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International Research Collaboration in Higher Education

by

Jacqueline Louise Throngard

A dissertation

submitted in partial fulfillment

of the requirements for the degree of

Doctor of Education in the Graduate Department of Educational Leadership and

Instructional Design

Idaho State University

Summer 2014

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Committee Approval

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RE: Your application dated 10/30/2013 regarding study number 3999: International Research Collaboration in Higher Education

Dear Ms. Throngard:

I agree that this study qualifies as exempt from review under the following guideline: 2. Anonymous surveys or interviews. This letter is your approval, please, keep this document in a safe place.

Notify the HSC of any adverse events. Serious, unexpected adverse events must be reported in writing within 10 business days.

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Sincerely,

Ralph Baergen, PhD, MPH, CIP
Human Subjects Chair

Dedication

I want to dedicate this publication to John and Janet Spratt, who have been with me every step of the way and have always supported me. To Justin Throngard, who was there to inspire a better me and who kept me going. To Jolene Taaffe and John Spratt Jr., who were always there to cheer me up and help me along the way. Finally to my favorite people in the whole world: John Spratt the 3rd, Scarlett Taaffe, Tatem Spratt, and Robert Taaffe the 3rd, I did this for you.

Acknowledgements

I would like to acknowledge Dr. Eric Landrum, who allowed me to be his teaching and research assistant as an undergraduate at Boise State University. It was he who first gave me the dream that I could do more and become what I am today.

I would like to acknowledge Dr. Anthony Marker, who allowed me to be his graduate assistant while I was a master's student at Boise State University and for allowing me to work on his research. Dr. Marker also helped me prep my letters for a doctoral program and helped me navigate the process.

I would like to acknowledge Dr. Steve Villachica, who was my mentor and navigator during my master's degree and helped me to get into a doctorate program and taught me a few professional lessons along the way.

I would like to acknowledge my dedicated dissertation committee at Idaho State University, Dr. Alan Frantz, Dr. Jonathan Lawson, Dr. Dotty Sammons-Lohse, Dr. Deb Easterly, and Dr. Joanne Togle. Special thanks go to Dr. Peter Denner for his contributions, which were a huge help.

I would like to acknowledge my friends and colleagues at Idaho State University who helped me to complete this process and without whom I would not have survived the ride: Dr. Alan Frantz and Dr. Jonathan Lawson. You have both shown me what I want to be when I grow up.

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Abstract

The purpose of this study was to examine international research collaboration and the reported positive and negative experiences for women and men faculty; also examined is the impact of international research collaboration on career advancement of faculty specifically studying whether there is a difference between women's and men's experiences. A total of 1418 faculty members from three Idaho public universities were surveyed, with a 34% ($N = 487$) response rate. Results indicated there were gender differences in both the positive and negative experiences reported by faculty members. The negative experiences were found to be not as abundant as previous literature would suggest. Findings indicated there was not consensus between two groups: (1) the faculty members, and (2) deans and department chairs. These two groups did not agree when valuing the impact that international research collaboration had on department promotion/tenure decisions. However, findings showed a consensus among these two groups on the impact that international research collaboration could have on hiring decisions.

CHAPTER I

Introduction

Academics have found themselves considering an increase in international collaboration efforts. As institutions of higher education search for prestige and recognition, they are encouraging academics to pursue international research projects for publicity, financial gain, and cost reduction by the sharing of resources (Arthur, Patton, & Giancarlo, 2007; Jeong, Choi, & Kim, 2011; Katz & Martin, 1997). Academics have seen the value in creative scholarly activity, career growth, and hiring opportunities, and the altruistic feeling that a collaborative international research career can bring. Many academics have perceived an advantage in the job market over those individuals who had not worked in an international research setting (Arthur et al., 2007; Jeong et al., 2011; Ou, Varriale, & Tsui, 2012). “International scholarship is increasingly becoming the expectation for faculty members as evidenced in changing norms for hiring practices and criteria for determining merit and promotion” (Arthur et al., 2007, p. 326). This study, while focusing on the experiences unique to women, also compared male and female academics’ experiences and perceptions about collaborating on international research.

To fully appreciate the importance of collaborative international research, it is critical to understand the research aspect as it pertains to the work of faculty. Research, at institutions that require faculty to be active in research/scholarly activities, is the number one measure by which faculty are considered for hiring, promotion, or tenure, above both teaching and service (Hardre & Cox, 2009). According to Jorgensen (2007), many newly hired faculty members are advised to work independently on research in order to be the sole author and receive the highest evaluation of scholarly contribution by deans and

department chairs for promotional purposes. Sole-authorship of research gives credit for discoveries, ownership rights, and obtaining a reputation in the field (Birnholtz, 2006; Hardre & Cox, 2009). Two of the most prominent criteria in research are the number of publications and the rating of the journal in which an academic is published (Facione, 2006; Lincoln 1998; Paul & Rubin, 1984). The higher the number of publications, the more recognized a faculty member becomes and often the more career opportunities that are available. Deans and directors indicate that research has become the most important factor in tenure and promotion decisions for institutions with a research component or emphasis (Green, 2008; Paul & Rubin, 1984).

Women in higher education have had a very different career path than their male counterparts. Traditional faculty advancement paths were created and have remained focused on men. Universities originally catered to white land-owning men and thus the career paths that followed the education were also created with men in mind (Easterly, 2008; Thelin, 2004). The first college in the United States, Harvard, was established in 1636, and mostly served white men, as did many of its later contemporaries such as Yale, Princeton, Columbia, Brown, and Dartmouth (Thelin, 2004). Puritans had a special religious interest in educating their young men, as the depravities of the Oxford type institutions would not put the religious devotion of the Puritan faith in the everyday lives of the young men (Thelin, 2004). By the 1750s a college education was viewed as prestigious, and the “main purpose of the colleges was to identify and ratify a colonial elite” (Thelin, 2004, p. 25).

In the 1840s and 1850s, women were allowed access to colleges or, rather, programs that were finishing schools and teacher certification programs (Thelin, 2004).

According to the National Center for Education Statistics (NCES, 2011), there was a rising trend from 1889-1930 in the number of women who were awarded doctoral degrees. This was due to the education of women after the Civil War that allowed them access to the same or similar educational opportunities as men. During this time the women's college movement was gaining momentum, which also contributed to the increase in the number of women obtaining graduate degrees (Thelin, 2004). Women accounted for around 15% of doctoral degrees awarded at the height of the period. The trend for women pursuing their doctoral education has steadily increased over the years. The last available census (2009-2010) reported that 52% of doctoral degrees awarded were earned by women (NCES, 2011).

Logically, because of the steady and now dominant numbers of doctoral degrees awarded to women, women's advancement and opportunities for positions in higher education should show similar trends. Unfortunately, the data show that women are still not progressing at the same rate as men in their academic fields. Bonawitz and Andel (2009) have characterized the stark reality of women in higher education and their career advancement as a "glass ceiling really made of concrete" (p. 6). Women are not tenured and promoted at the same rates as men in similar fields (Bonawitz & Andel, 2009; Mandelco, 2010). Since research is today's benchmark for faculty advancement, the question remains how this trend has affected women in higher education.

There are generally three ranks in the faculty: assistant professor (usually pre-tenured), associate professor (usually conferred with tenure), and full professor (tenured) (Hardre & Cox, 2009). According to the *Chronicle of Higher Education* (2011), two more faculty ranks can be added to the above list: new assistant professor (an individual

who has recently received assistant professor rank) and instructor. Currently, women comprise between 53% and 57% of the instructor positions (Association of American Colleges and Universities (AACU), 2009; Bonawitz & Andel, 2009). Increasing numbers of adjunct faculty are employed in higher education today, especially at community colleges (Thelin, 2004). In the 1960s the job market was flooded with qualified professionals and universities took advantage by hiring faculty at the adjunct level which meant “‘teaching without tenure,’ a practice that heralded an administrative erosion of academic freedom” (Thelin, 2004, p. 332).

Bain and Cummings (2000) found that fewer than one in ten full professors worldwide were women. According to the American Association of University Professors, as quoted by Catalyst (2012), only 24% of women are in tenure-track positions in the United States and 44% are in tenured positions. Women, because they have not obtained a full professorship, are limited in salary increases, research funding, and conference support (Bonawitz & Andel, 2009; Mandelco, 2010; Ou et al., 2012). Bonawitz and Andel (2009) asserted that this is because men hold 75% of full professorships and make the decisions that affect tenure and hiring. “Women hired to non-tenure track jobs and those that ‘fail’ to achieve tenure or promotion cannot achieve a powerful position in the institutional hierarchy that sets the conditions by which they work” (Bonawitz & Andel, 2009, p. 6). Mandelco (2010) stated that because women hold the majority of adjunct/lecturer positions, they are expected to have higher teaching and service loads, which leads to less time for scholarly activities, securing research funding or facilities, and less opportunity for advancement. The worst trend is at the institutional level, where Bain and Cummings (2000) found that the greater the prestige of an

institution, the lower the proportion of female full professors. The AACU (2009) reported that women represent only 23% of chief academic officers. According to Cook (2012), currently 26% of institutional leadership positions are being held by women. These numbers are low and may be attributed to the lack of advancement of female faculty members as academics.

Problem Statement

There are conflicting views as to whether academics, male or female, should even attempt collaborative international research before they have received tenure rank (Acker & Armenti, 2004; Ackers, 2008; Adler, 1984; Cooper & Mitsunaga, 2010; Hardre & Cox, 2009; Jeong et al., 2011; Ou et al., 2012). There is a lack of research in the literature describing how a faculty member's participation in international research collaboration has affected hiring or tenure/promotion decisions. There is little literature that indicates whether males and females face similar positive and negative experiences when participating in international research collaboration. This study sought to fill both of these voids.

Purpose Statement

The purpose of this study was to examine international research collaboration and the reported positive and negative experiences for women and men faculty; also examined is the impact of international research collaboration on career advancement of faculty specifically studying whether there is a difference between women's and men's experiences.

Research questions. In order to examine the experiences of faculty members and the opinions of deans and chairs responsible for hiring and promotion decisions, this study posed the following questions:

1. What are the positive experiences that Idaho public university faculty have when collaborating on international research projects?
2. What are the negative experiences that Idaho public university faculty face when collaborating on international research projects?
3. What is the value of participating in collaborative international research in hiring and tenure/promotion decisions according to Idaho public university deans and department chairs and faculty?
4. Are there similarities and differences in collaborative international research as explored in the above questions between Idaho public university women and men faculty?

Definitions

The definitions are a combination of factors that have been taken from the literature review. For the purposes of this study, the following definitions apply:

Research. "Research" is the scholarship and other creative activities that apply to faculty in various disciplines when evaluated for hiring, tenure, and promotion decisions (Idaho State University, 2013). All three universities in this study have the following definition listed within each Human Subjects Committee: "Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge (U.S. Department of Health and Human Services (HHS), 2009; §46.102 Definitions).

Collaborative international research. Collaborative international research is the interfacing with international colleagues in any of the following: projects located in a foreign country, research collaboration with individuals located outside of the United States, presentations or attendance at international forums and conferences, and publications in international journals (Farquhar, 2008; Hatakenaka, 2007; Knight, 2007).

Internationalization. “Internationalization of higher education is the process of integrating an international dimension into the teaching, learning, research and service function of a university or college” (Knight, 1994, p. 3).

Opportunities that impact collaborative international research. Opportunities that impact access to collaborative international research included: having a peer mentor (Arthur et al., 2007; Bain & Cummings, 2000; Cooper & Mitsunaga, 2010;); having a supportive spouse or partner (Arthur et al., 2007; Cooper & Mitsunaga, 2010); having the support of the administration (Arthur et al., 2007; Cooper & Mitsunaga, 2010); having the support of the dean of the college; funding availability (Arthur et al., 2007; Cooper & Mitsunaga, 2010; Ray & Solem, 2009); and having colleagues who are supportive.

Positive experiences. Positive experiences are opportunities or motivators that produce an outcome (Urdang, 1995) that helps advance the career of a faculty member. Positive experiences may include: recognition from peers and institutions (Adler, 1984); reduction in costs through the sharing of facilities, equipment, personal, etc. (Hatakenaka, 2007); increased personal skills (Katz & Martin, 1997); increased employment opportunities; gaining recognition as an international researcher; higher salary expectations (Acker & Armenti, 2004; Adler, 1984; Cooper & Mitsunaga, 2010; Hardre & Cox, 2009; Hartley & Dobeles, 2009; Katz & Martin, 1997; Ray & Solem, 2009; Tien

& Blackburn, 1996); faster career advancement (Acker & Armenti, 2004; Adler, 1984; Cooper & Mitsunaga, 2010; Hardre & Cox, 2009; Hartley & Dobeles, 2009; Katz & Martin, 1997; Ray & Solem, 2009; Tien & Blackburn, 1996); increased experience in the field; public recognition outside of the university or academic setting (Cooper & Mitsunaga, 2010); increased number of publications (Ackers, 2008; Ou et al., 2012); acquisition of awards at a national or higher level (Cooper & Mitsunaga, 2010; Ray & Solem, 2009); publication opportunities; joining other experts in the field (Ackers, 2008; Katz & Martin, 1997); travel; excitement; challenge; increased interest in international topics; network building; and the ability to provide a social contribution to communities for a better world (Ackers, 2008; Arthur et al., 2007; Cooper & Mitsunaga, 2010).

Negative experiences/barriers. Negative experiences/barriers are those that have an unfavorable outcome or impact (Urdang, 1995) on the faculty's ability to collaborate in international research. Negative experiences for this study include: lack of a peer mentor; no offer of international projects due to gender; children; spouse or partner obligations; caring for an elderly parent (Acker & Armenti, 2004; Cooper & Mitsunaga, 2010); no support from the dean or chairs of the department; health issues; no available funding (Armenti, 2004; Arthur et al., 2007; Ray & Solem, 2009); cultural barriers and/or language barriers (Ackers, 2008; Cooper & Mitsunaga, 2010; Jeong et al., 2011; Ou et al., 2012; Ray & Solem, 2009), and no support from administration (Bonawitz & Andel, 2008; Cooper & Mitsunaga, 2010; Ray & Solem, 2009).

Assumptions, Limitations, Delimitations

Assumptions. It was assumed that faculty at Idaho universities collaborate in international research in adequate numbers to provide the researcher with sufficient

responses for analysis. If this assumption were found to be false, the research would still be useful in identifying a lack of international research collaboration at Idaho universities. The researcher assumed that the faculty at Idaho universities, who participate in the study, would give honest answers to survey questions and that the faculty have and utilize email accounts.

Limitations. A limitation of this study was that the researcher could not control which faculty would respond to the survey. A secondary limitation is that the faculty who did answer may have been concentrated in a limited number of disciplines that may cause the results to reflect certain disciplines or the research requirements of those disciplines more than others. There may be familiarity with the researcher due to the researcher having attended the university or taken course work with specific faculty members that may increase the response rates from certain disciplines. To reduce any possible bias, a Bonferroni adjusted alpha was used for all reported gender results to reduce the family wise error or a type one error, for threats to the validity of the study.

Delimitations. The delimitation of this study was that the results might not be generalizable to other institutions due to the sample including only public universities in Idaho. The universities for this study included: Boise State University, Idaho State University, and the University of Idaho.

Significance of the Study

The researcher was unable to locate prior research that indicates how heavily international research collaboration was weighted during hiring or tenure/promotion decisions. This study will reveal Idaho deans, department chairs, and faculty's general attitudes toward international research collaboration on the hiring and tenure/promotion

decisions. This study identified specific positive and negative experiences that faculty experienced when deciding to collaborate in international research. There is the potential that the participants' answers may indicate gender differences in the positive and negative experiences that are experienced when collaborating in international research. There is the potential that academia may be excluding women in collaborative international research by creating barriers to participation. If the barriers were found to be gender neutral, it may be possible to remove general barriers to foster a more world-oriented solution to researching issues for both genders. If academia has created barriers to international research collaboration, then faculty may be hindered in their professional advancement using this avenue, as research is necessary to increase one's scholarly value and advance in the field. If faculty are not encouraged to collaborate in international research and are not rewarded for their efforts accordingly, academia falls behind foreign counterparts and loses a scholarly competitive edge as the world becomes more globalized.

Summary

The purpose of this study was to examine international research collaboration and the reported positive and negative experiences for women and men faculty; also examined is the impact of international research collaboration on career advancement of faculty specifically studying whether there is a difference between women's and men's experiences. This study used a mixed method design allowing faculty to identify the positive and negative experiences/barriers that have already been identified in previous literature as well as adding their unique experiences in these areas in the form of an "other" option. Deans and department chairs were also given a mixed method designed

survey, which allowed them to rate the importance of international research collaboration to the hiring and promotion decision using a Likert scale, as well as be able to add comments or opinions about how international research collaboration is viewed and valued in their departments.

This study posed the following research questions:

1. What are the positive experiences that Idaho public university faculty have when collaborating on international research projects?
2. What are the negative experiences that Idaho public university faculty face when collaborating on international research projects?
3. What is the value of participating in collaborative international research in hiring and tenure/promotion decisions according to Idaho public university deans and department chairs and faculty?
4. Are there similarities and differences in collaborative international research as explored in the above questions between Idaho public university women and men faculty?

CHAPTER II

Literature Review

The purpose of this study was to examine international research collaboration and the reported positive and negative experiences for women and men faculty; also examined is the impact of international research collaboration on career advancement of faculty specifically studying whether there is a difference between women's and men's experiences. The literature review addressed the following content areas: (a) the impact of research on career advancement (hiring, tenure, and promotion), (b) value of collaborative research, (c) international research collaboration, (d) positive experiences in international research collaboration, and (e) negative experiences/barriers in international research collaboration. Due to the fact that women are often at a disadvantage in higher education, the examination of positive and negative experiences encompassed the unique experiences reported by women faculty members. This method was employed to determine if there are shared experiences or differences in collaborative international research between women and men. It should be noted that due to the scarcity of literature on hiring and tenure/promotion decisions that are weighted for collaborative international research participation, this topic was not addressed in the literature review.

Impact of Research on Career Advancement

Faculty members at research institutions who are trying to attain tenure are judged on three main qualities: teaching, service, and research (Green, 2008; Luchs, Seymoure, & Smith, 2011; Mandelco, 2010; Tien & Blackburn, 1996). Although teaching and service are important to the overall goals and mission of a university, several studies have stated that when promotion or tenure decisions are made, research is the most important

factor at institutions with a strong research component (Birnholtz, 2006; Boyes, Happel, & Hogan, 1984; Green, 2008; Luchs et al., 2011; Tien & Blackburn, 1996). According to a study by Luchs et al. (2011), research was given three times the amount of weight over service activities when considering candidates for promotion or tenure. Conventional research, or research for which the faculty member is the sole-author, is considered the most valuable when making tenure and promotional decisions and is considered by some to be the only sure way to measure scholarly achievement (Birnholtz, 2006; Boyes et al., 1984; Facione, 2006; Lincoln, 1998). However, research collaboration is becoming more popular among new assistant professors as a way to produce more research with less effort and to increase their publication numbers (Jeong et al., 2011).

Value of Collaborative Research

There were mixed reactions regarding the value of collaborative research when it came to career advancement (Facione, 2006). Increasingly, journals and funding agencies are interested in multidisciplinary research, which has increased the need for collaborative research (Facione, 2006). Administrators and colleagues should encourage and reward collaborative research when considering promotion and tenure decisions (Facione, 2006; Jorgensen, 2007). Collaborative research allows for more effective ways to access specialized equipment, thus reducing costs to universities by sharing equipment, facilities, and personnel (Birnholtz, 2006; Haase & Fisk, 2008; Jeong et al., 2011; Katz & Martin, 1997; Ou et al., 2012). Collaborative research allows the individual professor to maintain or increase specialization in a field while still contributing to others' research (Birnholtz, 2006; Haase & Fisk, 2008; Katz & Martin, 1997; Ou et al., 2012).

Although collaborative research is valuable for the advancement of knowledge and scholarship, there is concern that it is difficult to evaluate how involved a faculty member was in a project, making it difficult to give the faculty member credit toward promotion and tenure (Birnholtz, 2006; Facione, 2006; Haase & Fisk, 2008; Jorgensen, 2007; Katz & Martin, 1997). When collaborative research was reviewed, tenured faculty members still gave greater weight to the individual faculty member who was “first author” on a publication (Facione, 2006). According to research by Facione (2006), the top five significant contributions to collaborative research included: being first author; design and integrity assurance to the research project; content expert; lead developer of research instruments; and leader of the research team. Tenure and promotion committee members have concerns about giving credit for work that the collaborative researcher may not have been involved in or that the researcher did not contribute significantly to the overall scholarship of the publication (Facione, 2006; Haase & Fisk, 2008).

International Research Collaboration

International research collaboration is about more than sharing resources and increasing publication rates with less effort than a sole-authorship. Today, due to the growth of information technology creating a more global community for the sharing of information and because English has been established as the key language, it is easier for academics to communicate and to work together on projects that are more global in nature (Altbach, 2007). According to Wildavsky (2011), international research collaboration has more than doubled in the last 20 years and continues to grow. Many researchers in various fields now consider international research collaboration as a way to address global issues and economic problems (Hatakenaka, 2007; Jorgensen, 2007).

According to Hatakenaka (2007), one-fifth of scientific papers are co-authored internationally. According to Knight (2007), the goals of international research collaboration include: creating an international reputation, improving quality of life, increasing national competitiveness, strengthening research capacity, developing human resources, and diversifying the source of faculty and students.

Positive Experiences

The literature on women academics in higher education points to fewer positive experiences for women relative to those of men. It is for this reason that this study focuses on the women's experiences in higher education and will analyze men's and women's responses to learn how closely their experiences coincide. The best-documented positive experience for women in higher education was a peer mentor who could foster their career advancement and provide guidance to promotion and tenure (Arthur, Patton, & Giancarlo, 2007; Bain & Cummings, 2000; Cooper & Mitsunaga, 2010; Easterly, 2008). A supportive spouse and a supportive administration at the institutional level were also listed as factors creating opportunities for women to progress in their careers (Arthur et al., 2007; Cooper & Mitsunaga, 2010). Funding for collaborative international research has been indicated as a positive experience for women (Arthur et al., 2007; Cooper & Mitsunaga, 2010; Ray & Solem, 2009). According to Jeong et al. (2011), the higher the faculty rank and experience of an individual, the greater the opportunity for research collaboration.

International research collaboration has its own unique set of positive experiences reported by women. Women are motivated to collaborate in international research because of possible recognition from peers and their institutions, increased rank, and

higher salary expectations (Adler, 1984). Faster career progress or a better chance to attain tenure were the most frequently mentioned motivators for women wanting to work on collaborative international research projects (Acker & Armenti, 2004; Adler, 1984; Cooper & Mitsunaga, 2010; Ray & Solem, 2009). Becoming an expert in the field (Arthur et al., 2007; Hardre & Cox, 2009; Katz & Martin, 1997; Ray & Solem, 2009); gaining new knowledge or skills (Katz & Martin, 1997); public recognition of good work (outside of the university) (Cooper & Mitsunaga, 2010); winning awards (Cooper & Mitsunaga, 2010; Ray & Solem, 2009); and having access to and joining other experts in the field (Ackers, 2008; Katz & Martin, 1997) were listed as powerful positive experiences to collaborate in international research. Women who collaborated in international research indicated that the travel, type of work available, the challenge of the work, and the excitement of the work were other motivating factors (Ackers, 2008; Arthur et al., 2007; Cooper & Mitsunaga, 2010). Networking and social contributions to communities were also positive experiences (Arthur et al., 2007). Finally, gaining access to top rated journals by partnering with prominent authors or experts in the field through collaborative international research was listed as a highly positive experience (Ackers, 2008; Ou et al., 2012).

Negative Experiences/Barriers

The negative experiences/barriers for women in higher education careers are numerous. If benefitting from a peer mentor is a positive experience, then the opposite can be considered as a negative experience, and indeed the lack of a peer mentor is viewed as a negative barrier to career success (Arthur et al., 2007; Easterly, 2008; Hartley & Dobebe, 2009). One negative experience/barrier that was continuously repeated in the

literature was career blockage based on gender stereotypes or norms, where women were seen as less devoted to their work because of family constraints and the dual roles that they often perform as professionals and as parents (Arthur et al., 2007; Bain & Cummings, 2000; Bonawitz & Andel, 2008; Easterly, 2008; Hartley & Dobeles, 2009; Ou et al., 2012). Additional negative experiences were family-career obstacles where women are contributing the majority of time to: dual-career couples (Adler, 1984; Hartley & Dobeles, 2009); children/child care (Acker & Armenti, 2004; Arthur et al., 2007; Easterly, 2008; Mandleco, 2010); and caring for an elderly parent (Acker & Armenti, 2004; Bonawitz & Andel, 2008; Hartley & Dobeles, 2009; Mandleco, 2010), all of which were indicated as major barriers to advancement. Women acting in dual roles with family commitments also identified the lack of flexible work schedules as a barrier to career advancement (Armenti, 2004; Arthur et al., 2007).

Women who collaborate or have tried to collaborate in international research have reported other gender-based obstacles. There were barriers to accepting women in positions of experience within certain countries (Adler, 1984; Arthur et al., 2007; Ou et al., 2012). Women identified the reluctance of their male managers to send them on international assignments and reported that male managers had stated that women did not want to go or did not ask to collaborate on an international assignment due to the working conditions outside the United States (Arthur et al., 2007). Adler (1984) found the following observation by men who had earned an MBA:

These described the women as lacking confidence, interest, and willingness to travel or to accept expatriate positions, as well as being less adventurous, less able

to take care of themselves overseas, less mentally prepared for a foreign assignment, and more fearful than men. (p. 75)

Negative experiences related to collaborative international research that were specifically identified by women in higher education included emotional and physical stress due to time constraints (Acker & Armenti, 2004; Cooper & Mitsunaga, 2010); funding (Armenti, 2004; Arthur et al., 2007; Ray & Solem, 2009); cultural and language barriers (Ackers, 2008; Cooper & Mitsunaga, 2010; Jeong et al., 2011; Ou et al., 2012; Ray & Solem, 2009); administrative constraints (Bonawitz & Andel, 2008; Cooper & Mitsunaga, 2010; Ray & Solem, 2009); costs associated with travel and communication (Jeong et al., 2011; Ou et al., 2012); and biases of tenured colleagues (Bonawitz & Andel, 2008; Ray & Solem, 2009). One of the more interesting views of women researchers, as identified in the research by Arthur et al. (2007), is that international projects do not promote career growth.

Summary

The availability of literature on the negative experiences that faculty experience is extensive. However, when international research collaboration is involved, the current literature is sparse. This study addresses the sparseness of the literature on international research collaboration when positive and negative experiences were involved. The researcher was interested in determining if there were gender differences in the positive and negative experiences. There is even a smaller amount of information available about international research collaborations and positive experiences. The researcher wanted to address the positive experiences gap in the current literature.

The researcher was unable to locate literature on the subject of how international research collaboration is weighted by deans and department chairs in the hiring and promotion decision process. Lack of literature made this study important in filling the literature gap of information regarding tenure/promotion decisions when a faculty member had collaborated in international research.

Two other gaps existed in the literature. The first was the lack of identification of the collaborating partners' countries, which could lead to a better understanding of geographical limitations or language barriers. A second gap regarding international research collaboration was the information about public and private universities and the Carnegie classification of a university. These could be used to better understand the needs and values of different types of universities. Future research may include adding tenured colleagues to the discussion of international research collaboration and the hiring and promotion decisions, since most departments include senior faculty in the promotion process; they were not included in this study.

CHAPTER III

Methodology

As stated, the purpose of this study was to examine international research collaboration and the reported positive and negative experiences for women and men faculty; also examined is the impact of international research collaboration on career advancement of faculty specifically studying whether there is a difference between women's and men's experiences. The methodology section reviews the participants and sampling, the instrumentation, the procedures, and the data analysis.

This study posed the following questions:

1. What are the positive experiences that Idaho public university faculty have when collaborating on international research projects?
2. What are the negative experiences that Idaho public university faculty face when collaborating on international research projects?
3. What is the value of participating in collaborative international research in hiring and tenure/promotion decisions according to Idaho public university deans and department chairs and faculty?
4. Are there similarities and differences in collaborative international research as explored in the above questions between Idaho public university women and men faculty?

Participants and Sampling

Participants. The participants for this study included two groups: (1) faculty members, any level and any department, whose email address was available on the university's online directory, and who were employed at Boise State University, Idaho

State University, or the University of Idaho; and (2) deans and department chairs from the same universities.

Sampling. A total of 1418 faculty members were invited to participate in the survey. The email sampling, email invitations per university, breaks down as follows: Boise State University 41%; Idaho State University 34%, and the University of Idaho 25%. The faculty response rates by university were as follows: *Boise State University* 55%; *Idaho State University* 24%; the *University of Idaho* 15%; and *did not provide an institution* 5%. Table 1 shows the invitations for faculty institutional breakdown with raw numbers and percentages.

Table 1

Faculty: Invitations Institutional Breakdown and Response Rates

Institution	Invitations		Response Rates	
	<i>n</i>	%	<i>n</i>	%
Boise State University	580	41%	269	55%
Idaho State University	483	34%	117	24%
University of Idaho	355	25%	75	15%
Did not provide an institution			26	5%
Total	1418	100%	487	99%*

Note. * Percentage was due to rounding.

Faculty from all departments were asked to participate in the faculty survey. Email invitations by generic college were as follows: Colleges of Agriculture; Natural Resources 9%; Colleges of Arts & Letters; Social Sciences 35%; Colleges of Business 15%; Colleges of Education 14%; Colleges of Health Sciences 13%; and Colleges of Sciences; Engineering 14%. Generic colleges were used to report the invited participants' college in order to protect their identity. For instance the College of Arts and Letters and the College of Arts and Science along with the College of Social Science became Colleges of Arts and Letters; Social Sciences. Faculty response rates for the reported

colleges were as follows: *Colleges of Agriculture; Natural Resources* 1%; *Colleges of Arts & Letters; Social Sciences* 34%; *Colleges of Business* 9%; *Colleges of Education* 14%; *Colleges of Health Sciences* 14%; *Colleges of Sciences; Engineering* 14%; *no college indicated but did identify their gender* 11%; and *no college or gender indicated* 3%. Table 2 provides the invitations for each college and the response rates from each college with raw numbers and percentages. The rationale for including the entire population of accessible faculty members was to obtain an accurate representation of all levels of faculty and increase the range of disciplines questioned. Faculty rank was not reported in the invitational stage because not all faculty ranks were available.

Table 2

Faculty: Invitations and Responses for College

College	Invitation Totals		Response Totals	
	<i>n</i>	%	<i>n</i>	%
Colleges of Agriculture; Natural Resources	122	9%	5	1%
Colleges of Arts & Letters; Social Sciences	496	35%	164	34%
Colleges of Business	216	15%	46	9%
Colleges of Education	196	14%	66	14%
Colleges of Health Sciences	187	13%	68	14%
Colleges of Sciences; Engineering	201	14%	68	14%
No college indicated with gender indicated			53	11%
No college or gender indicated			17	3%
Totals	1418	100%	487	100%

Note. The reported colleges are generic categories to protect the identity of faculty members.

Deans and department chairs surveyed from all three universities totaled 114. The breakdown by college is not provided to protect the identity of the deans and department chairs. The invitation breakdown was as follows: deans 21% and department chairs 79%. The response rates were as follows: *deans* 15%; *department chairs* 82%; and *not*

identified 3%. Table 3 provides the invitational breakdown of deans and department chairs and the response rates with raw numbers and percentages.

Table 3

Invitations Deans and Department Chairs Breakdown

Position	Invitations		Responses	
	<i>n</i>	%	<i>n</i>	%
Deans	24	21%	10	15%
Department Chairs	90	79%	54	82%
Not identified			2	3%
Totals	114	100%	66	100%

Instrumentation

Faculty. A blanket email/consent form was developed to contact faculty members through the university email systems, so that the researcher could invite faculty to participate in the survey (see Appendix A). The email served as an initial contact and as a consent form. Participants who clicked the link included in the email and filled out the survey were consenting to participate in the study.

The faculty survey utilized a mixed methods design (see Appendix C). A mixed methods research design is defined as: combining quantitative and qualitative research to assess the differences between groups (Ary, Jacobs, & Sorensen, 2010; Myers, Well, & Lorch Jr., 2010). Two types of close-ended questions were utilized: check boxes for appropriate experiences, and Likert scale questions about perceptions. The faculty survey included an “other” option for the faulty members to add their own unique positive and negative experiences. The faculty survey took approximately ten minutes to complete, depending on a participant’s responses.

Deans and department chairs. A separate blanket email/consent form was developed to assist in contacting deans and department chairs through the university email systems, so that the researcher could invite deans and department chairs to participate in their own survey (see Appendix D). Participants who clicked the link included in the email and filled out the survey were consenting to participate in the study.

The deans and department chairs survey utilized a mixed methods design (see Appendix F). One type of close-ended question was utilized: Likert scale questions about perceptions. The deans and department chairs survey asked them for additional thoughts on international research collaboration and how it could affect the hiring/promotion process. The deans and department chairs survey took less than five minutes to complete, depending on a participant's responses.

Procedures

The following is the format for the design, dissemination, additional information collection, and analysis of the research. The general procedure for this study was:

1. Created survey based on literature review.
2. Panel reviewed survey instruments (Idaho State University dissertation committee).
3. Surveys edited based on responses from Idaho State University dissertation committee.
4. Panel of experts from University of Idaho and Boise State University assessed survey for validity.
5. Surveys edited based on responses from panel of experts from University of Idaho and Boise State University.

6. Submitted to the Idaho State University Human Subjects Committee (HSC) (Institutional Review Board for Idaho State University).
7. Survey was made available through SurveyMonkey.com.
8. Faculty, deans, and department chairs emailed by primary researcher.
9. Secondary reminder email sent two weeks after initial email to faculty, deans, and department chairs, by primary researcher.
10. A third reminder email sent three weeks after the secondary email to faculty, deans, and department chairs, by primary researcher.
11. Data analyzed.
12. Dissemination of results.

Email. The email messages with the survey link were distributed through the primary researcher's Idaho State University email account. The faculty, deans, and department chairs email addresses were obtained through the universities' online directories. The survey links were available for two months after the initial email request for participation (initial contact for faculty received 214 responses and initial contact for deans and department chairs received 39). A second reminder email was sent out two weeks after the initial email (second contact for faculty received 142 and second contact for deans and department chairs received 17). A third reminder email was sent (see Appendix B for faculty and Appendix E for deans and department chairs) three weeks after the secondary email reminder (third contact for faculty received 131 and third contact for deans and department chairs received 10). Additional availability of the surveys was considered based on initial response rates. After the third email reminder, the response rates were adequate to draw conclusions and the survey links were closed.

Surveys. An online survey was developed by drawing upon the literature reviewed in this study to assess the current positive and negative experiences when collaborating on international research (see Appendix C). The survey was sent to two separate groups to assess the validity of the instrument: (1) dissertation faculty committee and (2) five faculty members from Boise State University and the University of Idaho (Ary et al., 2010; Bogdan & Biklen, 2007; Creswell, 2007). Changes to the survey instruments were made based on the panel's review and review of experts. The surveys were submitted to the HSC at Idaho State University for approval. After the HSC gave approval for the study, the surveys were emailed and made available to the participants online. The surveys were designed to be administered electronically to reduce the cost of distributing the survey in the form of postage and paper supplies, and because an electronic survey provides a faster response rate (Yun & Trumbo, 2006). Tse (as cited in Prathap, Premavathi, & Ramasubramanian, 2011) summarized six advantages of using e-mail surveys compared to traditional mail methods: "e-mail is cheaper; it eliminates tedious mail processes; it is faster in transmission; it is less likely to be ignored as junk mail; it encourages respondents to reply; and it can be construed as environmentally friendly" (p. 2). The survey links were available 24 hours a day, seven days a week for approximately two months.

Confidentiality issues. All survey data were recorded anonymously through the online survey platform SurveyMonkey. Data were exported to and analyzed using SPSS. Data were not linked to the individual surveys. The data were retrievable by a password known only to and accessible only by the primary researcher and the dissertation committee members to ensure confidentiality during the collection and analysis phases of

the study. After the completion of the study, the data and analyses were stored on a password-protected cloud system called Dropbox by the principal investigator and will remain there for seven years in case further studies on the topic are conducted. After seven years the data of the study will be deleted from the cloud system. If Dropbox ceases to exist, the files will be moved to a password-protected flash drive for the remainder of the seven years before deletion.

Data Analysis

A Likert scale question was used to collect quantitative responses from both the faculty and deans and department chairs surveys. Acceptable return rates for an online survey were estimated at 30% (The University of Texas at Austin, 2011). Descriptive and frequency statistics were used to analyze all responses to the questions (Leech, Barrett, & Morgan, 2011). A chi-square with Phi was used for faculty survey questions 2 through 9 (to discern gender association with positive and negative experiences/barriers and to identify which gender respondents worked more with during international research collaboration) and questions 11 through 13 (gender association in faculty rank, university reported, and college reported) on the faculty survey. A Bonferroni adjustment was used (to reduce type one errors) for each question group, at $\alpha = .10$ divided by the number of chi-square tests in each group to calculate the family wise error for each group of tests (Jensen, Beus, & Storm, 1968). Phi was calculated for effect using the following scale: between .10 and .30 = small effect; between .30 and .50 = medium effect, and equal to or greater than .50 = large effect (Cohen, 1988). A Binomial statistic was used for additional gender associations with an adjusted Bonferroni for assessing faculty rank and collaborating partners.

Qualitative “other” data were analyzed using a coding approach, identifying key words within the respondents’ comments. The patterns of the group answers were analyzed to identify new information on positive and negative experiences, and hiring and promotion/tenure decisions by identifying keywords or phrases (Creswell, 2007).

Methods Summary

The procedures supported the study by allowing the survey to be designed based on the literature that identified the positive and negative experiences/barriers that are issues identified by women faculty. The positive and negative experiences could be shared experiences of male faculty members. The validity of the survey was strengthened by a review of the survey materials by outside faculty members to assess the synchronization of survey questions with desired measurables. The lack of literature on the impact of international research collaboration on hiring and tenure/promotion decisions was addressed by capturing the views of the faculty and the views of deans and department chairs to better understand the perception and the weighted value given when hiring and promoting individuals when they have collaborative international research participation as part of their resume.

CHAPTER IV

Results

As stated, the purpose of this study was to examine international research collaboration and the reported positive and negative experiences for women and men faculty; also examined is the impact of international research collaboration on career advancement of faculty specifically studying whether there is a difference between women's and men's experiences. The results will review the study findings relative to the response rate/demographics, then by research question.

Response Rate/Demographics

A total of 1418 faculty members were surveyed, and 487 responses were received, a 34% response rate. Faculty responses came from all three universities for a total of 461 respondents, with 5% ($n = 26$) of individuals who did not indicate their university. Response rate by university was as follows: *Boise State University* 55% (male 52% and female 48%); *Idaho State University* 24% (male 45% and female 55%); the *University of Idaho* 15% (male 64% and female 36%); and *did not provide an institution* 5%. The response rates by university are representative of the population invited to complete the survey, with Boise State University accounting for 41% of emailed participants, Idaho State University 34%, and the University of Idaho 25%. The numbers from the NCES (2012a, 2012b, 2012c), as far as gender percentages, are in line with the response populations for Boise State University (53% male faculty versus 47% female faculty), Idaho State University (54% male faculty versus 46% female faculty), and the University of Idaho (66% male faculty versus 34% female faculty). There was no gender association (Bonferroni adjusted $\alpha = .03$ for this set of tests) for the university that faculty members

reported, $\chi^2(2) = 6.41$, $p = .041$, $\Phi = .12$. Table 4 presents the data for institutional invitations, the National Center for Educational Statistics reported gender populations, total response rates, and the response rates by gender for each university.

Table 4

Faculty Institutional Breakdown Invitations and Responses

Institution	Invitations		NCES		Total Response		Male Responses		Female Responses	
	<i>n</i>	%	Male %	Female %	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Boise State University	580	41%	53%	47%	269	58%	141	52%	128	48%
Idaho State University	483	34%	54%	46%	117	25%	53	45%	64	55%
University of Idaho	355	25%	66%	34%	75	16%	48	64%	27	36%
Totals	1418	100%			461		242		219	

Note. $\chi^2(2) = 6.41$, $p = .041$, $\Phi = .12$ for the last two columns (male and female response rates).. Bonferroni adjusted $\alpha = .03$ for this set of tests. $n = 461$. Total responses $n = 487$, with 26 (5%) of individuals who did not identify a university.

Faculty respondents came from various colleges, with 14% ($n = 70$) who did not identify their college. The college and gender reported for each college were as follows: *Colleges of Agriculture; Natural Resources* 1% (male 80% and female 20%); *Colleges of Arts & Letters; Social Sciences* 34% (male 57% and female 43%); *Colleges of Business* 9% (male 72% and female 28%); *Colleges of Education* 14% (male 41% and female 59%); *Colleges of Health Sciences* 14% (male 32% and female 68%); *Colleges of Sciences; Engineering* 14% (male 75% and female 25%); *no college indicated but did identify their gender* 11% (male 34% and female 66%); and *no college or gender indicated* 3% (please see Table 5). A chi-square test was used to identify gender differences. There was a gender association (Bonferroni adjusted $\alpha = .014$ for this set of

tests), between males and females and the colleges they reported, $\chi^2(6) = 45.61, p < .001$, $\Phi = .31$. A Binomial statistic was used to find specific gender associations with an adjusted Bonferroni ($\alpha = .007$) for this set of tests. It was found that men were dominant in two colleges: *Colleges of Business* (men 72% versus women 28%), and *Colleges of Sciences; Engineering* (men 75% versus women 25%). Women (68%) were found to be dominate in the *Colleges of Health Sciences* (men 32%). Generic colleges were used to protect the identity of faculty members. The category for no college indicated represents those that did not give a gender and those that did not give a college.

Table 5

Responses for College Breakdown

College	Total		Male		Female		<i>p</i>
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Colleges of Agriculture; Natural Resources	5	1%	4	80%	1	20%	.375
Colleges of Arts & Letters; Social Sciences	164	34%	94	57%	70	43%	.072
Colleges of Business	46	9%	33	72%	13	28%	.005*
Colleges of Education	66	14%	27	41%	39	59%	.175
Colleges of Health Sciences	68	14%	22	32%	46	68%	.005*
Colleges of Sciences; Engineering	68	14%	51	75%	17	25%	< .001*
No college indicated with gender indicated	53	11%	18	34%	35	66%	.027
No college or gender indicated	17	3%					

Note. $\chi^2(6) = 45.61, p < .001, \Phi = .31$ for the male and female response rates for overall differences across the colleges. Bonferroni adjusted $\alpha = .014$ for this set of test. $n = 470$ (individuals who indicated both college and gender or no college but did indicate a gender). * Denotes a gender association from an additional Binomial statistic ($\alpha = .007$).

Faculty rank for the overall response population ($n = 469$) was indicated as follows: *adjunct* 12% (males 37% and females 63%); *instructors* 9% (males 46% and females 54%); *assistant professor* 25% (males 40% and females 60%); *associate professors* 25% (males 49% and females 51%); *full professor* 31% (males 74% and

females 26%), with 4% ($n = 18$) of respondents declining to give their faculty rank (please see Table 6). A chi-square test was used to identify gender differences. There was a significant association (Bonferroni adjusted $\alpha = .02$ for this set of tests) between gender and faculty rank, $\chi^2(4) = 40.35$, $p < .001$, $\Phi = .29$. A Binomial statistic was used to find specific gender associations with an adjusted Bonferroni ($\alpha = .01$) for this set of tests. It was found that women (26%) were underrepresented in the faculty rank of *full professor* (men 74%).

Table 6

Faculty Rank Breakdown

Rank	Total Responses		Male Responses		Female Responses		p
	n	%	n	%	n	%	
Adjunct ^a	54	12%	20	37%	34	63%	.076
Instructor	41	9%	19	46%	22	54%	.755
Assistant Professor	115	25%	46	40%	69	60%	.040
Associate Professor	116	25%	57	49%	59	51%	.926
Full Professor	143	31%	106	74%	37	26%	< .001*
Totals	469	100%	248	53%	221	47%	

Note. $\chi^2(4) = 40.36$, $p < .001$, $\Phi = .29$ for the male and female response rates for overall differences across the faculty ranks. Bonferroni adjusted $\alpha = .02$ for this set of tests. $n = 469$. Individuals who did not identify faculty rank $n = 18$. ^aAlthough this is not considered a faculty rank, it is the number of contingent faculty who identified themselves as such. * Denotes a gender association from an additional Binomial statistic ($\alpha = .01$).

Question one on the faculty survey asked “Do you participate in research/scholarly activities of any kind? (As ISU defines it, research is any extracurricular activity of an intellectual or professional nature that extends knowledge, understanding, and appreciation, or facilitates the extension of knowledge, or contributes something of scholarly value; this definition includes those activities that involve or are

preparatory to the production of creative works).” Of the 487 faculty members who filled out this survey, 93% ($n = 455$) said *yes*, indicating that they do participate in research/scholarly activities (male 53% and female 47%) and 7% ($n = 32$) said *no* (male 47% and female 53%). The 7% of individuals who answered no to question one were directed to the demographic questions. Question two on the faculty survey asked faculty members “Have you participated in any of the following? Please mark all that apply.” This question was used to identify which activities faculty members participated in when collaborating on international research, also referred to as qualifiers. There were 21% ($n = 94$) of participants who answered that they did not participate in any of the qualifying activities. Individuals who selected the option *I have not participated in any of these activities* (21%) were directed to the demographic questions. For those participants who did select one or more of the qualifiers (79% or $n = 361$) a chi-square with phi was used to examine the association between gender and activities. Gender showed an association (Bonferroni adjusted $\alpha = .02$ for this set of tests) on collaborative international research activities/qualifiers in the following areas: *research projects that were for or in a country outside of the United States* 36% (males 66% and females 34%), $\chi^2(1) = 11.63, p = .001, \Phi = .18$; *research collaborations with partners located outside the United States* 37% (males 69% and females 31%), $\chi^2(1) = 25.55, p < .001, \Phi = .27$; *publication in an international journal* 53% (males 63% and females 37%), $\chi^2(1) = 13.70, p < .001, \Phi = .20$, and *attending an international conference* 60% (males 60% and females 40%), $\chi^2(1) = 5.30, p = .02, \Phi = .12$.

The following collaborative international research activities were not associated (Bonferroni adjusted $\alpha = .02$ for this set of tests) with gender: *research on a topic that is*

international in scope 53% (males 58% and females 42%), $\chi^2(1) = 0.97, p = .33, \Phi = .05$, and *presentation at an international forum or conference* 59% (males 59% and females 41%), $\chi^2(1) = 3.78, p = .05, \Phi = .10$. Table 7 presents the raw numbers and percentages for activities that faculty members reported they participated in when collaborating on international research; gender breakdown; chi-square; p-value; and phi reported.

Table 7

Gender and Qualifiers for International Research Collaboration

Qualifier	Total		Male		Female		$\chi^2(1)$	p	Φ
	n	%	n	%	n	%			
Research projects for or in a country outside of the United States	162	36%	107	66%	55	34%	11.63*	.001	.18
Research collaboration with partners located outside of the United States	176	37%	122	69%	54	31%	25.55*	< .001	.27
Research on a topic that is international in scope	241	53%	140	58%	101	42%	0.97	.33	.05
Presentation at an international forum/conference	267	59%	158	59%	109	41%	3.78	.05	.10
Publication in an international journal	240	53%	151	63%	89	37%	13.70*	< .001	.20
Attending an international conference	272	60%	162	60%	110	40%	5.30*	.02	.12
I have not participated in any of these activities	94	21%	40	43%	54	57%	--	--	--

Note. * Denotes a gender association. Bonferroni adjusted $\alpha = .02$ for this set of tests. $n = 455$.

Question nine on the faculty survey asked participants “Do you work more with men or women when collaborating on international research?” A total of 327 faculty

members answered this question. A chi-square with phi was used to examine the association between the participants' gender and what gender they reported working with on international research collaboration. Gender showed an association (Bonferroni adjusted $\alpha = .03$ for this set of tests) between participants' gender and the gender they reported working with, $\chi^2(3) = 38.60, p < .001, \Phi = .34$. A Binomial statistic was used to identify specific gender associations with an adjusted Bonferroni ($\alpha = .013$) for this set of tests. Participation was as follows: *men* 27% (male 64% and female 36%); *women* 17% (male 23% and female 77%); *equal participation with both men and women* 45% (male 69% and female 31%); and *I work independently* 10% (male 47% and female 53%) (please see Table 8). A gender association was found in two categories that favored males: *men*, and *equal participation with both men and women*. Women (77%), more than men (23%), indicated that they work more with *women*.

Table 8

The Gender of Collaborating Partners for International Research

Gender	Total		Male		Female		<i>p</i>
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Men	89	27%	57	64%	32	36%	.011*
Women	57	17%	13	23%	44	77%	< .001*
Equal participation with both men and women	147	45%	101	69%	46	31%	< .001*
I work independently	34	10%	16	47%	18	53%	.864

Note. $\chi^2(3) = 38.60, p < .001, \Phi = .34$ for the male and female response rates for overall differences across collaborating partners gender. Bonferroni adjusted $\alpha = .03$ for this set of tests. $n = 327$. The gender (men, women, equal participation with both men and women, and I work independently) indicated on the left were the options available for participants to select. * Denotes a gender association from an additional Binomial statistic ($\alpha = .013$).

Of the deans and department chairs ($n = 66$) who participated in the survey, 15% identified themselves as deans (males 70% and females 30%) and 82% identified as

department chairs (males 87% and females 13%), and one individual declined to answer.

University participation for deans and department chairs was as follows: *Boise State University* 50%; *Idaho State University* 29%; and the *University of Idaho* 18%, with 3% of individuals who did not indicate their university (please see Table 9). The college of the individual respondents was not reported to protect the identity of respondents.

Table 9

Response Deans and Department Chairs Breakdown

Position	Total		Male		Female	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Deans	10	15%	7	70%	3	30%
Department chairs	54	82%	47	87%	7	13%
Not identified	2	3%	--	--	--	--

Research Question 1

What are the positive experiences that Idaho public university faculty have when collaborating on international research projects? There were three separate survey

questions (questions three, four, and five) on the faculty survey that addressed positive experiences. Frequency statistics were used to analyze this set of data for the percentage of participants who identified with each positive experience. Question three on the faculty survey asked: “What are the positive experiences you have had when

collaborating or working on international research? Please check all that apply.” A total of 326 faculty members marked at least one answer and many marked multiple answers.

The positive experiences when participating in international research collaborations were as follows: *travel to a country outside of the United States* 75%; *excitement* 59%; *challenge* 67%; *providing a social contribution to communities for a better world* 48%; *recognition from peers* 55%; *reduction in cost of project by sharing equipment, facilities,*

etc. 11%; *increased personal skills* 55%; *recognition from the institution* 37%; *increasing my expertise in the field* 84%; *public recognition outside of my university* 48%; *awards at a national level or greater* 14%; *peer mentor* 17%, and *funding availability* 21% (please see Table 10).

Table 10

Positive Faculty Experiences When Participating on International Research Collaborations

Positive Experiences	<i>n</i>	%
Travel to a country outside of the United States	244	75%
Excitement	193	59%
Challenge	219	67%
Providing a social contribution to communities for a better world	156	48%
Recognition from peers	180	55%
Reduction in cost of project by sharing equipment, facilities, etc.	36	11%
Increased personal skill	180	55%
Recognition from the institution	119	37%
Increasing my expertise in the field	275	84%
Public recognition outside of my university	155	48%
Awards at a national level or greater	47	14%
Peer mentor	56	17%
Funding availability	69	21%

Note. *n* = 326. Some participants did not answer this question.

When faculty members were asked to provide additional comments of positive factors, a total of 40 respondents gave additional comments. The following categories were created for the additional comments given: *expectation for my job* 15%; *friendships created* 5%; *leadership* 3%; *learning opportunity* 20%; *same positive experiences as working on national projects* 3%; *sharing of information* 25%; *good opportunity for student participation* 3%; *support is meager or non-existent* 8% (meant as a negative experience by respondents); *university prestige* 3%; *provides a worldly outlook* 5%; *repeated options already available from check list or provided an answer of N/A* 28% (please see Table 11). For comments made by faculty members, please see Appendix G.

Table 11

Faculty Additional Positive Experiences When Collaborating on International Research

Additional Positive Experiences	<i>n</i>	%
Expectation for my job	6	15%
Friendships created	2	5%
Leadership	1	3%
Learning opportunity	8	20%
Same positive experiences as working on national projects	1	3%
Sharing of information	10	25%
Good opportunity for student participation	1	3%
Support is meager or non-existent*	3	8%
University prestige	1	3%
Provides a worldly outlook	2	5%
Repeated options already available from check list or provided an answer of N/A	11	28%

Note. *n* = 40. Open-ended; some participants gave multiple answers. *Although this is not a positive experience, participants did include it with this set of comments.

Question number four on the faculty survey asked participants: “What are some of the professional advantages that you have experienced because you collaborated or worked on international research?” A total of 316 faculty members answered this question and many marked multiple responses. The following advantages were reported by faculty respondents: *joining other experts in the field* 79%; *building a strong network of professionals* 67%; *publication opportunities* 75%; *increased employment opportunity/offers* 20%; *gaining rank as an international researcher* 51%; *faster career advancement* 16%; and *higher salary* 9% (please see Table 12).

Table 12

Faculty Professional Advantages Experienced When Collaborating on International Research

Professional Advantages	<i>n</i>	%
Joining other experts in the field	248	79%
Building a strong [professional] network*	213	67%
Publication opportunities	238	75%
Increased employment opportunity/offers	64	20%
Gaining rank as an international researcher	162	51%
Faster career advancement	51	16%
Higher salary expectations	29	9%

Note. *n* = 316. Not all participants answered this question. *Edited for clarity.

There were 22 faculty members who gave additional comments for professional advantages that they had received from working on international research collaboration.

The following categories were created for the additional professional advantages:

provided a broad cultural understanding 9%; the research is the most important aspect 5%; increased salary is a myth 14%; same as in national research 9%; and repeated options already available from check list or provided an answer of N/A 64% (please see Table 13). For comments made by faculty members please see Appendix H.

Table 13

Faculty Additional Professional Advantages Experienced When Collaborating on International Research

Additional Professional Advantages	<i>n</i>	%
Provided a broad cultural understanding	2	9%
The research is the most important aspect	1	5%
Increased salary is a myth	3	14%
Same as in national research	2	9%
Repeated options already available from check list or provided an answer of N/A	14	64%

Note. *n* = 22. Open-ended; some participants gave multiple answers.

Question five on the faculty survey asked participants “What are the supports you have received when working or collaborating on international research? Please check all

that apply.” A total of 279 faculty members answered this question and many marked multiple responses. The following are the support types identified by the faculty members: *spouse or partner* 53%; *administration outside the college* 24%; *dean of my college* 44%; *my department chairs* 62%; *tenured colleagues* 38%, and *other experts in the field* 50% (please see Table 14).

Table 14

Faculty Supports When Participating on International Research Collaborations

Supports	<i>n</i>	%
Spouse or partner	149	53%
Administration outside the college	68	24%
Dean of my college	123	44%
My department chair	173	62%
Tenured colleagues	107	38%
Other experts in the field	138	50%

Note. *n* = 279. Not all participants answered this question.

There were 53 participants who left additional comments about the supports faculty received when participating on international research collaboration. The following categories were created for additional supports: *a university other than their own* 6%; *foundations* 4%; *receiving grants* 13%; *it is an expectation in my department* 2%; *a journal editor* 2%; *no supports given* 11%; *sabbatical time* 6%; *same as national* 2%; *money for travel was given* 6%; *repeated options already available from check list or provided an answer of N/A* 51% (please see Table 15). For comments made by faculty members please see Appendix I.

Table 15

Additional Supports Reported by Faculty When Participating on International Research Collaborations

Additional Supports	<i>n</i>	%
A university other than their own	3	6%
Foundations	2	4%
Receiving grants	7	13%
It is an expectation in my department	1	2%
A journal editor	1	2%
No supports given	6	11%
Sabbatical time	3	6%
Same as national	1	2%
Money for travel was given	3	6%
Repeated options already available from check list or provided an answer of N/A	27	51%

Note. *n* = 53. Open-ended; some participants gave multiple answers.

Research Question 2

What are the negative experiences that Idaho public university faculty face when

collaborating on international research projects? Question six on the faculty survey

asked: “What are the barriers you have experienced in your attempts to work on

collaborative international research? Please check all that apply.” A total of 259 faculty

members answered this question and many marked multiple responses. The following

were indicated as negative experiences identified by faculty members when attempting to

work on international research collaboration: *lack of a peer mentor* 17%; *gender issues*

5%; *children* 15%; *spouse or partner’s employment needs* 25%; *caring for a spouse or*

elderly parent 7%; *no support from dean* 20%; *no support from department chair* 14%;

health issues 6%; *no funding available for project* 49%; *no funding available or not*

enough funding to participate/travel to the conference that I would have liked to attend

64%; *cultural barriers* 14%; *no support from tenured colleagues* 9%; *language barriers*

24%, and *no support from administration outside the college* 16% (please see Table 16).

Table 16

Faculty: Negative Experiences/Barriers When Collaborating on International Research

Negative Experience/Barrier	<i>n</i>	%
Lack of a peer mentor	43	17%
Gender issues	13	5%
Children	38	15%
Spouse or partner's employment needs	64	25%
Caring for a spouse or elderly parent	17	7%
No support from dean	51	20%
No support from department chair	36	14%
Health issues	15	6%
No funding available for project	128	49%
No funding available or not enough funding to participate/travel to the conferences that I would have liked to attend.	166	64%
Cultural barriers	37	14%
No support from tenured colleagues	24	9%
Language barriers	61	24%
No support from Administration outside the college	42	16%

Note. *n* = 259. Not all participants answered this question.

There were 53 participants who left additional comments about the negative experiences/barriers that faculty members encountered when working on international research collaboration. Those comments fall into these categories: *could not travel for research* 2%; *confiscation of property in other countries* 2%; *contract paperwork* 6%; *could not find a contract for research* 2%; *locating data access points* 2%; *knowing the international aspect of the issue being researched* 2%; *intellectual property issues* 2%; *there were no barriers to international research collaboration* 25%; *no support for international research* 2%; *research support declined* 6%; *time from teaching* 9%; *time general* 15%; *traveling to an unsafe part of the world* 2%; *varying research standards* 2%; and *repeated options already available from check list or provided an answer of N/A* 36% (please see Table 17). For comments made by faculty members please see Appendix J.

Table 17

Additional Faculty Negative Experiences/Barriers When Collaborating on International Research

Additional Negative Experience	<i>n</i>	%
Could not travel for research	1	2%
Confiscation of property in other countries	1	2%
Contract paperwork	3	6%
Could not find a contract for research	1	2%
Locating data access points	1	2%
Knowing the international aspect of the issue being researched	1	2%
Intellectual property issues	1	2%
There were no barriers to international research collaboration	13	25%
No support for international research	1	2%
Research support declined	3	6%
Time from teaching	5	9%
Time general	8	15%
Traveling to an unsafe part of the world	1	2%
Varying research standards	1	2%
Repeated options already available from check list or provided an answer of N/A	19	36%

Note. *n* = 53. Some participants gave multiple answers.

Research Question 3

What is the value of participating in collaborative international research in hiring and tenure/promotion decisions according to Idaho public university deans and department chairs and faculty?

Faculty. Question seven on the faculty survey asked faculty members: “Please rate the impact on potential advancement in your current department, because you have participated in collaborative international research.” A total of 338 participants answered this question. A chi-square test was used to identify gender associations. The results indicated that male and female faculty place the same amount of potential impact on advancement in their current department (Bonferroni adjusted $\alpha = .03$ for this set of tests), breakdown as follows: *great impact* 18% (males 63% and females 37%); *good*

impact 29% (males 57% and females 43%); *some impact* 33% (males 59% and females 41%), and *no impact* 20% (males 49% and females 51%), $\chi^2(3) = 2.64, p = .45, \Phi = .09$ (please see Table 18).

Table 18

Faculty Perceptions of Potential Advancement in Current Department

Response	Total		Male		Female	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Great impact	59	18%	37	63%	22	37%
Good impact	98	29%	56	57%	42	43%
Some impact	112	33%	66	59%	46	41%
No impact	69	20%	34	49%	35	51%

Note. $\chi^2(3) = 2.64, p = .45, \Phi = .09$. Bonferroni adjusted $\alpha = .03$ for this set of tests. Gender association not found. $n = 338$.

Question eight on the faculty survey asked faculty members: “Please rate the impact on the potential advancement in your overall career for your participation in collaborative international research.” A total of 326 faculty members answered this question. A chi-square test was used to identify gender associations. The results indicated that men and women place the same amounts of potential impact on their overall career advancement (Bonferroni adjusted $\alpha = .03$ for this set of tests), breakdown as follows: *great impact* 26% (males 58% and females 42%); *good impact* 36% (males 58% and females 42%); *some impact* 29% (males 58% and females 42%), and *no impact* 9% (males 50% and females 50%), $\chi^2(3) = 0.69, p = .88, \Phi = .05$ (please see Table 19).

Table 19

Faculty Perceptions of Potential Advancement on Overall Career

Response	Total		Male		Female	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Great impact	84	26%	49	58%	35	42%
Good impact	118	36%	68	58%	50	42%
Some impact	96	29%	56	58%	40	42%
No impact	28	9%	14	50%	14	50%

Note. $\chi^2(3) = 0.69$, $p = .88$, $\Phi = .05$. Bonferroni adjusted $\alpha = .03$ for this set of tests. Gender association not found. $n = 326$.

Deans and Department Chairs. Deans and department chairs were asked to “Please rate the level of importance you place on experience in international research collaboration when hiring for faculty positions in your current department/college. (Research that involves the faculty member to collaborate with a person, subject, or organization that is located or based in a country outside the United States).” A total of 65 deans and department chairs responded as follows: great importance 6%; some importance 52%; little importance 35%, and no importance 6% (please see Table 20).

Table 20

Deans and Department Chairs: Importance of International Research Collaboration for Hiring

Response	<i>n</i>	%
Great importance	4	6%
Some importance	34	52%
Little importance	23	35%
No importance	4	6%

Note. $n = 65$.

Deans and department chairs were asked “How would you weight the contribution of participation in international research collaborations for faculty members in your current department/college to the tenure and/or promotion decision? (Research

that involves the faculty member to collaborate with a person, subject, or organization that is located or based in a country outside of the United States).” A total of 64 deans and department chairs answered this question. The responses for international research collaboration when considering a faculty member for promotion or tenure were as follows: *substantial weight* 9%; *some weight* 63%; *little weight* 23%, and *no weight* 5% (please see Table 21).

Table 21

Deans and Department Chairs: Importance of International Research Collaboration on Promotion/Tenure

Response	<i>n</i>	%
Substantial weight	6	9%
Some weight	40	63%
Little weight	15	23%
No weight	3	5%

Note. *n* = 64.

Additionally, the deans and department chairs were asked “How would you weight the contribution of international publication for faculty members in your current department/college? (Publications in journals that are recognized as global in nature).” A total of 65 deans and department chairs answered this question. The responses were: *substantial weight* 35%; *some weight* 52%; *little weight* 11%, and *no weight* 3% (please see Table 22).

Table 22

Deans and Department Chairs: Importance of Contribution to International Publication for Current Faculty Members

Response	<i>n</i>	%
Substantial weight	23	35%
Some weight	34	52%
Little weight	7	11%
No weight	2	3%

Note. *n* = 65. Weight is a term used to describe the amount that international publications would impact a candidate's chance at promotion or tenure in the candidate's current department.

Deans and department chairs were asked "How would you weight the contribution of participation at conferences that are international for faculty members in your current department/college? (Forums or conferences outside of the United States)."

A total of 65 deans and department chairs answered this question. The responses were:

substantial weight 15%; *some weight* 60%; *little weight* 15%, and *no weight* 9% (please see Table 23).

Table 23

Deans and Department Chairs: Importance of International Conference Participation for Current Faculty Members

Response	<i>n</i>	%
Substantial weight	10	15%
Some weight	39	60%
Little weight	10	15%
No weight	6	9%

Note. *n* = 65. Weight is a term used to describe the amount that international conference participation would impact a candidate's chance at promotion or tenure in the candidate's current department.

When deans and department chairs were asked to provide additional thoughts about the impact on hiring and/or promotion decisions if a candidate had collaborated in

international research, 45 participants provided comments. The following categories were created for the additional comments: *international research creates visibility and prestige for the university and the department* 4%; *depends on the candidate* 9%; *depends on the position* 4%; *does not impress* 2%; *international research is desirable* 22%; *international research is not expected* 7%; *international research is valued* 18%; *international research collaboration is undervalued* 2%; *international research is an opportunity* 2%; *more national recognition* 2%; *international research is not given any more consideration than national research* 42%; *international research is not critical in my field* 9%; *research in my field is not collaborative* 2%; *I would actually be wary of hiring faculty who fancied themselves international collaborators* 2%; and *repeated options already available from check list or provided an answer of N/A* 2% (please see Table 24).

For comments made by deans and department chairs, please see Appendix K.

Table 24

Deans and Department Chairs: Additional Comments on International Research Collaboration

Additional Comment	<i>n</i>	%
International research creates visibility and prestige for the university and the department	2	4%
Depends on the candidate	4	9%
Depends on the position	2	4%
Does not impress	1	2%
International research is desirable	10	22%
International research is not expected	3	7%
International research is valued	8	18%
International research collaboration is undervalued	1	2%
International research is an opportunity	1	2%
More national recognition	1	2%
International research is not given any more consideration than national research	19	42%
International research is not critical in my field	4	9%
Research in my field is not collaborative	1	2%
I would actually be wary of hiring faculty who fancied themselves international collaborators	1	2%
Repeated options already available from check list or provided an answer of N/A	1	2%

Note. *n* = 45. Open-ended; some participants left multiple comments.

Research Question 4

Are there similarities and differences in collaborative international research as explored in the above questions between Idaho public university women and

men? Question three on the faculty survey asked participants: “What are the positive experiences you have had when collaborating on international research? Please check all that apply.” A total of 326 faculty members answered this question. A chi-square with phi was used to examine the association between gender and activities. Results indicated that gender had a small association (Bonferroni adjusted $\alpha = .007$ for this set of tests) on *public recognition outside of my university* (males 54% and females 38%), $\chi^2(1) = 8.02$, $p = .005$, $\Phi = .16$. The following positive experiences were not associated (Bonferroni

adjusted $\alpha = .007$ for this set of tests) with gender: *travel outside of the United States* (males 62% and females 39%), $\chi^2(1) = 5.76, p = .02, \Phi = .13$; *excitement* (males 58% and females 42%), $\chi^2(1) = 0.03, p = .87, \Phi = .01$; *challenge* (males 58% and females 42%) $\chi^2(1) = 0.03, p = .87, \Phi = .01$; *providing a social contribution to communities for a better world* (males 56% and females 44%), $\chi^2(1) = 0.44, p = .51, \Phi = -.04$; *recognition from peers* (males 63% and females 37%), $\chi^2(1) = 5.28, p = .02, \Phi = .13$; *reduction in cost of project by sharing equipment, facilities, etc.* (males 69% and females 31%), $\chi^2(1) = 2.30, p = .13, \Phi = .01$; *increased personal skill* (males 59% and females 41%), $\chi^2(1) = 0.52, p = .47, \Phi = .04$; *recognition from the institution* (males 66% and females 35%), $\chi^2(1) = 4.76, p = .03, \Phi = .12$; *increasing my expertise in the field* (males 59% and females 42%), $\chi^2(1) = 0.55, p = .46, \Phi = .04$; *awards at an national level or greater* (males 62% and females 38%), $\chi^2(1) = 0.37, p = .55, \Phi = .03$; *peer mentor* (males 59% and females 41%), $\chi^2(1) = 0.04, p = .83, \Phi = .01$, and *funding availability* (males 68% and females 32%), $\chi^2(1) = 3.91, p = .05, \Phi = .11$ (please see Table 25).

Table 25

Gender and Faculty's Positive Experiences in International Research Collaboration

Positive Experience	Total		Male		Female		$\chi^2(1)$	<i>P</i>	Φ
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%			
Travel to a country outside of the United States	244	75%	150	62%	94	39%	5.76	.02	.13
Excitement	193	59%	112	58%	81	42%	0.03	.87	.01
Challenge	219	67%	127	58%	92	42%	0.03	.87	.01
Providing a social contribution to communities for a better world	156	48%	87	56%	69	44%	0.44	.51	-.04
Recognition from peers	180	55%	114	63%	66	37%	5.28	.02	.13
Reduction in cost of project by sharing equipment, facilities, etc.	36	11%	25	69%	11	31%	2.30	.13	.01
Increased personal skill	180	55%	107	59%	73	41%	0.52	.47	.04
Recognition from the institution	119	37%	78	66%	41	35%	4.76	.03	.12
Increasing my expertise in the field.	275	84%	161	59%	114	42%	0.55	.46	.04
Public recognition outside of my university	155	48%	102	66%	53	34%	8.02*	.005	.16
Awards at a national level or greater	47	14%	29	62%	18	38%	0.37	.55	.03
Peer mentor	56	17%	33	59%	23	41%	0.04	.83	.01
Funding availability	69	21%	47	68%	22	32%	3.91	.05	.11

Note. * Denotes a gender association. Bonferroni adjusted $\alpha = .007$ for this set of tests. $n = 326$. Some participants did not answer this question.

Question four on the faculty survey asked: “What are some of the professional advantages that you have experienced when working on international research collaborations?” A total of 316 faculty members answered this question. A chi-square with phi was used to examine the association between responses and gender. Results indicated that gender had an association (Bonferroni adjusted $\alpha = .01$ for this set of tests) on *increased employment opportunity/offers* (males 73% and females 27%), $\chi^2(1) = 7.63$, $p = .01$, $\Phi = .16$. The following advantages were not associated (Bonferroni adjusted $\alpha =$

.01 for this set of tests) with gender: *joining other experts in the field* (males 61% and females 40%), $\chi^2(1) = 2.41, p = .12, \Phi = .09$; *building a strong network of professionals* (males 59% and females 41%), $\chi^2(1) = 0.06, p = .81, \Phi = .01$; *publication opportunities* (males 61% and females 39%), $\chi^2(1) = 3.85, p = .05, \Phi = .11$; *gaining rank as an international researcher* (males 64% and females 36%), $\chi^2(1) = 4.87, p = .03, \Phi = .12$; *faster career advancement* (males 57% and females 43%), $\chi^2(1) = 0.05, p = .83, \Phi = -.01$, and *higher salary expectations* (males 69% and females 31%), $\chi^2(1) = 1.51, p = .22, \Phi = .07$ (please see Table 26).

Table 26

Gender and Faculty's Professional Advantages in International Research Collaboration

Professional Advantages	Total		Male		Female		$\chi^2(1)$	p	Φ
	n	%	n	%	n	%			
Joining other experts in the field	248	79%	150	61%	98	40%	2.41	.12	.09
Building a strong network of professional	213	67%	125	59%	88	41%	0.06	.81	.01
Publication opportunities	238	75%	146	61%	92	39%	3.85	.05	.11
Increased employment opportunity/offers	64	20%	47	73%	17	27%	7.63*	.01	.16
Gaining rank as an international researcher	162	51%	104	64%	58	36%	4.87	.03	.12
Faster career advancement	51	16%	29	57%	22	43%	0.05	.83	-.01
Higher salary expectations	29	9%	20	69%	9	31%	1.51	.22	.07

Note. * Denotes a gender association. Bonferroni adjusted $\alpha = .01$ for this set of tests. $n = 316$. Not all participants answered this question.

Question five on the faculty survey asked: "What are the supports that you have received when working on collaborative international research? Please check all that apply." A total of 279 faculty members answered this question. The researcher found no supports that had gender associations. A chi-square with phi was used to examine the

association between responses and gender. The following supports were not associated (Bonferroni adjusted $\alpha = .017$ for this set of tests) with gender: *spouse or partner* (males 56% and females 44%), $\chi^2(1) = 0.76, p = .38, \Phi = -.05$; *administration outside the college* (males 66% and females 34%), $\chi^2(1) = 2.03, p = .15, \Phi = .09$; *dean of my college* (males 62% and females 38%), $\chi^2(1) = 0.82, p = .37, \Phi = .05$; *my department chair* (males 57% and females 43%), $\chi^2(1) = 0.46, p = .50, \Phi = -.04$; *tenured colleagues* (males 58% and females 42%), $\chi^2(1) = 0.05, p = .82, \Phi = -.01$, and *other experts in the field* (males 62% and females 38%), $\chi^2(1) = 1.41, p = .24, \Phi = .07$ (please see Table 27).

Table 27

Gender and Faculty's Supports in International Research Collaboration

Supports	Total		Male		Female		$\chi^2(1)$	p	Φ
	n	%	n	%	n	%			
Spouse or partner	149	53%	84	56%	65	44%	0.76	.38	-.05
Administration outside the college	68	24%	45	66%	23	34%	2.03	.15	.09
Dean of my college	123	44%	76	62%	47	38%	0.82	.37	.05
My department chairs	173	62%	99	57%	74	43%	0.46	.50	-.04
Tenured colleagues	107	38%	62	58%	45	42%	0.05	.82	-.01
Other experts in the field	138	50%	86	62%	52	38%	1.41	.24	.07

Note. Bonferroni adjusted $\alpha = .017$ for this set of tests. $n = 279$. Not all participants answered this question. No gender association found.

Question six on the faculty survey asked: "What are the barriers you have experienced in your attempts to work on collaborative international research? Please check all that apply." A total of 259 faculty members answered this question. A chi-square with phi was used to examine the association between responses and gender. Results indicated that gender had an association (Bonferroni adjusted $\alpha = .007$ for this set of tests) on *gender issues* as a barrier to international research collaboration (males 15%

and females 85%), $\chi^2(1) = 9.75, p = .002, \Phi = -.19$. The following negative experiences/barriers were not associated (Bonferroni adjusted $\alpha = .007$ for this set of tests) with gender: *lack of a peer mentor* (males 44% and females 56%), $\chi^2(1) = 3.53, p = .06, \Phi = .12$; *children* (males 58% and females 42%), $\chi^2(1) = 0.01, p = .92, \Phi = .006$; *spouse or partner's employment needs* (males 69% and females 31%), $\chi^2(1) = 4.68, p = .03, \Phi = .13$; *caring for a spouse or elderly parent* (males 53% and females 47%), $\chi^2(1) = 0.13, p = .72, \Phi = -.02$; *no support from dean* (males 59% and females 41%), $\chi^2(1) = 0.07, p = .79, \Phi = .02$; *no support from department chair* (males 64% and female 36%), $\chi^2(1) = 0.78, p = .38, \Phi = .06$; *health issues* (males 53% and females 47%), $\chi^2(1) = 0.09, p = .76, \Phi = -.02$; *no funding available for project* (males 55% and females 45%), $\chi^2(1) = 0.62, p = .43, \Phi = -.05$; *no funding available or not enough funding to participate/travel to conferences that I would have liked to attend* (males 53% and females 47%), $\chi^2(1) = 3.22, p = .07, \Phi = -.11$; *cultural barriers* (males 57% and females 43%), $\chi^2(1) = 0.003, p = .96, \Phi = -.003$; *no support from tenured colleagues* (males 50% and females 50%), $\chi^2(1) = 0.55, p = .46, \Phi = -.05$; *language barriers* (males 62% and females 38%), $\chi^2(1) = 0.87, p = .35, \Phi = .06$, and *no support from administration outside the college* (males 52% and females 48%), $\chi^2(1) = 0.46, p = .50, \Phi = -.04$ (please see Table 28).

Table 28

Gender and Faculty's Negative Experiences/Barriers in International Research Collaboration

Negative Experiences/Barriers	Total		Male		Female		$\chi^2(1)$	<i>p</i>	Φ
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%			
Lack of a peer mentor	43	17%	19	44%	24	56%	3.53	.06	.12
Gender issues	13	5%	2	15%	11	85%	9.75*	.002	-.19
Children	38	15%	22	58%	16	42%	0.01	.92	.006
Spouse or partner's employment needs	64	25%	44	69%	20	31%	4.68	.03	.13
Caring for a spouse or elderly parent	17	7%	9	53%	8	47%	0.13	.72	-.02
No support from Dean	51	20%	30	59%	21	41%	0.07	.79	.02
No support from Department Chair	36	14%	23	64%	13	36%	0.78	.38	.06
Health issues	15	6%	8	53%	7	47%	0.09	.76	-.02
No funding available for project	128	49%	70	55%	58	45%	0.62	.43	-.05
No funding available or not enough funding to participate/travel to the conferences that I would have liked to attend	166	64%	88	53%	78	47%	3.22	.07	-.11
Cultural barriers	37	14%	21	57%	16	43%	0.003	.96	-.003
No support from tenured colleagues	24	9%	12	50%	12	50%	0.55	.46	-.05
Language barriers	61	24%	38	62%	23	38%	0.87	.35	.06
No support from Administration outside the college	42	16%	22	52%	20	48%	0.46	.50	-.04

Note. * Denotes a gender association. Bonferroni adjusted $\alpha = .007$ for this set of tests. $n = 259$.

Summary

Results indicated that the gender of Idaho public university faculty responding to this survey was closely matched with the Idaho university demographics given by the NCES (2012a, 2012b, 2012c). These response rates allow the determination of any possible gender gap associations with confidence. The public university a faculty member

reported working at (Boise State University, Idaho State University, or the University of Idaho) did not have a statically significant gender difference. However, some colleges were underrepresented, such as the *Colleges of Agriculture; Natural Resources*, which represented only 1% of the overall response population. Some colleges also had gender associations, such as the *Colleges of Sciences; Engineering* and the *Colleges of Business*, which had higher male numbers and the *Colleges of Health Sciences*, which had higher female numbers. Faculty rank was found to have a gender association with a lower portion of women in *full professorships* (26%) versus males (74%).

Deans and department chairs in this study had a response rate of 56%. Department chairs (82%) were the majority of respondents, and females represented only 15% of the overall response population versus males, who were the majority (82%).

Of the 487 faculty members who participated in the survey, 93% reported that they participated in some kind of research/scholarly activity. However, of the 455 faculty members who participated in research/scholarly activities, 361 (79% of the 455; 74% of the 487) faculty members reported having participated in one or more of the collaborative international research activities (qualifiers) for this study. When participants were asked what gender they worked most with when collaborating in international research, a gender association was found. Women, more than men, reported working mostly with other *women*. Males, more than females, reported working with *men* and *equal participation with both men and women*.

Activities or qualifiers for this study were indicated by faculty members as activities in which they currently participate. It should be noted that *attended an international conference* (60%) was the most often selected international research

collaboration activity selected followed by *presentation at international forum/conference* (59%). Both of these activities can be completed without the help of a research partner outside of the United States or an international collaboration. The study found that men *attended international conferences* (60%); participated with *research projects for or in a country outside of the United States* (66%); reported *publishing in international journals* (63%); and *research collaboration with partners located outside the United States* (69%) more frequently than women faculty members [*attended international conferences* (40%); *research projects for or in a country outside of the United States* (34%); reported *publishing in international journals* (37%); and *research collaboration with partners located outside the United States* (31%)].

Positive experiences when collaborating on international research were divided into three main categories: positive experiences in general; professional advantages; and supports for international collaborative research. The top five positive experiences for faculty overall (questions three, four, and five on the faculty survey) included: *increasing my expertise in the field* 84%; *joining other experts in the field* 79%; *travel to a country outside of the United States* 75%; *publication opportunities* 75%; and *challenge* 67%. Of the three research questions addressing positive experiences, gender associations were found in only 8% of the available options, indicating that the positive experiences reported by women for participating in international research collaborations are also relevant to male faculty members. Women reported a lower positive experience with *public recognition outside of my university* (34%) versus males (66%). Women reported a lower professional advantage of *increased employment opportunities/offers* (27%) versus males (73%). There was no association between gender and any of the supports that male

and female faculty received. The top five categories for additional positive experiences that were indicated by faculty members included: the *sharing of information* 25%; *learning opportunity* 20%; *expectation for my job* 15%; *increased salary is a myth* 14%; and *receiving grants* 13%.

The faculty survey included 14 options for expressing negative experiences/barriers when collaborating on international research. Only one of the 14 experiences was indicated as having a gender association, *gender issues*. The top five negative experiences/barriers (question six on the faculty survey) included: *no funding available or not enough funding to participate/travel to the conference that I would have liked to attend* 64%; *no funding available for project* 49%; *spouse or partners' employment needs* 25%; *language barriers* 24%; and *no support from the dean* 20%.

These results indicate that overall, faculty members are not viewing international research collaboration as a negative experience compared to the previous literature cited in this study. The top five categories for additional negative experiences/barriers (of the 14 new ones) reported by faculty included: *there were no barriers to international research collaboration* 25%; *time general* 15%; *time from teaching* 9%; *contract paperwork* 6%; and *research support declined* 6%.

Faculty members were asked to rate the overall impact, both in their current department and overall career, on the value they perceived from their participation in international research collaboration. Regardless of gender, both males and females rated the impact for participation in international research collaboration in either their current departments or overall careers the same way. Faculty perceptions were compared with deans' and department chairs' weighing of the impact that international research

collaboration could have for both hiring new employees and for promotion/tenure decisions. Findings indicated that faculty members (collectively 47% positive) undervalue international research collaboration and the impact that it can have on their career in their current department, compared to the weight it was given by deans and department chairs (collectively 72% positive). Faculty members (collectively 62% positive) and deans and department chairs (collectively 58% positive) gave about the same amount of impact/weight to the value of international collaboration on a candidate's overall career.

Deans and department chairs were favorable toward faculty members in their current department who participated in international conferences (75%). Deans and department chairs indicated that they are very favorable to international publication (87% collectively positive). The top five categories for additional comments from deans and department chairs, when given the opportunity to add additional comments about how international research collaboration can affect the hiring and promotion process, were as follows: *international research is not given any more consideration than national research* 42%; *international research is desirable* 22%; and *international research is valued* 18%; *international research is not critical to my field* 9%; and *depends on the candidate* 9%.

CHAPTER V

Discussion

As stated, the purpose of this study was to examine international research collaboration and the reported positive and negative experiences for women and men faculty; also examined is the impact of international research collaboration on career advancement of faculty specifically studying whether there is a difference between women's and men's experiences. The results indicated that there were gender differences in both the positive and negative experiences. However, gender differences for both positive and negative experiences were not as abundant as the literature would suggest. Both men and women reported more positive experiences than negative experiences.

There was a general consensus between the faculty members and the deans and department chairs regarding the amount of impact international research collaboration may have on participants' overall careers. However, there was a discrepancy between faculty members and deans' and department chairs' perceptions of the impact that international research collaboration may have on promotion in their current department. These findings should begin the conversation of how important international research collaboration is to the career advancement of faculty members and how international research collaboration, as an activity, is valued by deans and department chairs. This discussion section will interpret the study findings relative to the research questions.

Response Rate/Respondent Demographics

Faculty. The participants for this study were faculty at Boise State University, Idaho State University, and the University of Idaho. A total of 1418 faculty members were surveyed, and 487 responses were received, a 34% response rate. The response rate,

although acceptable, was low and may not have been an accurate representation of all faculty in Idaho public universities. The gender of the respondents closely matched the NCES gender populations reported by the universities. This allowed for the researcher to confidently draw conclusions about Idaho public universities international research collaboration experiences. There was no statistically significant gender difference reported by participants for any given university.

There was an association between gender and college reported. This indicated that there were more females and/or males in one college versus the other. This study found that gender is not equal among the various disciplines in numbers and that certain fields are still dominated by a specific gender. For instance, in the *Colleges of Sciences; Engineering*, only 25% of the reported participants for these colleges were women (men 75%). The *Colleges of Business* were also low in women (28%) versus men (72%). Finally, the *Colleges of Health Sciences* were dominant in females (68%) versus males (32%).

There was an association between gender and faculty rank with males holding a majority of *full professorships* 74% (females 26%). This is an issue for women participating or trying to collaborate in international research because according to Jeong et al. (2011), the more advanced in faculty ranking and experience, the greater the opportunity for research collaborations. Women in lower faculty ranks may also be assigned higher teaching loads and have less time for research, thereby inhibiting women faculty from collaborating in international research.

A majority of faculty members (93%), regardless of faculty rank, reported that they do participate in research/scholarly activities. However, women reported *I have not*

participated in any of these activities (57%) more frequently than men (43%) when asked about specific activities that this study considered international in nature. Qualifiers for this survey (question two on the faculty survey) indicated that gender was significant for activities that involved traveling or working with someone outside of the United States, with males dominating in these actions [*research projects for or in a country outside of the United States* (male 66%, females 34%); *research collaboration with partners located outside of the United States* (males 69%, females 31%); *publication in an international journal* (males 63%, females 37%), and *attending an international conference* (males 60%, females 40%)]. The reasons for these findings would have to be researched further to draw conclusions. Women reported lower numbers of qualifiers that involved working with others, which may be due to their lower faculty rank as the literature review stated that the higher faculty position and the more experienced the researcher, the greater the opportunity for research collaborations (Jeong et al., 2011). *Publication in an international journal* was reported more by men (63%) versus women (37%). This may be associated with faculty rank. Women reported being adjuncts (63%) more than men (37%), which requires a higher teaching load. Being an adjunct also allows less time for research, if research is expected at all, but is necessary for advancement. *Research on a topic that is international in scope* was found to be gender neutral, which indicates that both males and females were able to find topics to engage them. *Presentations at an international forum or conference* was also found to be gender neutral, which may indicate that if a university or department can find value in the presentation, for the purposes of prestige, the individual will be given funds to assist in attending and/or presenting at the conference regardless of faculty rank.

Faculty members were asked to identify which gender they worked more with when collaborating on international research. There was a gender difference for *equal participation with both men and women*, where men (69%) reported a higher number than women (31%). Men (64%) reported working with other *men* (27% of overall responses) more frequently than women (36%). Women (77%) reported working more with other *women* (17% of overall responses), which may indicate that they have fewer gender issues when working with the same sex. It is not surprising that men can be more flexible in the gender of their collaboration partner, since men hold the majority of full professorships and are more likely to have options when considering research, due to their faculty rank. There were a small percentage of individuals who indicated that they *work independently* (10%) when collaborating on international research. This would explain the fluctuation in responses for the positive and negative experiences in the results of the faculty survey. Further research is warranted to discover how these individuals have identified with international research collaboration when they indicate that they work independently. However, one such explanation is the *publication in international journals and presentations at an international forum or conference* as qualifiers for this study; these particular activities can be done independently.

Deans and Department Chairs. The low response rate from deans (15%) may impact the amount of importance placed on international research collaboration during the hiring/promotional process. A majority of respondents from the deans and department chairs were male (83%, female 17%), which supports the literature by Cook (2012) that women hold a low number of leadership positions. A majority of deans and department chairs were from Boise State University at 50% (Idaho State University 29%, and the

University of Idaho 18%). Having a majority of responses from one university may have directed the results of this study toward that particular university's practices.

Research Question 1

What are the positive experiences that Idaho public university faculty have when collaborating on international research projects? There were three separate questions on the faculty survey (questions three, four, and five) that were about positive experiences. This study validates previous research on the following positive experiences, professional advantages, and supports that were indicated by a majority of faculty members: *travel to a country outside of the United States* 75%; *excitement* 59% (Ackers, 2008; Arthur, Patton, & Giancarlo, 2007; Cooper & Mitsunaga, 2010); *challenge* 67% (Ackers, 2008; Arthur et al., 2007; Cooper & Mitsunaga, 2010); *recognition from peers* 55% (Adler, 1984); *increased personal skills* 55% (Katz & Martin, 1997); *increasing my expertise in the field* 84% (Cooper & Mitsunaga, 2010); *joining other experts in the field* 79% (Ackers, 2008; Katz & Martin, 1997); *building a strong network of professionals* 67% (Ackers, 2008; Arthur et al., 2007; Cooper & Mitsunaga, 2010); *publication opportunities* 75% (Ackers, 2008; Katz & Martin, 1997); *gaining rank as an international researcher* 51% (Ackers, 2008; Arthur et al., 2007; Cooper & Mitsunaga, 2010); and support from a *spouse or partner* 53% (Arthur et al., 2007; Cooper & Mitsunaga, 2010).

This study did not support the previous literature that indicated the following as positive experiences, advantages, and supports (the percentages were very low): *reduction in cost of project by sharing equipment, facilities, etc.*, 11% (Birnholtz, 2006; Haase & Fisk, 2008; Jeong et al., 2011; Katz & Martin, 1997; Ou et al., 2012); *awards at*

a national level or greater 14% (Cooper & Mitsunaga, 2010; Ray & Solem, 2009); *peer mentor* 17% (Arthur et al., 2007; Bain & Cummings, 2000; Cooper & Mitsunaga, 2010); *funding availability* 21% (Arthur et al., 2007; Cooper & Mitsunaga, 2010; Ray & Solem, 2009); *faster career advancement* 16% (Adler, 1984); and *higher salary expectations* 9% (Adler, 1984). A *higher salary expectation* was not found to be significant overall and it was also described in the “other” section of the faculty responses as a “myth” (14%), which contradicts the research findings of previous literature that reported faculty members expected a higher salary if they had collaborated in international research (Acker & Armenti, 2004; Adler, 1984; Cooper & Mitsunaga, 2010; Hardre & Cox, 2009; Hartley & Dobebe, 2009; Katz & Martin, 1997; Ray & Solem, 2009; Tien & Blackburn, 1996). A *peer mentor* was the best-documented positive experience for women faculty members (Arthur et al., 2007; Bain & Cummings, 2000; Cooper & Mitsunaga, 2010; Easterly, 2008). However, this study found that neither men nor women indicated a peer mentor as a highly important positive experience in the international research collaboration process. This may indicate that a peer mentor is not important for the international collaborative research efforts for faculty success.

This study identified four groups of individuals that faculty considered supportive in the international research collaboration process, yet were not listed in the literature review of this study: *dean of my college* 44%; *my department chair* 62%; *tenured colleagues* 38%; and *other experts in the field* 50%. These findings are important because they indicate that those who have decision authority for hiring and tenure decisions are supportive of the international research collaboration efforts of faculty members and this shows that there is value for the faculty members’ contribution with such collaborations.

This study also found that *support from administration outside the college* (24%) was not common for faculty members trying to pursue international research collaboration.

Through participants' comments, three categories emerged that supported previous literature, but were not listed as options: *it's an expectation for my job* 15%; *sharing of information* 25%; and *university prestige* 3%. Had these categories been available as options for selection, they may have yielded higher numbers. There were three prominent themes in the additional comments for positive experiences and advantages that were not listed in previous literature: *same as national*; *no support was given*; and *a chance to increase personal skills*. Most of the additional comments fit into one of these three categories. It is important that faculty perceived no difference between national and international research regarding supports, since deans and department chairs also indicated a *same as national* in additional comments when considering a candidate for hiring and tenure/promotion. Further research should be conducted to clarify the meaning of *no support was given*. The *no support* may have been the same as national research or the department may not value or support international research collaboration. Additional comments for positive supports had one main category: funding. Categories such as sabbatical time, grants, and money for travel are monetary based. It is important to understand that funding plays a large role in the ability for faculty to collaborate in international research.

Research Question 2

What are the negative experiences that Idaho public university faculty face when collaborating on international research projects? Question six on the faculty survey asked: "What are the barriers you have experienced in your attempts to work on

collaborative international research? Please check all that apply.” A total of 263 faculty members answered this question. A majority of faculty members indicated funding as the only barrier to international research collaboration [*no funding available for project* (49%) (Armenti, 2004; Arthur et al., 2007; Ray & Solem, 2009) and *no funding available or not enough funding to participate/travel to the conference that I would have liked to attend* (64%)]. This indicates that if funds were made available, faculty members may collaborate in international research and also that more international relationships could be developed. This finding supports the literature citing funding as an issue for international research collaborations (Armenti, 2004; Arthur et al., 2007; Ray & Solem, 2009). This study found a new category for funding difficulties in *participate/travel to conference that I would have liked to attend* as indicated by 64% of respondents. This is important because it gives a specific funding issue for administrations to alleviate if possible.

The following were indicated by some faculty members as negative experiences/barriers in regard to international research collaboration: *lack of a peer mentor* 17% (Acker & Armenti, 2004; Cooper & Mitsunaga, 2010); *gender issues* 5% (Acker & Armenti, 2004; Cooper & Mitsunaga, 2010); *children* 15% (Acker & Armenti, 2004; Cooper & Mitsunaga, 2010); *spouse or partner's employment needs* 25% (Acker & Armenti, 2004; Cooper & Mitsunaga, 2010); *caring for a spouse or elderly parent* 7% (Acker & Armenti, 2004; Cooper & Mitsunaga, 2010); *no support from dean* 20% (Armenti, 2004; Arthur et al., 2007; Ray & Solem, 2009); *no support from department chairs* 14% (Armenti, 2004; Arthur et al., 2007; Ray & Solem, 2009); *health issues* 6% (Armenti, 2004; Arthur et al., 2007; Ray & Solem, 2009); *cultural barriers* 14% (Ackers,

2008; Cooper & Mitsunaga, 2010; Jeong et al., 2011; Ou et al., 2012; Ray & Solem, 2009); *no support from tenured colleagues* 9%; *language barriers* 24% (Ackers, 2008; Cooper & Mitsunaga, 2010; Jeong et al., 2011; Ou et al., 2012; Ray & Solem, 2009); and *no support from administration outside the college* 16%. A majority of previously reported negative experiences, according to the literature, were not reported in high numbers by the faculty in this study. The findings from this study do not support previous literature that cited the above negative experiences as barriers to international research collaboration. Therefore one may assume that the negative experiences, as cited in previous literature, may not be factors in international research collaboration today. The researcher expected that *language barriers* (24%) would be a low number due to the previous literature by Altbach (2007), which indicated that the English language has become the universal collaboration language. As time passes, the researcher believes the language barrier for international research collaboration will continue to decrease. The negative additional comment that *there were no barriers* (25%) for participating in international research collaboration is interesting because it may indicate that faculty from other parts of the world are also interested in collaboration or that technology has made communication and collaboration easier. Further research on this topic would need to be conducted to better understand the lack of barriers.

When faculty members were asked to identify additional negative aspects of international research collaboration, the categories of time and of navigating the research issue as international in scope were the majority of additional comments. Time had two major aspects that faculty reported. First, international research collaboration takes more time than non-international research. Second, international research collaborations

reduced the time available for teaching. The reduced time for teaching may be a negative experience due to the high number of faculty who have not attained associate professor/tenure or full professor status and therefore may have higher teaching loads. Navigating the issue in an international scope would require further research due to the various negative experience reported including: travel; paper work; locating data access points; intellectual property; confiscation issues; and safety when researching. These issues were not experiences reported in previous literature and are important to further understand the obstacles/barriers of today's international research collaboration efforts.

Research Question 3

What is the value of participating in collaborative international research in hiring and tenure/promotion decisions according to Idaho deans and department chairs and faculty? There was a difference between the values that faculty members and deans and department chairs placed on collaboration in international research. Faculty members perceived a lower positive impact on their current careers (collectively 47% positive). Deans and department chairs placed a higher value on international research collaboration for candidates in the promotion/tenure decisions (collectively 72% positive). The comparison here may indicate that faculty members who are under consideration for promotion within their current department under-value their international research collaboration in the process of attaining promotion, since it is valued in the promotion/tenure process by the deans and department chairs who are responsible for promotion decisions. This finding might indicate that faculty members who are still trying to attain tenure/promotions may avoid collaborating on international research because they falsely perceive it is undervalued.

Faculty members (collectively 62% positive) and deans and department chairs (collectively 59% positive) all agreed that the impact international research collaboration can have on the potential hiring process and overall career is positive. This may indicate that if candidates want to enhance their resumes for hiring purposes, that international research collaboration may benefit the candidate.

Deans and department chairs indicated (collectively 87% positive) that publication in an international journal was important to their department/college. This is a great indicator for Idaho universities in the future, as journals and funding agencies are interested in international research collaborations (Facione, 2006). A collectively positive indicator by deans and department chairs toward publication in international journals is reinforcement for faculty who collaborate in international research as a way to access top journals (Ackers, 2008; Ou et al., 2012).

When considering a candidate for tenure/promotion in their current department, deans and department chairs gave positive weight (collectively 66% positive) to candidates who had collaborated in international research. Faculty reported that *attending an international conference* (79%) and having *presented at an international forum/conference* (77%) were activities in which they already participated. Therefore there is benefit to the faculty members to continue these activities.

When deans and department chairs were asked to provide the researcher with any additional thoughts about the impact on hiring and/or promotion decisions if a candidate had collaborated in international research, 42% of deans and departments chairs indicated that they do not regard international research collaboration as more important than quality research or national research collaborations. This would indicate that international

research collaboration, although valued by many deans and department chairs, is still not valued above quality research. Other comments were similar to *same as national* such as *depends on the candidate* and *depends on the position*. Some deans and department chairs (although very few) made comments that were negative toward candidates who had international research collaboration, such as: “I would actually be wary of hiring faculty who fancied themselves ‘international collaborators.’” and “While impressive and noteworthy, this type of experience is of little to no value to us at this time.” Additional research by field would need to be conducted to better understand the negative comments made by deans and department chairs. However, as a whole, international research collaboration was viewed positively by deans and department chairs with additional comments such as international research is desirable, valued, and is undervalued. It should be noted that deans and department chairs also mentioned that international research collaboration brought prestige and recognition to their departments and universities, which they valued. This is consistent with the literature that states international research collaboration is a way to bring prestige and recognition to the university and college (Arthur, Patton, & Giancarlo, 2007; Jeong, Choi, & Kim, 2011; Katz & Martin, 1997).

Research Question 4

Are there similarities and differences in collaborative international research as explored in the above questions between Idaho public university women and men?

There were three separate survey questions (questions three, four, and five) on the faculty survey that addressed positive experiences. There were two areas that showed a gender difference in the positive aspects of international research collaboration. The first was in

the in positive experience section (question three). More men (66%) than women (34%) reported that they have received public recognition outside of their university. The second gender difference was in professional advantages (question four). More men (73%) reported increased employment opportunities/offers than did women (27%). There were no gender differences in the supports that faculty reported.

Negative experiences/barriers (question six) yielded only one gender difference reported by faculty members: gender issues. Gender issues were reported by females (85%) more than males (15%) when collaborating on international research. However, the numbers reporting gender issues were very small ($n = 13$). This topic will need further research to identify specific gender issues. Past literature suggests that women are being passed up for international research collaborations by managers (Arthur et al., 2007) or that women were experiencing barriers to working in certain countries, which blocked access to collaboration possibilities (Adler, 1984; Arthur et al., 2007; Ou et al., 2012). However, no specific conclusions regarding this issue can be drawn from this study.

Summary

Results indicated that the gender of faculty respondents was closely matched with the university gender breakdown given by the NCES (2012a, 2012b, 2012c). These response rates allowed the researcher to make gender associations with some confidence. There was no association between gender and the university where the faculty member was employed. However, there was a gender association between faculty members and the colleges they reported. There was a gender association where females were reported in higher numbers for the *Colleges of Health Sciences*. Males had higher gender associations reported in the following colleges: *Colleges of Business* and *Colleges of*

Sciences; Engineering. Faculty rank had a gender association with a larger portion of men in *full professorships* (males 74% and females 26%).

A majority of faculty members indicated that they did participate in research/scholarly activities (93%). However, women reported a higher percentage (57%) of not having collaborated in one of the international research qualifiers for this study (men 43%). The qualifiers for this study were dominated by male participants. All categories of international research collaboration had higher percentages for male respondents. Of the six activities or qualifiers for this study, four were found to be gender significant. More males than females reported the following activities: *research projects for on in a country outside of the United States* 36% (males 66% and females 34%) and *research collaboration with partners located outside of the United States* 37% (males 69% and females 31%); *publication in an international journal* 53% (males 63% and females 37%); and *attending an international conference* 60% (males 60% and females 40%).

Faculty members were asked to identify which gender they worked more with when collaborating on international research. A gender association was found that men, more than women, reported working with two groups more frequently: *men* and *equal participation with both men and women*. Women reported working more with other *women*, which may indicate that they have fewer gender issues when working with the same gender. There were a small percentage of individuals who indicated that they work independently (10%) when collaborating on international research.

The overall response rate for deans and department chairs was 56%, a medium rate. However, it should be noted that department chairs (85%) were the majority of

respondents. Boise State University accounted for a majority (52%) of respondents and males were the majority of respondents (82%). This may have influenced the results of the deans and department chairs' views due to a high response rate from one university and a majority of male participants. This is also concerning because women represented only 15% of the response population, which indicates a lack of female presence in leadership positions throughout Idaho universities.

This study identified specific positive experiences of faculty when they collaborate in international research. Positive experiences totaled 25 overall and were divided into three main categories: positive experiences in general; professional advantages; and supports. There was a gender association found in only 8% of all positive experiences. A low gender association related to positive experiences indicates that collaborating in international research collaboration is positive for both males and females. There were two areas that showed a gender difference in the positive aspects of international research collaboration: positive experience section (question three) *public recognition outside of their university*, and professional advantages (question four) *increased employment opportunities/offers*. There were no gender differences in the supports that faculty reported. This study identified four groups of individuals who faculty considered supportive to the international research collaboration process: dean, department chair, tenured colleagues, and other experts in the field. These groups were not listed in previous literature and therefore continue the conversation of faculty supports. This study found that *administration outside one's department or college* was not viewed by faculty as a support to their international research collaboration.

The negative experiences/barriers were found to be gender neutral and sparse for the most part. There were 14 available choices of negative experiences / barriers when collaborating on international research provided for faculty. Funding was the only negative experience/barrier that both male and female faculty members (as a majority) indicated when collaborating on international research collaboration. This study was able to identify one specific negative experience/barrier that faculty members struggle with during the international research collaboration process, which was *funding for participation/travel to conferences that they wanted to attend*. Only 7% of these negative experiences/barriers (or one option) was found to have a gender association: gender issues. The gender issues will need further research. The lack of negative experiences / barriers reported by a majority of faculty members indicated that there is a significant decrease in negative experiences/barriers for both men and women when collaborating on international research compared to the literature reviewed in Chapter II. Other areas for further research into negative aspects of international research collaboration that this study identified were: paperwork; locating data access points; and intellectual property and confiscation of property issues.

The researcher was unable to locate prior research that indicates how heavily weighted international research collaboration was during hiring or tenure/promotion decisions. This study found that faculty members are valued for their participation in international research collaboration by deans and department chairs. Findings indicate that faculty members undervalue international research collaboration and the impact that it can have on their career or in their current department. Findings indicated that deans and department chairs are very favorable to international publication 87% (collectively

positive) and to participation at international conferences 66% (collectively positive). However, deans and department chairs (42%) stated that international research collaborations were not given more weight than national publications. Deans and department chairs were more concerned with the quality of the research. Deans and department chairs viewed international research collaboration as valuable, desirable, and undervalued. However, it should be noted that a few deans and department chairs indicated that international research collaboration was not expected in their field and that it was not impressive.

Recommendations/Implications for Action

The researcher recommends that Idaho universities focus on supporting and promoting females into positions of leadership, since numbers for full professors, deans, and department chairs were dominated by males. Idaho universities should diversify their faculty gender, since it was reported that there are discrepancies between college reported and gender. It is recommended that Idaho universities devise a cost sharing strategy to reduce the cost associated with international research collaboration through the use of facilities, equipment, personnel, and student participation. Universities should provide faculty members, regardless of faculty rank, increased access to research funds. International research support should be based on the prestige it can bring the department and value of the contribution to the discipline. This would ensure that faculty members who have not become full professors within the university have access to funds to increase their work in international collaborations.

Areas of Further Inquiry

This study only surveyed Idaho public universities; thus this study should be conducted with a larger population from various universities across the United States. The difference between public and private universities and the Carnegie classification system could be used to categorize universities and therefore further the understanding of different universities' needs and views on international research collaboration. The research recommends that colleges or departments be a factor in this study to assess gender differences in the various disciplines and the opinions of the faculty, deans, and department chairs about international research collaboration and hiring and promotion decisions. Faculty rank should be part of further research to determine the amount of research dollars a faculty member receives based on faculty rank.

The researcher noticed a decline in the number of respondents as the survey progressed. This decline may have been due to the survey's length, which can contribute to survey fatigue. In order to reduce this fatigue in further studies, the researcher suggests the use of categories for each positive and negative experience and mixing these two factors throughout the survey.

Additional factors such as where partners for international research collaborations are located and how these relationships are developed could shed light on the complex process of international research collaboration. The identification of the collaborative partners' country could help explain geographical limitations or language barriers. Female faculty, although in very small numbers, still perceived there were gender issues when working on international research collaborations. Since gender issues were used as a general term, further research would be needed to identify what female faculty

perceived to be a gender issue. Additional information on communication techniques and travel habits would be additional factors to consider regarding whether international research collaboration is increasing because of technology or if travel is still a main factor in the process.

Future research may include adding tenured colleagues to the discussion of international research collaboration and the hiring and promotion decisions, since most departments include senior faculty in the promotion process; they were not included in this study.

Conclusions

There are gender differences in the disciplines reported in this study. There are gender differences in the faculty ranks reported in this study. A majority of faculty members do participate in some type of research/scholarly activity. There were a large number of faculty members who qualified for this study as international research collaborators. This would indicate that there is a need to address international research collaborations in university and department funding discussions and in the hiring / promotion discussion. In Idaho public universities, men hold the majority of leadership positions and full professorships. These two factors may inhibit the growth and cultivation of female faculty members and future leaders because, according to Bonawitz and Andel (2009), “male administrators who often reward faculty who behave according to gendered norms who belong to the ‘old boys’ social network” (p. 4).

Both males and females reported higher numbers of positive experiences when collaborating on international research. This study identified deans, department chairs, tenured colleagues, and other experts in the field as supportive to the international

research collaboration efforts of faculty. This study found that a higher salary (which was listed as a positive for participation in past literature) was not a positive factor and many faculty members left comments about this not being a realistic expectation for their participation in international research collaboration. Many faculty perceived that they received the same support or advantages as when they participated in national research. This may indicate that collaborative international research may be more mainstream than in previous studies.

Negative experiences/barriers to international research collaboration were few, with funding issues being the only significant finding. This study identified a specific funding issue for faculty members and their participation in international research collaborations as *participate/travel to conference that I would have liked to attend*. This study identified four additional barriers to international research collaboration: paperwork; locating data access points; intellectual property issues; and confiscation of property.

There is a lack of research reported in the literature describing how a faculty member's collaboration in international research has affected hiring or tenure/promotion decisions. This study found that faculty members undervalued their international research collaboration for promotion within their own departments but valued international research collaboration for future positions. Deans and department chairs were highly positive towards both promotional candidates and the hiring of new faculty members who had quality international research collaboration experience. Deans and department chairs were also highly positive towards publications in international journals and for participation at international conferences. Therefore one can draw the conclusion that

faculty members who collaborate in international research will be rewarded for their efforts and viewed as a contributing faculty member.

This study identified new positive and negative experiences in international research collaboration. This study opens the conversation of the value of collaborating in international research for faculty members. This study identified that there is a positive attitude among individuals who make decisions about hiring and promotions towards faculty members with international research collaboration as part of their experience and skill sets.

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Appendix A

Email for Survey Participation Faculty (Emails 1 & 2)

Dear Faculty Member,

I send this email/consent form to you to ask you to participate in a short survey (2-10 minutes) about your current collaboration in international research and its impact on tenure and hiring decisions. I am a doctoral student at Idaho State University and this survey is part of my dissertation in the Ed.D. program in Educational Leadership. As you know, I cannot succeed in completing my dissertation without the support and participation of others who have gone before me.

I would like to thank you in advance for taking the time out of your already busy schedule to help a student in her pursuit of educational excellence.

Please click on the survey link below to reach the confidential survey.

SURVEY LINK HERE

I am asking you to be in a research study. By clicking the link below, you are consenting to share your experience in international research collaboration. You do not have to be in this study. If you say yes, you may quit at any time. All of the answers that you provide will be kept confidential and will not be connected to your email address.

For additional information about the study please see the attached document (you will not need to sign the document for participation).

Please call the head of the study Jacqueline Throngard if you:

- Have questions about the study.
- Have questions about your rights.
- Feel you have been injured in any way by being in this study.

You can also call the Idaho State University Human Subjects Committee office at

208-282-2179 to ask questions about your rights as a research subject.

Please click on the survey link below to reach the confidential survey.

SURVEY LINK HERE

Best Regards,

Jacqueline Throngard

Idaho State University

College of Education

Educational Leadership: Higher Education Administration

Phone: (208) 794-7966

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Appendix B

Follow up Email for Faculty (Email 3)

Dear Faculty Member,

This is an email request for you to complete a survey. Below is the original email I sent out back in November and December, 2013. I apologize for sending this to those of you who have already taken the time to fill out the survey. As you know the survey answers are not connected to your email address, so I have no way to identify who has already completed the survey. I thank you all for your time and for your help.

Dear Faculty Member,

I send this email/consent form to you to ask you to participate in a short survey (2-10 minutes) about your current collaboration in international research and its impact on tenure and hiring decisions. I am a doctoral student at Idaho State University and this survey is part of my dissertation in the Ed.D. program in Educational Leadership. As you know, I cannot succeed in completing my dissertation without the support and participation of others who have gone before me.

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Please call the head of the study Jacqueline Throngard if you:

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Appendix C

Faculty Survey

1. Do you participate in research/scholarly activities of any kind? (As ISU defines it, research is any extracurricular activity of an intellectual or professional nature that extends knowledge, understanding, and appreciation, or facilitates the extension of knowledge, or contributes something of scholarly value; this definition includes those activities that involve or are preparatory to the production of creative works).

- ☐ Yes
- ☐ No

NOTE: If the participant answers no to this question the survey will automatically skip to question 10. If the participant answers yes they will go on to question two.

2. Have you participated in any of the following? Please mark all that apply.

- ☐ Research projects for or in a country outside of the United States
- ☐ Research collaboration with partners located outside of the United States
- ☐ Presentation at international forums/conference
- ☐ Publication in international journal
- ☐ Attending an international conference
- ☐ I have not participated in any of these activities.

NOTE: If the participant answers no to this question the survey will automatically skip to question 10. If the participant answers yes they will go on to question four.

3. What are the positive experiences you have had when collaborating on international research? Please check all that apply.

- ☐ Travel to a country outside of the United States
- ☐ Excitement
- ☐ Challenge
- ☐ Providing a social contribution to communities for a better world
- ☐ Recognition from peers
- ☐ Reduction in cost or project by sharing equipment, facilities, etc.
- ☐ Increase personal skill
- ☐ Recognition from the institution
- ☐ Increasing my expertise in the field
- ☐ Public recognition outside of my university
- ☐ Awards at a national level or greater
- ☐ Peer mentor
- ☐ Funding availability
- ☐ Other __FILL IN THE BLANK HERE__

4. What are some of the professional advantages that you have experienced because you collaborated or worked on international research?

- ☐ Joining other experts in the field
- ☐ Building a strong network of professional
- ☐ Publication opportunities
- ☐ Increased employment opportunity/offers
- ☐ Gaining rank as an international researcher
- ☐ Faster career advancement
- ☐ Higher salary expectations
- ☐ Other ____FILL IN THE BLANK HERE____

5. What sources of supports have you received when working or collaborating on international research? Please check all that apply.

- ☐ Spouse or partner
- ☐ Administration outside the college
- ☐ Dean of my college
- ☐ My department chair
- ☐ Tenured colleagues
- ☐ Other experts in the field
- ☐ Other ____FILL IN THE BLANK HERE____

6. What are the barriers you have experienced in your attempts to work on collaborative international research? Please check all that apply.

- ☐ Lack of a peer mentor
- ☐ Gender issues
- ☐ Children
- ☐ Spouse or partner's employment needs
- ☐ Caring for a spouse or elderly parent
- ☐ No support from Dean
- ☐ No support from Department Chair
- ☐ Health issues
- ☐ No funding available for project
- ☐ No funding available or not enough funding to participate/travel to the conferences that I would have liked to attend.
- ☐ Cultural barriers
- ☐ No support from tenured colleagues
- ☐ Language barriers
- ☐ No support from Administration outside the college
- ☐ Other __FILL IN THE BLANK HERE__

7. Please rate the impact on potential advancement in your current department, because you have participated in collaborative international research.

Great	Good	Some	None
-------	------	------	------

8. Please rate the impact on the potential advancement in your overall career for your participation in collaborative international research.

Great	Good	Some	None
-------	------	------	------

9. Do you work more with men or women when collaborating on international research?

- ☐ Male
- ☐ Female
- ☐ Equal participation with both males and females
- ☐ I work independently

10. What is your sex?

- ☐ Male
- ☐ Female

11. What best describes your current faculty status?

- ☐ Adjunct
- ☐ Assistant professor
- ☐ Associate professor
- ☐ Full professor
- ☐ Instructor

12. At which university are you currently employed?

- ☐ Boise State University
- ☐ Idaho State University
- ☐ University of Idaho

13. In which college at your university is your main appointment?

Type college name

Appendix D

Email for Survey Participation by Deans and Department Chairs (Email 1 & 2)

Dear Dean or Department Chairs,

Would you be so kind as to participate in a short survey (less than 5 minutes) about your current hiring and promotion decisions when faculty members have collaborative international research as part of their research portfolios? I am a doctoral student in the Department of Education at Idaho State University and this survey is part of my dissertation in the Ed.D. program in Educational Leadership. As you know, I cannot succeed in completing my dissertation without the support and participation of others who have gone before me.

I would like to thank you in advance for taking the time out of your already busy schedule to help a student in her pursuit of educational excellence.

Please click on the survey link below to reach the confidential survey.

SURVEY LINK HERE

I am asking you to be in a research study. By clicking the link below, you are consenting to share your expertise on hiring and promotion decisions when an applicant has participated in international research collaboration. You do not have to be in this study. If you say yes, you may quit at any time. All of the answers that you provide will be kept confidential and will not be connected to your email address.

For additional information about the study please see the attached document (you will not need to sign the document for participation).

Please call the head of the study Jacqueline Throngard if you:

- Have questions about the study.
- Have questions about your rights.

- Feel you have been injured in any way by being in this study.

You can also call the Idaho State University Human Subjects Committee office at 208-282-2179 to ask questions about your rights as a research subject.

Please click on the survey link below to reach the confidential survey.

SURVEY LINK HERE

Best Regards,

Jacqueline Throngard

Idaho State University

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Phone: (208) 794-7966

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Appendix E

Follow up Email for Deans and Department Chairs (Email 3)

Dear Dean or Department Chairs,

This is an email reminder for your participation in a survey. Below is the original email that was sent out. I apologize for sending this to those of you who have already taken the time to fill out the survey.

Dear Dean or Department Chairs,

This email is being sent to you to ask you to participate in a short survey (less than 5 minutes) about your current hiring and promotion decisions when faculty members have collaborative international research as part of their research portfolio. I am a doctoral student in the Department of Education at Idaho State University and this survey is part of my dissertation in the Ed.D. program in Educational Leadership. As you know, I cannot succeed in completing my dissertation without the support and participation of others who have gone before me.

I would like to thank you in advance for taking the time out of your already busy schedule to help a student in her pursuit of educational excellence.

Please click on the survey link below to reach the confidential survey.

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I am asking you to be in a research study. By clicking the link below, you are consenting to share your expertise on hiring and promotion decisions when an applicant has participated in international research collaboration. You do not have to be in this study. If you say yes, you may quit at any time. All of the answers that you provide will be kept confidential and will not be connected to your email address.

For additional information about the study please see the attached document (you will not need to sign the document for participation).

Please call the head of the study Jacqueline Throngard if you:

- Have questions about the study.
- Have questions about your rights.
- Feel you have been injured in any way by being in this study.

You can also call the Idaho State University Human Subjects Committee office at 208-282-2179 to ask questions about your rights as a research subject.

Please click on the survey link below to reach the confidential survey.

SURVEY LINK HERE

Best Regards,

Jacqueline Throngard

Idaho State University

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Educational Leadership: Higher Education Administration

Phone: (208) 794-7966

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Appendix F

Deans and Department Chairs Survey

1. Please rate the level of importance you place on experience in international research collaboration when hiring for faculty positions in your current department/college. (Research that involves the faculty member to collaborate with a person, subject, or organization that is located or based in a country outside of the United States)?

Great importance	Good importance	Some importance	No importance
------------------	-----------------	-----------------	---------------

2. How would you weight the contribution of participation in international research collaborations for faculty members in your current department/college to the tenure and/or promotion decision? (Research that involves the faculty member to collaborate with a person, subject, or organization that is located or based in a country outside of the United States).

Substantial weight	Some weight	Little weight	No weight
--------------------	-------------	---------------	-----------

3. How would you weight the contribution of participation at conferences that are international for faculty members in your current department/college? (Forums or conferences outside of the United States).

Substantial weight	Some weight	Little weight	No weight
--------------------	-------------	---------------	-----------

4. How would you weight the contribution of international publication for faculty members in your current department/college? (Publications in journals that are recognized as global in nature).

Substantial weight	Some weight	Little weight	No weight
--------------------	-------------	---------------	-----------

5. Please provide us with any thoughts that you may have about the impact on hiring and/or promotion decisions if a candidate has participated in international research collaboration.

____FILL IN THE BLANK HERE____

6. What is your sex?

- ☐ Male
- ☐ Female

7. Are you a Dean or a Department Chair?

- ☐ Dean
- ☐ Department Chairs

8. At which university are you currently employed?

- ☐ Boise State University
- ☐ Idaho State University
- ☐ University of Idaho

9. In which college at your university is your main appointment?

Type college name

Appendix G

Faculty Comments: Additional Positive Experiences When Collaborating on International Research.

Please note that all comments are displayed as the participants typed them.

Abbreviations/grammar lapses/misspellings, etc. are those of the participant.

- Having my student travel to another country and give a paper to an international audience.
- Learning.
- Same as with national research.
- I have not participated in international research. Presented and attended conferences only.
- Have not thought much about this. My field is international in scope, so participation in international conferences is expected, the norm.
- To know more international scholars and researchers who share same research interests and to create opportunities for cross country research collaborations.
- Recognition when working toward tenure.
- Awareness that educational issues are world-wide issues.
- ISU research support is meager, both in terms of money & time. I've paid out of pocket for trips to Europe.
- The collaboration itself is the greater teacher, any "recognition" is a pointless secondary to the experience of the sharing of information and creation potential.
- Additional opportunity for research publications.
- Collaborating with world class researchers.

- Leadership.
- Science is based on collaborations, both domestically and internationally.
Scientists with parallel interests aren't bound by borders so creating enriching international collaborations are one of the joys of the business.
- My research is only international in the sense that it examines violence and victimization, both of which certainly apply to all cultures. I have had positive experiences related to the topic and research in general, though not necessarily due to the fact that they apply to other cultures, nations, etc.
- My motivation is based on contribution to the broader educational community.
- Collaborating and consulting with top scholars in the world, not just in the country.
- I have benefited intellectually from participation in the International Sociological Association and similar institutions. Theoretical and scientific dialogue in these academic communities is more objective and social scientific. It is less constrained by the "positivist" assumptions underlying US hegemony and dominance.
- It is simply essential for me to work with international collaborators. The workers in my small area of logic are mostly in Europe.
- A different perspective on higher education, research, and teaching done elsewhere. Exposure to different methods.
- I investigate second language acquisition, so to some extent international collaboration and dissemination are a natural part of my work.

- Research is being strangled off in the US by the right wing idiots who are running the country. We are rapidly being left behind in basic research by the rest of the world. Soon if you want to do cutting edge research you will have to seek opportunities internationally.
- Working with international colleagues adds to the richness of the research. You have insight into the impact of culture and community across countries. I have had two opportunities to present at international meetings. One I let my graduate student go in my place and in the other I was unable to secure the funding needed to participate.
- I find it very interesting to see how universities abroad prioritize teaching and research duties. Often, there is a clear separation between university faculty to "teach" and those who do research. In my experience, my peers abroad do not have nearly the teaching responsibilities that we have.
- I have only engaged in one collaboration and it is just starting. As such, the benefits at this point are pretty selfish - that it will look good that I have collaborated internationally.
- Part of my expectation as a researcher.
- Discovering that working in an international project provides a bigger picture when it comes to the analysis of more localized projects.
- Satisfaction of working with students in a developing country and providing opportunities they would not otherwise have had. Experience and sense of accomplishment of learning and teaching in a second language.
- Prestige.

- As an adjunct at several Idaho Universities, there is little in funding or in recognition for my research outside the classroom.
- Tapping into expertise or resources in my research area that do not exist within the USA.
- Availability of data.
- Visibility for my institution, friendships.
- The opportunity to meet those in other countries working in my field is invaluable.

Appendix H

Faculty Comments: Additional Professional Advantages Experienced When Collaborating on International Research.

Please note that all comments are displayed as the participants typed them.

Abbreviations/grammar lapses/misspellings, etc. are those of the participant.

- My visits overseas and the seminars I gave expanded my research reputation in ways that would not have been otherwise possible.
- Again, these are based on the topics, not necessarily the fact that they apply to other nations.
- A lot of those things are hard for me to evaluate (for example, I do not know whether my international research experience had anything to do with the decision to hire me).
- Through a personnel exchange, I was able to get into new areas.
- Higher Salary hahahahahaha.
- Dream on about the higher salary at ISU no matter what you achieve or take on as a professor. Only administrators willing to do whatever they are told have that advantage.
- I published in a journal that is international. It was a good place to publish the study.
- Interest in seeing issues from different cultural perspectives.
- I did not experience any particular advantages that are different from other research.

- The research itself is important - that's why I do it - not because I get paid more or that someone loves me - but because it's about the research.
- I didn't click "building a strong network" because of the word "strong." My international conferences, though, did make me acquainted with a wider ring of colleagues whom I could resource if appropriate or necessary. Maybe that's a "weak" network? Certainly I value the professional conversations I had with them, in part because they broadened my understanding or introduced me to perspectives or cultural settings and conditions that broadened by awareness.
- The latter was, unfortunately, an inflated expectation. [referring to higher salary expectation]

Appendix I

Faculty Comments: Additional Supports When Participating on International Research Collaborations.

Please note that all comments are displayed as the participants typed them.

Abbreviations/grammar lapses/misspellings, etc. are those of the participant.

- In our field, this group is the one in the world to publish/present with. It is common and all of us do it.
- Grants from regional or national organizations.
- Other foundations.
- None. UI does not support any extramural research and very, very little internal research. It is UI policy to discourage research wherever and whenever possible by every means possible.
- Same as national.
- None.
- The financial support has not been given directly by them as individuals, but through policies of travel support.
- Personal.
- None.
- Journal editor.
- Sabbatical support from the University and the generosity of friends who arranged for me to teach classes or present lectures.
- None other than my own research grants.

- Unclear question: Financial support or moral support? The university has paid me half salary for a sabbatical in Chile, so that might count. My dean and chair are all for such things, so that might count, also.
- Grants from U.S. and host country sources Associate Dean A few faculty members.
- PhD marriage and family another university.
- Two sabbatical leaves (each one semester), travel support (about 50%, not 100%).
- Not sure what this question means - moral support? Financial support? My int research activities have been funded by a variety of sources.
- Sources of supports is not necessarily funding, but is in-kind contribution.
- I was able to host my international collaborator at Boise State. He came with his own funding though. My administration approved the paperwork and allowed him to teach a course.
- Competitive grant awards. Colleagues in general, not just tenured (to cover classes in my absence). To clarify: Support from spouse - to handle childcare when I travel. Support from dean and chair - they agree that international travel is an important part of my job.
- Not applicable.
- Colleagues who are seeking tenure.
- This question is unclear. Sources of support is financial tome. I have received funding from colleagues at other universities to spend the summer working there contributing to their research projects.

- Not sure what this question is asking because in research "support" typically means funding, unless the use of the word is clarified. Also, re "support from other 'people' " is a bit vague as well, as basically everyone on that list would be "supportive" of the efforts, but not by helping with funding or logistics.
- None.
- I don't understand the question - do you mean emotional support or financial support or professional support. Again, I don't do research because someone pats me on the head.
- My wife was actually a co-investigator for one of our international presentations. The others, of course, awarded me financial support at various times, making travel feasible even if it did still mostly cost me.
- None..... people fight me... I have to fight to DO the work.
- As an Adjunct, I am solely responsible for my research.
- Grant from my department.
- Grants.
- Research grants.
- With some of our US government-sponsored work, we have to be careful how we interact internationally. International travel has to be specifically approved, we cannot award honors to students who are not citizens or PR. We cannot support work of those not in the US.
- International Programs Office.

Appendix J

Faculty Comments: Additional Negative Experiences When Collaborating on International Research.

Please note that all comments are displayed as the participants typed them.

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- We have to be very careful when using US Govt. grant funding for international travel. While not impossible, the barriers to such travel are significant, and must be addressed many months before the travel begins.
- Time.
- Again, it is UI policy to discourage research, international or domestic, whenever and wherever possible and by all means possible.
- Children and spouse are no longer an issue for me. But earlier in my career they wouldn't have created difficulties.
- None.
- Time - juggling teaching and administrative responsibilities.
- Differences in research funding mechanisms between countries or US funding agencies prohibition on funding international collaborators.
- All I did was present at an international conference.
- ISU's research support has declined to nearly 0 since Vailas became President.
This is no longer a good place for researcher. Many top researchers have left.
- You make your own opportunities. Money is always an issue but there are always ways to beg, borrow or steal support.
- No barriers. There is little cost. Most of my collaboration is done via email.

- It is difficult to take time out of my teaching responsibilities.
- TIME!
- Just want to note that while cultural and language barriers can be indeed barriers, they also provide a benefit (e.g. often because of the difficulty with language or cultural differences in what can be researched, or how research is conducted, I end up being forced to think more deeply, clearly, and broadly about my topic).
- Challenges with university policies on intellectual policy. University research contract rules.
- Small department; heavy teaching loads. Lots of competition for reduction in teaching loads. Hence, real constraints imposed on time to do research and writing as needed.
- None I can think of.
- I do simulation and educational research. For a long time no one even knew what simulation was and for sure, there is little funding for same.
- I can find support from the university, but funding can always be a challenge. In general, my experience has been if someone wants to pursue int research they can find a way.
- No barrier is identified yet except for a large volume of contract paperwork among institutions.
- No major barriers. I felt like nobody really cared about my international collaboration.
- No barriers.
- I have not experienced barriers.

- Hazards associated with collaboration in a not so safe part of the world.
- None.
- Issues listed were not problematic.
- I've had materials essentially confiscated by customs (i.e., a jump drive I sent to a colleague in Greece so that he could send some sound files to me. Now, of course, there are restrictions on collaboration thanks to homeland security and the ever-tightening stranglehold that arises from our national paranoia.
- Although my research articles have been of interest to others internationally (requests for reprints or citations of my work), my research does not address international issues per se. I do not need to collaborate with anyone internationally in order to conduct my studies.
- Workload overload due to the lack of two full-time faculty members for 2 years. Unable to recruit qualified individuals because of the low salaries, which are not competitive. Existing faculty members have to teach, advise students, participate in community service events, etc more because of the reduction in the faculty resources.
- I've been very supported by colleagues and administration on international endeavors.
- Again "no support from the Dean" or "Department Chair" . . . they say "go for it", but can't/don't provide funding or logistical support.
- None.
- None.

- The only barriers I find is winning the grants of making the contacts with foreign researchers to do the work.
- Varying research standards.
- None.
- None, I am very lucky to be very supported. The only possible barrier that I can think of is time.
- There is reluctance among the department faculty to support international research and travel. Internationalization is not really valued. Depending on the person occupying the Dean's office, there is support--usually demands that the department support international collaboration. New faculty display the interest, but are encouraged to stay local/regional in their work.
- Re: the cultural and language barriers - I would not characterize these as barriers but rather as challenges. Successful collaboration internationally requires an understanding or at least recognition of cultural differences. Language can be difficult at times, but requires willingness of all involved to make the effort, and when this is the case good things can happen for all. Another challenge is the pace at which work can proceed when working internationally, particularly in developing countries. Patience is required, and in my experience it is necessary to multiply by 3 or 5 the amount of time it would take to complete a task when working at home.
- My research focus has mostly been American.
- Getting up to speed on international dimensions of issues, figuring out where to get data/access subjects in a foreign environment.

- As an Adjunct, I am expected culturally to teach and not to research. When I have tried to take off time to research, I have confronted departmental obstacles that prevent me from traveling (not allowed to teach online courses unless I am physically in the state of Idaho).
- Time needed to seek international \$\$ support.
- No direct barriers but definitely several of these made it more difficult: balancing spouse/children needs, support from some colleagues at home institution, funding generally.

Appendix K

Deans and Department Chairs Additional Comments.

Please note that all comments are displayed as the participants typed them.

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- Collaborators are sought to meet a specific need. It makes little difference where they are. There is nothing special about an international collaborator or one down the hall.
- It impacts hiring and P/T decisions to some extent. Given the choice between national recognition and international recognition, I believe that national would be more important, though it does depend a bit on the discipline.
- A nice plus, but not at top of priority list.
- I would think that international research collaboration would primarily be of importance in those disciplines geography, culture, language, etc. differentiates the research.
- International by itself doesn't mean that the research is significant. Other factors matter as well.
- Will impressive and noteworthy, his type of experience is of little to no value to us at this time.
- It's a nice thing to have, but not something that we emphasize much. There isn't enough travel money to support international conferences, meetings, etc.
- The main concern is 1) over those publications achieved since being hired into our department and 2) the recognition that such work brings to our University and our College and our Department

- More important in promotion to full professor than before that.
- Because the USA is still the dominant country for science, international collaborations have no more weight than domestic collaborations.
- International research is a requirement of our accrediting body and, as such, must be fostered.
- The designation of "international" has very little significance to me when it comes to evaluating research or research collaboration. There are international collaborations that are of high quality and there are those of low quality. Simply collaborating with someone from another country is relatively meaningless independent of a measure of the quality of the collaboration. Likewise, there are "international" journals that are high quality and those that are low quality. "International" for its own sake is too often a flight of academic fancy (and there are too many supposed collaborations that are of little to no merit). In fact, given the meaningless work that is often done in the name of "international collaboration," I would actually be wary of hiring faculty who fancied themselves "international collaborators." Although, I would certainly be interested in candidates with publications in top flight international journals and with an established scholarly agenda...
- It's not something we focus on. 1/3 of our faculty come from other countries, and are able to provide an international perspectives. The major professional societies in our area are international in scope.

- Our promotion and tenure documents do not give priority to having an international dimension to scholarship, so we do not honor it more highly than other forms.
- Hiring more international faculty meets our mission to become more global.
- Assistant level = regional, national participation Associate = national participation Full Professor = national + international participation.
- While all research is important and is a MUST for promotion, research that is sustainable and provides the researcher with opportunities to engage in and interact with researchers from other countries and cultures, should be valued.
- What is important is hiring faculty who partner and engage in meaningful research... If it is international that is fine.
- International collaboration is just as important as domestic collaboration. If we see a need for comparative scholarship and/or teaching, then it becomes more important. At this moment, it is not a concern for our department.
- In our discipline, research is often not collaborative, making it difficult to answer your first two survey questions.
- The quality of the research is of greatest importance whether it is with colleagues in the USA or abroad. However, research that is internationally recognized as being high quality is very important.
- It's a good thing, but the absence of it from a candidate's cv would not hurt his/her chances.

- I think it is undervalued everywhere I have worked. In most places, there seems to be an idea that international work is not valuable, even though people profess the opposite.
- It is likely that international collaborations would be weighted equally when compared to regional or national collaborations.
- This depends on the field of the candidate. If their field has an international focus, international collaboration is very important. If their field is within the USA, it is less crucial. All else being equal, international experience is better than not having it.
- These questions will depend greatly on the person's research agenda. For some people, the IR part doesn't matter at all. For all people, it is crucial that these issues are crucial.
- These decisions turn completely on the position and area of expertise of the individual we hire. How much weight these activities receive is dependent upon what the position and expectations for the faculty member are. If the international activities are consistent with expectations, they would be highly valued and rewarded in my college. Without knowing context, it is difficult to know what weight and significance would be given in any particular situation.
- Most of what we do involves international collaborations. Maybe not one on one, but conferences and publications are, by nature, international in timber.

- Whether or not a faculty member (or potential faculty member) has international research collaboration has little bearing on our hiring consideration. We want high quality people who have done outstanding research regardless of where it is performed.
- International collaborations are applauded but not expected. ALL journals in which we publish have global reach.
- Since we are a Dept of Geography, international collaborations are always desirable. However, in the hiring and promotion processes the nature and quality of the collaborations is very important. We are looking for collaborations that bring impact of some type, not just that they exist.
- One can participate in low level international research. It is still low level. High level research will be valued if it is international or not. In reality, high quality research reaches the international market due to the quality.
- Although it would not be a qualifying criterion, we would look at this as a positive activity.
- International publications and collaborations are nice, but I don't think they would be weighed much higher than any other kind of collaboration. The only difference in this might be publication in an international journal.
- We have hired two in our Department alone. It had to do with their qualifications. They were well prepared, published and had other skills we looked for in the process.

- International collaboration helps shore up the profile of the faculty member and the visibility of the department/institution in the world. This is the reason while it is very much appreciated.
- Sorry N/A.
- This factor previously received little or no weight in our department, but with a change in department chair international collaboration will be more strongly emphasized.
- International research would not be viewed as any better or worse than noninternational research. Either way, what matters is that it is quality research that relates to the discipline in some meaningful way.
- It certainly does not hurt to have international collaboration.
- Not critical quality of research is more important.
- International collaborations should be described as opportunities.
- The quality of the research/presentation/creative activity is what counts most--- not the international venue. External validation is part of the process, but, that validation certainly does not need to be international.
- Research collaboration (international or otherwise) is not common in my field.
- Whether or not research involves international collaboration or whether the journal is international in character is irrelevant. Decisions are made based on the quality of the research and the reputation of the journal/conference.