were taking foothold.” Another shared that they felt, “unexplored factors influencing women in academic research is maternal guilt and the perception of extreme competition that is implied in the research world.” A participant noted they had,

witnessed and been a part of gender bias at both Universities, however [she] did not let that impact her career” and that women need to “fight for equal pay and [she has] always quietly and effectively won those battles.

She concluded her comments by stating, “slowly it will change but [she] must say that there is still a glass ceiling.” A final participant stated that,

it is important for studies like this to be done although [she believes the researcher] may need to add a quantitative component...these are very personal stories that are kept quiet for the most part because people may feel threatened by revealing the difficulties that come with a challenging

work situation and personal lives that are stressed by it and outside factors.

She continued to note that,

women have too many conflicting roles to play at once. More flexibility in the workplace is needed for women to be able to maintain a healthy [family life], care for [family/parents/children], and raise their [children/family] while trying to advance their careers.

Findings Related to Literature

The conceptual model for this study provided support to the personal processing and learning that occurred from the critical incidents shared by participants'. Grounded in Critical Feminist Theory coupled with the fact that participants of this study identified as female, there was an overwhelming response, "that men and women are equal and should have equal respect and opportunities in all spheres of life personal, social, work, and public" (Wood, 2008, p.324). However, the critical incidents proved that the participants' were not equal to their male counterparts. Reported incidents that helped or hindered participants were true to Woods (2008) latter part of the statement about the need for opportunity. Participants shared that in many cases, they were provided opportunities; however, the same participants also shared how they struggled at times obtaining equal opportunities to their male counterparts. There was a desire and need to be expressed by participants that equity should exist within their experiences; however, the reality is there were underlying cultural implications to departments, organizations, or committees which inhibited because there were not clear processes or protocols which made opportunities appear to be equitable.

Tong (2009) stated,

in any type of feminist theory we lament the ways in which women have been oppressed, repressed and suppressed and...celebrate the ways in which so many women have beaten the system, taken charge of their

own destinies, and encouraged each other to live, love, laugh, and to be happy as women. (p.2)

This statement held true for participants. Participants expressed knowledge of the barriers within their pursuits to achieve tenure that was specific to women, but they worked to achieve it anyway. Barriers included power relationships, interruptions, mentorship, culture, and profiles for success.

Power

Respondents shared how they experienced power relationships. Relationships were noted to be with colleagues, mentors, supervisors, students, their institution, and family, among others. Astin and Leland (1991) defined power as, “empowerment treating power as an expandable resource that is provided and shared through interaction by leaders and followers alike” (p.1). Carroll (1984) noted that “conception views power as energy that transforms one’s self and others, and identifies the effective leader as one who empowers others to act in their own interests.”

Interruptions

Participants shared both work-related and non-work related critical incidents that caused interruptions within their career path. These interruptions both helped and hindered their careers. Some participants were able to rebound quickly from interruptions that may have initially hindered their careers, while others noted they are still dealing with repercussions of interruptions and have not recovered, or are struggling to move forward. Interruptions included family, children, personal health and wellness, promotions, leadership positions, and work assignments, among many other examples. Women experienced more career interruptions than males (Cebrian & Moreno, 2015; Rowley 2013; Hayter, 2014; Kearns, 2010; Spivey, 2005). Interruptions

can be categorized into parental leave, unemployment, and other types of interruptions (Gerst & Grund, 2017; Cebrian & Moreno, 2015; Grund, 2015; Hayter, 2014; Meures, 2010; Judiesch & Lyness, 1999). Examples of interruptions may include physical mobility, limits to moving for work due to family demands. Women were noted to reject career opportunities for personal or family reasons more often than males, whose career interruptions were more likely due to job loss (Pew Research Center, 2013; Rowley 2013; Kerns, 2010; Spivey, 2005; Kirchmeyer, 2002). Participants in this study did note rejection of career opportunities within their shared critical incidents. The rejections occurred for personal, family, and partner-related reasons. Those interruptions were often because of competing priorities. Interruptions within the participants' careers may be seen as a factor of Western culture, and the responsibilities women take on. Evidence shows that this difference in responsibilities only occurred for mundane tasks; men and women spent equal amounts of time playing with their children (Biernat & Wortman, 1991; Kotila, Schoppe-Sullivan, & Dush, 2013) and women were reported to be discontent with unequal distributions of household labor (Ruble, Fleming, Hackel, & Stangor, 1988; Kotila et al., 2013). This was true for the participants in this study.

Participants shared critical incidents where children both helped and hindered their careers at various times. Helpful aspects of children shared by the women included a better balance and prioritization of their work by focusing on what was most important to them, their family life and experiences. Participants shared how their work provided their family, specifically their children, opportunities to see or experience places they may otherwise not have been (e.g. traveling abroad). Having children also

provided opportunities to create changes in work culture, as family events within departments were helpful in seeing lives outside of the traditional work environment. However, having children was reported more highly as a hindrance when there was not a strong support system to help counterbalance responsibilities within the household or with family. Several participants noted that they chose to intentionally wait to expand their family due to the feedback of mentors, colleagues, and their career. While others noted that having children during their tenure and promotion process provided them an opportunity to self-advocate beyond their department chair, that policies in place be utilized to “stop the clock” in accordance with their tenure and promotion process so that they could be with their family.

Valian (1998) and Kotila et al. (2013) detailed how gender schemas (masculinity and femininity) lead to expectations of different behaviors and roles from men and women. Several participants noted that they often felt compelled to serve in more feminine roles, and some were even assigned these roles, of event planners or recognition chairs for their departmental units. Participants noted that they felt these communal connections for the organizational culture would not exist if it were not for them, even if they were not interested in serving in this role.

Women have internalized the feminine gender role with regard to expectations of being a primary caregiver and have come to see this role is incompatible with the long work hours required or associated with academia (Jaschik, 2008; Martin & Barnard, 2013; Mayor, 2015). Participants noted that these responsibilities were often a burden and took away from their research and teaching roles and that their time could have been better utilized within other committees that would have supported their

tenure and promotion process. However, two participants challenged this idea by claiming that serving in the morale booster role of their department provided an opportunity to foster connections that ultimately assisted them in collaborative research and publications.

Leadership and Advocacy

Participants shared that they had to self-advocate to achieve or get what they needed in work and non-work environments. This advocacy was helpful for some and hindered others the difference is how and for what they advocated. These factors, decisions, and the actual incidents were rooted in the participants' leadership, advocacy and critical feminism. Antobus (2003) supported this by stating,

advocacy must be based on an analysis of what needs to be changed and why... this analysis must be feminist because only feminism gives an analysis of patriarchy and how it is linked to the structures and relationships of power between men and women that perpetuate violence, poverty — the crises that confront us. (p.1)

Advocates have sought changes in policy as a ways to achieve impact that differs from what can be achieved through direct services or programs alone. Participants' repetitively noted in their critical incidents that they had to advocate for themselves in both work and non-work related situations. Stachowiak, (2013) wrote that advocates and change makers come to work with a set of beliefs and assumptions about how the change will happen, and this was often true for the critical incidents that helped the participants. Those beliefs shaped their thoughts about what conditions were necessary for success, which tactics to undertake in which situations, and what changes needed to be achieved along the way (Stachowiak, 2013). For the participants who experienced an incident that hindered them, they often utilized advocacy to be

resilient and move forward from the incident and turn it into a helpful learning experience.

Vulnerability

Sharing vulnerability can also have a positive long-term effect because such leaders can provide voice for a social movement or represent a group of minorities by tapping into followers' implicit leadership theories (Schyns & Meindl, 2005). Several participants specifically noted that they did not want to be vulnerable and choose not to be vulnerable in their careers. If they showed vulnerability, it was rare and with a trusted mentor or colleague. Participants' critical incidents had connections to vulnerability and power relationship. Those participants who chose to be vulnerable and exhibited statements of resilience were able to rebound from situations that initially hindered them, and the situation turned into a learning opportunity which helped them in the long run.

Mentorship

Mentorship both helped and hindered participants of this study. Mentorship has been broadly researched and has generally been proven to be a process which helps lead to improved outcomes. However, this study provided there was contradiction to this logic by sharing that it hindered participants. Mentoring programs for junior faculty need further research to identify what factors which lead to improved outcomes. Factors of consideration may include the pairing of mentor/mentee, incentive, structure, planning, and intentionality of mentorship programs for faculty populations.

Mentorship Helped.

Organizational and management support for females through mentoring is needed (Rowley, 2013; Washington, 2010; Management Mentors, 2006; Inzer & Crawford, 2005). Participants noted that mentorship is needed to navigate the culture, build relationships, and foster collaborative experiences. Participants explained that mentorship was helpful when it was executed well. The helpful examples noted that there was training, preparation, and personal investment in both the mentor and mentee. Since females suffer from a lack of mentoring, it is necessary to develop better formal mentoring programs, as informal mentoring has been shown to provide less positive outcomes (Baranik, Roling, Eby, 2010; Beehr & Raabe 2003). Participants also shared that mentoring was helpful in creating their professional plans. Both male and female mentors were helpful in moving them forward. It was often noted that this was a challenge for the participants, as they were encouraged to challenge themselves outside of their comfort areas and take risks often while being the only, or one of the very few women in that challenge.

Successful managerial profiles are high on dominance, achievement, orientation, and self-assurance, which are seen as masculine characteristics (Rowley, 2013; Melamed, 1995, 1996; House & Howell, 1992). Females are perceived to be unsuitable for managerial roles, due to a lack of such characteristics (Kloot, 2004; Ruddman & Glic, 1999; Morrow, 1990). Females try to prove personal characteristics being congruent with the job of a manager. While there are drawbacks in becoming higher in such masculinity traits, inducing resistance among males with traditional attitudes can interfere with the leadership performance of females (Harman & Sealy, 2017; Ibara & Petriglieri, 2016; Caleo & Heilman, 2014).

Mentorship Hindered.

Where mentorship hindered participants is when organized programs, with financial incentives, and there was not genuine personal interest or connection with the mentor and mentee. The literature notes females with mentoring relationships may experience less career-enhancing outcomes than their male counterparts (Hoobler, Lemmon, & Wayne, 2014; Ragins & Scandura, 1994). Participants noted that they had to often self-advocate with their mentor to obtain information or to steer the relationship in a fruitful direction. If there was not a strong mutual-relationship, participants noted that the relationship and mentorship experience was hindered. Foucault (1982) further acknowledged that power relations are often interwoven with other types of relations. In some cases, critical theorists wanted to understand how minority groups become empowered and how to change dominant patterns and perhaps the ideologies that underlie them (Wood, 2008, p. 32). Critical Feminism enabled researchers to deconstruct power relationships in the context of women's real-life events (Stead & Elliott, 2009).

Mosaic Mentoring.

The mosaic mentoring model embraces the idea that faculty feels empowered to get their needs met by a team of mentors who work well together and have complementary skill sets (Jackson & Arnold, 2010). While it may be optimal to have at least one mentor with a deeper understanding of junior faculty working towards tenure, in the end, it is the responsibility of the junior faculty to manage their career after weighing the guidance provided by others. This means multiple people and perspectives are required to support and help faculty move forward in the tenure and promotion process

Culture

Title IX, part of the Educational Amendments of 1972, was created with the purpose of eliminating sex discrimination in education, including higher education. The hope was it would create equity to ultimately advance women's influence and participation throughout society while, "leveling the playing field" (Gangone & Lennon, 2014).

However, the goals of increased presence, achievement, and influence of women across all sectors still leave much to be desired. Solomon (1985) wrote, "...educated women still have not achieved equal status with men either within or outside of the sphere of education" (p. xvii). Over 20 years later, Glazer-Raymo (2008) similarly reported that women are disproportionately concentrated in areas and institutions with the lowest levels of research funding.

Tenure Standards

The exemplar model could allow faculty members whose professional portfolios have been deemed successful to serve as guides for early-career faculty. Philipsen & Bostic (2008) noted that a model like this would allow for, "institutions to set standards for tenure according to institutional mission, for departments to show multiple avenues for success within academic fields, and presents realistic examples of professional achievement to level the field" (p 24). Participants' shared that they were often underprepared by their department and had to seek to understand elsewhere about how to create a strong tenure and promotion packet. Participants shared incidents in which they applied for tenure early. Some participants were successful, and others were not, and cited lack of communication and expectations from their department as the cornerstone of these incidents. Utilizing an exemplar model could alter the

traditional tenure clock by permitting faculty, at any career stage, to set personal and professional goals without limitations of the historical timeline for success in academia in the United States (Philipsen & Bostic, 2008).

Profiles for Success.

Challenges of the Faculty Career for Women presented how old and patriarchal policies created obstacles in both the personal and professional lives of women faculty, and offered creative solutions for reform (Philipsen & Bostic, 2008). Countless participants of this study shared that they were not often equipped to navigate political environments without the assistance of others. Philipsen & Bostic (2008) noted that one overarching challenge for women in all of their career stages is the lack of a clear understanding of standards for success within academe. Participants shared that they were helped the most when a there was a plan and strategy made for their tenure and promotion process. Participants who shared critical incidents about this often noted benchmark measures that were clear and communicated effectively. Philipsen & Bostic (2008) acknowledged that prescribing specific benchmarks of a tenure process could encourage “bean counting” and thus could eliminate professional discretion. Participants did not share information related to the idea of “bean-counting.” However, they did share incidents that helped in their tenure and promotion process. When objectives for success were established, departments assisted in creating a personal plan by setting milestone dates or a timeline for personal success.

Career Models

Traditional career models are often categorized into the following constructs: continuous, linear, and developmental (Rowley 2013; Sullivan 1999). These constructs are less useful in this context, as female labor patterns are often non-traditional, non-

linear, and discontinuous, and are better captured by boundaryless (Sullivan, 1999) and kaleidoscope models (Rowley, 2013). Participants explained that the external factors of their non-work lives influenced their careers more than their male counterparts. Participants' shared that interruptions often halted their careers. Navigating these interruptions was not clear-cut, and they often had to self-advocate to be successful. Rowley (2013) noted there are five considerations for women's careers: interruptions, organizational culture, mentorship, a profile for success, and culture and location. While Rowley's (2013) considerations are framed to business and industry, they apply to any organization and were true for the participants in this study.

Boundaryless Careers

Participants' flexibility, self-control, and consciousness contribute to building emotional competence which in turn has a relation with the variable boundaryless career. In other words, people can modify behavior and adapt to move forward (O'Connell et al., 2008). Participants' self-control made it possible to face stressful situations and to avoid the sacrifice syndrome of giving up and walking away; rather, they improved performance (de Boer et al., 2015; Kuijpers et al., 2006; and Boyatzis & McKee, 2005). Participants' consciousness was the capability to meet commitments while being accurate, helping to maintain focus on the qualitative level of results and details of actions, without reducing performance, even in different environments (Rajadhyaksha, 2005).

Kaleidoscope Careers

The kaleidoscope careers model encompasses the parameters of challenge, balance, and authenticity (Sullivan & Baruch, 2009; Sullivan & Mainiero, 2008). Lee et al. (2011) developed a theoretical framework for careers as an evolutionary model and

process unfolding in an overall life context. The model suggests that individual's construct careers develop over time. Participants' critical incidents often provided an evolutionary flow to how their incidents impacted their careers which fit the kaleidoscope career model.

The literature, while limited, provided both challenge and support to the participants' critical incidents within this study. Further research is needed on the effectiveness of programs and processes for the tenure and promotion process for women academics.

Surprises

There were three surprising outcomes in this study:

1. Reluctance to support or share information for potential participants.
2. Willingness to participate.
3. Candid sharing of critical incidents.

First, one of the surprises was the feedback from various institutions who noted that they wanted to, "protect ... women faculty." Institutions were contacted by email, phone and letter in the snowball sample. Several institutions responded that they did not want faculty to participate with the words, "protect ... women faculty." The reasons for protection varied. They did not want their faculty to feel they were being forced to be a participant through a nomination, or that they may be over-surveyed by their own institution, or that there were limited tenured women faculty members and did not want them to feel obligated to participate by even sharing the opportunity. Many institutions, however, chose to confirm that anyone in the directory with listed titles (which they provided) would qualify and that the researcher could make contact. This occurred more often than not. From the institutions which chose to "protect...women faculty." 20

participants organically reached out as to why they had not been contacted to participate in this study. This provided for an interesting conversation with these women. These conversations were requested, by the seeker, to occur over the phone and not via e-mail due to concerns for anonymity and the relay of information. As an aspiring academic this provided unique opportunity to connect with these women.

Second, the willingness to participate was overwhelmingly a surprise. This could be a factor of the time of year in which the participants were contacted but also knowing that there was an eagerness to share stories. Research tells us that women academics are more reluctant to share information without knowing who the researcher is (Kendall, 1999; Winter & Huff, 1996; Cushing, 1996; Kramer & Taylor, 1993). However, the success is likely attributed to two things: the introduction and outreach methods executed by the researcher which fostered personal connections through related interests (Newington & Metcalfe, 2014) and the security of utilizing online formats for research (Antonella, 2016). The researcher explained her status as a doctoral student, working full-time, and being a new mother of two, who was also aspiring to become a faculty member post-graduation. This storytelling provided an opportunity to connect with the potential participants. Explaining the reasoning to participants as to why the researcher was utilizing online interviews rather than in-person or video conferencing to capture interviews due to having a new infant was potentially another reason for connection and understanding that the researcher was finding a way to accomplish the goal at hand.

Lastly, the candid sharing of critical incidents was surprising. Knowing there are proven factors that reduce participants' willingness to share personal stories, these

participants shared critical incidents that were incredibly personal and impactful in their lives. The participants noted these stories were not previously shared with others along their academic journey. The participants noted they felt this study was an opportunity in which they felt compelled to share their critical incidents to help others, or influence change. This level of trust and vulnerability by participants in this study was humbling, energizing, and emotionally painful at times. The raw nature of the incidents shared was truly an experience for which this researcher is grateful.

Recommendations for further Research

There are four main areas suggested for further research based on the findings of this study:

1. Broadening the scope to other academic colleges and institution type.
2. Inclusion of junior faculty perspectives.
3. Investigating departmental and institutional expectations and communication of tenure and promotion process.
4. Studying the effectiveness of mentor programs for junior faculty.

First, this study is limitedly generalizable to all tenured women faculty members. Assessing tenured women faculty within additional colleges, is an area for further research. This coupled with an understanding of experiences at other types of institutions, other than land-grant, are opportunities for further research.

Second, numerous junior faculty members reached out inquiring if they could participate in this study. Due to various factors, they were not included in this study. However, there is an opportunity for further research with junior faculty that is going through the tenure and promotion process. Their lived experiences during the process would be valuable to add to this body of research.

Third, research and evaluation are needed for departmental and institutional leadership about tenure and promotion processes. Participants shared incidents that helped and hindered them, depending on how their department and institution set them up for their tenure and promotion process. Understanding expectations, timeline, and what it means to be successful is varied within disciplines and further varied within established research agendas.

Lastly, mentoring programs within academic departments and institutions for academics is an area for evaluation and research. Participants noted incidents in which these programs helped and hindered them in their careers. Identifying what works and what does not can be a determining factor for junior faculty success in a tenure-track position.

By having a stronger understanding of these recommended areas, there is an opportunity to create stronger support systems for women and junior faculty to know and understand the expectations for the tenure and promotion process. Also, there is an opportunity to understand the gaps of why there are still far fewer women than men in tenured positions at higher education institutions across the United States.

Recommendations for Practice

There are three main areas suggested for further improvements for practice based on the findings of this study:

1. Creation of intentional and meaningful mentorship programs that support tenure-track faculty members.
2. Support of personal wellness initiatives.
3. Support of children and family.

First, mentoring was noted to help and hinder women faculty in this study. Having needs and expectation based mentoring programs which are structured and

evaluated could be helpful for tenure-track faculty. Strategically pairing faculty mentor/mentee relationships should be a consideration. Providing time for junior faculty and senior faculty to get to know one another should be considered before pairing within the same department. Cross-discipline mentoring should be a consideration as it relates to the importance of collaboration and understanding working relationships. Personal investment, expectations for time commitments should be a consideration with mentoring programs. Mentoring does not have to be one-on-one, it can be collaborative. Structured on-boarding processes at an institution for tenure-track faculty can provide mentoring opportunities where these faculties get to know other faculty and what resources are available at the institution.

Second, personal wellness was noted in this study to help and hinder women faculty. Personal wellness is inclusive to physical, emotional and mental health. Having work expectations, self-discipline for time management, self-awareness, and communication skills are part of personal wellness. When support resources at an institutional level are offered and known to faculty they should be encouraged to advantage of physical recreational facilities to work out and alleviate stress, maintain physical health, meditate, or regain focus. When health benefits are provided they can choose options to take care of themselves or their families. This supports efforts so they can be present in and out of work environments. Providing personal wellness as a department through activities, communication, and relationships cultivates opportunities to have a fruitful environment to work at. When people enjoy where they work they are more likely to invest in the community and culture.

Lastly, children and familial support or understanding of legal processes related to human resource benefits need to be a priority of practice for departmental chairs and all employees. Having basic knowledge of the Family and Medical Leave Act (FMLA) as it relates to the tenure and promotion process can impact how colleagues decide on a vote of confidence. If these are not known, shared, or supported by departments or departmental leaders then this can negatively impact culture and retention. Culture and retention can also be impacted by the relationships of a department. If a department is not inclusive of family (partners, spouses, children, and other members) at events or gathers this can exclude members of the community. This is not limited to faculty, but should also be a consideration for inclusive student events. Demonstrating by example what departmental relationships can and should be like, when they are inclusive of family, can have a positive ripple effect.

Summary

Chapter 5 provided a complete review of the study and included the significance of the study, its purpose and objectives, the methodology and participants, and a summary of the findings. Chapter 5 also included a discussion of the findings, their meaning for future research, and recommendations for leadership development practice and research regarding the tenure and promotion process. The remainder of the document includes the appendices and references.

Table 5-1. Reported Demographics Summary. (*n*=50)
Demographics total percentage

Category	Number	Percentage
Age		
30-39	2	4%
40-49	13	26%
50-59	21	42%
60+	14	28%
Ethnicity		
Asian	6	12%
European/Pakeha/Caucasian	25	50%
Latin American	4	8%
Middle Eastern	1	2%
Other	14	28%
Highest Degree		
Masters	2	4%
Ph.D.	46	92%
Dr. of Science	2	2%
Position Title		
Professor	27	54%
Associate Professor	1	2%
(Other) Department Head/Dean	4	8%
(Other) Faculty	18	36%

Table 5-1. Continued

Demographics total percentage		
Category	Number	Percentage
Employed at a University		
1-5	1	2%
6-10	5	10%
11-15	5	10%
16-20	14	28%
21-25	6	12%
26-30	11	22%
31-35	3	6%
36-40	3	6%
41+	2	4%
Employed at a Land-grant University		
6-10	6	12%
11-15	7	14%
16-20	19	38%
21-25	6	12%
26-30	7	14%
31-35	3	6%
36-40	2	4%

Table 5-2. Factors that Helped Women Faculty (n=50)

Helped total percentage		
Category	Number	Percentage
Work Ethic		
Reaching Beyond	26	52%
Collaboration	42	84%
Solving Problems	36	72%
Opportunities		
Promotion	13	26%
Correcting Mistakes	18	36%
Responsibilities	35	70%
Feedback	42	84%
Coursework	16	32%
Being the First	18	38%
Opportunities		
Advice	41	82%
Family	23	46%
Coaching	29	58%
Mentorship	36	72%
Sponsorship	24	48%
Association Involvement	38	76%
Personal Wellness	22	44%

Table 5-3. Factors that Hindered Women Faculty (*n*=50)

Hindered total percentage		
Category	Number	Percentage
Personal		
Children and Family	28	56%
Health and Wellness	31	62%
Politics of the Environment		
Accountability	41	82%
Mentorship Programs	28	56%
Ambition	32	64%
Salaries	22	44%
Advocacy	42	84%
Inclusivity	23	46%
Leaders Actions	35	70%

Table 5-4. Interview Questions for Women Faculty.

Number	Question asked to participant(s)
Demographic Information	
1	I agree to take part in this project. Yes/No
2	How old are you (years of age)? 20-29, 30-39, 40-49,50-59,60+
3	This research is examining Women Faculty. Which sex do you identify as? Female, Male
4	What is your ethnicity? African, Asian, European/Pakeha/Caucasian, Latin American, Maori, Middle Eastern, Pasifika peoples, Other
5	Where have you come from and how long have you lived in the United States? a. Country of Birth? b. Nationality? c. How long have you lived in the United States?
What do you do?	
6	What is your University job description? *Choose as many options as appropriate Manager, General Manager, Lecturer, Faculty, Professor, Researcher, Head of Department/School/Institute, Director/Dean, Associate Dean, Pro-Vice Chancellor, Chancellor, Other
7	Are you an academic or general staff member? General, Academic
8	If you are an academic staff member what is your title? Professor, Associate Professor, Senior Lecturer, Lecturer, Other, Not Applicable
9	What is your highest qualification? Bachelors, Honours, Dip Grad, PG Dip, Masters, Ph.D., MD, JD, Dr. of Science, Other, Not Applicable
10	Have you achieved a 'tenure' or terminal appointment by July 1, 2016? Yes, No *Tenure is an arrangement whereby faculty member, after successful completion of a period of probationary service, can be dismissed only for the adequate cause of possible circumstances and only after a hearing before a faculty committee (American Association of University Professors, (AAUP, n.d.)).

Table 5-4. Continued

Number	Question asked to participant(s)
How many years have you worked at a University?	
11	How many years have you worked at a University? Scale: 0, 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41+
12	Years in paid employment at a university anywhere in the world? Scale: 0, 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41+
13	Years in paid employment at a Land-grant university? Scale: 0, 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41+
Incidents that have helped or hindered your advancement	
14	Please describe a WORK related incident that has HELPED you advance your career. Please also describe what stage you were at in your career at the time and whether you were working at a Land-Grant University at the time.
15	If you wish, please describe a second incident. Something else that happened to you in a WORK context that HELPED you in your career advancement.
16	Please describe a WORK related incident that has HINDERED you advance your career. Please also describe what stage you were at in your career at the time and whether you were working at a Land-Grant University at the time.
17	If you wish, please describe a second incident. Something else that happened to you in a WORK context that HINDERED you in your career advancement.
18	Please describe an incident that happened to you outside of the workplace and which HELPED you advance your career. Please also describe what stage you were at in your career at the time and whether you were working at a Land-Grant University at the time.
19	If you wish, please describe a second incident. Something else that happened to you outside of the workplace that HELPED you in your career advancement.
20	Please describe an incident that happened to you outside of the workplace and which HINDERED you advance your career. Please also describe what stage you were at in your career at the time and whether you were working at a Land-Grant University at the time.
21	If you wish, please describe a second incident. Something else that happened to you outside of the workplace that HINDERED you in your career advancement.
22	Would you like to receive a summary of the findings? Yes, No *Yes, Please enter your email address which you would like the summary emailed to
23	To cross analyze responses to your experiences please link your current public CV from a website or in a pdf, word doc, or docx file.
24	Do you have any further comments that you would like to make?

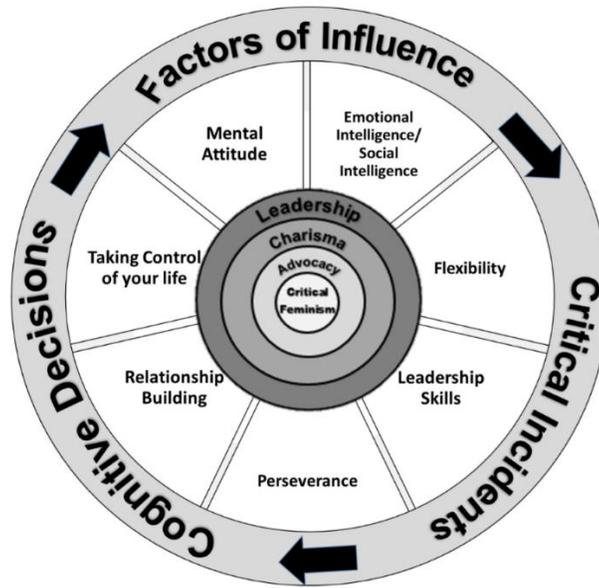


Figure 5-1. Conceptual model: Critical Feminism’s Role in Women Faculty Achieving Tenure

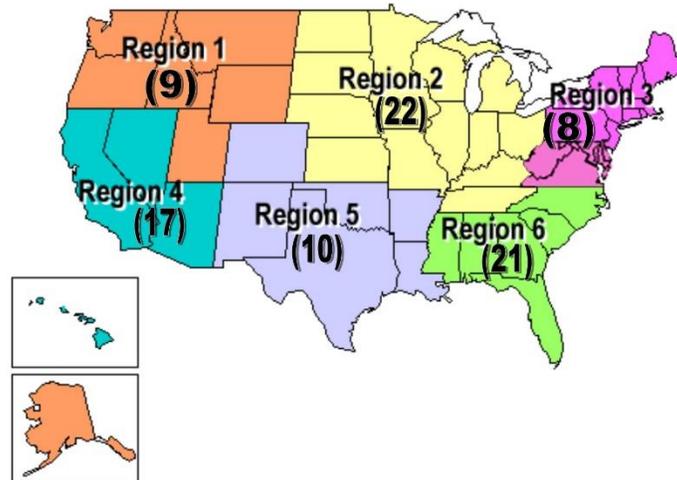


Figure 5-2. Regional Participation by Land-Grant Institutions Beyond Saturation

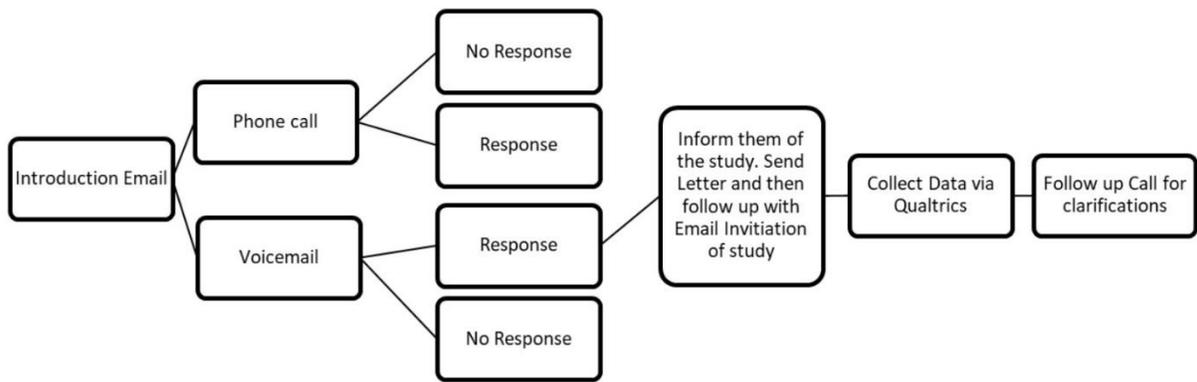


Figure 5-3. Interview Process Map for Women Faculty Participants.

APPENDIX A
DEPARTMENT ADMIN CONTACT INFORMATION REQUEST E-MAIL

Initial Admin Contact Information Request



Institute of Food and Agricultural Sciences
Department of Agricultural Education and Communications

DATE DAY YEAR

Dear [prefix] [LastName],

I am writing to request your assistance in the information gathering process of a nationwide study of tenured women in 1862 Land-grant Universities and Colleges of Agricultural and Life Sciences. This study will help determine the factors contributing to female faculty tenure.

You have been identified as a valuable contact person to obtain the contact information (name, address, and e-mail) of all tenured women faculty in your college across all departments. Tenured women faculty for this study are being identified as any assuming a tenured woman faculty member on or before July 1, 2016. Women in the tenure review process will not be included in this study at this time.

Unfortunately, if you do not have any tenured women faculty as of July 1, 2016 than your institution will not be eligible to participate in this study. However, I would really appreciate your response so that your institution can be removed from my contact list.

If you are aware of other tenured women faculty in 1862 Land-grant Universities and Colleges of Agricultural and Life Sciences, we would appreciate contact information being shared.

While the sharing of tenured women faculty contact information is completely voluntary, I would greatly appreciate your assistance with this important study. If you are not the correct person to provide such information, please accept my apologies and I ask that you please forward this letter to the correct colleague.

Thank you in advance for your assistance!

Sincerely,

Carolynn Nath Komanski

Doctoral Student, Agricultural Education and Communication Department
University of Florida
PO Box xxxxx Gainesville FL xxxxx-xxxxx
T: xxx.xxx.xxxx Ext. xxxx F: xxx.xxx.xxxx
xxxxxxxx@ufl.edu

APPENDIX B FACULTY CONTACT REQUEST

Initial Faculty Contact Request.



Institute of Food and Agricultural Sciences
Department of Agricultural Education and Communications

DATE DAY YEAR

Dear [prefix] [LastName],

I am writing to request your assistance in the information gathering process of a nationwide study of tenured women in 1862 Land-grant Universities and Colleges of Agricultural and Life Sciences. This study will help determine the factors contributing to faculty member experience in of achieving a tenured academic position.

You have been identified as valuable contact and possible participant for this study. You were recommended by the following individual (name, address, and e-mail) when seeking tenured women faculty in your college across all departments. Tenured women faculty for this study are being identified as any woman faculty member achieving tenure on or before July 1, 2016. Women in the tenure review process will not be included in this study at this time.

This qualitative study will examine factors which helps or hindered your tenure process. A interview questionnaire will be emailed to you on (XX/XX/XXX) from xxxxxxxx@ufl.edu. There will be eighteen question on the interview. We are seeking stories about both work and non-work related experiences since life-changing events outside work often impact on career development.

We are especially interested in 'complete' stories. These are stories with three parts:

- a trigger: something starts off an incident,
- an action: some action or actions happen,
- an outcome: there is some kind of conclusion, perhaps a change, as a result of the experience.

The questions ask about work and non-work situations so you can nominate up to two incidents related to each question. This means you can contribute up to 8 stories in total. You can also choose whether or not to complete all sections by simply pushing the 'Next' button when you are ready to go on. Information you enter is saved whenever you push 'next'.

You can exit and re-enter the survey as often as you like.

However, entry to the survey is closed after you submit your entries by pushing the 'Done' button on the final page.

Here is an example of a 'complete' story...

“In my second year my Department Head sent me details about an international conference and suggested that I should write a paper and present at it. It had never occurred to me that I could do such a thing before that. I was just thinking about teaching my classes and focusing on the day to day tasks. But I thought, ‘Why not?’ and gave it a go. I didn’t find that first paper all that easy to write because I had to work out what tone and content was right and I didn't know what to expect when presenting. But I kept at it. And the outcome? Well, now I have an extensive conference publication record and am part of an international network. Presenting at conferences has helped me get up the academic ladder. I believe it all began from that one small ‘oh-by-the-way’ communication.”

Your own stories can be as long or short, descriptive or otherwise as you wish. The stories will be examined using the 'critical incident technique', and information will be grouped into categories which help inform professional development practices.

A reminder:

You will not be personally identified in the outcomes from this project.

We are interested in:

- stories about what has helped in your university career development,
- stories about what has hampered your university career development, and
- other issues you want the research group to know about.

If you are not interested in participating in this study, I would really appreciate your response so that your institution can be removed from my contact list.

If you are aware of other tenured women faculty in 1862 Land-grant Universities and Colleges of Agricultural and Life Sciences, we would appreciate contact information being shared.

While the sharing of tenured women faculty contact information is completely voluntary, I would greatly appreciate your assistance with this important study. If you are not the correct person to provide such information, please accept my apologies and I ask that you please forward this letter to the correct colleague.

Thank you in advance for your assistance!

Sincerely,

Carolynn Komanski

Doctoral Student
Agricultural Education and Communication Department
University of Florida
PO Box xxxxxx Gainesville FL xxxxx-xxxx
T: xxx.xxx.xxxx Ext. xxxxx F: xxx.xxx.xxxx
xxxxxxx@ufl.edu

APPENDIX C
INVITATION TO PARTICIPATE/INFORMED CONSENT

E-mail invitation to participate in study with informed consent

Sender:Carolynn Nath Komanski

Subject line: **Research Study on Female Faculty at a Land Grant Institution**

Dear Esteemed Colleague,

In an effort to support female academic leaders within higher education, the researcher (Carolynn Nath Komanski) would like for you to take a few minutes of your time to respond to this survey.

This survey will look at your support system and the experiences you have had in academia at a land grant institution. It is our goal to take this information and build on the research to further develop leadership programs for female faculty at land grant institutions.

The survey should take approximately 10 minutes to complete. You may access the survey by clicking on the link below:

[UNIQUE HYPERLINK]

Or you can cut and paste the following link into your web browser:

[UNIQUE HYPERLINK]

Participants may withdraw their consent to participate at anytime without penalty.

There are no direct benefits, risks, or compensation to you for participating in the study. Please be assured that your answers are anonymous. No individual's answers will ever be identified in any report.

There is a minimal risk that security of any online data may be breached, but our survey host QUALTRICS uses strong encryption and other data security methods to protect your information. Only the researchers will have access to your information on the Qualtrics server. No identifying information will be collected or connected with your responses, which will be anonymous.

In addition, your participation is voluntary, though we hope you will respond. *By clicking on the link you are indicating your willingness to participate in this survey.*

Should you have any questions about the project or our interest in using the results, I encourage you to contact me for answers.

Thank you for your participation!

Sincerely,

Carolynn Nath Komanski
Department of Agricultural Education and Communication

University of Florida
xxx.xxx-xxxx Ext xxxxx
xxxxxxxx@ufl.edu

Dr. Nicole Stedman
Associate Professor
Department of Agricultural Education and Communication
University of Florida
xxx-xxx-xxxx
xxxxxxx@ufl.edu

Who to contact about your rights as a research participant in the study:
IRB02 Office
Box xxxxxx
University of Florida
Gainesville, FL xxxxx-xxxx
xxx-xxx-xxxx

APPENDIX D INTERVIEW SURVEY QUESTIONS

Qualtrics Survey interview questionnaire for tenured women faculty.

The image displays the survey questionnaire in two formats: desktop and mobile. The desktop version is on the left, and the mobile version is on the right. The content is as follows:

Thank you for volunteering to participate in this research study which examines what affects women's development as leaders in Universities.

By answering yes to the statement below, "I agree to participate in this study" you are indicating you have read the information emailed to you concerning this project, understand what it is about, and give your consent to being a participant."

CONSENT FORM FOR PARTICIPANTS
THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF SIX YEARS

Principle Investigator: Carolynn Nath Komanski (University of Florida)
Co-Investigator: Dr. Nicole Stedman

Title: Factors Influencing Female Faculty Advancement as Leaders in Agricultural Fields at Land-Grant Institutions.

I have read the participant information e-mail and understand what the project entails. I have the opportunity to ask questions and have them answered.

I understand that I am a voluntary participant in this research and agree to participate. I understand that in the reporting of this research, my identity will be strictly confidential and all information will only be used for the purpose of this research. I understand that survey data will be stored for 6 years and may be used for conference presentations, papers and other publications of an academic nature. I also understand that I may choose to withdraw from the research project at any time without giving reason simply by informing the Principal Investigator. I have the right to withdraw my data from the study up to 05/30/2017. I understand that academic relationships will not be affected by either refusal or agreement to participate. All of my questions have been answered to my satisfaction and I understand that I am free to request information at any stage. I understand that reasonable precautions have been taken to protect data transmitted by email (all data is protected by SSL encryption) but that the security of the information cannot be guaranteed.

I understand that I am a voluntary participant in this research and agree to participate. I understand that in the reporting of this research, my identity will be strictly confidential and all information will only be used for the purpose of this research. I understand that survey data will be stored for 6 years and may be used for conference presentations, papers and other publications of an academic nature. I also understand that I may choose to withdraw from the research project at any time without giving reason simply by informing the Principal Investigator. I have the right to withdraw my data from the study up to 05/30/2017. I understand that academic relationships will not be affected by either refusal or agreement to participate. All of my questions have been answered to my satisfaction and I understand that I am free to request information at any stage. I understand that reasonable precautions have been taken to protect data transmitted by email (all data is protected by SSL encryption) but that the security of the information cannot be guaranteed.

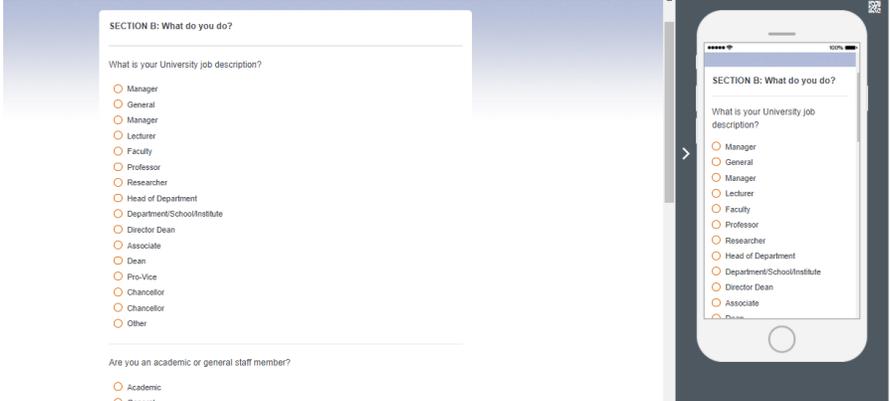
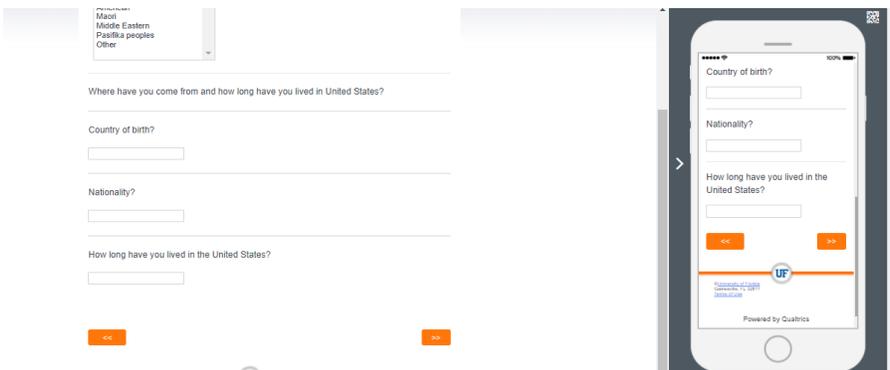
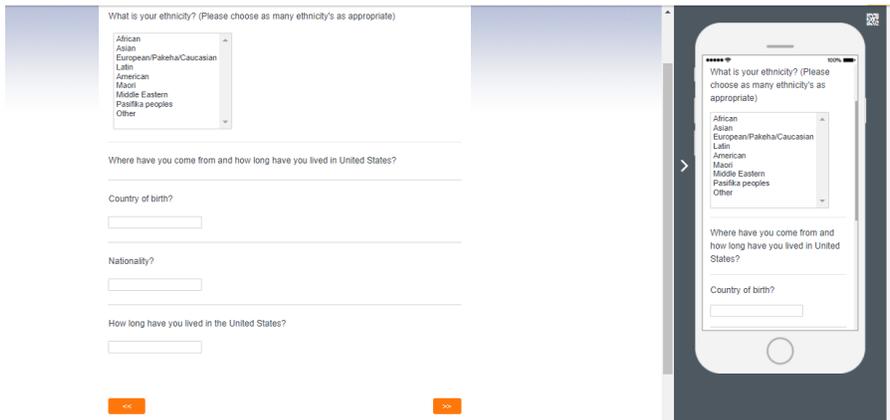
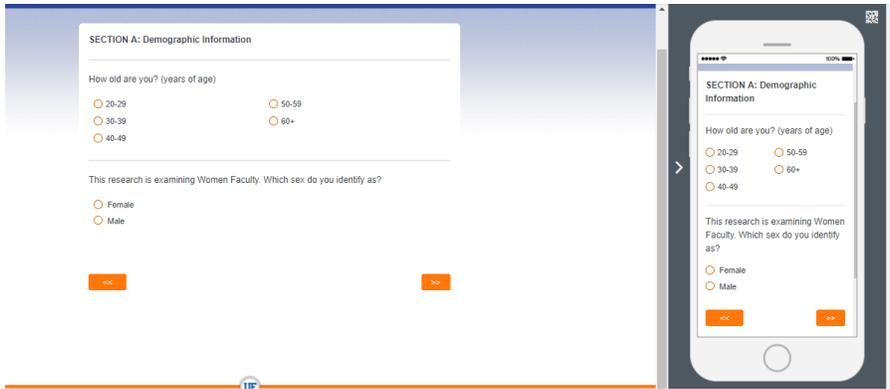
This study was APPROVED BY THE UNIVERSITY OF FLORIDA IRB COMMITTEE on March 13, 2017 for 6 years from 2017 to 2023. Reference Number IRB201700283

I agree to take part in this project.

Yes
 No

Survey Formatting
There are three question sections to this survey:
i) Completion of biographical information,
ii) Description of your role(s) i.e. job description, and
iii) Writing about incidents that have helped or hindered your advancement in university leadership.

The mobile version shows the same content adapted for a smaller screen, including the consent form, the agreement section with radio buttons, and the survey formatting section.



Are you an academic or general staff member?

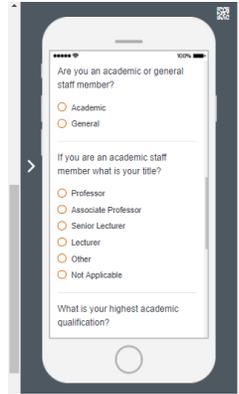
Academic
 General

If you are an academic staff member what is your title?

Professor
 Associate Professor
 Senior Lecturer
 Lecturer
 Other
 Not Applicable

What is your highest academic qualification?

Bachelors
 Honours
 Dip Grad
 PGDip
 Masters
 PhD
 MD
 JD
 -

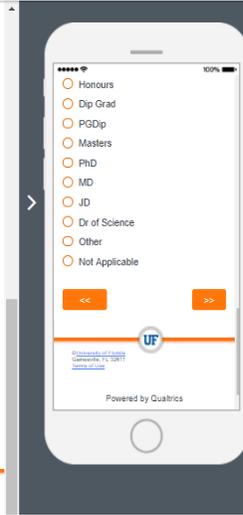


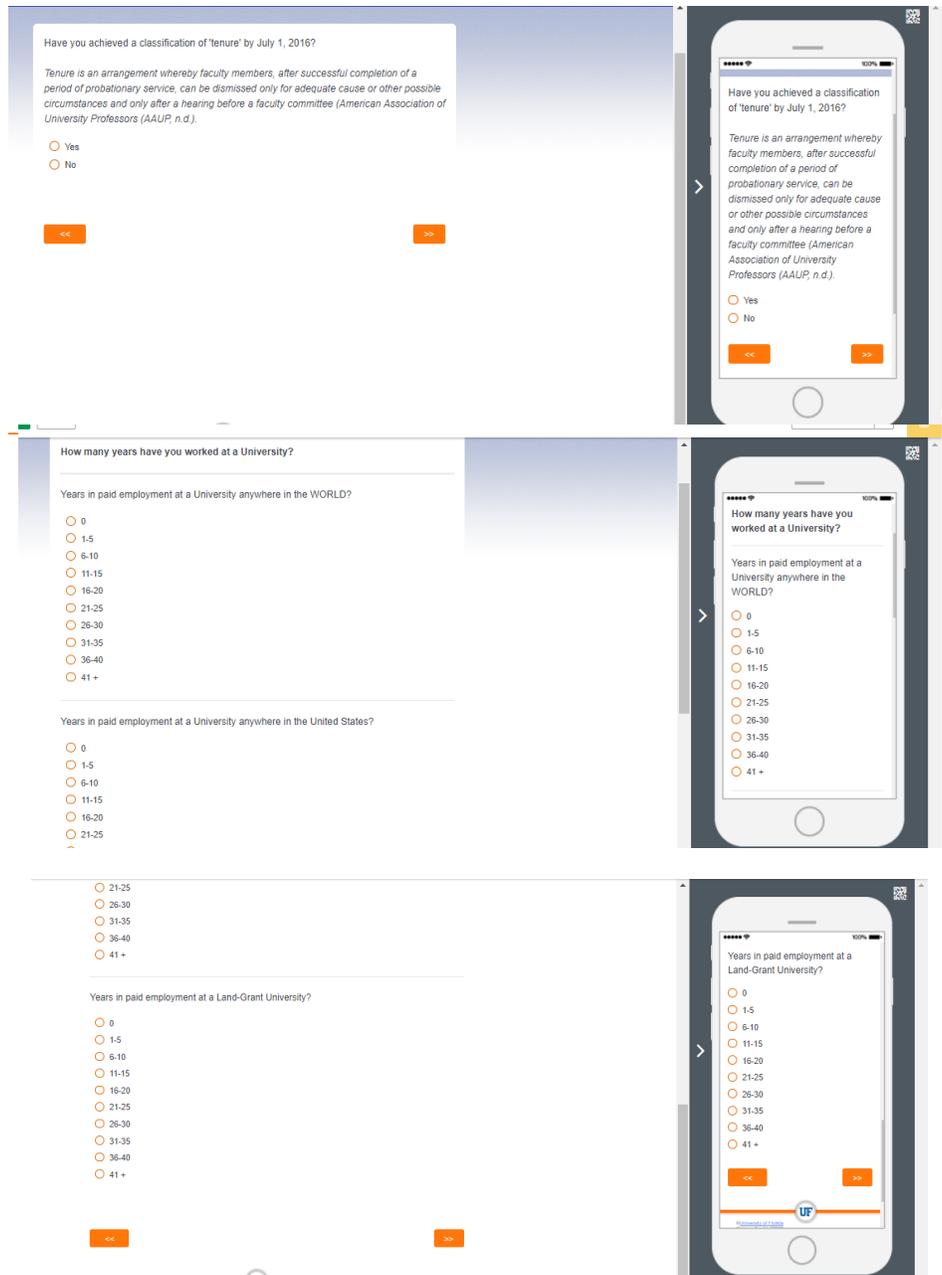
Senior Lecturer
 Lecturer
 Other
 Not Applicable

What is your highest academic qualification?

Bachelors
 Honours
 Dip Grad
 PGDip
 Masters
 PhD
 MD
 JD
 Dr of Science
 Other
 Not Applicable

<< >>





SECTION C: Incidents that have helped or hindered your advancement

You are now invited to describe incidents that have helped or hindered your advancement in university leadership.

We are seeking stories about both work and non-work related experiences since life-changing events outside work often impact on career development.

We are especially interested in 'complete' stories.

These are stories with three parts:

- a trigger: something starts off an incident,
- an action: some action or actions happen,
- an outcome: there is some kind of conclusion, perhaps a change, as a result of the experience.

Our questions ask about work and non-work situations so you can nominate up to two incidents related to each question. This means you can contribute up to 8 stories in total.

You can also choose whether or not to complete all sections by simply pushing the 'Next' button when you are ready to go on.

Information you enter is saved whenever you push 'next'.

You can exit and re-enter the survey as often as you like.

However, entry to the survey is closed after you submit your entries by pushing the 'Done' button on the final page.

Here is an example of a 'complete' story...

These are stories with three parts:

- a trigger: something starts off an incident,
- an action: some action or actions happen,
- an outcome: there is some kind of conclusion, perhaps a change, as a result of the experience.

Our questions ask about work and non-work situations so you can nominate up to two incidents related to each question. This means you can contribute up to 8 stories in total.

You can also choose whether or not to complete all sections by simply pushing the 'Next' button when you are ready to go on.

Information you enter is saved whenever you push 'next'.

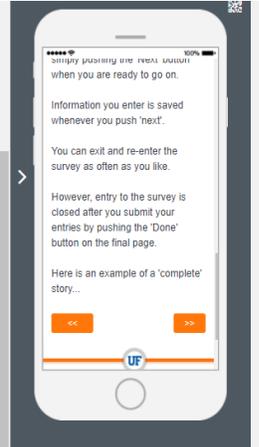
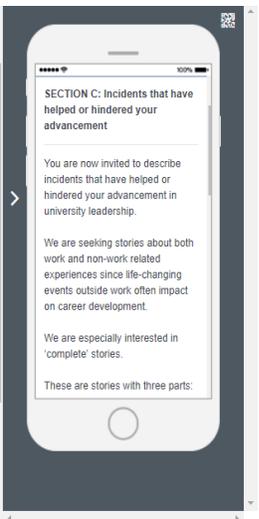
You can exit and re-enter the survey as often as you like.

However, entry to the survey is closed after you submit your entries by pushing the 'Done' button on the final page.

Here is an example of a 'complete' story...

<<
>>

UF



A complete story...

"In my second year my Department Head sent me details about an international conference and suggested that I should write a paper and present at it. It had never occurred to me that I could do such a thing before that. I was just thinking about teaching my classes and focusing on the day to day tasks. But I thought, 'Why not?' and gave it a go. I didn't find that first paper all that easy to write because I had to work out what tone and content was right and I didn't know what to expect when presenting. But I kept at it. And the outcome? Well, now I have an extensive conference publication record and am part of an international network. Presenting at conferences has helped me get up the academic ladder. I believe it all began from that one small 'oh-by-the-way' communication."

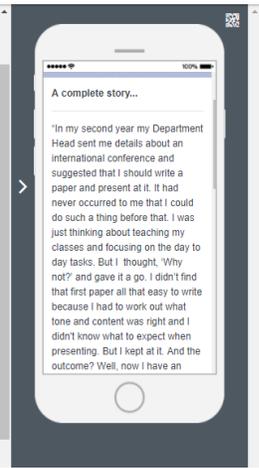
Your own stories can be as long or short, descriptive or otherwise as you wish. The stories will be examined using the 'critical incident technique', and information will be grouped into categories which help inform professional development practices.

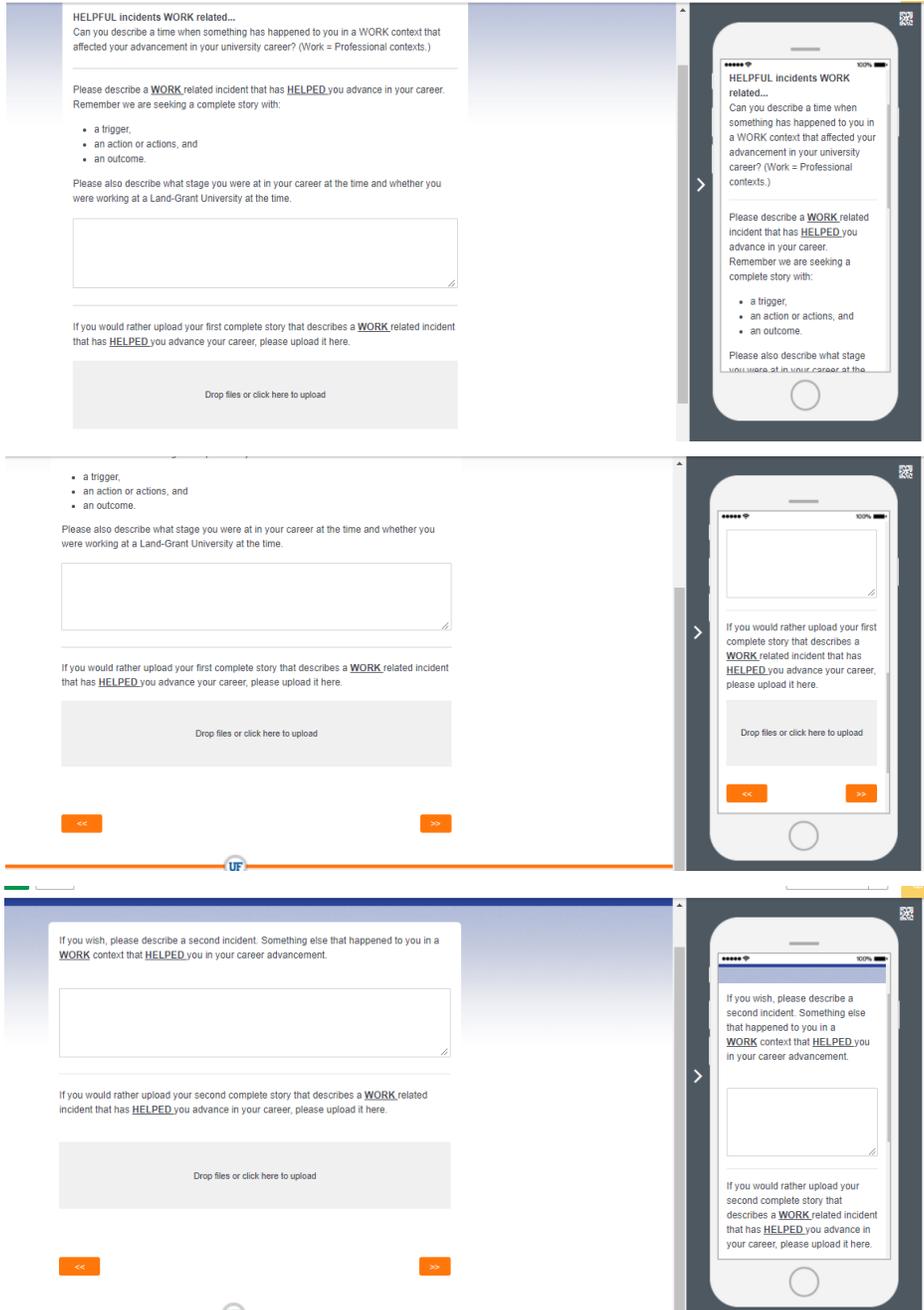
A reminder:
You will not be personally identified in the outcomes from this project.

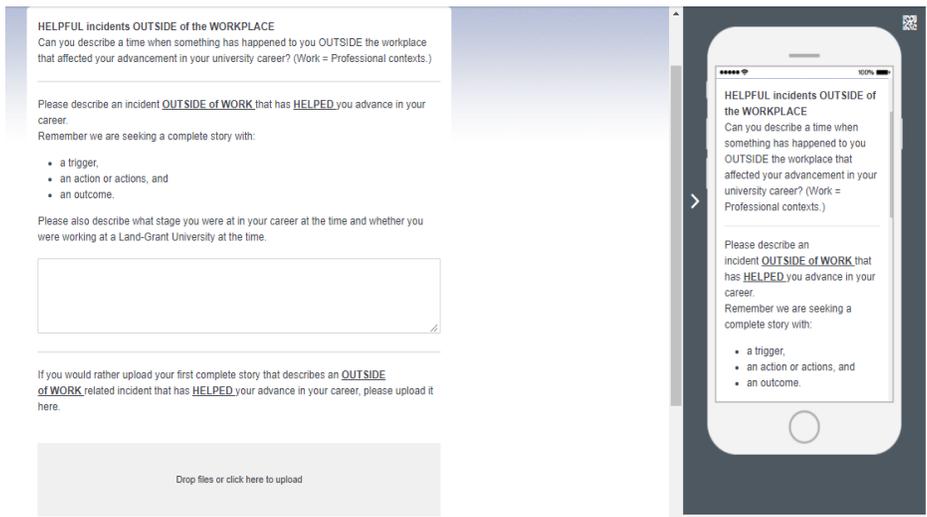
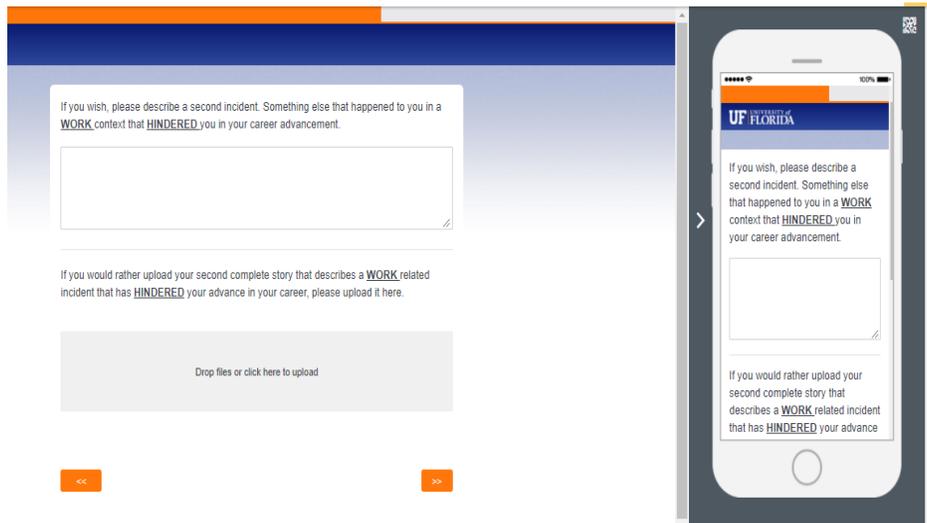
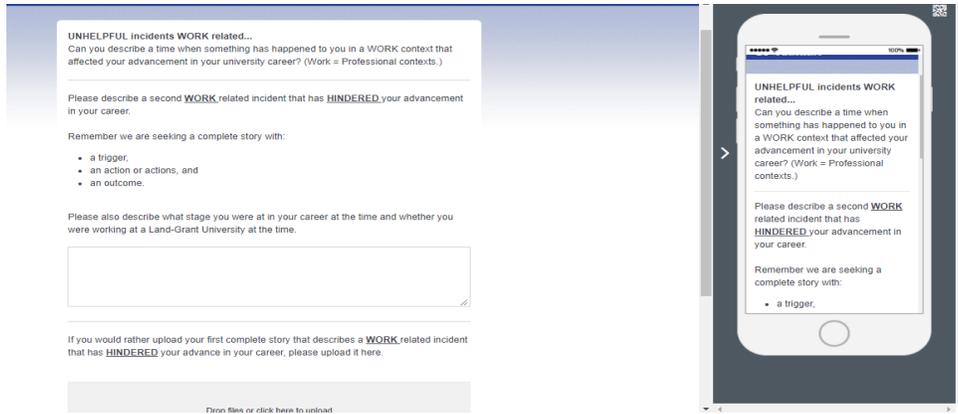
We are interested in:

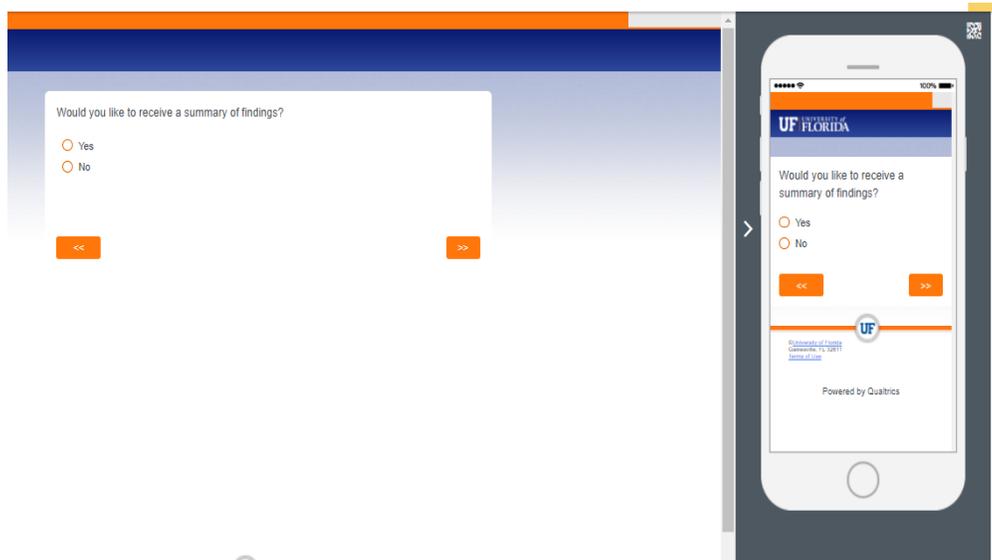
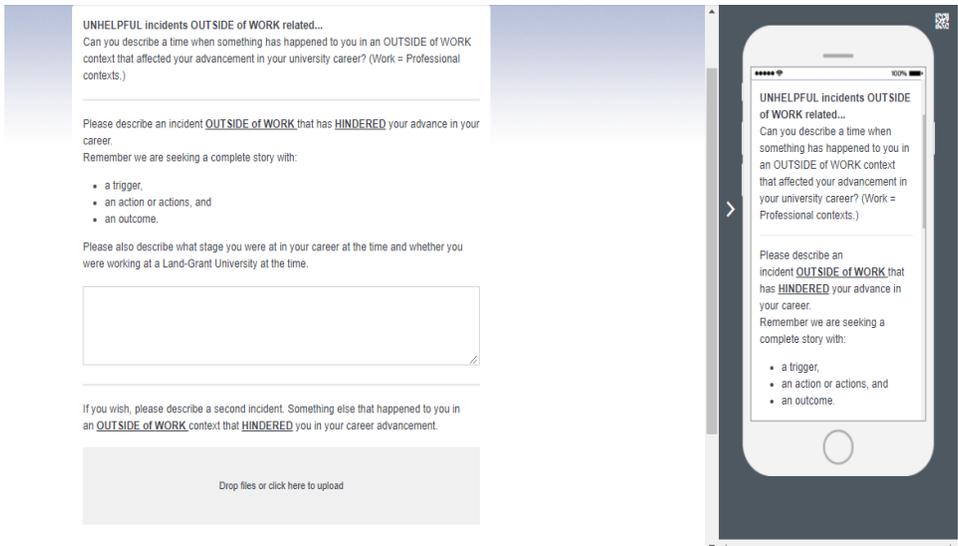
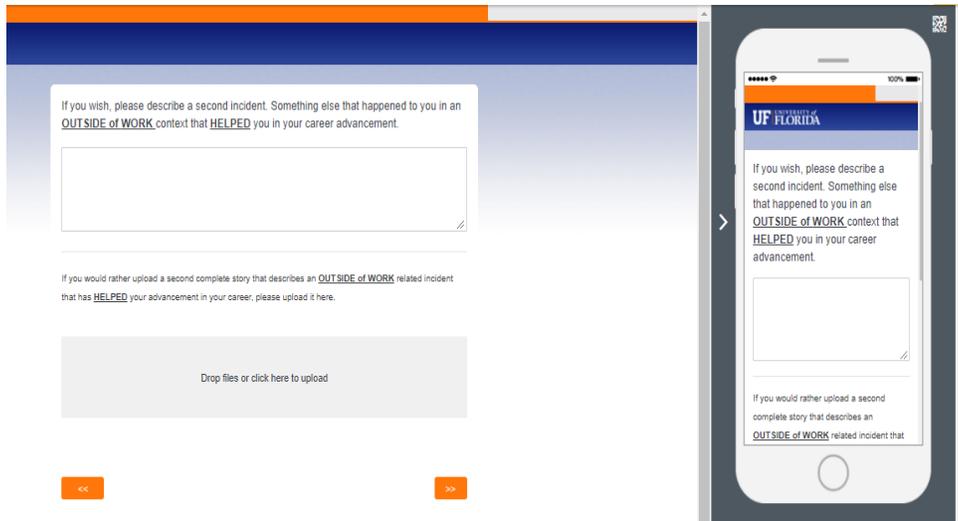
- stories about what has helped in your university career development,
- stories about what has hampered your university career development, and
- other issues you want the research group to know about.

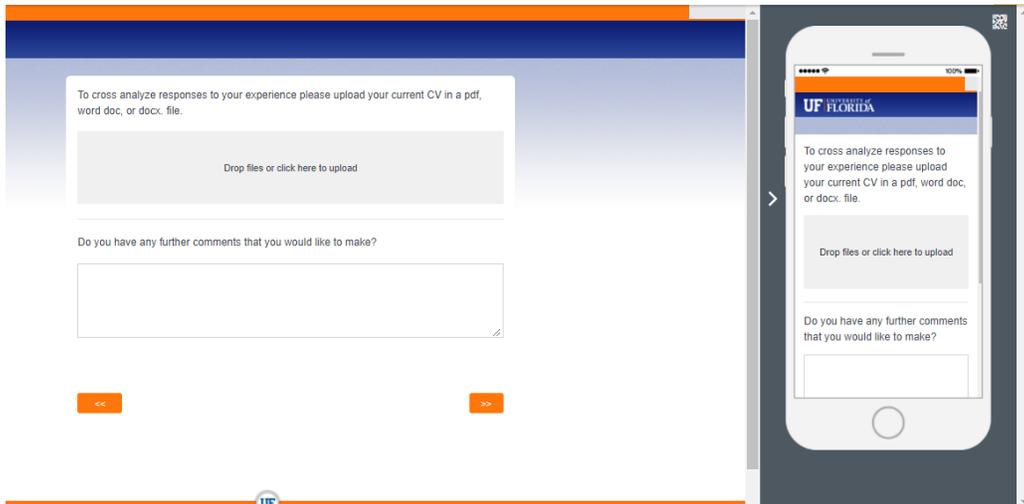
<<
>>











This is the final page of the survey.

Thank you for taking the time to consider and communicate the events that have influenced your career development.

You can submit your response by selecting 'DONE' or return to edit earlier pages by selecting 'PREV'.

You might like to check you have given us complete stories... and that you have indicated where you were in your career at the time of the incident.

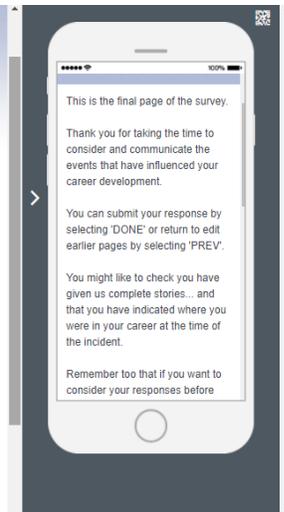
Remember too that if you want to consider your responses before submitting your entries you don't have to press '>>>' now... instead you can go back or exit Qualtrics selecting the using the 'EXIT THIS SURVEY' button on the top right hand side of the page. You can then come back later.

However, if you do choose to come back later please remember your survey is not finished until you return and select '>>>>'.

Thanks again!

Carolynn

Carolynn Nath Komanski, University of Florida
Dr. Nicole Stedman, University of Florida
Dr. Kirby Barrick, University of Florida
Dr. Lisa Lundy, University of Florida
Dr. Angel Kowlek-Folland, University of Florida



APPENDIX E

E-MAIL CONFIRMATIONS FOR STUDY REPLICATION

Dr. Wilson,

I hope that you are having a wonderful week.

Just wanted to take a moment and follow up on my email below regarding the instrument utilized in the following article:

Airini, Collings, S., Conner, L., McPherson, K., Midson, B. and Wilson, C. (2011). Learning to be leaders in

higher education: What helps or hinders women's advancement as leaders in universities. *Educational Management Administration & Leadership*, 39(1), 44–62.
DOI: 10.1177/1741143210383896

Dr. Airini noted that you would be the authoring team contact to obtain this information.

Do you by chance have timeline in which I may be able to attain the instrument?

Please let me know if you have any questions.

Best Regards,

Carolynn

Dean Airini,

I hope this message finds you well.

My name is Carolynn Nath Komanski, I am a graduate student at the University of Florida perusing my PhD in Agricultural Education and Communications with a specialization in Leadership Development. Simultaneously, I am also a full time employee of the University of Florida overseeing the protection of minors and youth who participate in events or activities with the university.

My research interests are in female faculty and academic leaders progression at Land Grant Universities in the United States. Specifically what inhibits and supports them to their attain their leadership goals within the academy.

I came across an article you and your colleagues wrote in 2011:

Airini, Collings, S., Conner, L., McPherson, K., Midson, B. and Wilson, C. (2011). Learning to be leaders in higher education: What helps or hinders women's advancement as leaders in universities. *Educational Management Administration & Leadership*, 39(1), 44–62.
DOI: 10.1177/1741143210383896

I am very interested in the instrumentation utilized in this study and would like to consider utilizing it to replicate a study in the United States at Land Grant institutions.

Would it be possible for you your colleagues to share the instrumentation used in this article and was used for the development of the L-SHIP (Leadership -Supporting Higher Intent & Practice) toolkit.

Additionally, is there a location in which the L-SHIP toolkit is shared? I was searching the internet and was unable to find it.

Please let me know if you have any questions.

Best Regards,

Carolynn

Dr. Conner,

I hope this message finds you well.

My name is Carolynn Nath Komanski, I am a graduate student at the University of Florida perusing my PhD in Agricultural Education and Communications with a specialization in Leadership Development.

My research interests are in female faculty and academic leaders progression at Land Grant Universities in the United States. Specifically what inhibits and supports them to their attain their leadership goals within the academy.

I came across an article you and your colleagues wrote in 2011:

Airini, Collings, S., Conner, L., McPherson, K., Midson, B. and Wilson, C. (2011). Learning to be leaders in higher education: What helps or hinders women's advancement as leaders in universities. *Educational Management Administration & Leadership*, 39(1), 44–62.
DOI: 10.1177/1741143210383896

I am very interested in the instrumentation utilized in this study and would like to consider utilizing it to replicate a study in the United States at Land Grant institutions.

Would it be possible for you your colleagues to share the instrumentation used in this article and was used for the development of the L-SHIP (Leadership -Supporting Higher Intent & Practice) toolkit.

Additionally, is there a location in which the L-SHIP toolkit is shared? I was searching the internet and was unable to find it.

Please let me know if you have any questions.

Best Regards,

Carolynn

Thank you very much for the update.

Have a lovely week.

Carolynn

From: Airini
Sent:
To: Carolynn Komanski
Subject: Re: Inquiry regarding

Thanks Carolynn. Thank you for your interest in this research. I understand you have contacted each of the research team. Cheryl will be in touch with the requested information.

All the best for your research.

Airini

Professor Airini
Dean, Faculty of Education and Social Work
Thompson Rivers University
Kamloops, BC
CANADA
Tel: ---
Skype: :

Sent from my iPhone

APPENDIX F IRB APPROVAL LETTER



Behavioral/Social/Health Services Institutional Review Board
PWA00001790

PO Box 112250
Gainesville FL 32611-2250
Telephone: (352) 392-9455
Facsimile: (352) 392-9294
Email: irb@ufl.edu

DATE: 3/15/2017
TO:Carolynn Komanski

FROM: Ira Fischler, Ph.D., Professor Emeritus
Chair IRB-02

IRB#: **IRB201700283**
TITLE: Factors Influencing Women Faculty Advancement as Leaders in Agricultural Fields at Land-Grant Institutions

Approved as Exempt

You have received IRB approval to conduct the above-listed research project. Approval of this project was granted on 3/15/2017 by IRB-02. This study is approved as exempt because it poses minimal risk and is approved under the following exempt category/categories:

2. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures, or the observation of public behavior, so long as confidentiality is maintained. If both of the following are true, exempt status can not be granted: (a) Information obtained is recorded in such a manner that the subject can be identified, directly or through identifiers linked to the subject, and (b) Subject's responses, if known outside the research, could reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability or reputation.

Should the nature of the study change or you need to revise the protocol in any manner please contact this office prior to implementation.

Study Team:

Nicole Stedman Co-Investigator

The Foundation for The Gator Nation
an Equal Opportunity Institution

Confidentiality Notice: This e-mail message, including any attachments, is for the sole use of the intended recipient(s), and may contain legally privileged or confidential information. Any other distribution, copying, or disclosure is strictly prohibited. If you are not the intended recipient, please notify the sender and destroy this message immediately. Unauthorized access to confidential information is subject to federal and state laws and could result in personal liability, fines, and imprisonment. Thank you.

LIST OF REFERENCES

- Adelman, C. (1983). The major seventh: Standards as a leading tone in higher education. *New Directions for Higher Education*, 43, 39-54
- Acker, S. (1992). New perspectives on an old problem: The position of women academics in British higher education. *Higher Education*, 24, 57-75.
- Agricultural College Act of 1890 (Second Morrill Land Grant Act), ch. 841, 26 Stat. 417, 7 U.S.C. §§ 322 et seq.
- Ahmed, S., Sclafani, A., Aquino, E., Kala, S., Barias, L., & Eeg, J. (2017). Building student capacity to lead sustainability transitions in the food system through farm-based authentic research modules in sustainability sciences (FARMS). *Elem Sci Anth*, 5.
- Airini, Collings, S., Conner, L., McPherson, K., Midson, B. and Wilson, C. (2011). Learning to be leaders in higher education: What helps or hinders women's advancement as leaders in universities. *Educational Management Administration & Leadership*, 39(1), 44-62.
- Aisenberg, N., & Harrington, M. (1988). *Women of academe: Outsiders in the sacred grove*. Amherst: The University of Massachusetts Press.
- Aiston, S. J., & Jung, J. S. (2015). Women academics and research productivity: An international comparison. *Gender and Education*, 27(3), 205-220.
- Almer, E. D., Baldwin, A. A., Jones-Farmer, A., Lightbody, M., & Single, L. E. (2016). Tenure-Track Opt-Outs: Leakages from the Academic Pipeline. In *Advances in Accounting Education: Teaching and Curriculum Innovations* (pp. 1-36). Emerald Group Publishing Limited.
- Altheide, D. (1996). *Qualitative media analysis*. Thousand Oaks, CA: Sage Publications.
- American Association for University Professors. (n.d). Tenure. Retrieved from: <http://www.aaup.org/issues/tenure>
- American Association of University Professors [AAUP]. (1940). 1940 Statement of principles on academic freedom and tenure. Retrieved from: <https://www.aaup.org/file/1940%20Statement.pdf>
- American Association of University Professors [AAUP]. (2003). *Unequal progress: The annual report on the economic status of the profession, 2002-03*. <https://www.aaup.org/reports-publications/2002-03salarysurvey>
- American Association for University Professors. (2005). *Inequities persist for women and non-tenure-track faculty: The annual report on the economic status of the*

- profession. Retrieved from <https://www.aaup.org/reports-publications/2004-05salarysurvey>
- AAUP. (2006). The Devaluing of Higher Education: The Annual Report on the Economic Status of the Profession, 2005-06. <https://www.aaup.org/reports-publications/2005-06salarysurvey>
- AAUP. (2007). Financial Inequality in Higher Education: The Annual Report on the Economic Status of the Profession, 2006-07. <https://www.aaup.org/reports-publications/2006-07salarysurvey>
- AAUP. (2008). Where Are the Priorities? The Annual Report on the Economic Status of the Profession, 2007-08. <https://www.aaup.org/reports-publications/2007-08salarysurvey>
- AAUP. (2009). On the Brink: The Annual Report on the Economic Status of the Profession, 2008-09. <https://www.aaup.org/reports-publications/2008-09salarysurvey>
- AAUP. (2010). No Refuge: The Annual Report on the Economic Status of the Profession, 2009-10. <https://www.aaup.org/reports-publications/2009-10salarysurvey>
- AAUP. (2011). A Very Slow Recovery: The Annual Report on the Economic Status of the Profession, 2011-12. <https://www.aaup.org/reports-publications/2011-12salarysurvey>
- AAUP. (2012). Here's the News: The Annual Report on the Economic Status of the Profession, 2012-13. <https://www.aaup.org/report/heres-news-annual-report-economic-status-profession-2012-13>
- AAUP. (2013). Losing focus: The annual report on the economic status of the profession, 2013-14. <https://www.aaup.org/reports-publications/2013-14salarysurvey>
- AAUP. (2014). Losing focus: The annual report on the economic status of the profession, 2013-14. <https://www.aaup.org/reports-publications/2013-14salarysurvey>
- AAUP. (2015). Busting the myths: The annual report on the economic status of the profession, 2014-15. <https://www.aaup.org/reports-publications/2014-15salarysurvey>
- AAUP. (2015). Policy Documents and Reports, 11th ed. [Baltimore: Johns Hopkins University Press, 2015], 94–98.

- AAUP. (2016). Higher Education at a Crossroads: The Annual Report on the Economic Status of the Profession, 2015-16. <https://www.aaup.org/report/higher-education-crossroads-annual-report-economic-status-profession-2015-16>
- AAUP. (2017). Visualizing change The Annual Report on the Economic Status of the Profession, 2016-17. Retrieved <https://www.aaup.org/report/visualizing-change-annual-report-economic-status-profession-2016-17>
- Alemán, A. M. M. (2017). Generational Dispositions of Women Faculty: A Critical Examination. In *Critical Approaches to Women and Gender in Higher Education* (pp. 215-234). Palgrave Macmillan US.
- Allen, T. D., French, K. A., & Poteet, M. L. (2016). Women and career advancement. *Organizational Dynamics*, 3(45), 206-216.
- American Council on Education [ACE]. (2009, March). The 2009 COA census: A national profile of chief academic officers. Washington, DC: Author.
- American Council on Education [ACE], American Association of University Professors [AAUP], and United Educators [UE]. (2000). Practice good tenure evaluation in advice for tenured faculty, department chairs, and academic administrators. Washington, DC: American Council on Education. Retrieved from: <https://www.aaup.org/sites/default/files/files/Good%20Practice%20in%20Tenure%20Evaluation.pdf>
- Andenoro, A. C., Allen, S. J., Haber-Curran, P., Jenkins, D. M., Sowcik, M., Dugan, J. P., & Osteen, L. (2013). National Leadership Education research agenda 2013-2018: Providing strategic direction for the field of leadership education. Retrieved from Association of Leadership Educators website: <https://www.leadershipeducators.org/ResearchAgenda>.
- Anderson, K., & Jack, D. (1991). Learning to listen: Interview techniques and analyses. In S. Gluck & D. Patai (Eds.), *Women's words: The feminist practice of oral history* (pp.11-26). New York, NY: Routledge.
- Angen, MJ. (2000). Evaluating interpretive inquiry: Reviewing the validity debate and opening the dialogue. *Qualitative Health Research*. 10(3). 378-395.
- Antonella, E. (2016). Research 2.0 and the impact of digital technologies on scholarly inquiry. IGI Global, DOI: 10.4018/978-1-5225-0830-4
- Antrobus, P. (2003). Personal quote. In *Association for Women's Rights in Development*.(2003) An advocacy guide for feminists. Young Women and Leadership.
- Armenti, C. (2004). May babies and post tenure babies: Maternal decisions of women professors. *Review of Higher Education*, 27, 211–231.

- Arthur, M. B., & Rousseau, D. M. (Eds.). (2001). *The boundaryless career: A new employment principle for a new organizational era*. Oxford University Press on Demand.
- Ashcraft, K. L., & Mumby, D. K. (2004). *Reworking gender: A feminist communicology of organization*. Thousand Oaks, CA: Sage.
- Association for Agriculture Education [AAAE]. (2011). National research agenda 2011-2015. Retrieved from:
<http://aaaonline.org/Resources/Documents/AAAE%20National%20Research%20Agenda.pdf>
- Association for Agriculture Education [AAAE]. (2015). National research agenda 2016-2020. Retrieved from:
http://aaaonline.org/resources/Documents/AAAE_National_Research_Agenda_2016-2020.pdf
- Association for Women's Rights in Development. (2003). An advocacy guide for feminists. *Young Women and Leadership*, 1, Retrieved from:
http://iknowpolitics.org/sites/default/files/feminist_advocacy_guide_awid_2.pdf
- Astin, A. W. & Astin, H. S. (2000) *Leadership Reconsidered: Engaging Higher Education in Social Change*. Battle Creek, MI: W.K. Kellogg Foundation.
- Astin, H. S., & Leland, C. (1991). *Women of influence, women of vision: A cross-generational study of leaders and social change*. San Francisco: Jossey-Bass.
- Bailyn, L. (2003). Academic careers and gender equality: Lessons learned from MIT. *Gender, Work and Organization*, 10, 137-153.
- Baker, M. (2010). Career confidence and gendered expectations of academic promotion. *Journal of Sociology*, 46, 317-334
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Barbezat, D.A. (2002). History of pay equity studies. In R. Toutkoushian (Ed.), *Conducting salary-equity studies: Alternative approaches to research*. (pp. 9-40). San Fransisco: Jossey Bass.

- Barbezat, D.A. & Hughes, J. (2005). Salary structure effects and the gender pay ca in academia. *Research in Higher Education*, 46, 621-640.
- Basford, T.E, Offermann, L.R, and Behrend, T.S. (2013). Do you see what I see?: Perceptions of gender microaggressions in the workplace. *Psychology of Women Quarterly*. 38: 340-349. DOI: 10.1177/0361684313511420
- Bhattacharjee, Y. (2004). Family matters: Stopping tenure clock may not be enough. *Science*, 306(5704), 2031.
- Beddoes, K. (2016). Selling policy short? Faculty perspectives on the role of policy in addressing women's underrepresentation in engineering education. *Studies in Higher Education*. 1-12. <http://dx.doi.org/10.1080/03075079.2016.1266610>
- Beintema, N. (2006). Participation of female agricultural scientists in developing countries. *Agricultural Science and Technology Indicators Brief*. Washington, DC: IFPRI.
- Benschop, Y. & Brouns, M. (2003). Crumbling ivory towers: Academic organizing and its gender effects. *Gender, Work and Organization*, 10, 194-212.
- Bergvall, V. (2014). *Rethinking language and gender research: Theory and practice*. Routledge.
- Bielby, R., Posselt, J. R., Jaquette, O., & Bastedo, M. N. (2014). Why are women underrepresented in elite colleges and universities? A non-linear decomposition analysis. *Research in Higher Education*, 55(8), 735-760.
- Biernat, M., & Wortman, C. B. (1991). Sharing of home responsibilities between professionally employed women and their husbands. *Journal of Personality and Social Psychology*, 60, 844–860.
- Bisbee, D.C. (2005). Current practices of land grant universities for identifying and training academic leaders. PhD diss., University of Arkansas, 2005. Retrieved from <http://search.proquest.com/docview/305026855?pq-origsite=summon&accountid=10920>
- Bisbee, D.C. (2007). Looking for leaders: Current practices in leadership identification in higher education. *Planning and Changing*, 38, 77-88. Retrieved from: <http://files.eric.ed.gov/fulltext/EJ785728.pdf>
- Bishop, R. (1998). Freeing ourselves from neo-colonial domination in research: Amaori approach to creating knowledge. *Qualitative Studies in Education* 11(2): 199–219.
- Bishop, R. and Glynn, T. (1999). *Culture counts: Changing power relations in education*. Palmerston North: Dunmore Press.

- Blackwell, D. L., & Lichter, D. T. (2000). Mate selection among married and cohabiting couples. *Journal of Family Issues*, 21, 275–302.
- Blackburn, T. R., & Lawrence, H. J. (1995). *Faculty at work: Motivation, expectation, satisfaction*. Baltimore: John Hopkins University Press.
- Blackmore, J. (2014). 'Wasting talent'? Gender and the problematics of academic disenchantment and disengagement with leadership. *Higher Education Research & Development*, 33(1), 86-99.
- Blackmore, J., Sanchez-Moreno, M., Sawers, N. (2015). Globalized re/gendering of the academy and leadership. *Gender and Education*, 27(3) Special Issue: SI
Published: APR 16 2015.
- Bok, D. (2015). *Higher education in America*. Princeton University Press.
- Boice, R. (1992). *The new faculty member*. San Francisco: Jossey Bass.
- Boice, R. (2000). *Advice for new faculty members: Nihil nimus*. Boston: Allyn and Bacon.
- Bok, D. (1982). *Beyond the Ivory Tower: Social Responsibilities of the Modern University*. Cambridge: Harvard University Press.
- Bok, D. (1990). *Universities and the Future of America*. Durham: Duke University Press.
- Bonner, J.T. (1996). *Land Grant Universities are Changing*. Retrieved from:
<http://www.adec.edu/clemson/papers/bonnen1.html>
- Bonner, J.T. (1998). *The Land Grant Idea and the Evolving Outreach University*. Retrieved from: <http://www.adec.edu/clemson/papers/bonnen2.html>
- Bowen, G. A. (2005). Preparing a qualitative research-based dissertation: Lessons learned. *The Qualitative Report*, 10(2), 208-222.
- Bowman, M. J. (1962). The land-grant colleges and universities in human-resource development. *The Journal of Economic History*, 22(4), 523-546.
- Boyatzis, R. E., and McKee, A. (2005). *Resonant Leadership: Renewing Yourself and Connecting with Others through Mindfulness, Hope, and Compassion*. Boston, MA: Harvard Business School Press.
- Butler, J. (1990). *Gender trouble: Feminism and the subversion of identity*. New York, NY: Routledge.
- Brehm, U., & Buchholz, S. (2014). Is there a wrong time for a right decision? The impact

- of the timing of first births and the spacing of second births on women's careers. *Journal of Family Research*, 26(3).
- Brown, S.M. (1979). Male versus female leaders: A comparison of empirical studies. *Sex Roles: A Journal of Research*, 5 (5). 595-611.
- Brown, J. D. (2014). Self-esteem and self-evaluation: Feeling is believing. *Psychological perspectives on the self*, 4, 27-58.
- Buunk, B. P., Dijkstra, P., Fetchenhauer, D., & Kenrick, D. T. (2002). Age and gender differences in mate selection criteria for various involvement levels. *Personal Relationships*, 9, 271–278.
- Burelli, N. (2008). Thirty-three years of women in s & e faculty positions. National Science Foundation *NSF 08* (308) 1-10. Retrieved from: <https://wayback.archive-it.org/5902/20160210222049/http://www.nsf.gov/statistics/infbrief/nsf08308/nsf08308.pdf>
- Butler, J., & Scott, J. W. (Eds.). (2013). *Feminists theorize the political*. Routledge.
- CADE Executive Committee. (2011, November 14). The CADE Strategic Plan. Retrieved from: <http://www.aplu.org/members/commissions/access-diversity-and-excellence/cade-strategic-plan.html>.
- Campbell, C. M., & O'Meara, K. (2014). Faculty agency: Departmental contexts that matter in faculty careers. *Research in Higher Education*, 55(1), 49-74.
- CAUT. (2002). Ivory towers: Feminist audits. Year 2002 figures. Retrieved from <https://www.caut.ca/docs/almanac/almanac-2002.pdf?sfvrsn=0>
- CATU (Canadian Association of University Teachers). (2003). CAUT almanac of post-secondary education in Canada. Retrieved from <https://www.caut.ca/latest/publications/almanac>
- CAUT. (2005). Almanac of post-secondary education in 2005. Ottawa: CAUT.
- CAUT. (2005). Ivory Towers: Feminist and equity audits 2005. Ottawa. CAUT.
- Cavanaugh, J. M. (2017). An Examination of Facilitators and Barriers to Academic Careers for Women in STEM.
- Caplan, P. J. (1993). Lifting a ton of feathers: A woman's guide to surviving in the academic world. Toronto: University of Toronto Press.
- Carli, L.L. & Eagly, A.H. (2016). Women face a labyrinth: An examination of metaphors for women leaders. *Gender in Management*, 31 (8).514-527, <https://doi.org/10.1108/GM-02-2015-0007>

- Carroll, S.J. (1984). Feminist scholarship on political leadership. In B. Kellerman (ed.) *Leadership: Multidisciplinary Perspectives*. Englewood Cliffs, NJ.: Prentice-Hall, 1984.
- Carter, J. A., & Avalos, M. D. (2016). KEEPING ON THE ACADEMIC TRACKS. *Identity Intersectionalities, Mentoring, and Work–Life (Im) Balance: Educators (Re) Negotiate the Personal, Professional, and Political*, 121.
- Carter, M. J. (2014). Gender socialization and identity theory. *Social Sciences*, 3(2), 242-263.
- Ceci, S. J., Ginther, D. K., Kahn, S., & Williams, W. M. (2014). Women in academic science: A changing landscape. *Psychological Science in the Public Interest*, 15(3), 75-141.
- Charbeneau, J. (2015). White faculty transforming whiteness in the classroom through pedagogical practice. *Race Ethnicity and Education*, 18(5), 655-674.
- Chhachhi, A., & Truong, T. Đ. (2009). Gender, poverty and social justice. *International Institute of Social Studies (ISS)*.
- Childress, A. L. (2015). Examination of decision-making processes for resource allocation at the college-level and school-level within an academic unit (Doctoral dissertation, Purdue University).
- Chin, J. L. (2007) Overview: Women and Leadership: Transforming Visions and Diverse Voices, in *Women and Leadership: Transforming Visions and Diverse Voices* (eds J. L. Chin, B. Lott, J. K. Rice and J. Sanchez-Hucles), Blackwell Publishing Ltd, Oxford, UK. doi: 10.1002/9780470692332.ch
- Cho, S., Crenshaw, K. W., & McCall, L. (2013). Toward a field of intersectionality studies: Theory, applications, and praxis. *Signs: Journal of Women in Culture and Society*, 38(4), 785-810.
- Chell, E. (1998). Critical incident technique.
- Christy, R. D., & Williamson, L. (Eds.). (1992). *A century of service: Land-grant colleges and universities, 1890-1990*. Transaction Publishers.
- Clery, S.B. (2012). Faculty salaries: 2010-2012. *The Almanac of Higher Education*. Retrieved from: <http://nea.org/assets/docs/2012.Almanac.faculty.salaries.pdf>.
- Clery, S.B. (2016). Faculty salaries: 2010-2016. *The Almanac of Higher Education*. Retrieved from: <http://nea.org/assets/docs/2016.Almanac.faculty.salaries.pdf>.
- Coates, J. (2015). *Women, men and language: A sociolinguistic account of gender differences in language*. Routledge.

- Cohen D, Crabtree B. "Qualitative Research Guidelines Project." July 2006.
<http://www.qualres.org/HomeMemb-3696.html>
- Colleges of Agriculture at the Land Grant Universities (1996). Public Service and Public Policy
- Collins, L. H., Chrisler, J. C., & Quina, K. (Eds.). (1998). *Arming Athena: Career strategies for women in academe*. Thousand Oaks, CA: Sage.
- Collins, M. E. (2008). Where have all the soils students gone?. *Journal of Natural Resources & Life Sciences Education*, 37(1), 117-124.
- Colorado Women's College. (2013). *Benchmarking women's leadership in the United States 2013*. Denver, CO: Colorado Women's College.
- Condon, W., Iverson, E. R., Manduca, C. A., Rutz, C., & Willett, G. (2016). *Faculty development and student learning: Assessing the connections*. Indiana University Press.
- Conger, J.A. and Kanungo, R.N. (1987). Toward a behavioral theory of charismatic leadership in organizational settings. *Academy of Management Review*, 12 (4). 637-647. Retrieved from:
https://www.researchgate.net/profile/Jay_Conger/publication/248126140_Toward_a_Behavioral_Theory_of_Charismatic_Leadership_in_Organizational_Settings/inks/55bf7ba808aec0e5f4475e3c.pdf
- Connell, R. W. (2014). *Gender and power: Society, the person and sexual politics*. John Wiley & Sons.
- Cook, S. G. (2001). Students give failing grade to PhD programs. *Women in Higher Education Newsletter*, 10, 27– 28. Retrieved from <http://www.phd-survey.org/news/>
- Comer, E. W., Medina, C. K., Negroni, L. K., & Thomas, R. L. (2017). Women Faculty of Color in a Predominantly White Institution: A Natural Support Group. *Social Work with Groups*, 40(1-2), 148-155.
- Corbally, J. (1956). The critical incident technique and educational research. *Educational Research Bulletin*, 35, 57-62.
- Cotterill, P. (1992). Interviewing women: issues of friendship, vulnerability, and power. *Women's Studies International Forum*, 15, 593-606. Retrieved from EBSCOhost.
- Crabb, S. & Ekberg, S. (2010). Retaining female postgraduates in academia: the role of

gender and prospective parenthood. *Higher Education Research and Development* 33 (6). 1099-1112.
<http://dx.doi.org/10.1080/07294360.2014.911251>

- Creswell, J.W. (1998). *Qualitative Inquiry and Research Design Choosing Among Five Traditions*. Thousand Oaks, CA: Sage Publications.
- Creswell, J.W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.
- Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Crotty, M. (2006). *The foundations of social research: Meaning and perspective in the research process*. London, England: Sage Publications.
- Cruz, A. *Int J Educ Adv* (2009) 9: 116. doi:10.1057/ijea.2009.25
- Cushing, P. (1996). Gendered conversational rituals on the Internet: An effective voice is based on more than simply what one is saying. *Anthropologica*, XXXVIII : 47-80.
- Davidson, M. and Burke, R. (2004). *Women in management world-wide: Facts, figures and analysis*. Aldershot:Gower Publishing.
- de Boer, B. J., van Hooft, E. J., and Bakker, A. B. (2015). Self-control at work: its relationship with contextual performance. *J. Manage. Psychol.* 30, 406–421. doi: 10.1108/JMP-08-2012-0237
- Damaske, S., Ecklund, E. H., Lincoln, A. E., & White, V. J. (2014). Male scientists' competing devotions to work and family: Changing norms in a male-dominated profession. *Work and occupations*, 41(4), 477-507.
- Deneef, A.L. & Goodwin, C.D. (1995). *The academics handbook (2nd Edition)*. Durham, NC: Duke.
- Delbecq, A.L., & Mills, P.K. (1985). Managerial practices that enhance innovation. *Organizational Dynamics*, 14, 24-34.
- Detweiler, J., LaWare, M., & Wojahn, P. (2017). Academic Leadership and Advocacy: On Not Learning In. *College English*, 79(5), 451.
- Deutsch, F. M., & Yao, B. (2014). Gender differences in faculty attrition in the USA. *Community, Work & Family*, 17(4), 392-408.
- Dever, M., Laffan, W., Boreham, P., Behrens, K., Haynes, M., Western, M. & Kubler, M.

- (2008). Gender differences in early post-PhD employment in Australian universities: The influence of PhD experience on women's academic careers: Final Report. Brisbane:University of Queensland, Retrieved from: <http://arts.monash.edu.au/womens-studies/research/projects/documents/report.pdf>.
- DeZure, D., Shaw, A., & Rojewski, J. (2014). Cultivating the next generation of academic leaders: Implications for administrators and faculty. *Change: The Magazine of Higher Learning*, 46(1), 6-12.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: the tailored design method*. John Wiley & Sons.
- Doherty, L. & Manfredi, S. (2006). Women's progression to senior positions in English universities. *Employee Relations*, 28, 553-572.
- Duderstadt, J. J. (2000). New roles for the 21st-century university. *Issues in Science and Technology* 16, (2). Retrieved from: <http://issues.org/16-2/duderstadt/>
- Dyer, J. E., Breja, L. M., & Wittler, P. S. H. (2002). Predictors of Student Retention in Colleges of Agriculture.
- Eagly, A.H. and Carli, L.L. (2007a). *Through the labyrinth: The truth about how women become leaders*. Boston, Mass: Harvard Business School Press.
- Eagly, A.H. and Carli, L.L. (2007b). Women and the labyrinth of leadership. *Harvard Business Review*. Retrieved from: <https://hbr.org/2007/09/women-and-the-labyrinth-of-leadership%20While%20others%20use%20%E2%80%9Cglass%20walls,%20glass%20cliffs>
- Enns, K. J., & Martin, M. J. (2015). Gendering Agricultural Education: A Study of Historical Pictures of Women in the Agricultural Education Magazine. *Journal of Agricultural Education*, 56(3), 69-89.
- Euben, D.R. (2000). Hiring and Promotion Legal Issues for Department Chairs. AAUP Counsel. Retrieved from: <https://www.aaup.org/issues/appointments-promotions-discipline%C2%A0/hiring-and-promotion-legal-issues-department-chairs>
- Evetts, J. (2014). *Women and career: themes and issues in advanced industrial societies*. Routledge.
- Farmer, A. (2008). Feminism today: The personal is still political. *Perspectives: A magazine for & about women lawyers*, 4-7. Retrieved from EBSCOhost.
- Fels, A. (2004, April). Do women lack ambition? *Harvard Business Review*, 50-60.
- Fiske, E.B. (2012). *World atlas of gender equality in education*. Paris: United Nations

Educational, Scientific and Cultural Organization.

- Fitzgerald, H. E., Bruns, K., Sonka, S. T., Furco, A., & Swanson, L. (2016). The centrality of engagement in higher education. *Journal of Higher Education Outreach and Engagement*, 20(1), 223-244.
- Flanagan, J. (1954). The critical incident technique. *Psychological Bulletin*, 51, 327–358.
- Fletcher, J. K. (1994). Castrating the female advantage: Feminist standpoint research and management science. *Journal of Management Inquiry*, 3(1), 74–82. doi: 10.1177/105649269431012.
- Fletcher, J. K. (2004). The paradox of postheroic leadership: An essay on gender, power, and transformational change. *The Leadership Quarterly*, 15(5), 647–661. doi: 10.1016/j.leaqua.2004.07.004
- Folbre, N. (1994). *Who pays for the kids?: Gender and the structures of constraint* (Vol. 4). Taylor & Francis US.
- Follett, M. P. (1924). *Creative experience*. New York, NY: Longmans Green.
- Fouad, N., Brehm, S., Hall, C.I., Kite, M.E., Hyde, J.S., & Russo, N.F. (2000). *Women in academe: Two steps forward, one step back: Report of the task force on women in academe*. Washington, C: American Psychological Association. Retrieved from: <https://www.apa.org/pi/women/programs/academe/taskforce-report.pdf>
- Foucault, M. (1982). The subject and power. *Critical Inquiry*, 8, 777-795.
- Furnham, A. (2016). *The elephant in the boardroom: The causes of leadership derailment*. Springer.
- Gangone, L.M. and Lennon, T. (2014). Benchmarking women's leadership in academia and beyond. In Longman, K., & Madsen, S. R. (2014). *Women and leadership in higher education*.
- Garcia, M. (Ed.) (2000). *Succeeding in an academic career: A guide for faculty of color*. Westport, CT: Greenwood Press.
- Geiger, R. L., Rothblatt, S., Woodward, K., Moses, Y., Kleinman, D. L., Melin, C., ... & Newfield, C. (2015). *A New Deal for the Humanities: Liberal Arts and the Future of Public Higher Education*. Rutgers University Press.
- Gerli, F., Bonesso, S., & Pizzi, C. (2015). Boundaryless career and career success: The impact of emotional and social competencies. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2015.01304>.

- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York, NY: Aldine De Gruyter.
- Glazer-Raymo, J. (2008). *Unfinished agendas: New and continuing challenges in higher education*. Baltimore, MD: Johns Hopkins University Press.
- Glesne, C. (2006). *Becoming qualitative researchers: An introduction*. Boston, MA: Pearson Education, Inc.
- Gluck, S. & Patai, D. (1991). *Women's words: The feminist practice of oral history*. New York, NY: Routledge.
- Golde, C.M., & Dore, T.M. (2001). At cross purposes: What the experiences of doctoral students reveal about doctoral education (www.phd-survey.org). Philadelphia: Pew Charitable Trusts.
- Gonzales, L.D. & Terosky, A.L. (2016). Collegueship in different types of post-secondary institutions: A lever for faculty vitality. *Studies in Higher Education*. 1-14. <http://dx.doi.org/10.1080/03075079.2016.125593>
- Greenwood, M. R. C. (1995). Societal expectations from research universities and the higher education system. p. 31-43 In. *Reinventing the Research University*, C. K. N. Patel, ed. Los Angeles: Regents of the University of California.
- Griffeth, L.L. (2013). *Growing into leadership: A study of the informal and incidental learning of women agricultural deans and vice presidents*. PhD diss., University of Georgia, 2013. Retrieved from: https://getd.libs.uga.edu/pdfs/griffeth_lauren_l_201312_phd.pdf
- Guarino, C. M., & Borden, V. M. (2017). Faculty service loads and gender: Are women taking care of the academic family?. *Research in Higher Education*, 58(6), 672-694.
- Han, K. T., & Leonard, J. (2017). Why Diversity Matters in Rural America: Women Faculty of Color Challenging Whiteness. *The Urban Review*, 49(1), 112-139.
- Hanna, E., Robertson, S., Woodall, J., & Rowlands, S. (2016). Women's perspectives on the value of a father's initiative in shifting gendered practices within families. *Journal of Gender Studies*, 1-12.
- Hannum, K. M., Muhly, S. M., Shockley-Zalabak, P., & White, J. S. (2015). Women leaders within higher education in the united states: Supports, barriers, and experiences of being a senior leader. *Advancing Women in Leadership*, 35, 65-75. Retrieved from <https://login.lp.hscl.ufl.edu/login?URL=http://search.proquest.com/accountid=10920?url=https://search.proquest.com/docview/1682223456?accountid=10920>

- Haraway, D. (2013). Simians, cyborgs, and women: *The reinvention of nature*. Routledge.
- Harding, S. (2016). *Whose science? Whose knowledge?: Thinking from women's lives*. Cornell University Press.
- Helgesen, S. and Johnson, J. (2010). *The female vision: Women's real power at work*. San Francisco, CA: Berrett-Koehler.
- Helms, J. L. (2014). *Teaching and Learning in Sustainable Agriculture Curricula: A Case Study of Faculty Work as Learning at a Land Grant University* (Doctoral dissertation, Virginia Polytechnic Institute and State University).
- Henry, K. A., Talbert, B. A., & Morris, P. V. (2014). Agricultural Education in an Urban Charter School: Perspectives and Challenges. *Journal of Agricultural Education*, 55(3), 89-102.
- Herren, R., & Edwards, M. (2002). Whence we came: The land-grant tradition –origin, evolution, and implications for the 21st Century. *Journal of Agricultural Education*. 43, 4.
- Herren, R. V., & Hillison, J. (1996). Agricultural education and the 1862 land-grant institutions: The rest of the story. *Journal of Agricultural Education*, 37, 26-32.
- Heywood, A. (2017). *Political ideologies: An introduction*. Palgrave Macmillan.
- Hill, C., C. Corbett, and A. St. Rose, 2010: Why so few? Women in science, technology, engineering, and mathematics. American Association of University Women Research Rep., 109 pp. [Available online at www.aauw.org/files/2013/02/Why-So-Few-Women-in-Science-Technology-Engineering-and-Mathematics.pdf.]
- Hollander, E. P. (2013). American presidential leadership: Leader credit, follower inclusion, and Obama's turn. In M. C. Bligh , & R. E. Riggio (Eds.), *Exploring "distance" in leader-follower relationships: Far is near and near is far*. New York, NY: Routledge.
- House, R.J. (1977). A 1976 theory of charismatic leadership. In J. G. Hunt & L. L. Larson (Eds.), *Leadership: The cutting edge* (pp. 189-207). Carbondale, IL: Southern Illinois University.
- House, R.J., & Howell, J.M. (1992). Personality and charismatic leadership. *The Leadership Quarterly*, 3, 81-108.
- House, R.J., & Shamir, B. (1993). Toward the integration of transformational, charismatic, and visionary theories. In M. M. Chemers & R. Ayman (Eds.), *Leadership theory and research: Perspectives and directions* (pp. 81-107). San Diego, CA: Academic Press.

- Hughes, C. C., Schilt, K., Gorman, B. K., & Bratter, J. L. (2017). Framing the Faculty Gender Gap: A View from STEM Doctoral Students. *Gender, Work & Organization*.
- Hughes, H., Williamson, K., & Lloyd, A. (2007). Critical incident technique. *Exploring methods in information literacy research*, 49-66.
- Hult, C., Callister, R., & Sullivan, K. (2005). Is there a global warming toward women in academia?. *Liberal Education*, 91(3), 50-57.
- Hyer, P. B. (1985). Affirmative action for women faculty: Case studies of three successful institutions. *The Journal of Higher Education*, 282-299.
- Ibarra, H., Ely, R., & Kolb, D. (2013). Women rising: The unseen barriers. *Harvard business review*, 91(9), 60-66.
- Ito, A. & Bligh, M. C. (2016), Feeling Vulnerable? Disclosure of Vulnerability in the Charismatic Leadership Relationship. *J Leadership Studies*, 10: 66–70. doi:10.1002/jls.21492
- International Leadership Association. (2015). Asilomar declaration and call to action on women and leadership. Retrieved from: http://www.ilanet.org/Communities/AG/Asilomar_Declaration2015.pdf
- Irlbeck, E., Adams, S., Akers, C., Burris, S., & Jones, S. (2014). First Generation College Students: Motivations and Support Systems. *Journal of agricultural education*, 55(2), 154-166.
- Jackson, V. & Arnold, R.M. (2010). A model of mosaic mentoring. *Journal of Palliative Medicine* 13 (11). 1371-1371. <https://doi.org/10.1089/jpm.2010.9764>
- Jaeger, A. J., Dunstan, S. B., & Dixon, K. G. (2015). College student access: How articulation agreements support rural students. *Peabody Journal of Education*, 90(5), 615-635.
- Jaschik, S. (2008). Does academe hinder parenthood?. *Inside Higher Ed*. May, 23, 2008. Retrieved from: <https://www.insidehighered.com/news/2008/05/23/nokids>
- Johnson, I.Y. (2014). Female faculty role models and student outcomes: A caveat about aggregation. *Research in Higher Education*, 55 (7). 686-709.
- Johnson, L. B., & Schnakenberg, G. (2017). Gendering strategies for civic agriculture: The case of Blue Ridge Women in agriculture and the High Country Farm Tour. *Journal of Rural Studies*, 55, 181-192.
- Jones, B., Hwang, E., & Bustamante, R. M. (2015). African American female professors' strategies for successful attainment of tenure and promotion at predominately

- White institutions: It can happen. *Education, Citizenship and Social Justice*, 10(2), 133-151.
- Kellogg Commission on the Future of State and Land-Grant Universities. (2000). *Renewing the covenant: Learning, discovery, and engagement in a New Age and different world*, 6th report. Washington, DC: National Association of Land-Grant Colleges and Universities.
- Kendall, L. (1999). Recontextualizing cyberspace: Methodological considerations for on-line research. In S. Jones (ed.), *Doing Internet Research (57-75)*. Thousand Oaks, CA, and London: Sage.
- Kimura, D. (1997). Affirmative action policies are demeaning to women in academia. *Canadian Psychology*, 38, 238–243.
- Kimura, D. (1999, November 4). Best person not always hired under affirmative action [Opinion]. *Simon Fraser News*, 16. Retrieved from <https://link.springer.com/article/10.1007/s11199-004-5461-9>
- Kimura, D. (2002, January 10). Researcher thanks preferential hiring survey participants [Letter to the editor]. *UBC Reports*, 48. Retrieved from <http://www.publicaffairs.ubc.ca/ubcreports/2002/02jan10/02jan10let.html>
- Kirton, G., & Greene, A. M. (2015). *The dynamics of managing diversity: A critical approach*. Routledge.
- Kitzinger, C. & Wilkinson, S. (1996). Theorizing representing the other. In S. Wilkinson & C. Kitzinger (Eds.), *Representing the other: A feminism and psychology reader* (pp.1-32). London, England: Sage Publications.
- Kling, K. C., Hyde, J. S., Showers, C. J., & Buswell, B. N. (1999). Gender differences in self-esteem: A meta-analysis. *Psychological Bulletin*, 125, 470–500
- Kotila, L. E., Schoppe-Sullivan, S. J., & Dush, C. M. K. (2013). Time in Parenting Activities in Dual-Earner Families at the Transition to Parenthood. *Family Relations*, 62(5), 795–807. <http://doi.org/10.1111/fare.12037>
- Kramarae, C. & Taylor, H. (1993). Women and men on electronic networks: A conversation of monologue? In H. Taylor, C. Kramarae and M. Ebben (eds.), *Women, Information Technology, and Scholarship*. University of Illinois, Urbana-Champaign: Center for Advanced Studies.
- Krefting, L.A. (2003). Intertwined discourses of merit and gender: Evidence from academic employment in the USA. *Gender, Work and Organization*, 10, 260-278.
- Kuhn, T. S. (1970). *The structure of scientific revolutions*. Chicago: University of Chicago Press.

- Kuijpers, M. T., Schyns, B., and Scheerens, J. (2006). Career competencies for career success. *Career Dev. Q.* 55, 168–178. doi: 10.1002/j.2161-0045.2006.tb00011.x
- Kulis, S., Sicotte, D. & Collins, S. *Research in Higher Education* (2002) 43: 657. <https://doi.org/10.1023/A:1020988531713>
- Lawrence, J. H., Celis, S., & Ott, M. (2014). Is the tenure process fair? What faculty think. *The Journal of Higher Education*, 85(2), 155-192.
- Ledwith, M. (2009). Antonio gramsci and feminism: The elusive nature of power. *Educational Philosophy and Theory*, 41, 684-697. Retrieved from EBSCOhost
- Lee, Y., & Won, D. (2014). Trailblazing women in academia: Representation of women in senior faculty and the gender gap in junior faculty's salaries in higher educational institutions. *Social Science Journal*, 51(3), 331-340.
- Leeuwis, C. (2013). *Communication for rural innovation: rethinking agricultural extension*. John Wiley & Sons.
- Lent, R. W., Brown, S.D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45, 79-122.
- Leslie, L. M., Manchester, C. F., & Dahm, P. C. (2017). Why and When Does the Gender Gap Reverse? Diversity Goals and the Pay Premium for High Potential Women. *Academy of Management Journal*, 60(2), 402-432.
- Lesser, V., Dillman, D., Lorenz, F. O., Carlson, J., & Brown, T. L. (1999). The influence of financial incentives on mail questionnaire response rates. *Rural Sociological Society*.
- Levinson, R. (2007). *Academic Freedom and the First Amendment 2007*. Retrieved from: <https://www.aaup.org/our-work/protecting-academic-freedom/academic-freedom-and-first-amendment-2007>.
- Lichter, D. T., & Brown, D. L. (2014). The new rural-urban interface: Lessons for higher education. *Choices*, 29(1), 1-6.
- Lincoln, YS. & Guba, EG. (1985). *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications.
- Lindsey, L.L. (2015-10-14). *Gender Roles: A Sociological Perspective*. Routledge. ISBN 9781317348085.
- Lockwood, P. (2006). Someone like me can be successful: Do college students need same- gender role models? *Psychology of Women Quarterly*, 30(1), 36-46.

- Longman, K., and Madsen, S. R. (2014). Women and leadership in higher education.
- Loevinger, J. (2014). Measuring ego development. Psychology Press.
- Lucas, C.J. & Murry, J.W. (2002). New faculty: A practical guide for academic beginners. New York: Plagrave.
- Madsen, S. (2008). On becoming a woman leader: Learning from the experiences of University presidents. San Francisco, CA: Jossey-Bass
- Mainiero, L.A, & Sullivan, S.E. (2006). The ABC's of kaleidoscope career. *Change This*, 25 (2). 2-20. Retrieved from <http://changethis.com/manifesto/25.02.ABCKal/pdf/25.02.ABCKal.pdf>
- Martin, P. & Barnard, A. (2013). The experience of women in male-dominated occupations: A constructivist grounded theory inquiry. *Journal of Industrial Psychology*, 39 (2). doi:10.4102/sajip.v39i2.1099
- Martinez, L. R., O'Brien, K. R., & Hebl, M. R. (2017). Fleeing the Ivory Tower: Gender Differences in the Turnover Experiences of Women Faculty. *Journal of Women's Health*, 26(5), 580-586.
- Mason, M., & Goulden, M. (2002). Do babies matter? The effect of family formation on the lifelong careers of academic men and women. *Academe*, 88, 21–27.
- Matter, W. T. (2015). Public Research Universities. Retrieved from: https://www.amacad.org/multimedia/pdfs/publications/researchpapersmonographs/publicresearchuniv_whytheymatter.pdf
- Mayor, E. (2015). Gender roles and traits in stress and health. *Frontiers in Psychology*, 6, 779. <http://doi.org/10.3389/fpsyg.2015.00779>
- MacPhee, D. & Canetto, S.S. (2015). Women in academic atmospheric sciences. *Women in academic*. <https://doi.org/10.1175/BAMS-D-12-00215.1>
- McNay, L. (2013). Gender and agency: Reconfiguring the subject in feminist and social theory. John Wiley & Sons.
- Meindl, J. (1995). The romance of leadership as a follower-centric theory: A social constructionist approach. *The Leadership Quarterly*, 6(3), 329–341.
- Merriam, S. & Associates (2002). Qualitative research in practice: Examples for discussion and analysis. San Francisco, CA: Jossey-Bass Publishers.
- Miles, M. & Huberman, A. (1984). Qualitative data analysis: An expanded sourcebook (2nd ed.). Thousand Oaks, CA: Sage Publications

- Minister, K (1991). A feminist frame for the oral history interview. In S. Gluck & D. Pata (Eds.), *Women's words: The feminist practice of oral history* (pp.27-41). New York, NY: Routledge.
- Montana State University. (2003). President's statement on shared governance. Montana State University: Bozeman. Retrieved from: <http://www.montana.edu/sharedgov/>
- Moore, L. (2003). Leadership in the cooperative extension system. Doctoral dissertation, University of Florida, 2003.
- Morley, L. (2014). Lost leaders: Women in the global academy. *Higher Education Research & Development*, 33(1), 114-128.
- Morris, M. (2014). Rethinking the communicative turn: Adorno, Habermas, and the problem of communicative freedom. SUNY Press.Chicago
- Morrison, A., & Von Glinow, M. (1990). Women and minorities in management. *American Psychologist*, 45, 200–208.
- Morrill Land Grant Act of 1862, ch. 130, 12 Stat. 503, 7 U.S.C. §§ 301 et seq.American.
- Morse, J. (1994). "Designing funded qualitative research." In NK. Denzin and YS Lincoln (Eds.) *Handbook of Qualitative Research* (pp. 220-235). Thousand Oaks, CA: Sage Publications.
- National Association of State Universities and Land-Grant Colleges, [NASULGC]. (1995). The land-grant tradition. Retrieved from ERIC database.
- National Center for Education Statistics [NCES]. (2002). Table 171, Chapter 3: Post-secondary education. In *Digest of education statistics*. Retrieved from: <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2002130>
- National Center for Education Statistics [NCES]. (2017). Characteristics of Postsecondary Faculty. Figure 2. Chapter: 4/Postsecondary Education Section: Postsecondary Environments and Characteristics: https://nces.ed.gov/programs/coe/pdf/coe_csc.pdf
- National Research Council. 1995a. *Colleges of Agriculture at the Land Grant Universities: A Profile*. Washington, D.C.: National Academy Press.
- National Research Council. 1995b. *Reshaping the Graduate Education of Scientists and Engineers*. Washington, D.C.: National Academy Press.
- National Research Council. 1995c. *Research-Doctorate Programs in the United States: continuity and Change*. Washington, D.C.: National Academy Press.

- National Research Council. (1996). *Colleges of Agriculture at the Land Grant Universities: Public Service and Public Policy*. Washington, DC: The National Academies Press, 1996. doi:10.17226/5133
- National Science Foundation (2008). *Characteristics of doctoral scientist and engineers in the United States*. National Center for Science and Engineering Statistics. Retrieved from <http://www.nsf.gov/statistics/nsf13302/pdf/nsf13302.pdf>
- National Science Foundation (2016a). Chapter 5: Academic research and development. Retrieved from <https://www.nsf.gov/statistics/2016/nsb20161/#/report/chapter-5/doctoral-scientists-and-engineers-in-academia/trends-in-academic-employment-of-s-e-doctorate-holders>
- National Science Foundation (2016b). *Women in S&E occupations: 1993–2013*. Retrieved from <https://www.nsf.gov/statistics/2016/nsb20161/#/figures>
- Neiva, V. and Gutek, B.A. (1981). *Women and work*. New York: Praeger.
- Niewolny, K. L., & Lillard, P. T. (2016). Expanding the boundaries of beginning farmer training and program development: A review of contemporary initiatives to cultivate a new generation of American farmers. *Journal of Agriculture, Food Systems, and Community Development*, 1(1), 65-88.
- Neyland, L. W. (1990). *Historically Black Land-Grant Institutions and the Development of Agriculture and Home Economics, 1890-1990*.
- Newington, L. and Metcalfe, A. (2014). Factors influencing recruitment to research: Qualitative study of the experiences and perceptions of research teams. *BMC Medical Research Methodology* 14 (10) <https://doi.org/10.1186/1471-2288-14-10>
- Nogaj, L. A., Roberts, L., & Deprele, S. (2017). Development of an interdisciplinary undergraduate research training program to improve retention and future success of women in STEM. *The FASEB Journal*, 31(1 Supplement), lb251-lb251.
- Northouse, P.G. (2007). *Leadership theory and practice*. Thousand Oaks, CA: Sage Publications, Inc.
- Northouse, P.G. (2016). *Leadership theory and practice*. Thousand Oaks, CA: Sage Publications, Inc.
- Offermann LR, Basford TE, Graebner R, Degraaf SB, Jaffer S. (2013). Sights, snubs, and slurs: Leader equity and microaggressions. *Equality, Diversity and Inclusion*. 32: 374-393. DOI: 10.1108/EDI-05-2012-0046

- Organisation for Economic Co-operation and Development (2012). Fostering quality teaching in higher education: Policies and practices. Retrieved from: <https://www.oecd.org/edu/imhe/QT%20policies%20and%20practices.pdf>
- Paulsen, M.B.(ed.). (2013).Higher education: Handbook of theory and research. Springer Science+Business Media Dordrecht. DOI 10.1007/978-94-007-5836-0_1.
- Pedulla, D. S., & Thébaud, S. (2015). Can we finish the revolution? Gender, work-family ideals, and institutional constraint. *American Sociological Review*, 80(1), 116-139.
- Perkins, J. A. (2015). *The university in transition*. Princeton University Press.
- Philipsen, M. and Bostic, T. (2008). *Challenges of the faculty career for women: Success and sacrifice*. John Wiley & Sons.
- Pittman, J.F.,Teng, W., Kerpelman, J.L., & Solheim, C.A. (1999). Satisfaction with performance of housework: The roles of time spent, quality assessment, and stress. *Journal of Family Issues*, 20, 746–770.
- Posner, P. L. (2009). The Pracademic: An Agenda for Re-Engaging Practitioners and Academics. *Public Budgeting & Finance*, 29(1), 12-26.
- Powell, G. and Butterfield, D.A. (1984). If ‘good managers’ are masculine, what are ‘bad managers’?. *Sex Roles: A Journal of Research*, 10 (7/8). 477-484.
- Quality Assurance Agency for Higher Education (QAA). (2014). *The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies*. Retrieved from <http://www.qaa.ac.uk/publications/information-and-guidance/publication?PubID=2843#.Waq6v8iGPIU>.
- Rajadhyaksha, U. (2005). Managerial competence: do technical capabilities matter? *Vikalpa J. Decis. Makers* 30, 47–56.
- Ratts, M. J., Toporek, R. L., & Lewis, J. A. (Eds.). (2010). *ACA Advocacy Competencies: A social justice framework for counselors*. Alexandria, VA: American Counseling Association. Retrieved from: http://psysr.org/jsacp/lewis-v3n1-11_5-16.pdf
- Reinert, P. C. (1946). *Faculty tenure in colleges and universities from 1900 to 1940*. Saint Louis: Saint Louis Univ. Press.
- Rhode, D. L. (2016). *Women and leadership*. Oxford University Press.
- Risman, B. J. (2004). Gender as a social structure: Theory wrestling with activism. *Gender & society*, 18(4), 429-450.

- Rodríguez, H. (2017, June). Building support for women into your programs and structures: Best practice examples. In STEM Gender Equality Congress Proceedings (Vol. 1, No. 1, pp. 127-142). Science Impact Ltd.
- Rosser, S. V. (2017). Conclusion: What Can the Last Fifteen Years Tell Us about the Future of Academic Women in STEM. In *Academic Women in STEM Faculty* (pp. 121-135). Springer International Publishing.
- Rowbotham, S. (2015). *Woman's consciousness, man's world*. Verso Books.
- Ruble, D. N., Fleming, A. S., Hackel, L. S., & Stangor, C. (1988). Changes in the marital relationship during the transition to first time motherhood: Effects of violated assumptions concerning division of household labour. *Journal of Personality and Social Psychology*, *55*, 78–87.
- Sachs, C., Barbercheck, M., Braiser, K., Kiernan, N. E., & Terman, A. R. (2016). *The rise of women farmers and sustainable agriculture*. University of Iowa Press.
- Sandberg, S. (2013). *Lean In: Women, work, and the will to lead*. New York, NY: Alfred A. Knoph.
- Sandelowski, M. (1993). "Rigor or rigor mortis: The problem of rigor in qualitative research revisited." *Advances in Nursing Science*. 16(2), pp1-8.
- Sanders, G.E. (2017). Mapping Your Academic Career: Charting the Course of a Professor's Life. *Christian Scholar's Review*, *46* (3). 314. *Academic OneFile*, Accessed 12 Aug. 2017.
- Santamaría, L. J. (2014). Critical change for the greater good: Multicultural perceptions in educational leadership toward social justice and equity. *Educational Administration Quarterly*, *50*(3), 347-391.
- Schwartz, R. A. (1997). Reconceptualizing the leadership roles of women in higher education: A brief history on the importance of deans of women. *The Journal of Higher Education*, *68*(5), 502-522.
- Schyns, B., & Meindl, J. R. (2005). *Implicit leadership theories: Essays and explorations*. Greenwich, CT: Information Age Publishing.
- Sen, A. (1987). *Gender and cooperative conflicts* (No. 1342). Helsinki: Wider.
- Sennett, R. (2017). *The fall of public man*. WW Norton & Company.
- Shaker, G. G., & Plater, W. M. (2016). *The public good, productivity, and faculty work: Individual effort and social value*. Economics Models Project.
- Shamir, B., & Eilam, G. (2005). "What's your story?" A life-stories approach to authentic leadership development. *Leadership Quarterly*, *16*, 395-417.

- Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science*, 4(4), 577–594. doi: 10.1287/orsc.4.4.577.
- Shen, H. (2013). Mind the gender gap. *Nature*, 495(7439), 22.
- Silverberg, H. (Ed.). (1998). *Gender and American social science: The formative years*. Princeton University Press.
- Simeone, A. (1987). *Academic women: Working towards equality*. South Hadley, MA: Bergin & Garvey.
- Slaughter, A. M. (2015). Why women still can't have it all (p. 100). OneWorld.
- Smith, S. B., Hollerbach, A., Donato, A. S., Edlund, B. J., Atz, T., & Kelechi, T. J. (2016). Streamlining Appointment, Promotion, and Tenure Procedures to Promote Early-Career Faculty Success. *Journal of Professional Nursing*, 32(5), 334-341.
- Solomon, B. M. (1985). *In the company of educated women: A history of women and higher education in America*. New Haven, CT: Yale University Press.
- Sprague, J. (2016). *Feminist methodologies for critical researchers: Bridging differences*. Rowman & Littlefield.
- Stachowiak, S. (2013). Pathways for change: 10 Theories to inform advocacy and policy change efforts. Center for Evaluation Innovation. Retrieved from: http://orsimpact.com/wp-content/uploads/2013/11/Center_Pathways_FINAL.pdf
- Stage, S., & Vincenti, V. B. (Eds.). (1997). *Rethinking home economics: Women and the history of a profession*. Cornell University Press.
- Stead, V. and Elliott, C. (2009). Visualising Women's Leadership: Stereotypes and metaphors. *Women's Leadership*, 1, 40-59. DOI10.1057/9780230246737_3 Retrieved from: http://link.springer.com/chapter/10.1057%2F9780230246737_3
- Stevens, M. L., & Gebre-Medhin, B. (2016). Association, service, market: Higher education in American political development. *Annual Review of Sociology*, 42, 121-142.
- Stucki, P., Kahu, A., Jenkins, H., Bruce-Ferguson, P., and Kane, R. (2004). *Narratives of beginning Maori Teachers: Identifying forces that shape the first year of teaching*. Wellington: Teaching and Learning Research Initiative.
- Stukel, J. J. (1998). *The Future of Land Grant Universities*. Presented to the National

Association of State Universities and Land-Grant Colleges Extension Directors' Meeting in Corpus.

- Sue, D.W., Capodilupo, C.M., Torino, G.C., Bucceri, J.M, Holder, A.M.B, Nadal, K.L., and Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist*, 62(4), 271-286.
<http://dx.doi.org/10.1037/0003-066X.62.4.271>
- Sulé, V. T. (2014). Enact, discard, and transform: a critical race feminist perspective on professional socialization among tenured Black female faculty. *International Journal of Qualitative Studies in Education*, 27(4), 432-453.
- Sullivan, B., Hollenshead, C., & Smith, G. (2004). Developing and implementing work-family policies for faculty. *Academe*, 90(6), 24.
- Sullivan, S. (1999). The changing nature of careers: A review and research agenda. *Journal of Management* 25 (3). 457-484.
- Swann, N. (2014). A cross-generational narrative examination of women's career journeys. Pepperdine University.
- Tang, N. (2002). Interviewer and interviewee relationships between women. *Sociology*, 36, 703-721. Retrieved from EBSCOhost.
- The White House Project. (2009). *The White House Project: Benchmarking women's leadership*. New York, NY: The White House Project.
- Thorne, A.C. (1985). Visible and invisible women in land-grant colleges, 1890-1940. USU Faculty Honors Lectures. Paper 2.
http://digitalcommons.usu.edu/honor_lectures/2
- TIAA-CREF. (n.d.) Challenges Facing Leaders of U.S. Public and Land-Grant Universities. Retrieved from: <https://www.tiaa-crefinstitute.org/public/pdf/challenges-facing-leaders-of-US-public-and-land-grant-uni.pdf>
- Tierney, W.G. & Bensimon, E.M. (1996). Promotion and tenure: Community and socialization in academe. Albany, NY: SUNY.
- Tucker, A., et al. (1999). The department chair as an academic leader. Phoenix: Oryx Press.
- Tong, R. (2009). Feminist thought: A more comprehensive introduction (3rd ed.). Boulder, CO: Westview Press.

- Touchton, J. G. & Ingram, D. (1995) Women Presidents in U.S. Colleges and Universities. A 1995 Higher Education Update. Washington, DC: Office of Women in Higher Education, American Council on Education.
- Torres Bernal, A., Le, K., West, A. M., & Brown, K. S. (2017). An examination of rates, rank, advancement, and salary of women faculty in COAMFTE-accredited training programs. *Journal of Feminist Family Therapy*, 29(1-2), 88-101.
- Turner, C.S.V. & Myers, S.M. (1999). *Bittersweet success: Faculty of color in academe*. Boston: Allyn & Bacon.
- Tyson, L. (2014). *Critical theory today: A user-friendly guide*. Routledge.
- United States Office of Personnel Management, (2011). Guidance for Agency-Specific Diversity and Inclusion Strategic Plans. Retrieved from: <https://www.opm.gov/policy-data-oversight/diversity-and-inclusion/reports/diagencyspecificstrategicplanguidance.pdf>
- University Leadership Council. (2008). Breakthrough advances in faculty diversity: Lessons and innovative practices from the frontier. Retrieved from http://www.uky.edu/ie/sites/www.uky.edu/ie/files/uploads/EAB_BP_Breakthrough-Advances-Faculty-Diversity.pdf
- U.S. Department of Education, National Center for Education Statistics. (2017). The Condition of Education 2017 (NCES 2017-144), Characteristics of Postsecondary Faculty.
- Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press.
- Van Anders, S.M. (2004). Why the academic pipeline leaks: Fewer men than women perceived barriers to becoming professors. *Sex Roles* 51, 9/10. 511-521. Retrieved from: <file:///Z:/Grad%20School/Dissertation%20Resources/Why%20the%20Academic%20Pipeline%20Leaks.%20Fewer%20Men%20than%20women.pdf>
- van der Velde, M.E.G. (2003). Gender differences in the influence of professional tenure on work attitudes. *Sex Roles*, 49 (3-4). 153-162.
- Van't Hul, N. (1984). 1964-1984: A report. Ann Arbor, MI. Center for Continuing Education of Women, University of Michigan.
- Verbruggen, M. (2012). Psychological mobility and career success in the 'new' career climate. *J. Vocat. Behav.* 81, 289–297. doi: 10.1016/j.jvb.2011.10.010
- Virick, M., & Strage, A. (2016). Perceptions of value-congruence with one's department chair: Does match matter?. *The Journal of Faculty Development*, 30(1), 47-56.

- Ward, K., & Wolf-Wendel, L. (2004). Academic motherhood: Managing complex roles in research universities. *The Review of Higher Education*, 27, 233–257.
- Watkins, K. E., & Marsick, V. J. (2016). Development of academic programs in human resource development in the United States. *Advances in Developing Human Resources*, 18(4), 467-480.
- Weiss, S. (2015). 15 microaggressions women face on a daily basis, because they all add up to an unequal society. Retrieved from: <https://www.bustle.com/articles/119429-15-microaggressions-women-face-on-a-daily-basis-because-they-all-add-up-to-an-unequal>
- West, M.S. and Curtis, J.W. (2006) AAUP Faculty Gender Equity Indicators 2006. Washington DC: American Association of University Professors.
- Wheatley, M. J. (2006). *Leadership and the new science: Discovering order in a chaotic world* (3rd ed.). San Francisco, CA: Berrett-Koehler.
- Wilkie, J. R., Ferree, M. M., & Ratcliff, K. S. (1998). Gender and fairness: Marital satisfaction in two-earner couples. *Journal of Marriage and the Family*, 60, 557–594.
- Winter, D. & Huff, C. (1996). Adapting the internet: Comments from a women-only electronic forum, *The American Sociologist*, 27 (1) 30-54.
- Winslow, S., & Davis, S. N. (2016). Gender Inequality Across the Academic Life Course. *Sociology Compass*, 10(5), 404-416.
- Wolverton, M., Bower, B. L. & Hyle, A. (2008). *Women at the top: What women university and college presidents say about effective leadership* (Journeys to Leadership Series). Sterling, Va: Stylus Publishing LLC
- Wood, J. (2008). Critical feminist theories: Giving voice and visibility to women's experiences in interpersonal communication. In Baxter, L. & Braithwaite, D., (Eds.), *Engaging theories in interpersonal communication: multiple perspectives*. Thousand Oaks, CA: Sage Publications.
- Woodward, A. R. (2009). Land-grant university governance: an analysis of board composition and corporate interlocks. *Agriculture and Human Values*. 26; 121-131. Retrieved from: <http://link.springer.com/article/10.1007%2Fs10460-008-9174-5#page-3>
- Yin, R. K. (2003). *Case study research: Design and methods*. Thousand Oaks, CA: Sage Publications.
- Young, S. (2014). *Changing the world: Discourse, politics and the feminist movement*. Routledge.

Yukl, G. (2002). *Leadership in organizations*. Upper Saddle River, NJ: Prentice Hall.

Yun, J. H., Baldi, B., & Sorcinelli, M. D. (2016). Mutual mentoring for early-career and underrepresented faculty: Model, research, and practice. *Innovative Higher Education*, 41(5), 441-451.

BIOGRAPHICAL SKETCH

Carolynn Sue Nath grew up in Baltimore, Maryland and attended elementary school in Joppa, Maryland. Joppa was a transforming rural farming community. This community was Carolynn's first introduction to agriculture. Carolynn soon moved with her family to Jacksonville, Florida where she completed the remainder of her elementary education along with middle and high school. Throughout her youth, Carolynn was highly engaged in extracurricular activities. Carolynn's family purchased a small farm in Georgia where they would frequently visit on the weekends. In high school, Carolynn was the first seven sports letterman at her high school. She competed in each sporting event at the district and regional levels. Carolynn served as the editor of her yearbook, as varsity cheerleading captain, and was awarded other scholastic accolades during high school. She received an academic scholarship through the state of Florida and attended the University of South Florida in 2001.

At the University of South Florida, Carolynn continued her high level of academic and extracurricular involvement. She competed as an athlete, studied abroad, was hired as a resident assistant and later as a graduate assistant while still an undergraduate student. Carolynn began instructing courses as a teaching assistant within different academic departments. She volunteered within the Tampa Bay community serving high-risk communities. Carolynn began working full-time her senior year in preparation for graduate school. She was selected as an Ambassador for the university and alumni association and was voted among the student body as a finalist within the university's Homecoming Court during her senior year.

In 2005, Carolynn attended graduate school at Indiana University-Bloomington where she studied higher education and student affairs administration. She volunteered

within the greater Bloomington area serving high-risk populations.Carolynn worked within residence life, alcohol and drug counseling, alumni affairs, athletics, and other areas within the campus community. She was hired by Southern Methodist University for the summer to assist with a bridge program for at-risk students transitioning to the university. During her time at Indiana University Carolynn was invited to lead and develop leadership training programs for student leaders across campus and within residence life. She began teaching coursework to undergraduate students and developed training programs for graduate students. She presented at regional and international conferences as a graduate student. Upon graduation in 2007, she was hired by the University of Central Florida and relocated.

From 2007-2010 Carolynn worked at the University of Central Florida, Remington College, CTB McGraw-Hill and then was hired by the University of Florida. During this transition, Carolynn married Ryan Komanski and became Carolynn Sue Nath Komanski. She continued her working with her family's farm and wanted to learn more about agriculture and environmental efforts impacting communities.

In 2010, Carolynn began working at the University of Florida. It was here that she discovered her love for all that a land-grant university had to offer its community and the state which is supported.

In June 2014 Carolynn had her daughter Brie, and in Fall 2014 She began taking coursework and was later accepted as a doctoral student in the Agricultural Education and Communication program in Summer 2015. Carolynn continued working full-time throughout her academic program. Gaining approval from her supervisors, she volunteered her professional development hours to be an unpaid teaching assistant for

in-person and online courses. Carolynn was later invited to be a volunteer lead instructor. In October 2016 she had a second child, a son named Bligh Komanski. During this time she continued her coursework, volunteering, presenting at regional, national and international conferences. She serves on the board of directors for a local non-profit and the board of her neighborhood association. Carolynn continued to published, teaching courses, and worked full-time. The support of her husband and family are unparalleled. Carolynn is an Adjunct Lecturer for the Agricultural Education and Communication Department in Fall 2017 instructing the introductory leadership development course in an online format while continuing her full-time employment at the University of Florida.

She received her degree of Doctor of Philosophy in agricultural education and communications from the University of Florida in December 2017 She and her husband look forward to the possibilities ahead which include purchasing land to cultivate their own farm and sustaining her family's farm.