INTERNATIONALIZATION OF THE ACADEMIC PROFESSION: AN EXPLORATORY STUDY OF FACULTY ATTITUDES, BELIEFS AND INVOLVEMENT AT PUBLIC UNIVERSITIES IN PENNSYLVANIA

by

Michele S. Schwietz

Bachelor of Arts, Indiana University of Pennsylvania, 1980

Master of Arts, Indiana University of Pennsylvania, 1992

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ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

UNIVERSITY OF PITTSBURGH

SCHOOL OF EDUCATION

This dissertation was presented

by

Michele S. Schwietz

It was defended on

March 1, 2006

and approved by

William E. Bickel, Professor, Administrative and Policy Studies Department

Miriam S. Chaiken, Professor, Anthropology Department, Indiana University of Pennsylvania

Maureen C. McClure, Associate Professor, Administrative and Policy Studies

Dissertation Advisor: John C. Weidman, II, Professor, Administrative and Policy Studies Department

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Michele S. Schwietz, PhD

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This study investigates the attitudes, beliefs, experiences and involvement related to internationalization by faculty members at a group of universities in the United States. Internationalization of higher education is defined as the process of integrating an international or intercultural dimension into the teaching, research and service functions of an institution (Knight, 2004). The definition is placed within a conceptual framework of rationales, stakeholders, and approaches to internationalization (Knight, 1999).

Data collected from faculty at nine public universities in Pennsylvania (n = 829) were used to provide a descriptive and correlational analysis that: explores faculty attitudes, beliefs and experiences; reviews the extent to which faculty incorporate an international perspective into their teaching, research, and scholarship; determines what relationships exist between faculty characteristics, campus climate, and attitudes, beliefs and behaviors; and examines patterns that are used to describe or predict faculty members' *orientation to internationalization* (Morris 1996).

Data were collected using a survey instrument accessed over the internet (Best & Krueger, 2004; Dillman, 2000). Data were analyzed by faculty characteristics and by research variables, including: international experiences at different educational stages, assessment of campus climate, faculty involvement in internationalization, and attitudes and beliefs about internationalization. The data show that important differences exist by gender, discipline, teaching responsibilities, tenure status, rank, and teaching/research preference. The research shows that faculty with higher levels of international experiences at different educational stages have higher levels of involvement in internationalization as faculty members, and that they also have more favorable attitudes and beliefs about internationalization. Furthermore, faculty with more favorable attitudes and beliefs about internationalization are likely to have higher levels of

involvement in internationalization, although the strength of the relationship varies according to the three attitudes and beliefs factors identified in the factor analysis.

A definition for the construct of an *Orientation to Internationalization* is provided. Several of the research findings replicate findings from the Carnegie Foundation for the Profession of Teaching's *Study of the International Academic Profession* (Altbach, 1996). Policy implications are provided for different sectors interested in internationalizing higher education. Recommendations on internationalizing the faculty are provided, as are suggestions for future research.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PREFACE

My journey as a doctoral student began a long time ago, and many people are responsible for helping to make the journey much easier. Early support from my mom, Margaret Stanko, as I completed my coursework came in the form of baby-sitting and preparing meals. Support from my husband Jeff came in the form of days spent in the library as my research assistant – good-naturedly copying articles and helping me carry around my stack of books, and more often than not returning late books and trying to reduce the amount of the fines due. His presence in my life has comforted me beyond words, he has helped me retain a sense of humor throughout, and I am so glad that we are celebrating this time in our lives. Support from our children, Nichole, April and Joel, came in the form of giving me space in which to work, and in providing me with years of understanding, patience, and a tinge of admiration for pursuing such a lofty goal. While I worried about taking time away from them, they rewarded me in kind by growing up to be wonderfully smart, compassionate, empathic young adults.

Family members, including siblings, a myriad of nieces and nephews, and their respective spouses, friends and children, were always supportive if a bit puzzled about exactly what program of study I was in. Much latitude was given to me as I missed family celebrations, birthdays, and other gatherings to study or work on my research. They teased me about my latest deadline, they listened to me as I recalled the latest challenge, and all in all, they loved me and felt pride in my accomplishments. So – Mom, Ken, Diann, Dick, Gina, Marilyn, Rachelle, Danielle, Matt, Grace, Michele, Tim, Bec, Catie, David, Michael, Misti, and their respective children – I thank you. To the Schwietz family – Dad, Jack, Laurel, Jeanne, Jim, Jennifer, Jerry, newest addition Josie, Lindsay, Matt, and new son-in-law Jesse, thank you for making me a part of your family and for giving me plenty of opportunities to relax and be in great company. A very special thank you goes to Mom Schwietz and my Dad, Michael Stanko, who are surely

celebrating with me from Heaven. You have all been an inspiration to me and the reason why I was able to persevere.

In addition to my family, I want to acknowledge with great admiration and respect the faculty who helped me throughout, but especially during the research phase of my program. First, my dissertation chair, Dr. John Weidman, kept me on task and provided feedback and guidance at key points along the way. My committee – Dr. William Bickel, Dr. Miriam Chaiken, and Dr. Maureen McClure – offered excellent feedback and suggestions that strengthened the research project. I appreciate their time, attention, and expertise, as it was invaluable to completing the dissertation. Several faculty from Indiana University of Pennsylvania were generous with their time and expertise; without them I truly believe the task would have proven too great to finish. Thank you to Dr. Tom Short, Dr. Krys Kaniasty, Dr. Mary Ann Rafoth, Dr. Ed Donley and Dr. Rick Adkins for their expert advice and guidance. Many others at Indiana University of Pennsylvania were critical to me achieving this goal: Dr. Mark Staszkiewicz, Dr. Ramesh Soni, Dr. Alicia Linzey, Mrs. Beverly Obitz, Dr. Rhonda Luckey, Ms. Ola Kaniasty, Mr. John Ingram, and Dr. Ginger Brown Special thanks go to my dissertation support buddy, Dr. Michele Petrucci, who made the journey much more fun as we commiserated and kept each going in our respective doctoral programs. Many friends, including Steve and Sue, Tina and Barri, Julie, Edie, Alida, Matt and Nancy, Sheldon and Ann, and Nancy M. – provided tremendous help and support. Many others kept me going with their conversations, encouragement and interest, whether my progress was easy or difficult. They are too numerous to mention, but without them, the work would have been much harder.

The research would not have been possible without the fine work of those involved in internationalization, and I would like to acknowledge the work of Dr. Jane Knight, the American Council on Education (ACE), the Carnegie Foundation for the Advancement of Teaching, and the Association of International Education Administrators (AIEA) who provided a terrific framework in which to conceptualize my study. Special thanks go to Dr. William Brustein of the University Center for International Studies at the University of Pittsburgh for nominating me for the Harold Josephson Award of the AIEA. And, lastly, I would like to thank those faculty at the Pennsylvania State System of Higher Education who took the time to participate in my research.

Reaching the end of this journey is exciting and wonderful. Everybody said it would be well worth it. I think they're right!

1.0 INTRODUCTION

1.1 PURPOSE OF THE STUDY

The purpose of this study of faculty at a select group of public universities in the United States is fourfold: to explore and describe faculty attitudes, beliefs and experiences regarding internationalization; to review the extent to which faculty members incorporate an international perspective into their own teaching, research, and scholarship; to determine whether relationships exist between faculty characteristics, campus climate, and internationalization attitudes, beliefs and behaviors; and to examine whether patterns emerge that may be used to describe or predict faculty members' *orientation to internationalization*.

This study will provide an assessment and description of how faculty at one group of American universities approach internationalization at a time when, "globalization is not just a passing phenomenon, but rather, a definitive world system at the beginning of the 21st century" (Lindsay, Braxton, Glassman, & Larew, 1999, p. 12). Data collected about faculty attitudes, beliefs and experiences related to internationalization will add to what is known about international education at United States institutions of higher education at a time when it is a poorly documented phenomenon with only a few national studies in existence (Hayward, 2000). The study will provide a descriptive analysis of faculty attitudes, beliefs and experiences, with a view toward identifying relationships between faculty characteristics, campus climate, and involvement in internationalization. The study will attempt to see whether faculty with certain academic and international profiles are more likely to have a favorable orientation to internationalization (Morris, 1996).

This research project will provide an opportunity to explore faculty data in light of recent national surveys conducted by the American Council on Education (Siaya & Hayward, 2003), which examine the internationalization of undergraduate education from three vantage points:

undergraduates' international experiences and attitudes, faculty's international experiences and attitudes, and institutional policies and practices. The research project will also review its findings in light of the Carnegie Foundation for the Advancement of Teaching's 14 country study of the international academic profession (Altbach, 1996).

1.2 BACKGROUND

Faculty members are instrumental to university internationalization and they play a critical role in advancing international education on their campuses (Burn & Smuckler, 1995; Carter, 1992; Engberg & Green, 2002; Green & Olson, 2003; Harari, 1981, 1992; Henson, Noel, Gillard-Byers, & Ingle, 1991; Morris, 1996; P. M. Peterson, 2000, 2002). For example, a national survey conducted in 1991 (Henson, Noel, Gillard-Byers, & Ingle) showed that over 90% of the responding institutions indicated that faculty are one of the "most important contributors to internationalization. Faculty international competence and the translation and utilization of this competence in university programs is very important" (p. 8). Additionally, Harari (1981) concluded in his national study of universities who belong to the American Association of State Colleges and Universities (AASCU) that, "the degree of internationalization of a campus is not a function of size, location, or overall budget. *In the last analysis it is a function of faculty competence and commitment and of institutional leadership"* (p. 29).

As stewards of the educational programs on campus, Peterson (2002) says that faculty, "are the key to constructing a curriculum and a set of educational experiences that stand at the core of our aspiration to be more globally oriented institutions…Through our faculty we can build sustainable relationships with institutions outside the United States" (n.p.). As the university curriculum is the domain of faculty members, Morris (1996) says that, "it is a hopeless task to add international content to the university curriculum without major increases in faculty involvement in international work…Internationalization of the faculty is the key to changes in the curriculum and, ultimately, the types of students who graduate from the university" (p. 1).

Furthermore, according to findings from one American Council on Education study of undergraduates, internationally oriented extracurricular activities and academic programs abroad

attracted only a small minority of students. However, 51 percent of students reported they took an international course in the 2001-2002 academic year and almost 30 percent reported taking two or more courses. It appears, then, that international learning is more likely to happen in the classroom and that faculty involvement is important to students' acquisition of international knowledge and skills (Siaya & Hayward, 2003).

However, U.S. college and university faculty members are less committed to internationalism than academics in 13 other countries according to results from the first-ever international study of the academic profession conducted in 1991-1993 by the Carnegie Foundation for the Advancement of Teaching. American faculty rank last or next to last of all fourteen countries agreeing with these statements: "Connections with scholars in other countries are very important to my professional work"; "in order to keep up with developments in my discipline, a scholar must read books and journals published abroad"; "universities should do more to promote student and faculty mobility from one country to another"; and "the curriculum at this institution should be more international in focus" (Haas, 1996). Furthermore 65 percent of American faculty did not go abroad for study or research in the past three years, as compared to 25 percent of Swedes, 47 percent of Britons, and 7 percent of Israelis (Altbach, 2001). However, American professors have more contact with international students than do faculty in other countries, with 96 percent indicating that foreign students enroll at their institutions. Furthermore, attitudes and activities about *internationalism* seem to rest:

> More on the concept of having the U.S. educational process contribute to the development of students from abroad than from a belief that U.S. faculty and students need to tap into the richness and educational achievements of other cultures. The sense of wanting to share seems to be genuine and widely held. It arises in part from the assumption that U.S. higher education is the best in the world. The belief that this excellent education system could be improved significantly by revising the curricula of our universities to incorporate more of the perspectives, ideas, practices, and achievements developed in other nations has few proponents. (Haas, 1996, p. 376)

Altbach explains that variations exist among the professoriate, with faculty at American research universities reporting higher levels of international involvement than those not at research universities. He says, "Academics who are more cosmopolitan in their approach,

focusing on their disciplines and on research, seem to be more international than those who are more local in their orientation, stressing the campus and teaching" (Altbach, 2001, p. 317)[1].

The findings of the Carnegie study of the international academic profession show that, "with the exception of faculty at selective liberal arts colleges, [American] professors with a teaching orientation tend to be less internationally minded" than those with a research orientation (Altbach & Peterson, 1998, p. 39). This finding is relevant to the present study because the group of institutions selected for this study can be considered as predominantly undergraduate institutions that – with the exception of one university – are primarily non-research intensive, with faculty who may have a stronger orientation to teaching than research.

At the same time, the belief that global competency and opportunities for international experiences should be available to all students, not just those attending "elite" institutions, has gained currency among groups representing higher education and student interests in the United States (American Association of State Colleges and Universities, 1995, 2003, n.d.; American Council on Education, 1995; Harari, 1977, 1981; NAFSA: Association of International Educators, 2003b). The American Council on Education states that, "*All* undergraduates need exposure to other peoples, languages, and cultures. This is as true for community college students as it is for those enrolled in liberal arts institutions or state colleges and universities. Parochial and provincial outlooks are not options for today's undergraduates" (1995, p. 6).

Therefore, this study presents an opportunity to study a significant group of faculty members who have a strong orientation to teaching and who teach a sizable number of undergraduate students in Pennsylvania. This group of universities has been purposively selected for the study because they share many common characteristics, such as history, governance, and institutional type; they account for a significant segment of the higher education sector in Pennsylvania with more than 104,000 students and 4,700 full-time faculty members; and as member institutions in the Pennsylvania State System of Higher Education[2] whose

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[1] The concept of "cosmopolitans" and "locals" originated in an early study of the academic profession conducted by sociologist Alvin Gouldner in 1957. Gouldner proposed that faculty of major research universities can be categorized as either "cosmopolitans" – those who identify more strongly with their academic disciplines than their institutions, and "locals" – those whose loyalties are directed more towards their institutions than their disciplines. As an individual's focus moves from research toward teaching, the individual is likely to pursue local loyalties and to identify with his or her institution. (Forest, 2002, p. 6)

[2] See http://www.sshechan.edu/Act188/index for enabling legislation.

mission is to, “provide high quality education at the lowest possible cost to students,” they represent the ideals of democratic and universal higher education in the United States.

A study of this group of faculty may also illustrate Clark’s belief that, “institutions of similar type tend to have similar cultures; thus, the faculty in each institutional type share common experiences” (Clark 1985,1987 cited in Austin, 1990, p.67). This study will include perceptions about campus culture and climate that have been shown to affect faculty interest and support in internationalization (Henson, Noel, Gillard-Byers, & Ingle, 1991). Academic climate, defined as “the current common patterns of important dimensions of organizational life or its members’ perceptions of and attitudes toward those dimensions” (M. W. Peterson & Spencer, 1990, p. 7) also “focuses on common participant views of various organizational phenomena (Allarie and Firsirotu, 1984 cited in M.W. Peterson & Spencer, 1990, p. 8). This makes it possible to “specify the phenomena and easier to compare changes in a specific arena of climate in a single institution over time or across various institutions or subgroups” (M. W. Peterson & Spencer, 1990, p. 8).

Finally, this study will update what we know about internationalization of higher education in Pennsylvania. Given that the most recent systematic study of international education in higher education institutions in Pennsylvania occurred more than 25 years ago (Zawadski & Masters, 1980), this research project will provide a current examination of internationalization of higher education as seen through the eyes of one group of faculty members. The project will provide an opportunity to compare and contrast data according to institutions and faculty members, which may lead to a better understanding of internationalization as it is viewed by these stakeholders in the educational sector. The data may also serve as a basis for future research efforts in internationalization.

1.3 RESEARCH QUESTIONS

The research project will answer the following study questions:

1. What are the characteristics of this sample of faculty at public universities in terms of demographics, academic preparation and academic orientation?

2. What international experience and foreign language capacities do faculty members have?

3. How do faculty members assess the climate at their own institutions related to internationalization?

4. To what extent do faculty members incorporate an international perspective into their own teaching, research, and scholarship?

5. What attitudes and beliefs about internationalization do faculty members have?

6. How does faculty involvement in internationalization relate to campus climate, faculty members' international experiences, and selected faculty characteristics?

7. How do attitudes and beliefs relate to faculty involvement in internationalization, faculty members' international experiences, and selected faculty characteristics?

1.4 LIMITATIONS OF THE STUDY

The study is conducted at one particular segment of universities in Pennsylvania, that of state-owned universities. Because there are many different types of higher education institutions in the United States, the selection of one group of institutions that are similar in many ways may be considered a limitation of the study. Other institutions of higher education that have different institutional characteristics and governance structures may not follow the same patterns or trends that are revealed by this research study. Therefore, while the results can be generalized to this particular type of university, they may not be completely generalizable to other types of institutions of higher education.

The survey research method used in this study may also be viewed as a limitation to the study in that respondents who have stronger opinions about internationalization of higher education may be more inclined to participate in the research than those who do not, as those

who have a particular interest in the subject matter or the research itself are more likely to return mail questionnaires than those who are less interested (Fowler, 1988).

1.5 DEFINITION OF TERMS

The terminology and discourse surrounding international education and the internationalization of higher education has been discussed and debated for years (Arum, 1987; de Wit, 2002; Knight, 2003 as cited in Knight, 2004), reflecting the complexity and diverse conceptions of meaning of these terms. Numerous attempts to posit definitions have occurred through the years (Arum, 1987; Spaulding, Singleton & Watson, p. 196; Fraser & Brickman, 1968, p. 195 as cited in Arum & Van de Water, 1992; Burn & Smuckler, 1995; Harari, 1977, cited in de Wit, 2002, pp. 106-107; Ellingboe, 1999; Green & Olson, 2003; Henson, Noel, Gillard-Byers, & Ingle, 1991; Holzner & Harmon, 1998; Knight, 1999, 2004; Siaya & Hayward, 2003), with some using the term "international education" and others using the term "internationalization of higher education" in framing their definitions. Other related terms, such as higher education across borders, globalization, global competence, ethnocentrism and ethnorelativism, intercultural/multicultural education, and Internationalisation at Home (IaH) also appear in the literature concerning international education and the internationalization of higher education. For the purpose of this research project, the following definitions and terms are used:

1.5.1 Internationalization of higher education

The definition of internationalization of higher education used here is the one first put forth by Jane Knight in 1994 and updated ten years later, that says, "Internationalization at the national/sector/institutional levels is defined as the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education" (Knight, 2003 as cited in Knight, 2004, p. 11). Knight's earlier definition of

internationalization, which was the "process of integrating an international or intercultural dimension into the teaching, research and service functions of the institution" (Knight, 1994 as cited in de Wit, 2002, pp. 113-114; Knight, 1994 as cited in Green & Olson, 2003, p. 3 ; Knight, 1994 as cited in Knight, 1999, p. 16; Knight, 2004, p. 9) is complemented by the newer definition, in that: "The new definition attempts to address the realities of today's context where the national/sector level is extremely important…the number and diversity of education providers that have very different interests and approaches to the international, intercultural, and global dimensions are growing…" (Knight, 2004, p.12). As before, Knight places her working definition of internationalization of higher education into a conceptual framework that also identifies rationales, stakeholders, and approaches to internationalizing higher education (Knight, 1999).

1.5.2 Culture and climate

M.W. Peterson and Spencer (1990) say that *culture* and *climate* are concepts describing a subset of the internal environment of an institution. *Culture* "focuses on the deeply embedded patterns of organizational behavior and the shared values, assumptions, beliefs, or ideologies that members have about their organization or its work. Organizational culture is a holistic perspective" (p. 6). *Climate* can be defined as, "the current common patterns of important dimensions of organizational life or its members' perceptions of and attitudes toward those dimensions. Thus, climate, compared to culture, is more concerned with current perceptions and attitudes rather than deeply held meanings, beliefs, and values (Hellriegel and Slocum, 1974 cited in M.W. Peterson and Spencer, 1990, p. 7). Furthermore, "the major features of climate are (1) its primary emphasis on common participant views of a wide array of organizational phenomena that allow for comparison among groups or over time, (2) its focus on current patterns of beliefs and behaviors, and (3) its often ephemeral or malleable character" (M. W. Peterson & Spencer, 1990, p. 8).

1.5.3 Faculty member

For the purposes of this study, the term “faculty” is defined by the Collective Bargaining Agreement (CBA) of the Association of Pennsylvania State College and Universities Faculties (APSCUF)[3]. “Academic faculty” -- The bargaining unit consisting of department chairpersons, full-time teaching faculty including librarians with faculty status, part-time teaching faculty, librarians without faculty status and faculty members whose basic responsibilities lie outside of the classroom setting who have, by certification of the Pennsylvania Labor Relations Board (PLRB), been designated as “academic faculty”. "Administrative faculty" -- The bargaining unit consisting of faculty members whose basic responsibilities lie outside of the classroom who have not been designated as academic faculty. Furthermore, the following descriptions apply to different types of faculty appointments. "Regular" -- A tenured or tenure track faculty member. "Probationary non-tenured faculty member” -- A faculty member who is appointed to a tenure track position and who has not been granted tenure. "Non-tenure track faculty" -- A faculty member who is appointed to service in a position in which service will not be credited toward tenure. Examples of such positions include Temporary Part-time and Temporary Full-time.

1.5.4 Pennsylvania State System of Higher Education (PASSHE)

Pennsylvania law created the State System of Higher Education in November 1982 with the passage of Act 188. Beginning on July 1, 1983, the 13 former state colleges and Indiana University of Pennsylvania became one unified system. These institutions are geographically dispersed throughout Pennsylvania and one of them is designated as a Historically Black College or University (HBCU). As state owned universities subject to laws governing all state organizations, they are overseen by a Board of Governors and a Chancellor who is located in Harrisburg, Pennsylvania.

[3] See http://www.apscuf.com/edits/Purpose-3-24-04draft.doc.

1.6 SIGNIFICANCE OF THE STUDY

This study is significant for several reasons. First, the opportunity to study an important sub-group of campus culture, that of the faculty, will add to what we know about faculty attitudes, beliefs and experiences about internationalization of American higher education. Given the importance of this group to the success of internationalizing universities in the United States, such a study will provide insights as to what faculty believe to be true about internationalization, what obstacles and motivations exist to becoming involved in internationalization, and how faculty approach the process of educating more globally competent undergraduate students. The study will help to advance our understanding of internationalizing United States institutions of higher education and will also provide the opportunity to see how well the internationalization framework described by Knight (1999) matches the attitudes, beliefs and experiences of faculty in the United States.

This study of academic climate will add to the literature concerning the transformation that is underway as society and institutions adjust to globalization, which according to the National Association of State Universities and Land Grant College's (NASULGC) publication, *Expanding the International Scope of Universities: A Strategic Vision Statement for Learning, Scholarship and Engagement in the New Century* (Lindsay, Braxton, Glassman, & Larew, 1999) is, "not just a passing phenomenon, but rather, a definitive world system at the beginning of the 21st century" (p.1) that will involve higher education institutions in a process of reconceptualizing learning, scholarship and engagement. This study will help to describe the relationship between education and the increasingly interdependent world in which we live, and will help to answer the question as to how well American colleges and universities are able to, "prepare our future world citizens to function effectively in an environment that is analogous to a tightly woven tapestry" (p.2).

Furthermore, the survey will reveal information about the academic background and training of faculty teaching on these campuses, with the inclusion of target questions about their international training and international experiences. We may learn that the degree of internationalization of the faculty is greater than it may first appear, and that it could lay the groundwork for widespread support of internationalizing this segment of the higher education community in Pennsylvania. Should Harari's statement about needing a critical mass of 25% of

the faculty to internationalize a campus be true (Harari, 1981), then we will be in a much better position to understand what the extent of faculty internationalization actually is, and how we may be able to reach this goal. Information about individual campuses is not widely known outside of campus borders; this effort to collect systematic information from all 14 of the state universities may be useful information indeed as a picture of the faculty is taken.

Another significant aspect to this research is the opportunity to compare this data with that of the Carnegie Foundation for the Advancement of Teaching study that found less involvement in internationalization among faculty who are oriented to teaching rather than do research. The proposed survey will ask faculty to choose their preferences regarding teaching and research as included in the Carnegie study, and then survey responses will be compared by groups. The results will be viewed in light of the Carnegie data to see if there are any differences between American faculty who were surveyed in 1991-1993 and now. This data will also be examined in light of the findings from the American Council on Education's survey that investigated faculty's international experiences and attitudes about internationalization (Siaya & Hayward, 2003).

Finally, systematic research of internationalization of higher education in Pennsylvania has not been done since a 1977 study that surveyed Pennsylvania institutions, in terms of curriculum, international offerings for students, and the organization of international education on different campuses (Zawadski & Masters, 1980). Around that time a dialogue about international education in Pennsylvania was undertaken at a conference which was attended by representatives of state government, higher education, business and industry, and K-12 schools in 1987 (Dinniman & Holzner, 1988). It is hoped that this current study may be useful in re-igniting such a partnership again. A systematic study of any aspect of internationalization in Pennsylvania will help to fill the gaps as to what we know about this important topic and may lead to additional research.

2.0 LITERATURE REVIEW

2.1 NEED FOR A DEFINITION

In his article, "International education: What is it? A taxonomy of international education of U.S. universities," Arum (1987) recognizes that the concept of international education means different things to different people and that many use terms (such as international studies, international affairs, international education, international programs, the international perspective, and the international dimension) interchangeably. More recently, the American Council on Education (Green & Olson, 2003) explains that developing a shared language is an important part of the process that campuses undertake to create a common understanding of internationalization. They say:

> People frequently use key terms such as *international education, international studies, internationalization, global education, intercultural education,* and *multicultural education* interchangeably, and sometimes with quite different meanings, depending on the context and the speaker. These different terms convey diverse philosophies and approaches and can create confusion and distractions to advancing internationalization; therefore, campuses need to develop a shared language in order to create a common understanding of internationalization and to craft a shared vision. (p. 1)

In 1993, the British Columbia Centre for International Education Task Force addressed the "need for clarification of the definition of internationalization, both in the context of the post-secondary system as a whole, and at the individual institutional level." (Francis 1993, as cited in de Wit, 2002, p. 113). According to de Wit,

> A more focused definition [of internationalization] is necessary if it is to be understood and treated with the importance that it deserves. Even if there is no

agreement on a precise definition, internationalization needs to have parameters if it is to be assessed and to advance higher education. (2002, pp. 114-115)

As Knight and de Wit note,

> the conclusion 'there is no simple, unique or all encompassing definition of internationalization of the university' itself can be seen as an accomplishment, given the fact that until recently both the formulation and the implementation of internationalization was predominantly American based, the debate relatively new, and the research tradition young. (Knight and de Wit, 1995, as cited by de Wit, 2002, p. 114)

2.2 INTERNATIONAL EDUCATION VS. INTERNATIONALIZATION

The choice of whether to use "international education" or "internationalization of higher education" is significant. de Wit (2002) says that many American authors "use the term international education more in relation to activity, competency, rationale, and ethos approaches than to process approaches to internationalization….and for that reason may be considered as covering a different stage of development closer to the meanings as presented in the field of comparative and international education research" (p. 110).

The American Council on Education (Green & Olson, 2003) explains that historically the term of choice to describe the international dimensions of higher education in the United States has been *international education* and that it "remains a standard in the higher education lexicon" (p.1). The authors note that the term international education "generally functions as an umbrella term for institutional programs and activities that have a recognizable international dimension, such as student and faculty exchange, study and work abroad, international development activities, foreign language studies, international studies, area studies, joint degree programs, and comparative studies" (p.1).

However, they point out several problems associated with using this term. First, the term "suggests that it is separate from the rest of education and that it exists as a parallel or different undertaking. In practice, the result of this parallel concept is that international learning and experiences are not only disconnected from other aspects of the educational process, but also

marginalized and poorly integrated into the institution's mission, strategic plan, structure, or funding priorities" (p.1) leading to a fragmented approach. Furthermore, "faculty and staff involved in international teaching and programs constitute separate domains and act as distinct clans", which compounds another historic disconnect on campuses, that of faculty who are "frequently disconnected from the professional staff who deal with the international mobility of students and faculty" (p. 2).

The authors note another problem with the term – the tendency to substitute one component activity (i.e. study abroad, international studies, and foreign language study) for the whole. This tendency "reduces a complex multifaceted phenomenon to a single dimension" (p. 2). Recognizing the baggage that has accumulated with the use of this term, the American Council on Education chooses to use *internationalization* in their 2003 user's guide to *Internationalizing the Campus*, saying that it "suggests an integrative process with multiple approaches. The term internationalization is widely used in other countries and has gained currency in the United States. The use of the verb form *to internationalize* suggests a move from description to action, a process rather than a set of activities" (p. 2).

2.3 FRAMEWORK FOR INTERNATIONALIZATION

2.3.1 Definition

Knight begins her framework with a definition of internationalization, which is: Internationalization at the national/sector/institutional levels is defined as "the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education" (Knight, 2004, p. 11). Knight places her working definition of internationalization of higher education into a conceptual framework that also identifies rationales, stakeholders, and approaches to internationalizing higher education (Knight, 1999).

2.3.2 Rationales for internationalization

According to Knight, "just as there are a variety of ways to describe and define internationalisation, there are also a number of different rationales or motivations for wanting to integrate an international dimension into higher education" (1999, p. 17). Rationales "address the 'why' of internationalization. Different rationales imply different means and ends to internationalization" (de Wit, 2002, p.84). In order to provide a framework and logic to the discussion, Knight and de Wit identified two groups of rationales in 1995[4] – economic and political, and cultural and educational – which are later separated by Knight[5] into four categories: political, economic, cultural and social, and academic rationales, which are not mutually exclusive. She says, "These are not necessarily clear and distinctively different categories. In fact one of the changes that is occurring is that there is more integration or blurring of these categories" (Knight, 1999, p. 17). The four rationales driving internationalization remain the same in Knight's 2004 updating of her definition; however she did identify additional rationales of emerging importance to national and institutional sectors.

de Wit (2002) describes subcategories and explanations for each of the four rationales. *Political Rationales* have subcategories of foreign policy, national security, technical assistance, peace and mutual understanding, national identity, and regional identity. *Economic Rationales* "are becoming more dominant, and there is a direct link with the globalization of our economies" (de Wit, 2002, p. 89). The economic rationale subcategories include economic growth and competitiveness, the labor market, national educational demand, and financial incentives for institutions and governments. The *Cultural Rationale*, "constitutes a nationalist argument, one which emphasizes the export of national and cultural and moral values" (de Wit, 2002, p. 93), while the *Social Rationale* emphasizes, "the relevance of internationalization for the individual, in particular the student" (de Wit, 2002, p. 94) which some call social learning or personal development. Stressing the development of the student and the academic which occurs through

[4] See Jane Knight and Hans de Wit. (1995). Strategies for internationalisation of higher education: historical and conceptual perspectives. In *Strategies for internationalisation of higher education: A comparative study of Australia, Canada, Europe and the United States of America*, edited by Hans de Wit. Amsterdam: European Association for International Education.

[5] See Jane Knight, Internationalisation of higher education: A conceptual framework. In *Internationalisation of higher education in Asia Pacific Countries*, edited by Jane Knight and Hans de Wit. Amsterdam: European Association for International Education; and Jane Knight, Internationalisation of higher education. In *Quality and internationalisation in higher education*, edited by Jane Knight and Hans de Wit. Paris: IMHE/OECD.

experiencing a different culture as well as the re-examination of their own home culture, the focus on individual development is an important argument for internationalization by American universities. *Academic Rationales* include the following subcategories: providing an international dimension to research and teaching, extension of the academic horizon, institution-building, profile and status, enhancement of quality, and international academic standards.

2.3.3 Stakeholders

The review of rationales also notes that the diversity of stakeholder groups (from the government, the private sector, and the educational sector) in higher education should be considered. Rationales may overlap or be combined by stakeholders with a hierarchy in priorities evident, according to research done by Knight in Canada (1997, cited by de Wit, p. 100). Knight (1999) identifies sectors, made of up different stakeholder groups, as the next point of analysis in order to clarify the question of "internationalisation according to whose perspective" and as a way of illustrating that higher education "is not the only group with a strong vested interest" (p. 21) in internationalization.

2.3.4 Approaches to Internationalization

In building her framework, Knight adds approaches to international education to the definition, rationales, and stakeholders previously discussed. Her typology of approaches at the institutional level, "illustrates the different areas of emphasis that have been or are currently being given to internationalisation by different researchers, practitioners and higher education institutions" (Knight, 1999, p. 14). In 1994, she identified four different approaches (activity, competency, ethos, and process) that "are complementary and certainly not mutually exclusive. The typology reflects how dynamic the concept of internationalisation is and how internationalisation is shaping new directions for higher education and at the same time responding to current trends and needs of the sector" (p. 16). She updated her approaches in 2004 when she updated her working definition of internationalization.

Table 1. Approaches to Internationalization (1994)

Approach	Description
Activity	Categories or types of activities used to describe internationalisation; such as curriculum, student/faculty exchanges, technical assistance, international students.
Competency	Development of new skills, knowledge, attitudes and values in students, faculty and staff. As the emphasis on outcomes of education grows there is increasing interest in identifying and defining global/international competencies.
Ethos	Emphasis is on creating a culture or climate on campus which promotes and supports international/intercultural initiatives.
Process	Integration or infusion of an international or intercultural dimension into teaching, research and service through a combination of a wide range of activities, policies and procedures.

Source: (Knight, 1994, as cited in Knight, 1999)

Table 2. Approaches at the Institutional Level (2004)

Approach	Description
Activity	Internationalization is described in terms of activities such as study abroad, curriculum and academic programs, institutional linkages and networks, development projects, and branch campuses.
Outcomes	Internationalization is presented in the form of desired outcomes such as student competencies, increased profile, more international agreements, and partners or projects.
Rationales	Internationalization is described with respect to the primary motivations or rationales driving it. This can include academic standards, income generation, cultural diversity, and student and staff development.
Process	Internationalization is considered to be a process where an international dimension is integrated into teaching, learning, and service functions of the institution.
At home	Internationalization is interpreted to be the creation of a culture or climate on campus that promotes and supports international/intercultural understanding and focuses on campus-based activities.
Abroad (cross-border)	Internationalization is seen as the cross-border delivery of education to other countries through a variety of delivery modes (face to face, distance, e-learning) and through different administrative arrangements (franchises, twinning, branch campuses, etc.).

Source: (Knight, 2004, p. 20).

In her framework, Knight further identifies strategies that institutions may employ when internationalizing. She groups them in categories of program and organization strategies. Her four categories of program strategies include: academic programs; research and scholarly collaboration; external relations (domestic and cross-border); and extracurricular activities (See Table 3: Institutional Level Program Strategies). *Academic programs* are "perhaps closest to what is considered by many to be internationalisation activities" (1999, p. 23). *Research and scholarly collaborations* "address the substantive nature of the research, the methodology, the

research collaborators and the distribution of the research/knowledge" (pp. 23-24). *External relations and services*, which had been traditionally oriented to international development

Table 3. Institutional Level Program Strategies

Academic programs	• Student exchange programs • Foreign language study • Internationalized curricula • Area or thematic studies • Work/study abroad • International students • Teaching/learning process • Joint and double degree programs • Cross-cultural training • Faculty/staff mobility programs • Visiting lecturers and scholars • Link between academic programs and other strategies
Research and scholarly collaboration	• Area and theme centres • Joint research projects • International conferences and seminars • Published articles and papers • International research agreements • Research exchange programs
External relations: Domestic and cross-border	Domestic: • Community-based partnerships and projects with nongovernment groups or public/private sector groups • Community-service and intercultural project work Cross-Border: • International development assistance projects • Cross-border delivery of education programs (commercial and non-commercial) • International linkages, partnerships, and networks • Contract-based training and research programs and services • Alumni-abroad programs
Extra-curricular activities	• Student clubs and associations • International and intercultural campus events • Liaison with community-based cultural and ethnic groups • Peer support groups and programs

Source: (Knight, 2004, pp. 14-15)

and co-operation agreements between institutions is now "gradually shifting to more of a 'trade' than 'aid' focus" and this category of internationalisation appears to be "fundamentally changing

in orientation and increasing in importance" (p. 25). *Extracurricular activities* can internationalize "the total educational experience of both domestic and international students and help to bring a comparative perspective to the classroom" (p. 25).

Organization strategies include initiatives which help to institutionalize the international dimension through human resources, policies and administrative systems. Knight (1999) says, "The focus on organisational strategies is what distinguishes the process approach from the other approaches. By stressing the importance of integrating the international dimension into the institution's mission statement, planning and review systems, policies and procedures, hiring and promotion systems one is working toward ensuring that the international dimension is institutionalized" (p.25). Organization strategies are shown in Table 4.

Table 4. Institutional Level Organization Strategies

Governance	• Expressed commitment by senior leaders • Active involvement of faculty and staff • Articulated rationale and goals for internationalization • Recognition of an international dimension in institutional mission statements, planning, and policy documents
Operations	• Integrated into institution-wide and department/college-level planning, budgeting and quality review systems • Appropriate organizational structures • Systems (formal and informal) for communication, liaison, and coordination • Balance between centralized and decentralized promotion and management of internationalisation • Adequate financial support and resource allocation systems
Services	• Support from institution-wide service units, i.e. student housing, registrariat, fund-raising, alumni, information technology • Involvement of academic support units, i.e. library, teaching and learning, curriculum development, faculty and staff training • Student support services for incoming and outgoing students, i.e. orientation programs, counseling, cross-cultural training, visa advice
Human resources	• Recruitment and selection procedures that recognize international expertise • Reward and promotion policies to reinforce faculty and staff contributions • Faculty and staff professional development activities • Support for international assignments and sabbaticals

Source: (Knight, 2004, pp. 14-15)

Knight's conceptual framework of the internationalization of higher education helps to advance our understanding of the very complex processes involved with internationalization. Her 2004 update of the definition also included an expansion of the framework, with the inclusion of policies and programs at the three levels in her new definition (national, sector and institutional).

2.4 HIGHER EDUCATION IN THE UNITED STATES

More than 4,000 degree-granting institutions of higher education in the United States are listed in the Integrated Postsecondary Education Data System (IPEDS) of the U.S. Department of Education[6], according to degree-granting activity, enrollment size, and whether they are public or private institutions. The range and diversity of colleges and universities in the United States naturally leads to diverse and institution-specific approaches to internationalization and an "amazing array of administrative structures that support the international activities of faculty and students" which are "shaped by institutional traditions; leadership from presidents, provosts, and deans; faculty involvement; student demand; funding opportunities; external forces; and a host of other circumstances" (McCarthy, 2003, p. 1).

Ernest Boyer (1990) sees the diversity of institutions as strengthening the higher education community in the United States, but also notes that many campuses are experiencing a crisis of purpose in that they are being driven by external pressures of prestige, often associated with research intensive institutions, rather than by self-defined objectives. He suggests that this crisis can lead to blurring of institutional mission and compromised standards for research and teaching, and he suggests that, "every higher learning institution [should] define its own special mission and develop a system of faculty recognition that relates to what the campus is seeking to accomplish…We're suggesting that diversity, not uniformity, be the goal, and in this spirit, we outline below possible options for the full range of colleges and universities in the nation" (Boyer, 1990, p. 57). The options he lists include the research university, doctorate-granting universities, liberal arts colleges, community colleges, and the comprehensive college or

[6] See http://nces.ed.gov/programs/digest/d02/tables/dt214.asp for fall 2000 statistics from the National Center for Education Statistics.

university. Each would be driven by their own institutional identity, their own scholarship, and their own faculty reward structures. These institutional types are sorted by the Carnegie Foundation for the Advancement of Teaching according to a designation of "Carnegie Classification". The classifications range from "Doctoral/Research Universities – Extensive" to "Associate's Colleges" [7].

2.5 CULTURES OF THE ACADEMY

Beyond the framework of different sizes and shapes of institutions of higher education, the academic profession can be considered to have a variety of cultures. Austin (1990) says that there are four primary, and sometimes conflicting, cultures that influence faculty values and behaviors: (1) the culture of the academic profession, (2) the culture of the discipline, (3) the culture of the academy as an organization within a national system, and (4) the culture of the specific type of institution.

The key values and concepts that are "important bedrocks" under girding the culture of the ***academic profession*** are: the purpose of higher education, which is to pursue, discover, produce, and disseminate knowledge, truth, and understanding; autonomy and academic freedom; commitment to intellectual honesty and fairness; collegiality in faculty interactions and institutional decision making; and a commitment to service for society. Furthermore, the academic profession has also accepted an "institutional hierarchy of American higher education" (Burton Clark, 1985 cited in Austin, 1990, p. 63), in which the research university is the model that all other institutions strive to emulate and research is the activity that has become, "the central professional endeavor and the focus of academic life" (Rice, 1986 cited in Austin, 1990, p. 63).

The second culture, that of the ***discipline***, shapes the lives of academics in significant ways, and according to Kuh and Whitt (1988, pp. 77-78),

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[7] See *The Carnegie Foundation for the Advancement of Teaching* for Carnegie Classifications (www.carnegiefoundation.org/Classification). The distribution of the Carnegie Classifications for the 14 state owned institutions in the Pennsylvania State System of Higher Education are as follows: *Doctoral/Research Universities – Intensive*: (1 institution); *Master's Colleges and Universities I*: (12 institutions); and *Master's Colleges and Universities II*: (1 institution).

> Is the primary source of faculty identity and expertise and typically engenders stronger bonds than those developed with the institution of employment, particularly in large universities. This case is increasingly evident as academic subject matter becomes increasingly narrow in focus, requiring more specialized training (Blau 1973; Clark 1984; Morrill and Spees 1982). Elements of the culture of the discipline include assumptions about what is to be known and how, assumptions about the tasks to be performed and standards for effective performance, and assumptions about patterns of publication, patterns of professional interaction, and social and political status (Becher 1984, 1987; Clark 1984).

In reference to the culture of the ***academy as an organization***, "the culture of colleges and universities as social organizations traditionally has revolved around two central values: (1) the belief that universities and colleges are involved in "good work," that is, the production of knowledge for society and the intellectual development of students and (2) a commitment to collegiality coupled with autonomy as the appropriate organizational context within which faculty should work (Austin and Gamson, 1983 cited in Austin, 1990, p. 65)". Austin (1990) states that, "while the collegial and bureaucratic structures always have produced inherent conflicts, in the past decade external pressures – such as economic constraints, state and federal guidelines, and the labor market – have shifted the balance between the collegial and managerial cultures" (p. 65).

The culture of ***institutional types*** strongly affects faculty values and activities as Austin (1990) says, "The employing institution defines the institutional career, strongly affecting the duties, opportunities, rewards, relationship to the discipline, and prestige the faculty member experiences" (p. 66). It takes into account key elements that contribute to a college or university's culture including, "mission and goals of the institution, governance structure and leadership style of administrators, curricular structure and academic standards, student and faculty characteristics, student-faculty relations, size and location, and physical environment. The characteristics of each element and their interactions with each other create a unique culture for each college and university" (Peterson, Cameron, Jones, Mets, and Ettington, 1986, as cited in Austin, 1990, p. 66). The institutional mission is important and affects recruitment and socialization of new faculty, the nature of tasks faculty perform, and performance standards.

Austin says, “In universities with a strong mission to produce knowledge, the research activities tend to be highly specialized. In institutions that emphasize teaching, such as liberal arts colleges, scholarly projects tend to be less specialized, spanning knowledge in several fields and often synthesizing or organizing in new ways knowledge already discovered or produced. The extent to which teaching is a primary institutional commitment affects how faculty spend their time and participate in the disciplinary culture” (p. 66).

The different values and expectations associated with the four different cultures that faculty members experience may result in issues or conflicts. One example concerns problems that may result at the institutional level regarding campus reward systems. Austin (1990) says, “Impelled by the disciplinary and professional cultures, the criteria for campus reward systems increasingly emphasize scholarly productivity, as evidenced by the number of publications. Yet, in many colleges and universities, an overemphasis on research as a criteria for reward ignores realities of heavy teaching loads and increasing numbers of students requiring special assistance” (p. 68).

2.6 PREVIOUS RESEARCH

Numerous research studies have been conducted in international education, and the results of some of the international, national and large scale studies are summarized in this section. An early report by the American Association of State Colleges and Universities (AASCU) published findings from a study of member institutions that included: (1) an analysis of data gathered from AASCU members, along with profiles of the degree of internationalization of these institutions; (2) identification of major means of internationalizing the curriculum; (3) the key features of the process of internationalizing the institution; and (4) practical guidelines for institutions interested in starting or strengthening internationalization efforts (Harari, 1981). The survey of international programs in AASCU institutions included questions about institutional support for international programs; international activities offered by the institution; curriculum; grant-seeking efforts to support international activities; faculty involvement; foreign language instruction; international development cooperation programs; and programs in support

of international involvement by students. Based on the survey results, Harari placed institutions into five different categories of degree of internationalization.

About 15 years later, AASCU undertook another national survey of its members, asking questions about the extent of international activity on the campuses for the 1994-95 academic year, institutional commitment to international programs, international education networks, funding and contract/grant activity, curriculum, activities abroad and future assistance needs (American Association of State Colleges and Universities, 1995).

Data from Henson, Noel, Gillard-Byers, and Ingle's (1991) national survey of 183 institutions (doctoral granting universities that enroll 5,000 or more students and Historically Black Colleges and Universities), led to the development of a database of empirical data on internationalization and a conceptual model of internationalization, along with an "internationalization index" score for each university. The components considered significant in the internationalization index scores are: commitment to internationalization; priority for internationalization; type and level of various international activities by faculty and departments; strategies and plans; foreign language requirements, teaching and enrollment trends; development of faculty internationalization competence; funds available for internationalization; various inputs for establishing, strengthening, and operating international programs and activities; expectations of the private sector; and expected level of international programs and activities. In addition to the survey data, case studies were conducted with ten institutions from the survey population, which involved more than 237 university administrators in interviews.

The data identified activities or conditions that contribute significantly to internationalization. Those that were closely related were grouped together under headings called *factors*, and subheadings for each, called *subfactors*. The study authors note that, "Factors and sub-factors must be viewed in terms of their presence, characteristics, and interrelationships within the context of the individual institution" (p. 19). These factors and sub-factors are: (1) Resources [Faculty, Administrators, Funds, Incentives and Rewards] (2) Program Activities [Foreign Students/Scholars; Study, Work and Internships Abroad; Foreign Languages; Development Assistance; Linkages/Cooperative Agreements; Academically Driven Programs (research/scholarship/graduate education, area and thematic studies and the undergraduate curriculum); and Public Service] (3) Leadership and Management [Commitment, Policy, Strategic Planning/Review, Allocation of Resources] (4) Organization [Structure, Linkages

between and among internationalization factors and sub-factors, Internal culture] and (5) External Environment [Global Awareness, Stakeholder Demand, Benefits].

A national survey of changes in the academic and administrative practices of American colleges and universities was undertaken for the 12th year (El-Khawas, 1995) by the Higher Education Panel of the American Council on Education. The survey included questions about the faculty, academic programs, assessment, enrollment, financial status and institutional status of responding institutions. Several questions in the academic programs section related to internationalizing the institution and levels of international activities over time. The *Campus Trends* report (p. 46) provided a description of the different types of international activity engaged in by institution, according to program, faculty and student categories. Public comprehensive and research/doctoral institutions reported these program activities, faculty activities, and student support as part of their internationalization efforts.

The American Council on Education (ACE) produced several national studies that are useful in assessing internationalization. A preliminary status report of internationalization reviewed both published and unpublished literature about curricular and co-curricular undergraduate education in the United States (Hayward, 2000). The study reviewed the state of U.S. higher education in several aspects, including: foreign languages, study abroad, international dimensions of the curriculum, academic requirements, international awareness, international students and faculty, institutional support for internationalization (staffing and international programs, financial support, institutional policies, and other indicators of commitment to internationalization), funding support for international education (federal, state, and foundation sources), employment demands, and attitudinal and experiential data (faculty, staff, students, administrators, and public attitudes).

The review of the literature showed that the much of the limited data available is also over a decade old. Describing international education as a poorly documented phenomenon, the author notes that relatively few national studies exist and that most of the data is available only at local or regional levels or is anecdotal in nature. Findings are ambiguous or contradictory and there are whole areas in which, "there are no data at all – as is the case of college student and faculty attitudes about international education" (p. 29).

Public attitudes toward international education, while limited, suggest strong support for internationalizing U.S. higher education according to a recent ACE national public opinion

survey (Hayward & Siaya, 2001). A telephone survey of a national random sample of 1,006 respondents age 18 years and older examined international experiences and attitudes regarding the importance of international education, and global knowledge of respondents. The second component of the ACE study was a telephone survey of 500 four-year college-bound seniors that examined international experience, attitudes about international education at the postsecondary level, and intentions to participate in international education. The data indicate that, "The importance given to international learning opportunities by both students and the public suggests that institutions with robust international offerings will have a competitive advantage in attracting future students" (Hayward & Siaya, 2001, p. 3).

The study points to several contradictions in international education at the college or university level. Almost half of all college bound students sampled wish to study abroad, yet just about 3 percent of them presently do so over the course of their college career. What circumstances during their college years interfere with their initial hopes for a study abroad experience? A high percentage of students say they plan to study a foreign language while in college, yet foreign language enrollments as a percentage of total enrollments are lower than they were in the 1960s and early 1970s, and staffing levels appear to have declined. Students and the public appear to be very interested in international education, yet many colleges and universities overall do not seem to be responding as low levels of internationalization persist at many institutions. Institutions that understand this trend will most likely thrive as top college destinations for potential students.

The *Mapping Internationalization on U.S. Campuses* research project undertaken by the American Council on Education examined,

> The internationalization efforts of U.S. colleges and universities with comparisons to previous data, as appropriate and possible. It also looks at the international experiences and attitudes of undergraduate students and faculty. Key questions of the study include: To what extent are institutions internationalizing the undergraduate experience? What practices and policies are in place to support internationalization efforts? Do students graduate with international skills and knowledge? What international experiences and skills do students and faculty possess? Do students and faculty support international education initiatives? (Siaya & Hayward, 2003, p. vii)

The study included three national surveys. The first was an institutional survey that sampled 752 colleges and universities reflecting the range of institutional types (community colleges, liberal arts colleges, comprehensive universities, and research universities). The second survey was administered to a faculty sample that was drawn from the institutional survey respondents; 1,027 undergraduate faculty participated in this survey. The third instrument surveyed 1,290 undergraduate students enrolled at the institutions who responded to the institutional survey.

The findings of the research are summarized in several ways, including: overall strengths in internationalization of higher education; overall weaknesses of higher education internationalization; descriptions of data characteristics by groups (undergraduates, faculty and institutions); and descriptions of data characteristics by type of institution (community colleges, liberal arts colleges, comprehensive universities and research universities). The findings list overall strengths and weaknesses in the internationalization of higher education (Siaya & Hayward, 2003, pp. 74-75):

Strengths

- Institutional type alone did not determine an institution's level of internationalizing undergraduate education.
- The percentage of institutions with foreign language requirements has increased since the 1988 Andersen report.
- Half of all students surveyed had taken at least one international course during the 2001-02 academic year.
- Many faculty had personal interest in internationalization that was not dependent on institutional policies and practices.

Weaknesses

- Most institutions exhibited a low level of commitment to internationalization.
- A discrepancy existed between faculty and student attitudes and their actions.
- Foreign language enrollment as a percentage of total enrollment has remained static and that enrollment was increasingly concentrated in Spanish. Students preferred foreign language and culture learning focused on Western countries.
- While the number of participants had increased, only a small portion of undergraduates participated in academic programs abroad and the majority of them had short-term experiences.
- Internationally oriented extracurricular activities attracted only a small minority of students.

The ACE survey of faculty's international experiences and attitudes revealed that of those surveyed, 15 percent were born outside the United States, almost all had traveled for academic purposes, most said they had foreign language skills, 20 percent had submitted or published their work in a foreign journal or press over the past three years, about 25 percent had worked collaboratively with a foreign-born scholar, and 27 percent believed, "international work was a factor in tenure and promotion decisions at their institutions" (Siaya & Hayward, 2003, p. 9).

Faculty were supportive of international education, foreign language requirements, and academic programs abroad, and 67 percent believed it was the "responsibility of *all faculty* to provide undergraduates with an awareness of other countries, cultures, or global issues" (p. 10). However, the study notes that there seems to be a "substantial core number of faculty who did not see the value or importance of international education to the undergraduate experience or curriculum," given that 36 percent of faculty agreed with the statement, "The more time spent teaching students about other countries, cultures, and global issues, the less time is available for teaching the basics" (p. 10). Furthermore, "more than 25 percent agreed that international education is a useful, but not a necessary component of undergraduate education. Second, 28 percent of the faculty did not believe that students graduated from their institution with an awareness of other countries, cultures, or international issues" (p. 10).

The ACE institutional survey mailed to colleges and universities showed that international education is considered part of the curriculum and co-curriculum at most institutions, but it is not generally a high priority, and less than one-third report that internationalization appears as one of its top five institutional priorities listed in a strategic plan. However, some exceptions to this were noted with institutions that have high degrees of internationalization as evidenced by foreign language training, international course offerings, academic programs abroad, and support for faculty and student international activities. There were however, "a surprisingly large number of institutions that offered little or no language instruction or courses with an international focus, and had few international options in their co-curriculum" (Siaya & Hayward, 2003, p. 17).

A survey of the international academic profession commissioned by The Carnegie Foundation for the Advancement of Teaching collected information from academics in 14 countries to examine "the demographic facts of the profession, on attitudes toward teaching and learning, on the governance of academic institutions, on morale, and on the involvement of

scholars and scientists at the national and international levels" for the years of 1991-1993 (Altbach, 1996, p.4). Results of that study showed that academics from the United States have, "positive views regarding the merit of interaction with individuals and institutions of higher education in other countries. The amount of interaction taking place, however, seems quite modest given the attitudes expressed. There appears to be a chasm between the internationalist attitudes of full-time U.S. faculty and the level of international interaction in which they are involved" (Haas, 1996, p.388). Overall, U.S. participation in international activity is generally lower than that of academics in the other countries studied. Furthermore, the study shows that teaching-oriented faculty, as opposed to research-oriented faculty, participate in little international professional activity.

Several studies analyzed the data from the Carnegie International Study of the Academic Profession from various viewpoints. For example, Welch (1997) analyzed the data by applying a routine measure of internationalization to divide the international survey population into two groups, "peripatetic" (i.e. international) and "indigenous" (i.e. home-grown). The two sub-populations of academic staff were grouped according to whether they obtained their highest degree in another country. Also using the Carnegie data were Gottlieb & Yakir (1994) who presented a case study analysis of Israeli faculty perceptions of determinants of teaching quality. Their findings revealed that respondents were satisfied with most working conditions (not salaries), teaching loads, their preparation (training) for teaching, as well as their teaching.

Forest (2002) analyzed the Carnegie data in light of the preference for teaching over research, and examined the impact this preference has over other dimensions of faculty work and academic life. Specifically he found similarities among the respondents from the 14 participating nations in the areas of the assessment of teaching and in the international dimensions of higher education. Regarding the international dimensions of higher education, his analysis looked at the relationship of teaching orientation with: (1) indications of time spent on international activities; and (2) faculty views toward international dimensions of higher education. He found four significant relationships in the data (pp. 198-199):

- Teaching-oriented faculty worldwide are significantly less likely than their research-oriented colleagues to indicate that connections with faculty in other countries are important.

- Internationally, teaching-oriented faculty are significantly less likely than their colleagues to agree that scholars should read books published abroad.

- In a majority of countries surveyed, teaching-oriented faculty were significantly less likely than their research-oriented colleagues to have collaborated with faculty from another country in the past 10 years.

- Teaching-oriented faculty in most countries surveyed were less likely than their colleagues to have traveled or worked abroad within the past 10 years.

A study commissioned by the Council for the International Exchange of Scholars (CIES) was conducted by Goodwin and Nacht (1991) in order to answer these questions: What type of U.S. faculty go abroad, and for what reasons? What are the incentives and disincentives for these sojourns? What trends are discernible in faculty experience abroad? What are the attitudes prevalent on U.S. campuses toward such activities? What are the special obstacles and risks faced by faculty who commit themselves to an international experience? What are the effects of foreign experience among the faculty on the internationalization of U.S. campuses in general? What are the central issues for debate the command further attention? The researchers conducted extensive campus visits and interviews at 37 institutions of higher education in four different regions.

2.6.1 Pennsylvania Studies

While such international and national studies are useful, studies related to state government and university relations are also relevant. The Association of International Education Administrators (AIEA) Task Force on International Education and Economic Competitiveness made five recommendations directed at state governments to improve America's competence in international education in 1988 task force report, *Action for International Competence.* The task force recommendations are directed to state governments because, "As the state governors have recently pointed out, improvements need to be made at the state level. The states have, after all, the constitutional responsibility for education, and they now provide a major portion of the resources for international education" (Holzner et al., 1988, p. 9).

This state/university partnership was reflected in Pennsylvania at an October 1987 conference organized by the Pennsylvania Department of Education, *International Education: Keystone for Economic Success*. The conference was considered to be an initial step in the development of the Pennsylvania Partnership for International Competence (Dinniman & Holzner, 1988, p. 4). A book published after the conference, *Education for International Competence in Pennsylvania*, looked at international programs at different institutions and consortia (educational, governmental, and business) in Pennsylvania. Several of the book chapters reviewed international initiatives at many of the state's colleges and universities, and also discussed collaborations with pre-college educational entities.

The most recent systematic study of international education at institutions of Pennsylvania higher education was carried out by the Pennsylvania Department of Education with the Pennsylvania Council for International Education (PaCIE) in 1977-78. The researchers surveyed global/international education activity in Pennsylvania colleges and universities. The purpose of the study was to find out: "…the extent to which institutions and their faculties in Pennsylvania allocate human, financial and institutional resources toward realizing a goal of enriching their students and faculty through international experience or knowledge about other countries, peoples and cultures and the interrelationships between them" (Zawadski & Masters, 1980). The survey was done as the first step in response to a 1978 policy statement from the State Board of Education that directed the Department of Education to provide leadership for, "statewide responsibility for global education by helping institutions develop global education programs" (p. 1). The survey was sent to 155 Pennsylvania colleges and universities and of those, 82 usable responses (2/3 from privately owned institutions and 1/3 from public or tax supported institutions) were received. The survey asked for information about the organization, structure and other aspects of global/international education for the 1977-1978 year.

Given that this survey was the last published attempt at collecting data about global/ international education at Pennsylvania colleges and universities, several of these questions[8] were used in a study conducted of the 14 state owned institutions in Pennsylvania (Schwietz, 2003). The purpose of that study was to measure the current state of internationalization at the

[8] Permission to use these questions was granted by Dr. James Masters of the Pennsylvania Department of Education. Permission to use other survey questions from the American Council on Education's "Survey on the State of Internationalization in Undergraduate Education" was granted by Dr. Laura Siaya, Research Associate at the American Council on Education.

14 state owned universities in Pennsylvania, and a mailed survey was administered to international education officers that included questions concerning: the types of international education programs offered; student participation in international education; the academic curriculum; institutional affiliation agreements and visiting scholars/exchange faculty; U.S. faculty participation in international work; resource allocations for international programs; a description of campus administration of international education; and perceptions regarding support for and involvement in international education. Additional data (foreign student enrollment, enrollment by program and university, faculty statistics, etc.) was collected from the State System of Higher Education's Research Office, the Pennsylvania Department of Education, and the Institute of International Education (IIE).

One finding that is of special interest is the comparison between resources provided to faculty and the level of faculty engagement. One of the survey questions asked for yes/no responses as to whether resources are provided to faculty for eight different types of activities (e.g. present papers at international conferences, develop new courses with an international/global perspective, etc.), while a different survey question asked respondents to rate of the degree of participation (engagement) by faculty in ten different areas of international activities. A comparison of responses to both questions showed a relationship between provision of resources and faculty engagement. That is, the more resources that were provided, the higher the level of faculty engagement. In all cases, increasing the number of resources provided increased the level of faculty engagement.

2.6.2 Guidelines and Assessment Instruments

The American Association of State Colleges and Universities (AASCU) released guidelines that are still in use today (Harari, 1981, pp. 45-47). They describe the process of internationalizing institutions and provide direction for AASCU institutions. Another national association, the Association of International Education Administrators (AIEA) released *Guidelines for International Education at U.S. Colleges and Universities* (Van de Water, Hoemeke, Kopp, & Smuckler, 1989) in which they identify six major components of the international dimension of a college or university and provide criteria for judging adequacy and excellence of each. The six components include: administration; faculty and the curriculum; foreign study and international

exchanges; foreign students and scholars; technical cooperation and international development; and public service.

The American Council on Education's Commission on International Education also lists "ten ground rules" for internationalizing higher education in the United States, which are: (1) Require that all graduates demonstrate competence in at least one foreign language; (2) Encourage understanding of at least one other culture; (3) Increase understanding of global systems; (4) Revamp curricula to reflect the need for international understanding; (5) Expand study abroad and internship opportunities for all students; (6) Focus on faculty development and rewards; (7) Examine the organizational needs of international education; (8) Build consortia to enhance capabilities; (9) Cooperate with institutions in other countries; and (10) Work with local schools and communities (1995, pp. 9-13).

Beyond the broad guidelines offered by these national educational groups, specific assessment instruments have been developed that will help colleges and universities review their own progress. The Global Education Checklist (Czarra, 2002) was developed by the American Forum for Global Education (see http://www.globaled.org/guidelines) as a self-assessment tool to be used by teachers, schools, school systems and state education agencies. The American Council on Education's (ACE) publication, *Internationalizing the Campus: a User's Guide,* includes guidelines for carrying out an internationalization review and survey instruments created by practitioners. The review is grouped around several areas of assessment, such as "Articulated Commitment: Mission, Goals and Vision" or "The Curriculum and Co-Curriculum", and for each area there is a major question, followed by a series of questions that provide the opportunity to collect data for analysis.

Other inventories and reports are also instructive, including those done by the International Education Task Force at Northern Illinois University (1999); the work of the Colorado Commission on Higher Education (1994); the report about the status of international and global education at California community colleges (Rosalind L. Raby, 1998); the inventory of international resources of the Indiana Consortium for International Programs (ICIP) created by the Center for the Study of Global Change at Indiana University (see www.www.indiana.edu/~global/icipsurvey.htm); institutional assessments made by universities participating in the American Council on Education's *Promising Practices Project* (Engberg &

Green, 2002); and campus profiles highlighted by NAFSA: Association of International Educators (NAFSA: Association of International Educators, 2003a).

A review of survey instruments involving faculty attitudes, beliefs, and behaviors was also conducted. Two previous works already mentioned, the International Study of the Academic Profession (Altbach, 1996), and the American Council on Education's survey of a national random sample of faculty members on the topic of internationalization (Siaya & Hayward, 2003) are especially helpful. Both surveys include questions about involvement, attitudes, experiences and behaviors about internationalization that will be incorporated in my instrument. In addition, two national surveys of university faculty were reviewed. The first, "The Faculty Survey" collects information about the workload, teaching practices, job satisfaction, and professional activities of college faculty and administrators is conducted by the Higher Education Research Institute of UCLA (see: http://www.gseis.ucla.edu/heri/cirp.htm). The second, conducted by the U.S. Department of Education's National Center for Education Statistics, is a "National Study of Postsecondary Faculty (NSOPF)" that collects data about faculty in the areas of nature of employment, academic/professional background, institutional responsibilities and workload, job satisfaction, compensation, sociodemographic characteristics, and opinions on a variety of topics.

A search of other instruments related to my topic yielded a few surveys on which to draw from, such as the "Missouri Southern State University International Mission Faculty Survey" (Green & Olson, 2003, pp. 100-101) conducted as part of the American Council on Education's "Promising Practices Project" (Engberg & Green, 2002). Next, a survey which examined the status of internationalization among American sport management programs from a faculty perspective (Li, Ammon, & Kanters, 2002)[9], was useful as it studied the objectives when internationalizing a curriculum and individual faculty efforts in internationalization. Two more surveys were considered helpful because they examined the measure of faculty attitudes toward research and teaching (Tang & Chamberlain, 1997, 2003), identifying six factors: research orientation, teaching orientation, belief that rewards influence research, belief that rewards influence teaching, personal interest, and mission of the university. The research-teaching preference was shown to be a significant variable in the findings of the International Study of the

[9] One of the study authors is a faculty member at one of the universities in my sample.

Academic Profession (Altbach, 1996), and this variable will be investigated in my research as well.

3.0 RESEARCH PROCEDURES

3.1 DESIGN

The study was designed so that it would situate the researcher in the empirical world and connect the research questions to data (Denzin and Lincoln, 1994 as cited by Punch, 2005). The research plan was devised by considering four areas (Punch, 2005, pp. 63-64): (1) Strategy – the reasoning or set of ideas by which the study intends to proceed in order to answer its research questions; (2) Conceptual Framework – the conceptual status of the things being studied and their relationship to each other; (3) Research Sample – from whom the data will be collected; and (4) Tools and Procedures used for data collection and analysis. This educational research study can be classified as *descriptive* in that it is, "done in the present, but no variables are manipulated. Relationships among variables that occur naturally are simply described" (Eichelberger, 1989, p. 171). Furthermore, this study can be described as *correlational* (Ary, Jacobs, & Razavieh, 2002; Eichelberger, 1989; Punch, 2005) in that the analysis will study relationships between the variables in an attempt to identify and explain correlations within the data from this research sample.

Decisions about the research design were made after considering the research questions and reviewing other studies that investigated attitudinal and behavioral aspects of internationalization. Two studies in particular, the *International Study of the Academic Profession* conducted in fourteen countries in 1991-1993 under the auspices of the Carnegie Foundation for the Advancement of Teaching (Altbach, 1996) and the American Council on Education's nationally representative *Faculty Survey* conducted in February 2002 as part of the Mapping Internationalization on U.S. Campuses project (Siaya & Hayward, 2003) provided much-needed context and direction for this study.

The lack of any recent, systematic data about internationalization in Pennsylvania institutions of higher education provided the impetus for gathering data on a wide scale with a large sample of faculty members (n=3,599). The researcher decided that an exploratory, descriptive and broad study of faculty members would provide data across several public institutions which could then serve as a backdrop for future studies. Future studies might either try to replicate the findings at different types and groups of institutions or provide more in-depth inquiry on findings that emerge from the study.

This study was intended to be broad in focus, collecting self-report data about faculty members' attitudes, beliefs, and experiences with internationalization. Quantitative data was collected using a cross-sectional design with individual faculty members as the unit of analysis (Punch, 2003). The survey research method was chosen as the data collection tool because it enabled the researcher to systematically gather data from a large group of geographically dispersed faculty members. By using this method, descriptive summaries of faculty characteristics across several variables and statistical comparisons between groups could be made (Ary, Jacobs, & Razavieh, 2002; Dillman, 2000; Fowler, 1988; Punch, 2005).

Data were collected using a survey instrument that was accessed over the internet (Best & Krueger, 2004; Dillman, 2000). Potential respondents were invited to participate in the study by an e-mail message that contained an embedded hyperlink to a website hosting the instrument, one of three communication modes identified by Best and Kruger (2004, p. 37). The survey instrument, which included existing questions from previous national or international surveys and new questions developed by the researcher, was translated to a web-based format and administered with help from a university center that specializes in software systems and information technology applications. This expert help ensured that data collection occurred in a carefully controlled environment that addressed issues of survey access, security, response monitoring, and trouble shooting in the event of problems or questions from the research population.

The internet data collection method was selected for several reasons: (1) the research population has access to e-mail accounts and high speed internet connections from their respective universities, and technical computing support is provided; (2) participating research sites could be surveyed at the same time period providing for consistency in survey timing and administration; (3) the immediacy of survey invitations and the ease of completing the survey

was expected to produce a good response rate from research participants; (4) coordination with each university's information technology unit provided access to faculty e-mail addresses, increasing the appearance of survey legitimacy; (5) the large sample size (n=3599) and the time needed to prepare the survey and follow-up reminders using traditional means (copying, coding and mailing instruments and three follow-up reminders) would have been prohibitive and would have resulted in the need to limit the size of the sample; and (6) electronic submission of surveys provided for immediate transfer of data responses into a database that could be exported into a spreadsheet for analysis purposes, eliminating the need for data entry and ensuring data accuracy. The cost of conducting the survey over the internet was not a deciding factor because the expense involved in setting up the technical aspects of the survey instrument, administration and data collection was significant and did not represent a cost saving over more traditional methods of survey research.

3.2 DATA COLLECTION

3.2.1 Instrument Design

The researcher created a survey instrument (see Appendix A) for data collection so that it addressed the research questions and met the underlying four-fold purpose of the study, which is: to explore and describe faculty attitudes, beliefs and experiences regarding internationalization; to review the extent to which faculty members incorporate an international perspective into their own teaching, research, and scholarship; to determine whether relationships exist between faculty characteristics, campus climate, and internationalization attitudes, beliefs and behaviors; and to examine whether patterns emerge that may be used to describe or predict faculty members' orientation to internationalization (Morris, 1996).

Prior to creating this survey instrument, the researcher reviewed other research instruments for content and relevance to the current study. However, beyond those already mentioned no standardized instruments exist for measuring purely faculty aspects related to internationalization. Instead, existing instruments collect data from a broad, institutional or consortial perspective (American Association of State Colleges and Universities, 1995; Barker,

1996; El-Khawas, 1995; Ellingboe, 1999; Harari, 1981; Henson, Noel, Gillard-Byers, & Ingle, 1991; R.L. Raby, 1998; Saunders-Hamilton, 1984), or focus on specific programs or aspects of internationalization (Gray, Murdock, & Stebbins, 2002; Klasek, 1992b; Schneider & Burn, 1999; Speck & Carmical, 2002; Stimpfl, 1996). While many of these research studies included faculty involvement to various extents, different data collection approaches were often used (i.e. case studies, interviews, etc.) and research instruments went beyond faculty involvement to other aspects of campus internationalization. While these studies were useful in framing the study, ultimately none of these instruments could be used as data collection instruments.

The survey instrument created for this study draws upon the literature regarding internationalization of higher education and incorporates survey questions from published and unpublished studies. Questions from the Carnegie Foundation for the Advancement of Teaching's *International Study of the Academic Profession* (Altbach, 1996; Boyer, Altbach, & Whitelaw, 1994) were included, as were questions from the American Council on Education's national survey of faculty (Siaya & Hayward, 2003)[10]. Three questions were also used from a survey developed by Missouri Southern State University, entitled, *International Mission Faculty Survey* (Stebbins, Martin, Murdock, & Honey, n.d.), and two questions were included from a survey on attitudes toward teaching and research (Tang & Chamberlain, 1997). The researcher also added new survey items to fill in any gaps needed to answer the research questions. Knight's institutional and program strategies identified in her conceptual framework of internationalization at the institutional level (Knight, 1999, 2004; Knight & de Wit, 1999) were used to frame questions for measures of campus climate (e.g. governance, operations, and human resources) and of faculty involvement (e.g. academic programs, research and scholarly collaboration, external relations, and extracurricular).

The survey instrument designed for this research project fits the description of a correlational survey as explained by Punch (2005):

> The correlational survey is not a simple descriptive survey, but rather a multi-variable survey, seeking a wide range of information, and with some conceptual

[10] The Carnegie Foundation's survey is available for public distribution through the Roper Center for Public Opinion Research. The survey instrument itself is available for download from the Roper Center (http://www.ropercenter.uconn.edu); study number "MCCARNEGIE1993-FACULTY". Questions from the American Council on Education's national faculty survey were used after permission was granted from Dr. Madeleine Green, Vice President and Director, Center for Institutional and International Initiatives at ACE.

framework of independent, control and dependent variables. It is likely, therefore, that the questionnaire will seek factual information (background and biographical information, knowledge and behavioural information) and will also include measures of attitudes, values, opinions and beliefs. (p. 99)

3.2.1.1 Survey sections The survey instrument was organized into seven sections: (1) Demographics and Academic Preparation; (2) International Experiences; (3) Foreign Language Ability; (4) Academic Orientation; (5) Assessment of Campus Climate; (6) Faculty Involvement in Internationalization; and (7) Attitudes and Beliefs About Internationalization. Each section constituted one screen or "page" on the survey instrument.

Demographics and Academic Preparation, *Section I, questions 1-9.* Questions in this section seek information about faculty respondents such as gender, age, region of birth, citizenship or visa status, highest degree awarded (type of degree, discipline, geographic region of institution awarding degree), years employed at current institution, teaching responsibilities, employment status (full-time/part time; permanent/temporary; tenured/tenure-track/non-tenure track; teaching/ administrative faculty), academic rank.

International Experiences, *Section II, questions 1-9.* The first five questions in this section seek information about respondents' academic international experiences prior to college, as undergraduate students, as graduate students, as faculty members teaching or conducting research in other countries, or as faculty members taking students abroad. Questions 6-9 in this section ask respondents to list the world regions they have visited for academic experiences, the number of different countries they have visited, and the amount of time they may have spent residing outside the U.S. before becoming faculty members in the United States.

Foreign Language Ability (FL), *Section III, questions 1-3.* Questions in this section seek information about facility in languages other than English. Respondents indicate the number of languages other than English that they can speak or read, their self-reported degree of facility or fluency in languages other than English, and the languages other than English that they speak or read.

Cosmopolitan or Local Orientation, *Section IV, questions 1-3*. Questions in this section seek information about the degree to which faculty consider the importance of their affiliations to their disciplines, their universities and to their departments. These questions, taken from the

Carnegie Foundation's International Study of the Academic Profession, are based on work on academic orientation (Gouldner, 1957, 1958) in aspects such as reference group orientation, commitment to skills, and loyalty to the organization.

Teaching or Research Preference, *Section IV, questions 4-7.* Questions in this section seek to measure individual faculty preferences for research or teaching, given the importance of this variable as a predictor for internationalization in the Carnegie Foundation study of academics from 14 countries (Altbach, 1996). The fourth question asks respondents to select the answer that best describes their own teaching or research preference. This question and the response choices are drawn from the Carnegie Foundation's *Survey of the International Academic Profession*.

Assessment of Campus Climate, *Section V, questions 1-10*. Questions in this section seek information about faculty assessments of campus climate, e.g. whether they believe involvement in internationalization is recognized, encouraged, financially supported, rewarded and integrated into their university climate through organizational strategies identified by Knight (2004).

Faculty Involvement in Internationalization, *Section VI: questions 1-13.* Questions seek information about the extent to which faculty are involved in internationalization as shown in their teaching, research and scholarship behaviors over the past three years. Questions include a mix of program strategies identified in the conceptual framework for internationalization as described by Knight (2004).

Attitudes and Beliefs about Internationalization, *Section VII, questions 1-14.* Questions in this section seek information about the degree to which faculty believe an international perspective is important to their own professional work; their perceptions about the importance of international education, foreign language instruction, and study abroad experiences to undergraduate students; and whether students are graduating with an awareness of international issues.

3.2.1.2 Reliability and validity Care was taken to achieve reliability and validity of the instrument in several ways. First, the majority of the questions came from two established instruments that had gone through an exhaustive methodological design prior to administration. The methodology report of the American Council on Education study describes their procedures in developing, field testing and finalizing the three surveys (institutional, faculty and student

surveys) involved in the *Mapping Internationalization on U.S. Campuses* project. Their methods including commissioning the Center for Survey Research and Analysis (CSRA) of the University of Connecticut to conduct a series of 10 focus groups at four different institutions, each from different Carnegie Classifications. Separate focus groups of students and faculty were conducted at each institution. The focus groups were used to collect information about, "participants' international experiences and their perceptions of the value and state of international education at their institution" (Siaya & Hayward, 2003, p. 111) which informed initial survey drafts. These drafts were then reviewed at an American Council on Education advisory board meeting in July of 2001 that was composed of leaders, experts, and scholars in international education, who constructed new survey drafts at the meeting.

The Carnegie Foundation for the Advancement of Teaching study involved fifteen collaborating nations in the international study, and scholars from the field of comparative international higher education were designated as research directors in each participating country (only data from fourteen countries were included in the results). Research directors were involved in all aspects of the research project, including designing and reviewing draft questionnaires to ensure that questions were clearly stated and appropriate for different educational contexts in participating countries (Whitelaw, 1996). The questionnaire was based upon earlier national surveys conducted with United States faculty that were created by The Carnegie Foundation, but it was reworked by study research directors and staff of The Carnegie Foundation. Given the complexity of the project, the survey went through several stages of development and took several months to complete. The instrument was pilot tested in each country and minor revisions were made as a result of the pilot test.

Second, after the questions from the ACE and Carnegie studies were compiled and organized into the current instrument, other questions were added to address the research questions. A review of the literature revealed two other surveys that had questions germane to the current research instrument. Three questions were added from a faculty survey (Stebbins, Martin, Murdock, & Honey, n.d.) conducted by Missouri Southern State University, one of eight U.S. colleges and universities selected to participate in the *Promising Practices: Spotlighting Excellence in Comprehensive Internationalization* project (Engberg & Green, 2002). The researcher was also advised that, given the importance of faculty preferences for teaching or research as an independent variable, additional questions to measure respondents' preferences to

teaching or research should be added. Therefore, the researcher identified a study on attitudes toward research and teaching and included two questions from that survey instrument (Tang & Chamberlain, 1997). The researcher added several new questions that were designed to fill in any gaps, for example, questions regarding campus climate were added to address aspects of Knight's organizational strategies for internationalization at the institutional level and questions regarding faculty involvement in internationalization were added to address Knight's program strategies (2004).

3.2.1.3 Review and pilot testing After all the questions were compiled, the instrument was reviewed by a group of experts (Dillman, 2000), pre-tested by a group of faculty respondents, and then revised and finalized with additional design features. For the expert review, several known researchers in the field of international education were contacted, and while they verbally agreed to review the instrument, no comments from them were actually given. In terms of instrument design, the Center for Educational and Program Evaluation (CEPE) and the Applied Research Lab (ARL) at Indiana University of Pennsylvania were both consulted at early stages of development. Both consulting units reviewed the survey questions and the overall instrument for appropriate wording, organization, response scales, and consistency with research questions, survey objectives and planned statistical measures. Their continuous input and feedback into the instrument was extremely important to the development and finalization of the survey.

After the review by evaluation and statistical experts, the Software Development Center at Indiana University of Pennsylvania translated the instrument into a web-based format. The survey was reviewed and revised for professional presentation and ease of completion (Fowler, 1988). Design features, such as an indicator bar at the top right of each screen that showed progress in survey completion; a color palette of background colors, text and font styles; and visual additions – such as quotations and color photographs – were incorporated into the instrument to provide professional and aesthetic appeal.

Once the survey was translated to a web-based format, the instrument was pre-tested with a group of faculty members. Each faculty member was asked to complete the survey instrument and submit feedback to the researcher on a "Comment Sheet for Survey Field Test" that was organized by survey screen and section. The length of the survey was carefully monitored to ensure that questions were kept to a manageable number and that they were clearly focused on

the research questions. In this manner, the length of time needed to complete the survey was kept to less than ten minutes. The feedback from the field testers resulted in several changes to the instrument which were incorporated into the final version of the survey.

3.2.2 Ethical considerations

Once the survey instrument was finalized the researcher initiated the human subjects review and approval process at each of the research sites. Approvals from the researcher's home institution (one of the research sites) and from the University of Pittsburgh were granted first. Then, each of the eight remaining universities were contacted and either new, institution-specific protocols were written and submitted, or supporting documentation of the two already approved protocols were submitted, along with letters of approval and certification of the researcher's completion of the required IRB training module. All research sites granted IRB approval at their own university campuses. The informed consent letter was personalized to include the name of the participating university in the salutation, for example, "Dear (name of university) Faculty Member", and the IRB contact information for each campus was also listed with the campus phone number (see Appendix A).

3.2.3 Survey administration

After all institutional permissions were in place, the information technology (IT) personnel at each of the participating universities were cleared to provide access to e-mail addresses of all faculty members at their institutions. Such access is not provided to those outside the institution without institutional approval. The Software Development Center (SDC) at Indiana University of Pennsylvania prepared a technical process whereby the universities were given two options for processing email notifications. The first option allowed each IT office to send out the survey and follow-up responses from their home campus, allowing the universities to keep their email lists private. The second option was to release the faculty e-mail lists to the SDC, so they could prepare the initial and follow-up responses. This option was less work for the IT staff and was selected by all of the participating universities. This option also provided better control over the administration and timing of all e-mail invitations to participate.

An invitation to participate in the research was sent to all faculty by way of an e-mail message that contained a link to the web-based survey instrument (Best & Krueger, 2004; Dillman, 2000). This link included an arbitrarily assigned username and random password specifically for that faculty member. Those who chose to participate in the survey followed a web link in the e-mail message that gave them access to the survey instrument. No one other than these faculty could access the survey, since they did not have a username and password. The faculty email addresses, usernames and passwords were stored in one database, and the survey responses were stored in another database. When a respondent logged in, that person's record was deleted from the login database and a new, random ID was created to associate with that person's responses in the response database. This process served multiple purposes. First, the responses could not be matched with faculty email addresses, so the responses were anonymous. Second, faculty could not submit duplicate survey entries, since their login records were removed after the first submission. Third, the SDC had a record of who already filled out the survey, so that reminders were sent only to those who had not already submitted the survey.

Several types of responses were built into the survey instrument. Some survey questions were answered by using “radio buttons,” that allowed only one response for each question. Other closed-ended questions included “drop down menus” with forced choice responses, again allowing only one response for each question. A few questions allowed respondents to enter “other” as a choice and then in the next question to specify their answer by typing text into an open-ended box. Two questions provided an opportunity for respondents to provide more than one response to the question.

The pages of the survey were submitted electronically by clicking on the “submit” button at the end of each screen of the survey instrument. At the end of the last screen with survey questions, the respondent was thanked for their participation and informed on how to obtain research results if interested. Respondents were given a chance to enter their e-mail address into a random drawing for one of three digital cameras valued at $200 each, following the principal of social exchange inherent in survey response (Dillman, 2000). In this way, the incentive prize was available to only those respondents who completed the survey in its entirety, which has been shown to increase completion rates and reduce incomplete participation patterns (Bosnjak & Tuten, 2003). These faculty members had to enter their email addresses into a form at the conclusion of the survey, since the system had already removed their login information. These

email addresses were stored in a third database and they could not be associated with survey responses.

A follow-up e-mail was sent only to those e-mail addresses that remained on the mailing list ten days after the initial call for survey responses was sent. Second and third follow-up e-mails were sent to non-responders at seven to ten day intervals. The data file containing e-mail addresses was kept only until all survey correspondence and data analysis were completed.

3.3 DATA ANALYSIS

3.3.1 Data analysis procedures

The data analysis began with a descriptive analysis to show the distribution of responses across the sample and for sub-groups within the sample. The data were analyzed using frequency distributions and cross tabulations, and displayed using tables and charts. Data from this faculty sample were also compared to other research samples as appropriate, most notably from The Carnegie Foundation *International Study of the Academic Profession*, the American Council on Education *Faculty Survey* and the Missouri Southern State College *Faculty Survey*.

The analysis also investigated relationships between two variables, and the type of statistical tests used depended on whether the variables were categorical or continuous. Tests included two-sample t-tests, Pearson correlation, one-way analysis of variance, cross-tabulations, Chi Square and contingency tables. The significance of pairwise correlations between quantitative variables was also explored.

The analysis investigated multivariate relationships, using factor analysis and regression analysis. These types of analyses were done in order to explore what factors emerged from the data from different variables with this particular group of respondents, to more fully investigate the relationships between the variables, and to explain how unique independent variables used in combination with each other could predict certain outcomes shown in dependent variables. The analysis also investigated differences between independent samples within the research sample using two-sample t-tests, analysis of variance and post hoc tests. Data were represented in tables

and boxplots. All of the analyses were conducted using the Statistical Package for the Social Sciences (SPSS).

3.3.2 Variables and scaled scores

Survey item responses were either categorical or continuous variables. Categorical, or discrete, variables consisted of single-item questions (e.g. demographics or academic preparation) and were often used as control variables in order to compare data by characteristic or faculty group. Other categorical variables asked for dichotomous "yes/no" responses, which were summed and used as an indicator or a scaled score of a latent trait. Continuous, or measured, variables were also used to show differences by degree, level or quantity rather than by category (Punch, 2005, p. 86). Respondents could answer survey items using a five-point Likert scale ranging from *Strongly Agree to Strongly Disagree*, indicating their choice along a continuum of agreement or they could select a "Don't Know" choice for that particular item. One section of the survey asked respondents to quantify the depth of their experiences in terms of number of experiences and/or length of experiences. Scaled scores were aggregated from multiple survey items and used in the analysis.

3.3.2.1 Scaled scores 1. International Experiences (IE). Drawn from Section II of the survey instrument, data are aggregated to show differences in the range and quantity of international experiences. Questions one through five ask respondents to answer in terms of the amount of time they may have spent in international experiences at different educational stages. Respondents are given choices of "never" (coded as 1), "one month or less" (coded as 2), "more than one month and less than one year" (coded as 3), or "one year or more" (coded as 4). An *International Experiences* (Q1-5) score is calculated by summing responses to these five questions and a higher number indicates more international experiences, either through additional experiences or through longer durations of international experiences at different educational stages. The range of possible International Experiences (Q1-5) scores is 5-20. An *International Experiences (Pre-faculty)* score is calculated by adding together only the first three questions in this survey section, collecteing information on just the first three educational stages (pre-college, as undergraduate students, and as graduate students). The range of possible scores

for International Experiences (Pre-faculty) is 3-12. A higher score for both the *International Experiences (Q1-5)* and *International Experiences (Pre-faculty)* indicates a greater depth or breadth of international experience.

2. Assessment of Campus Climate (CC). Respondents indicate the degree to which they agree with ten items related to campus climate using a five point Likert scale ranging from "Strongly Agree" (coded as 1), "Agree" (coded as 2), "Neither Agree nor Disagree" (coded as 3), "Disagree" (coded as 4) to "Strongly Disagree"(coded as 5). A "Don't Know" response choice was also included for respondents to select. Question ten was reverse scored as it was a negatively stated item.

The dataset includes two sets of Campus Climate responses. The original set of item responses included the Likert scale and the "don't know" response choices and these responses were used in the descriptive analyses and frequency distributions. These questions were named "p5_q1", etc. in the dataset. The second set of item responses was copied from the original set of items, the "don't know" response choice was eliminated from the response set, and the questions were re-named "New_p5_q1", etc. and saved in the dataset under these new names.

The second set of item responses was used to calculate an *Assessment of Campus Climate* score for each respondent for the purpose of statistical testing. Only responses that were coded from Strongly Agree to Strongly Disagree were aggregated and included in the total of all ten items to derive a "Campus Climate" score for that respondent. If a "don't know" response was included in a respondent's set of answers, that respondent's score was not used in the bivariate or multivariate analyses that relied upon the summed score. The frequency of "don't know" responses reduced the valid N for the analysis, e.g. the bivariate regression analysis between Faculty Involvement and Campus Climate had a valid N of 338 for "new_p5_q1", as compared to a valid N of 780 for responses to question "p5_q1" in that section. A lower score indicates a higher level of agreement with the items in the Campus Climate Assessment, and indicates a more favorable assessment of campus climate as it relates to internationalization.

A casewise, not listwise approach was used to handle the "don't know" responses. The casewise approach means that if a missing value was present in the computation of a total score, across questions, then that score would be missing for that respondent. However, other scores that did not contain missing values would be non-missing, and any analyses that did not use the missing total could still use information from that respondent.

3. Campus Climate by Organizational Strategy (CC-OS). Sub-scales of Campus Climate scores were also derived, based on the organizational strategies identified as part of Knight's (2004) framework for internationalization. These sub-scales were used to see whether any of the organizational strategies would emerge as statistically significant in relationships between Campus Climate and other variables. Therefore, three strategies identified by Knight and included in the survey instrument (Governance, Operations, and Human Resources) were used to test for significance. Scores for *Governance, Operations,* and *Human Resources* were calculated by adding together responses from the groups of questions as outlined in the following table.

Table 5. Survey Items in Campus Climate by Organizational Strategy

Campus Climate Variables	Knight's Framework for Organizational Strategies
Campus Climate	New_P5_Q1 + New_P5_Q2 + New_P5_Q3 + New_P5_Q4 + New_P5_Q5 + New_P5_Q6 + New_P5_Q7 + New_P5_Q8 + New_P5_Q9 + Reversed_N_P5_Q10
Governance	New_P5_Q1 + New_P5_Q2 + New_P5_Q3 + New_P5_Q9 + Reversed_N_P5_Q10
Operations	New_P5_Q4
Human Resources	New_P5_Q5 + New_P5_Q6 + New_P5_Q7 + New_P5_Q8

4. Faculty Involvement in Internationalization (INV). A *Faculty Involvement* score was calculated for each respondent by adding together yes/no responses to each of the 13 questions in this section. Respondents answer yes (value of 1) or no (value of zero) for each question regarding their involvement in activities related to internationalization. The total possible range of scores is 0-13. A higher score represents higher faculty involvement in internationalization.

5. Attitudes and Beliefs about Internationalization (ATT). Respondents indicate the degree to which they agree with 14 items concerning Attitudes and Beliefs about Internationalization using a five point Likert scale ranging from "Strongly Agree" (coded as 1), "Agree" (coded as 2), "Neither Agree nor Disagree" (coded as 3), "Disagree" (coded as 4) to "Strongly Disagree"(coded as 5). A "Don't Know" response choice was also included for respondents to select. Question eight and question nine in this section are unfavorable or negatively stated items and they are reverse scored.

The dataset includes two sets of attitudes and beliefs about internationalization responses. The original set of item responses included the Likert scale and the "don't know" response choices and these responses were used in the descriptive analyses and frequency distributions. These questions were named "p7_q1", etc. in the dataset. The second set of item responses was copied from the original set of items, the "don't know" response choice was eliminated from the response set, and the questions were re-named "New_p7_q1", etc. and saved in the dataset under these new names. The second set of responses was used in bivariate and multivariate analyses. The frequency of "don't know" responses reduced the valid N for the analysis, however, the percentage of those replying "don't know" to attitudes and beliefs questions was 2% or less on seven of the items, less than 6% for four of the items, and less than 9% for one item.

A factor analysis was conducted of the *Attitudes and Belief about Internationalization* items, and the analysis did identify three factors (12 items) to be used in further analysis. The questions attributed to each of the factors is included in the Factor Analysis description (see p. 52). The existence of three different factors within the Attitudes and Beliefs survey items indicates that there are subscales of faculty attitudes and beliefs about internationalization that merit further review and additional analysis. These three Attitudes and Beliefs factors are used in different statistical analyses, rather than an overall Attitudes and Beliefs score. Because these three factors allow a more detailed analysis to occur, they lend strength to the overall findings of the study. **Factor 1**, the Scholarship of Research and Teaching, consists of six items; **Factor 2**, Instruction and Curriculum consists of five items; and **Factor 3**, Impact of Curriculum on Students, consists of two items. One item ("Knowledge of international issues is important to me") is included in both Factor 1 and Factor 2 as it had similar loaded scores for both factors, and thus can be considered as an overarching concept that spans both factors.

The range of scores for Factor 1 is 6-30; for Factor 2 is 5-25; and for Factor 3 is 2-10. A lower score indicates a higher level of agreement with the items in the Attitudes and Beliefs about Internationalization, and indicates a more favorable assessment of attitudes and beliefs as they relate to internationalization.

A casewise, not listwise approach was used to handle the "don't know" responses. The casewise approach means that if a missing value was present in the computation of a total score, across questions, then that score would be missing for that respondent. However, other scores

that did not contain missing values would be non-missing, and any analyses that did not use the missing total could still use information from that respondent.

3.3.2.2 Chronbach's Alpha Two multiple-item variables, Assessment of Campus Climate, and Attitudes and Beliefs about Internationalization were tested for internal consistency between items using Cronbach's Alpha. This test for reliability helps to show whether the differences in scores between people are due to real differences rather than to measurement error. A high reliability score affirms that differences in scores between respondents are real and not due to error (Punch, 2005, p. 96). Cronbach's Alpha was computed at .897 for Assessment of Campus Climate items and at .866 for Attitudes and Beliefs about Internationalization. Both scores are acceptable reliability coefficients.

In addition, reliability tests for subscales within these two variables were conducted. The Assessment of Campus Climate section includes three sub-scales, two of which are multi-item. These two variables – Governance and Human Resources – were tested. The Cronbach's Alpha for "Governance" is .830 for five items; and for Human Resources, the Cronbach's Alpha is .811 for four items. The Attitudes and Beliefs about Internationalization section includes three factors, all of which are multi-item. Factor 1 (Scholarship of Research and Teaching) includes six items and has a Cronbach's Alpha of .889. Factor 2 (Instruction and Curriculum) has five items and a Cronbach's Alpha of .805. Factor 3 (Impact of Curriculum on Students) has two items and a Cronbach's Alpha of .639. The reliability coefficients for these subscales are in the acceptable range, with the exception of Factor 3 of Attitudes and Beliefs. While some analyses in this study are done using Factor 3, it is important to remember the weak reliability coefficient in the interpretation of data.

3.3.3 Factor analysis

A factor analysis was conducted for two different sections of the survey instrument: *Section V: Assessment of Campus Climate* and *Section VII: Attitudes and Beliefs about Internationalization*. The factor analysis was done in order to see whether items within each section were correlated, thereby reducing the number of items by finding common factors among them (Punch, 2005, pp. 125-126). As Murdock (2003) explains, "Factor analysis is a descriptive statistical procedure to

summarize the ways that several questions on a survey go together. Items that respondents tend to answer in the same way are summarized by a single factor" (p. 1). As Punch (2005) notes, an important aspect of factor analysis involves levels of abstraction: "In factor analysis we begin with observed variables, and we end with unobserved or extracted factors. The variables are at a lower level of abstraction of generality than the factors" (p. 127).

3.3.3.1 Assessment of campus climate There were ten questions related to the variable, Assessment of Campus Climate. A Principal Component Analysis indicates that there is one very clear factor, with an eigenvalue (sum of squares ratio) of 5.253.

Table 6. Assessment of Campus Climate Principal Component Analysis

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.253	52.526	52.526	5.253	52.526	52.526	3.344	33.436	33.436
2	1.139	11.389	63.916	1.139	11.389	63.916	3.048	30.480	63.916
3	.806	8.064	71.979						
4	.600	6.001	77.981						
5	.567	5.675	83.656						
6	.523	5.234	88.890						
7	.421	4.206	93.096						
8	.343	3.433	96.529						
9	.261	2.607	99.137						
10	.086	.863	100.000						

Extraction Method: Principal Component Analysis.

The unrotated loadings in the "Component Matrix" for Factor 1 are all positive and relatively large. This indicates that Factor 1 is essentially the total of the responses over all ten questions. The second factor has an eigenvalue of 1.139, but upon further examination is not very different from the other factors that have eigenvalues below 1. Furthermore, the loadings for the second factor do not lend themselves to an easy interpretation of meaning. Following is a Component Matrix listing the loading for both factors.

Table 7. Assessment of Campus Climate Component Matrix

Component Matrix[a]

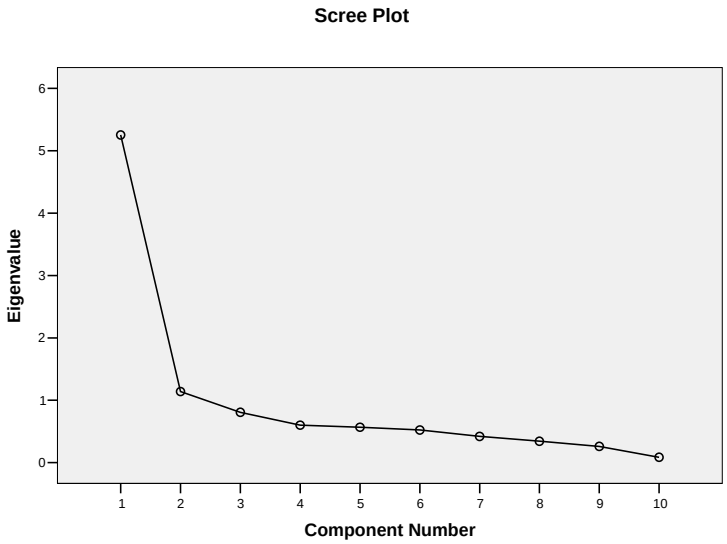
Question		Factor 1	Factor 2
		Load	Load
New_p5_q1	Expressed commitment by senior leaders	.764	-.390
New_p5_q2	Active involvement by faculty and staff	.770	-.431
New_p5_q3	Faculty are encouraged to include international perspectives and content in courses	.743	-.326
New_p5_q4	Funds are available to support internationalization and the development of faculty international skills/knowledge	.733	-.247
New_p5_q5	Participation in international activities is viewed favorably by department	.679	-.035
New_p5_q6	International expertise is part of recruitment/ selection of new faculty	.677	.188
New_p5_q7	Promotions committee recognizes and favorably reviews faculty involvement in internationalization	.781	.521
New_p5_q8	Tenure committee recognizes and favorably reviews faculty involvement in internationalization	.760	.556
New_p5_q9	Opportunities for international scholars to teach, conduct research or develop collaborations with U.S. based faculty	.721	.117
Reversed_ New_p5_q10	Commitment to international education is primarily symbolic	.600	.059

Extraction Method: Principal Component Analysis

[a]. 2 components extracted.

Next is a Scree plot, which shows that the eigenvalues level off after the first factor.

Table 8. Assessment of Campus Climate Scree Plot



3.3.3.2 Attitudes and beliefs about internationalization There were fourteen questions related to the variable, Attitudes and Beliefs about Internationalization. A Principal Component Analysis indicates that there is one very strong factor, with an eigenvalue (sum of squares ratio) of 5.757, with two others that have eigenvalues above 1 (1.527 and 1.162).

Table 9. Attitudes and Beliefs Principal Component Analysis

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.757	41.121	41.121	5.757	41.121	41.121	3.728	26.628	26.628
2	1.527	10.905	52.026	1.527	10.905	52.026	3.058	21.845	48.472
3	1.162	8.301	60.327	1.162	8.301	60.327	1.660	11.855	60.327
4	.992	7.088	67.415						
5	.828	5.915	73.330						
6	.603	4.305	77.635						
7	.589	4.206	81.841						
8	.514	3.674	85.514						
9	.424	3.032	88.546						
10	.407	2.909	91.455						
11	.358	2.558	94.013						
12	.345	2.466	96.478						
13	.293	2.094	98.572						
14	.200	1.428	100.000						

Extraction Method: Principal Component Analysis.

A Varimax rotation of the initial loadings was done to clarify the interpretations of the factors. The loadings are presented in the following "Rotated Component Matrix." The first factor loads most heavily on questions 1, 3, 4, 5, 6, and 7. The second factor loads most heavily on questions 1, 10, 11, 13, and 14. The third factor loads most heavily on questions 8 and 9. The Rotated Component Matrix shows the loadings for each of these three factors by question.

Table 10. Attitudes and Beliefs Varimax Rotation

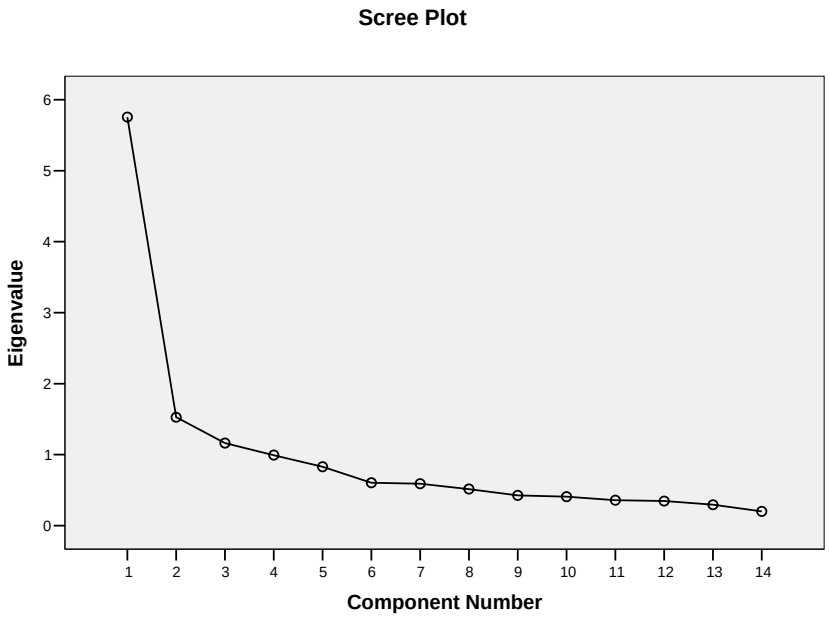
Rotated Component Matrix[a]

	Component		
	1	2	3
New_p7_q1	.509	.545	.048
New_p7_q2	.219	.489	-.052
New_p7_q3	.802	.197	.074
New_p7_q4	.806	.076	.151
New_p7_q5	.825	.321	.065
New_p7_q6	.729	.392	.064
New_p7_q7	.781	.233	.057
Reversed_New_P7_Q8	.050	.282	.707
Reversed_New_P7_Q9	.132	.402	.638
New_p7_q10	.200	.749	.206
New_p7_q11	.119	.753	.053
New_p7_q12	-.068	.225	-.720
New_p7_q13	.283	.639	.131
New_p7_q14	.383	.581	.358

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Next is a Scree plot, which shows the eigenvalues from the Factor Analysis.

Table 11. Attitudes and Beliefs Scree Plot



Applying Punch's (2005, p. 127) description of abstraction to the case of the Attitudes and Beliefs survey items, the observed variables are the actual responses to survey items, and the unobserved or extracted factors are the survey items that seem to belong together given patterns of response to these items. This indicates that there are subscales of faculty attitudes and beliefs about internationalization that merit further review and additional analysis. This is helpful in coming up with an instrument that measures attitudes and beliefs about internationalization that may be used in future analyses. Given that faculty work is complex, multi-dimensional and subject to different levels of affiliation (departmental, disciplinary, and university) as shown in this analysis, it is not surprising that faculty attitudes and beliefs are comprised of different components as they relate to different aspects of faculty work.

Factor 1, the "Scholarship of Research and Teaching," includes survey items related to scholarly work following a definition of scholarship (Boyer, 1990) that includes both teaching and research, in line with the teacher-scholar model espoused at these campuses. The first item (Knowledge of international issues is important to me) loaded highly on both Factor 1 (.509) and Factor 2 (.545), which implies that this statement applies to how faculty perceive the importance of knowledge of international issues, whether it informs aspects of the scholarship of research and teaching, or to teaching and curriculum.

Table 12. Attitudes and Beliefs Factor 1: Eigenvalue 5.757

Factor 1	Load	Survey Question
P7Q1	.509	Knowledge of international issues is important to me.
P7Q3 (CQ)	.802	Connections with scholars in other countries are very important to my professional work.
P7Q4 (CQ)	.806	In order to keep up with developments in my discipline, a scholar must read books and journals published abroad.
P7Q5 (CQ)	.825	An international perspective in my discipline is an important and valued part of my teaching and research.
P7Q6	.729	I am developing more of an international perspective in my teaching.
P7Q7	.781	I am developing more of an international perspective in my research.

Factor 2, "Instruction and Curriculum," includes items related to educating students about international topics, the curriculum, and the learning environment on campus.

Table 13. Attitudes and Beliefs Factor 2: Eigenvalue 1.527

Factor 2	Load	Survey Question
P7Q1	.545	Knowledge of international issues is important to me.
P7Q10 (ACE)	.749	Colleges and universities should require all students to take courses covering international topics
P7Q11 (ACE)	.753	The presence of international students (students from other countries) on U.S. campuses enriches the learning experience for American students.
P7Q13 (ACE)	.639	It is the responsibility of ALL faculty to provide undergraduate students with an awareness of other countries, cultures, or global issues.
P7Q14 (CQ)	.581	The curriculum at my institution should be more international in focus.

The third factor, "Impact of Curriculum on Students," relates to the time faculty spend teaching international topics and the effect that may have on other content areas needed in the curriculum. In other words, the implied question is, "does teaching international topics take away from other topics that must be covered as part of the course content?" Two questions are listed as part of this factor. It is important to note, however, that while not included in this

factor, a third item, “Most undergraduate students graduate with an awareness about other countries, cultures, or global issues” had a high negative loading in this analysis (-.720).

Table 14. Attitudes and Beliefs Factor 3: Eigenvalue 1.162

Factor 3	Load	Survey Question
P7Q8 (ACE)	.707	The more time that is spent teaching students about other countries, cultures, or global issues, the less time is available for teaching the basics.
P7Q9 (ACE)	.638	International education is a useful, but not a necessary component of undergraduate education.

3.3.3.3 Summary of factor analysis The *Assessment of Campus Climate* Factor Analysis did not indicate any factors or sub-scales within that survey section that can be used for further analysis. Rather, all survey items load heavily into one climate factor. The *Attitudes and Belief about Internationalization* Factor Analysis did identify three factors that will be used in further analysis. The existence of three different factors within the Attitudes and Beliefs survey items indicates that there are subscales of faculty attitudes and beliefs about internationalization that merit further review and additional analysis. Given that faculty work is complex, multi-dimensional and subject to different levels of affiliation (departmental, disciplinary, and university), it is not surprising that faculty attitudes and beliefs may be attributed to different aspects of faculty work. These three Attitudes and Beliefs factors are used in different statistical analyses and, because they have allowed a more detailed analysis to occur, they lend strength to the overall findings of the study.

3.3.4 Population

The population for this study is the faculty members of the 14 public universities that comprise the Pennsylvania State System of Higher Education (PASSHE). This group was purposively selected for several reasons: (1) while a few descriptive and anecdotal articles about internationalization in Pennsylvania exist, the topic has been largely neglected since a 1977-78

study by the Pennsylvania Department of Education (Zawadski & Masters, 1980), and an October 1987 international education conference and the resultant book, *Education for International Competence in Pennsylvania* (Dinniman & Holzner, 1988) that described efforts at different educational institutions and by consortia (educational, governmental, and business) in Pennsylvania. There are no studies that focus specifically on faculty characteristics and traits related to internationalization at this group or any other group of Pennsylvania universities. (2) Given the important role that faculty have in determining the curriculum and shaping the culture of the campus, the current study presents an opportunity to see whether earlier data (Altbach, 1996; Siaya & Hayward, 2003) are supported. Of special interest are data that suggest that U.S. faculty members with teaching orientations are less likely to be internationally involved than those with research orientations (Altbach & Lewis, 1996; Forest, 2002; Haas, 1996). At these public universities, most faculty carry heavy teaching loads (12 credit hour/semester), they have frequent interactions with students, and they adhere to a *Scholarship of Teaching* philosophy (Boyer, 1990); and (3) These universities are not considered elite or research institutions, but they educate more than 105,000 students each year and are in a position to broaden access to international experiences for students in Pennsylvania.

As of the fall 2004 semester, the number of 9 and 12-month full-time faculty members (permanent and temporary) employed by the PASSHE universities was 4,876 (Pennsylvania State System of Higher Education, 2004-2005). Of these, 60.4% are tenured, 24.8% are tenure track and 14.8% are non-tenured. Over the past five years there has been a shift in the faculty population as tenured faculty members have left through retirements and have been replaced by newer, tenure track faculty members. In terms of faculty rank and gender, 28% are Professors, 26.3% are Associate Professors, 32.6% are Assistant Professors, and 13.2% are Instructors. Males outnumber females at the highest faculty ranks (Professor and Associate Professor), while females outnumber males at the lower faculty ranks (Assistant Professor and Instructor). Overall, 55.3% of state system faculty are male (2,696 faculty) and 44.7% are female (2,180), as shown in the following table.

Table 15. 9 and 12-Month Full-Time Faculty by University, Rank and Gender, Fall 2004

University	Professor		Associate		Assistant		Instructor		Total		Grand	% of
	M	F	M	F	M	F	M	F	M	F	Total	Total
Bloomsburg	92	30	66	41	57	58	15	20	230	149	379	7.8%
California	69	23	32	32	41	42	17	15	159	112	271	5.6%
Cheyney	10	10	17	10	14	14	7	14	48	48	96	2.0%
Clarion	68	30	35	31	45	59	16	32	164	152	316	6.5%
East Stroudsburg	53	31	49	34	35	40	19	22	156	127	283	5.8%
Edinboro	54	35	43	36	80	66	28	32	205	169	374	7.7%
Indiana	150	70	104	86	110	107	31	42	395	305	700	14.4%
Kutztown	72	32	70	43	64	70	32	48	238	193	431	8.8%
Lock Haven	29	20	36	29	62	49	16	25	143	123	266	5.5%
Mansfield	32	11	33	23	20	29	6	12	91	75	166	3.4%
Millersville	68	34	49	49	52	60	5	5	174	148	322	6.6%
Shippensburg	61	28	45	36	77	72	5	23	188	159	347	7.1%
Slippery Rock	65	37	53	34	64	70	19	22	201	163	364	7.5%
West Chester	98	52	93	72	58	73	55	60	304	257	561	11.5%
System Total	921	443	725	556	779	809	271	372	2696	2180	4876	100%
Percent of Total	18.9	9.1	14.9	11.4	16.0	16.6	5.6	7.6	55.3	44.7	100 %	

Source: Pennsylvania State System of Higher Education, 2004-2005 Factbook.

3.3.5 Response rate

The research design called for multi-site data collection, enlisting as many of the 14 PASSHE universities in the study as possible. As a result of this invitation, ten of the fourteen universities agreed to serve as research sites. One of the ten sites dropped out from the study prior to any data collection, citing "survey fatigue" given that several internal and external surveys were proliferating on their campuses during that time. A census of all faculty members (including full time and part time faculty) at each of the nine participating universities was included in the research sample. The sample size was 3,599 faculty members. Each of the 3,599 faculty e-mail addresses was sent an invitation to participate in the survey. Most respondents submitted their surveys at the time of initial request, and decreasing numbers of respondents answered the invitation for each of the three reminders. A response rate of 23.03% was derived by dividing the number of responses received by the total number sent (829/3,599). The following table

shows the number and percent of total responses received after the initial e-mail invitation, and after the first, second and third reminders for participation.

Table 16. Survey Responses by Response Waves

Mailing	Responses Received	Percent of Total
Initial	307	37.0%
First Reminder	218	26.3%
Second Reminder	194	23.4%
Third Reminder	110	13.3%
TOTAL	**829**	**100.0%**

It is helpful to compare this project's 23.03% response rate to other Internet based research projects described in the literature. A study by Fricker and Schonlau (2002) set out to test three assumptions regarding Internet-based surveys, namely that they are cheaper to conduct, they are faster, and "when combined with other survey modes, Internet-based surveys yield higher response rates than conventional survey modes alone" (p. 348). They reviewed fifty-seven articles that described Internet-based survey research in sufficient detail so that they could make systematic comparisons. The researchers investigated response rates by survey mode, "the mode in which the survey itself is conducted: Web, e-mail, mail, and so on" (p. 349). They studied three categories of survey mode, one of which is the survey mode used in the current research project, namely "surveys using probability sampling or conducting censuses that used the Web as the only response mode" (p. 349).

Fricker and Schonlau's article includes a table with a group of six surveys they studied which lists information related to sample size, response rate percentage, and survey population. The studies have varying response rates: 42% from University of Michigan students (with another 5.6% of partially completed surveys not included in the overall rate); 8% from college-bound high school students and college students (which may have had a lower response rate due to the need to get informed consent from parents of respondents under the age of 18); 44% from RAND employees; 19% of university staff members; and in two studies conducted of purchasers of computer products, response rates of 41% and 38%. A footnote on the last two studies note

that all participants were initially contacted by phone and had already agreed to participate in the Web survey. Fricker and Schonlau conclude that "Web-only research surveys have currently achieved only fairly modest response rates, at least as documented in the literature" (p. 350). They summarize that "response rates for Web surveys in which no other survey mode is given have ranged from moderate to poor" (p. 362).

A meta-analysis of responses rates conducted by Cook, Health and Thompson (2000) studies factors affecting response rates in electronic surveys, given that "a number of smaller studies suggest that response rates for e-mail and Web-based surveys may not yet match those of other methods" (p. 824). They note that there are environments and populations in which electronic survey methodology may be appropriate, such as university professors who "generally have Internet address and access" and for whom "e-mail and web surveys may have only minor coverage problems" (Dillman, 2000 as cited in Cook, Heath, & Thompson, 2000, p. 829). As part of their analysis they reviewed literature about average response rate to paper surveys, noting studies claiming response rates of 55.7% to up to 70% in carefully designed studies, although one study suggested that "returns of less than 40 or 50 percent are common" (Kerlinger, 1986 as cited in Cook, Heath, & Thompson, 2000, p. 826). The authors also note that reviewing response rates of only published studies may overestimate typical rates as those with "small response rates may not be submitted for publication in some disciplines or they may not be published when they are submitted" (Cook, Heath, & Thompson, 2000, p. 826). They found in their analysis that there were some dominant factors that positively affected response rates, including, the "number of contacts, personalized contacts, and precontacts" (Cook, Heath, & Thompson, 2000, p. 829).

A study by Sax, Gilmartin and Bryant (2003) compared online survey methods and paper survey methods with a population of first year college students to explore response rates and nonresponse bias. Their review of the literature notes that some studies show higher response rates among college students for paper-and-pencil surveys than for online surveys, while other studies find just the opposite. They say, "clearly, response rates for both paper and Web surveys are currently in flux as new survey techniques are employed" (p. 411). They compared response rates by mode of administration for the 2001 Your First College Freshman Survey (YFCY) and found that for the group receiving the "Web-only with response incentive" (the mode employed in the currently study) the response rate was 17.1%, the paper-only survey group response rate

was 22%, the paper with Web option group response rate was 24%, and the Web-only without response incentive was 19.8%. They note the low overall response rate to the YFCY of 21.5%, saying that, "This result is somewhat unsurprising given that response rates to surveys have declined dramatically over time (Bradburn, 1992; de Leeuw and Heer, 2002; Dey, 1997; Fraenkel and Wallen, 1993; Smith, 1995). Reasons suggested for declining response rates range from the proliferation of junk mail to the rapid growth and ease of large-scale student assessment" (Sax, Gilmartin, & Bryant, 2003, p. 423). In discussing reasons why the two Web options yielded the lowest response rates, the authors note three possible detriments: it is not known whether students actually use their campus e-mail accounts or whether they have computer access to check their e-mail; even though they were promised confidentiality, students were aware they were being tracked; and the number of computer screens students had to pass through for this survey (32 screens) might have caused students to abandon their participation.

3.3.6 Research sample

The first part of the research project involved a descriptive analysis of the faculty at these public universities. Survey questions were designed to elicit information about faculty demographics, academic preparation, and academic orientation in order to provide a base of information from which to draw subsequent comparisons according to faculty characteristics. Next, survey questions specific to internationalization sought information about international experiences of faculty and their foreign language capacities, their assessment of various aspects of their campus climate related to internationalization, an explanation of their own involvement in internationalization, and finally, their attitudes and beliefs about internationalization. The data are presented here for the first five research questions that are descriptive in nature (see pages 5 and 6).

3.3.6.1 Demographics and academic preparation Data on faculty demographics were collected in order to describe the research sample and to compare data by group characteristics. The respondents were evenly split by gender, with 418 males (50.4%) and 411 females (49.5%) completing survey instruments. Regarding academic rank, 128 (15.4%) are Instructors, 284

(34.3%) are Assistant Professors, 201 (24.2%) are Associate Professors, and 216 (26.1%) are full Professors.

Table 17. Gender by Academic Rank Cross Tabulation

		Academic Rank				
		Instructor	Assistant Professor	Associate Professor	Professor	Total
Gender	Male	61	122	110	125	418
	Female	67	162	91	91	411
Total		128	284	201	216	829

The representativeness of the research sample by academic rank and gender is very similar to the overall PASSHE faculty population. The following table provides a comparison between the research sample and the overall PASSHE population for gender by academic rank.

Table 18. Gender by Academic Rank for PASSHE and Research Sample

Academic Rank and Gender	PASSHE (Fall 2004)	Research Sample
INSTRUCTOR	643 (13.2%)	128 (15.4%)
Male	271 (5.6%)	61 (7.36%)
Female	372 (7.6%)	67 (8.08%)
ASSISTANT PROFESSOR	1,588 (32.6%)	284 (34.3%)
Male	779 (16.0%)	122 (14.7%)
Female	809 (16.6%)	162 (19.54%)
ASSOCIATE PROFESSOR	1,281 (26.3%)	201 (24.2%)
Male	725 (14.9%)	110 (13.27%)
Female	556 (11.4%)	91 (10.98%)
PROFESSOR	1,364 (28.0%)	216 (26.1%)
Male	921 (18.9%)	125 (15.08%)
Female	443 (9.1%)	91 (10.98%)
TOTAL	4,876 (100%)	829 (100%)
Male	2,696 (55.3%)	418 (50.4%)
Female	2,180 (44.7%)	411 (49.6%)

Regarding tenure status, 404 (61.6%) respondents are tenured, 194 (29.6%) are tenure-track, and 58 (8.8%) are non tenure-track faculty. The representativeness of the research sample is similar to that of the overall PASSHE faculty population for tenured faculty. However, the research sample included a greater percentage of tenure track faculty than what is found in the overall PASSHE population, and a much smaller percentage of non-tenure track faculty than the percentage found in the overall PASSHE population. The following table compares the tenure status of this research sample with the overall PASSHE faculty population.

Table 19. Tenure Status for PASSHE and Research Sample

Tenure Status	PASSHE (Fall 2004)	Research Sample
Tenured	2,945 (60.4%)	404 (61.6%)
Tenure Track	1,211 (24.8%)	194 (29.6%)
Non-Tenure Track	720 (14.8%)	58 (8.8%)
Total	4,876 (100%)	656 (100%)

Most faculty are permanent (494 or 87.9%), while 68 of them (12.1%) indicate they are temporary. Most are also full-time (741 or 95.5%), while 35 (4.5%) are part-time. In terms of age, the mean year of birth is 1955 (mean of 1954.72 was rounded up), with a standard deviation of 11.396 (rounded down to 11). Therefore, the range of the year of birth for those within one standard deviation of the mean is 1944 to 1966, which translates to a range of ages from 39 years to 61 years, with the average age of faculty respondents being 50 years. In terms of how long faculty have been employed at their current institution, most respondents (37%) have been employed for five years or less, with the next two groups (17.9% and 18% respectively) employed for six to ten, or eleven to fifteen years.

In terms of highest degree earned, more than 80% of faculty members either have a doctoral degree (Ph.D., Ed.D., other doctoral) or a terminal (M.F.A.)/professional degree (M.D., J.D.). About 18% have degrees to the masters' level, while less than 1% have bachelors degrees.

Table 20. Highest Degree Earned

Degree Earned	Frequency	Percent
Doctoral	641	77.4
Terminal/professional	33	4.0
Masters, Other	150	18.1
Bachelors	5	0.6
Total	829	100

According to a report prepared by the PASSHE (Armstrong, Bohl-Fabian, Garland, & Yazdi, 2004), System Performance Measures or Sub-Measures show that for 2008-09, the target for system performance in the area of faculty with terminal degrees (percent of full-time tenured or tenure-track instructional faculty) is 90%. The 2003-2004 average system performance of this measure was 80.77%. Therefore, the research sample percentage with doctoral or other terminal degrees of 81.4% is very close to the PASSHE number of 80.77% identified in the 2003-2004 report. It is important to note that are differences in the definition of terminal degrees between the PASSHE and this research study. For example, the PASSHE excludes some terminal degrees in the listing of eligible degrees (e.g. PsyD, DNSC, DRPH, etc.), while this research study does not exclude doctoral degrees in these categories.

The majority of respondents (95%) classify themselves as teaching faculty and 5% classify themselves as administrative faculty. When asked to describe their responsibilities, respondents are closely matched as to whether they have teaching responsibilities that are "entirely undergraduate" (365 or 44%) or that include "some undergraduate, some graduate or professional" (390 or 47%). Less than 5% (41 respondents) say that their teaching responsibilities are entirely graduate or professional, and 4% (33 respondents) have no teaching responsibilities at the present time.

Faculty who responded to the survey represent many different disciplines, choosing one of nine categories presented to them. Of these faculty, it is interesting to note the extent to which they teach entirely at the undergraduate level, entirely at the graduate or professional level, or a combination of both. As shown in the following table, of the 159 faculty who teach in the discipline of Education, only 45 (28.3%) of them teach only undergraduates; most (93 or 58.5%) teach both undergraduate and graduate/professional students. Sixteen (10.1%) of them teach exclusively at the graduate level, while five (3.1%) are not currently teaching.

Table 21. Discipline of Employment by Teaching Responsibilities Cross Tabulation

	Teaching Responsibilities				
Discipline of Employment	Entirely undergraduate	Some undergraduate, some graduate or professional	Entirely graduate or professional	Not teaching at the present time	Total
Agricultural and Animal Sciences	23	4	1	0	28
Business and Commerce	20	20	0	1	41
Education	45	93	16	5	159
Engineering and Applied Sciences	3	8	0	0	11
Fine, Applied and Performing Arts	28	22	1	0	51
Humanities	62	61	1	1	125
Life Sciences and Health	45	55	5	2	107
Physical and Mathematical Sciences	46	30	0	0	76
Social and Behavioral Sciences	63	71	11	5	150
Other Academic Discipline	30	26	6	19	81
Total	365	390	41	33	829

This combination of teaching at both undergraduate and graduate levels fits into an overarching philosophy of teaching informed by scholarship that is espoused by many of the PASSHE universities. This academic philosophy, widely practiced and supported at these universities, is known as the Teacher-Scholar model and is adapted from the *Scholarship of Teaching* described by Boyer (1990) in *Scholarship Reconsidered: Priorities of the Professoriate*, "As a *scholarly* enterprise, teaching begins with what the teacher knows. Those who teach must, above all, be well informed, and steeped in the knowledge of their fields. Teaching can be well regarded only as professors are widely read and intellectually engaged" (p. 23). In describing the Scholarship of Teaching as one of the four elements of his scholarship model (the other three are the Scholarship of Discovery, the Scholarship of Integration, and the Scholarship of Application), Boyer says:

> In the end, inspired teaching keeps the flame of scholarship alive. Almost all successful academics give credit to creative teachers – those mentors who defined their work so compellingly that it became, for them, a lifetime challenge. Without the teaching function, the continuity of knowledge will be broken and the store of human knowledge dangerously diminished. (p. 24)

Respondents are also viewed by gender, within discipline of employment. The following table is sorted in descending order by the total number of faculty by discipline of employment,

Table 22. Discipline of Employment by Gender Cross Tabulation

Discipline of Employment	Gender		
	Male	Female	Total
Education	61 14.6%	98 23.8%	159 19.2%
Social and Behavioral Sciences	79 18.9%	71 17.3%	150 18.1%
Humanities	64 15.3%	61 14.8%	125 15.1%
Life Sciences and Health	41 9.8%	66 16.1%	107 12.9%
Other Academic Discipline	35 8.4%	46 11.2%	81 9.8%
Physical and Mathematical Sciences	52 12.4%	24 5.8%	76 9.2%
Fine, Applied and Performing Arts	24 5.7%	27 6.6%	51 6.2%
Business and Commerce	29 6.9%	12 2.9%	41 4.9%
Agricultural and Animal Sciences	24 5.7%	4 1.0%	28 3.4%
Engineering and Applied Sciences	9 2.2%	2 .5%	11 1.3%
Total	418 100.0%	411 100.0%	829 100.0%

and a percent of total respondents by gender for each discipline is provided. For example, Education was the discipline most represented in the research sample with 159 respondents (61 male and 98 female). The 61 male respondents represented 14.6% of the total male respondents while the 98 females represented 23.8% of the total female respondents.

In terms of where faculty received their degrees and the region in which they were born, most respondents (806 or 97.2%) received their highest degree in the United States while 23 faculty members (2.8%) earned their degrees in countries other than the United States. Of the 806 receiving their degrees in the United States, 726 of them were born in the United States, while 80 were born in countries other than the United States. Overall, 735 faculty members (88.7%) were born in the United States and 94 (11.3%) were born in countries other than the United States. Of the 735 faculty born in the United States, 726 of them earned their degrees in

the United States, while 9 faculty members earned their highest degree either in Canada, East Asia or Western Europe (see Appendix B.2).

In terms of citizenship status, 779 faculty members (94%) are U.S. Citizens and 34 (4.1%) are U.S. Residents. Sixteen faculty members (1.9%) indicate they are in the country on some type of Visa, such as those granted to academic students (F or M Visa), exchange visitors (J Visa), or other groups (e.g. H-1 Visas for working in the U.S.). In terms of country of birth and citizenship status, the following table shows that 57 of those indicating U.S. Citizenship and 24 of those indicating U.S. Residency were born outside of the United States (See Appendix B.3). Comparison data on country of birth, country of highest degree obtained and immigration or citizenship/residency status is not available from the PASSHE.

3.3.6.2 Academic orientation Faculty members have a variety of commitments to the institution as well as to the academic profession in general (Clark, 1996). Faculty in this research sample were asked to indicate the degree to which they agreed that each of the three affiliations (to discipline, to university and to department) were important to them. Faculty respondents were first asked the extent to which they agreed that their affiliation to their academic discipline was very important to them. Respondents overwhelmingly agreed with this affiliation, with 601 (76.7%) strongly agreeing and 125 (15.9%) agreeing with that statement for a total of 92.6%. Forty-four (5.6%) neither agreed nor disagreed while only 12 respondents (1.6%) disagreed or strongly disagreed.

Faculty respondents were then asked the extent to which they agreed that their affiliation to their university was very important to them. Out of the three affiliations, the smallest number of respondents (583 or 74.5%) either strongly agreed (352 or 45%) or agreed (231 or 29.5%) with the importance of their university affiliation, 134 respondents (17.1%) neither agreed nor disagreed with the importance of this affiliation, while 59 (7.5%) either disagreed (41 or 5.2%) or strongly disagreed (18 or 2.3%) with the importance of this affiliation.

When asked about the importance of their affiliation with their department, 636 (81.2%) either strongly agreed (431 or 55%) or agreed (205 or 26.2%) with the importance of their departmental affiliation, 11.7% neither agreed nor disagreed, and 48 (6.1%) either disagreed (26 or 3.3%) or strongly disagreed (22 or 2.8%) with the importance of this affiliation. Therefore,

the strongest affiliation that faculty noted was with their discipline, followed by their department, and lastly with their university.

Table 23. Affiliation to Discipline, to University and to Department

	Affiliation to Discipline		Affiliation to University		Affiliation to Department	
Degree of Agreement	Frequency	Percent	Frequency	Percent	Frequency	Percent
Strongly Agree	601	76.7	352	45.0	431	55.0
Agree	125	15.9	231	29.5	205	26.2
Neither Agree nor Disagree	44	5.6	134	17.1	92	11.7
Disagree	10	1.3	41	5.2	26	3.3
Strongly Disagree	2	.3	18	2.3	22	2.8
Don't Know	2	.3	7	.9	7	.9
Total	784	100.0	783	100.0	783	100.0

This trend of affiliation to discipline first, department second and university last is consistent with findings from the Carnegie study that found that, "In every country, the largest proportion ranks in order of importance their disciplines first, their department second, and their institutions third" (Altbach & Lewis, 1996, p. 18). In the Carnegie study, in response to the question regarding the degree to which affiliation with their academic discipline is important, 77% of faculty from the United States replied it was "very important", 21% said it was "fairly important" 3% said it was "not too important" and 0% said it was "not at all important". In response to the question about the degree to which affiliation with their institution is important, 36% of faculty from the United States replied it was "very important", 46% said it was "fairly important" 15% said it was "not too important" and 3% said it was "not at all important (Ernest L. Boyer, Philip G. Altbach, and Mary Jean Whitelaw, The Academic Profession: An International Perspective, as cited in Altbach & Lewis, 1996, pp. 18-19).

3.3.6.3 Teaching or research preference Faculty were asked to share their perceptions regarding faculty preferences for teaching and/or research. The first three questions were phrased about faculty members in general. The fourth question asked faculty members to describe their *own* preferences in terms of teaching or in research. For the question, "faculty view themselves primarily as teachers", a total of 473 respondents (61%) either strongly agreed

(189 or 24.4%) or agreed (284 or 36.6%) with that statement, 191 (24.6%) neither agreed nor disagreed, while a total of 98 (12.6%) either disagreed (63 or 8.1%) or strongly disagreed (35 or 4.5%), and 14 respondents didn't know (1.8%). For the question, "faculty members view themselves as both teachers and researchers", a total of 466 respondents (59.7%) either strongly agreed (203 or 26%) or agreed (263 or 33.7%), 226 (28.9%) neither agreed nor disagreed, and a total of 76 (9.7%) either disagreed (58 or 7.4%) or strongly disagreed (18 or 2.3%), while 13 respondents (1.7%) didn't know. For the question, "faculty members view themselves primarily as researchers, a total of 44 (5.8%) either strongly agreed (2 or .3%) or agreed (42 or 5.5%), 174 (22.7%) neither agreed nor disagreed, while a total of 525 (68.3%) either disagreed (229 or 29.8%) or strongly disagreed (296 or 38.5%) with the question, while 25 (3.3%) didn't know.

Table 24. Faculty as Teachers, as both Teachers and Researchers, or as Researchers

	Primarily as Teachers		Both Teachers & Researchers		Primarily as Researchers	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Strongly Agree	189	24.4	203	26.0	2	.3
Agree	284	36.6	263	33.7	42	5.5
Neither	191	24.6	226	28.9	174	22.7
Disagree	63	8.1	58	7.4	229	29.8
Strongly Disagree	35	4.5	18	2.3	296	38.5
Don't Know	14	1.8	13	1.7	25	3.3
Total	776	100.0	781	100.0	768	100.0

The data show that overwhelmingly, respondents strongly agree or agree that they view faculty equally in these categories: "primarily as teachers" or "both teachers and researchers". Less than 10% of respondents view faculty primarily as researchers and almost 70% of respondents disagree or strongly disagree with that view of faculty roles and responsibilities.

Faculty were then asked to define their own preferences, using four categories drawn from the Carnegie Foundation's *International Study of the Academic Profession*. They were asked, "Regarding your own preferences, do your interests lie primarily in teaching or in research?" and their four choices were: (1) primarily in teaching, (2) in both, but leaning toward teaching; (3) in both, but leaning toward research; (4) primarily in research. Two hundred thirteen faculty (27.5%) responded that the defined their own interests primarily in teaching, 400 faculty (51.6%) defined their own interests as in both teaching and research, but leaning toward

teaching; 145 (18.7%) defined their own interests as in both teaching and research, but leaning toward *research*; while 17 (2.2%) defined their own interests as primarily in research.

These data show that 79.1% of PASSHE faculty said their preferences lie "Primarily in teaching" or "In both, but leaning toward teaching". These data are consistent with findings from the Carnegie survey that show the majority of U.S. faculty indicated that "their primary interest and commitment is to teaching" (Altbach & Lewis, 1996, p. 20). For example, in that study, 27% of U.S. faculty indicated their preferences are "Primarily in teaching" and 36% indicated their preferences are "In both, but leaning toward teaching" for a combined total of 67% of American faculty respondents.

When gender is added to the distribution, we see that female faculty outnumber male faculty by 41 of those whose preferences are primarily in teaching and by 10 of those whose preferences are in both teaching and research but leaning toward teaching. Female faculty comprise 59.6% of those whose preferences are primarily in teaching, and 51.3% of those whose preferences are in both but leaning toward teaching. Male faculty outnumber female faculty by 37 of those who say their preferences are in both teaching and research but leaning toward research, and by 3 of those whose preferences are primarily in research. Male faculty comprise 62.8% of those whose preferences are in both teaching and research but leaning toward research, and 58.8% of those whose preferences are primarily in research. The following table provides a breakdown of teaching and research preferences of PASSHE faculty by gender.

Table 25. Self Definition of Preferences of Teacher or Researcher * Gender Cross tabulation

Preferences of Teacher or Researcher	Gender		Total	Percent
	Male	Female		
Primarily in teaching	86	127	213	27.5
In both but leaning toward teaching	195	205	400	51.6
In both but leaning toward research	91	54	145	18.7
Primarily in research	10	7	17	2.2
Total	382	393	775	100.0

These findings are consistent with those of the Carnegie study that says, "More males have an orientation to research, while more females are primarily interested in or lean toward teaching" (Altbach & Lewis, 1996, p. 21). Further analysis of the Carnegie data by Forest (2002) showed that an analysis of gender as a predictor of teaching orientation found that, "in

most of the countries surveyed, women are more likely to indicate a stronger orientation towards teaching than the male participants in the survey. Specifically, in 9 of the 14 countries surveyed *[including the United States]*, gender contributes significantly to predictions of teaching orientation" (p. 69). It is important to note, however, that for PASSHE faculty, the gender breakdown of faculty who say their preferences are "in both, but leaning toward teaching" are close to being equal, with 51.3% of those in that category being female and 48.7% of those in that category being male. The strong reward structure for teaching and the teaching-intensive climate of these campuses may account for the closeness of these faculty preferences by gender.

The next two tables show combinations of the four choices faculty could make when asked to define their own preferences for teaching or research. First, when combining those with a preference "primarily for teaching" with those with a preference for "both, leaning toward teaching", 79.1% of faculty respondents (613) were in this combined category. Slightly more than 20 percent (162 respondents or 20.9%) either identified their preferences as "primarily in research" or "in both but leaning toward research", as shown in the following table.

Table 26. Combination of Primary + Leaning to Primary

Preferences of Teacher or Researcher Combining "Primarily" with "Leaning To" Respondents	Frequency	Percent
Primarily Teaching Combined with Leaning to Teaching	613	79.1
Primarily Research Combined with Leaning to Research	162	20.9

A different combination of these four choices is presented next. Those who stated their preferences "primarily in teaching" account for 213 respondents (27.5% of the total), and 17 respondents (2.2% of the total) state their preferences as "primarily in research". The largest group overall combines both teaching and research, irrespective of whether they lean toward teaching or lean toward research, with 545 respondents (70.3%) of the total in this category.

Table 27. Teaching, Combination of Both, Research

Preferences of Primarily Teacher, Combination of Both Teacher or Researcher, or Primarily Researcher	Frequency	Percent
Primarily in Teaching	213	27.5
In Both (Leaning to Teaching and Leaning to Research)	545	70.3
Primarily in Research	17	2.2

These data support the existence of the teacher-scholar model at these campuses in which teaching is highly recognized and where scholarship and research that enhances the teaching mission of faculty is also highly valued. The tenure and promotion reward structures at each campus (governed by the statewide Collective Bargaining Agreement) require excellence in teaching first and foremost, and then, if that criterion is met, research and scholarship as a criterion for promotion is addressed.

3.3.6.4 International experiences Faculty respondents were asked to describe whether they had academic international experiences at different educational stages in their lives. The stages include before college, as an undergraduate student, as a graduate student, and as a faculty member. If they had such experiences, they were asked to estimate the combined amount of time they spent abroad (excluding time spent at professional meetings or conferences) for each educational stage. The length of time was requested in order to differentiate the nature and impact of academic experiences. While both short and long term experiences are valuable, the underlying assumption is that a longer stay abroad will produce a qualitatively different learning experience than a shorter stay abroad. It is also possible that a longer academic stay will produce more of a transformational learning experience. The question was also asked to see whether faculty members at different educational stages have different patterns of time spent abroad. If they are able to devote longer amounts of time to an international experience at different educational stages then it is possible to view such patterns within the confines and demands of an academic life.

At different educational stages, the majority of faculty indicated they never had an academic international experience at any stage, but a fair segment of faculty did have international academic experiences. For example, before beginning college, 15.2% of faculty indicated they had attended classes outside the United States, with 12.9% of them spending one year or more abroad. The undergraduate college experience for 25% of faculty members did include an international experience, with 12.2% of faculty reporting more than one year spent abroad, 8.8% spending less than one year but more than one month abroad, and 4% who reported one month or less time spent on international academic experiences. At the graduate level, 25.5% reported having international academic experiences, with 6.5% of faculty reporting short-

term (one month or less) experiences – an increase of 2.5% over those at the undergraduate level and a 6.5% increase over the pre-college level, 7.8% reporting more than one month but less than one year abroad, and 11.2% reporting international academic experiences of more than one year.

Table 28. International Academic Experiences

	Before College		As Undergraduate Students		As Graduate Students		As Faculty		As Faculty Taking Students Abroad	
Length of Time	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
NEV	663	84.8	594	74.9	584	74.5	504	63.6	649	82.7
LOM	0	0	32	4.0	51	6.5	111	14.0	84	10.7
OMALY	18	2.3	70	8.8	61	7.8	104	13.1	39	5.0
OYOM	101	12.9	97	12.2	88	11.2	74	9.3	13	1.7
Total	782	100.0	793	100.0	784	100.0	793	100.0	785	100.0

Codes for Length of Time:

NEV- Never; LOM-Less than One Month; OMALY-One Month or More and Less than One Year; OYOM-One Year or More

The length of time PASSHE faculty reported they spent abroad at different educational stages is also interesting. As faculty members, most indicated experiences for less than one month (14%), closely followed by more than one month and less than one year (13.1%), with just 9.3% indicating one year or more. This is opposite from trends at the undergraduate and graduate levels, when the majority (12.2% and 11.2% respectively) reported spending one year or more abroad while a student. The middle ground as undergraduate and graduate students was more than one month and less than one year (8.8% and 7.8% respectively), and the smallest percentage (4% and 6.5%) reported spending one month or less on an international experiences. This trend seems to suggest that more faculty have international experiences as faculty members than at earlier stages in the academic careers, but that their experiences are shorter in duration than time spent abroad when they were students. This is consistent with work by Goodwin and Nacht (1991) who discussed obstacles to faculty participation, such as the tenure and promotion clock, family concerns, and financial constraints that faculty face when considering an international experience.

It appears that as time goes on, the likelihood of having an international experience increases, since 36.4% had international experiences as faculty members as compared to 15.2% before college, 25% as undergraduates, and 25.5% as graduate students. In addition, 17.4% of

faculty have taken students abroad for an international academic experience, although most of these faculty (10.7%) reported the total international experiences were for less than one month, and 5% were for more than one month but less than one year. Less than 2% spent one year or more on international academic experiences with students.

Faculty were asked to describe if they had had academic experiences in countries other than the United States. Slightly less than half of the 795 faculty who answered this question (49% or 389) indicated they had academic experiences in countries other than the United States; most (38%) indicated they had had experiences in one to three countries, 8.6% had experiences in four to six countries, and 2.4% had experiences in seven to nine countries.

Faculty were next asked to indicate all of the world regions in which they had academic experiences. The data show the number of visits to different world regions. The unit of measurement is different (world region) from that in the previous question (country). Of the respondents, 397 indicated no travel to other world regions, while 433 respondents indicated they did visit at least one world region. Most respondents (239 or 28.8%) indicated they visited one world region, 111 (13.4%) indicated they visited two world regions, 35 respondents (4.2%) indicated they visited three world regions, and 24 respondents (2.9%) indicated they visited four world regions. The world region visited the most was Western Europe (31.4%) and the world region visited the least was South and Central Asia (3.4%). Overall, there were 805 visits to world regions other than the United States by faculty.

Table 29. Number of Visits to World Regions for Academic Experiences

World Region	Frequency	Percent	World Region	Frequency	Percent
Western Europe	253	31.4	Caribbean	46	5.7
Eastern Europe	88	10.9	South America	43	5.3
North America	83	10.3	South East Asia	37	4.6
East Asia	68	8.4	Australia/Oceania	31	3.9
Africa	52	6.5	Middle East	29	3.6
Central America	48	6	South and Central Asia	27	3.4
Sub-Total	592	73.5	Sub-Total	213	26.5

Respondents were also asked whether they had lived outside of the United States before becoming a faculty member, not including any time they may have spent abroad as a student.

Two hundred eleven faculty respondents indicated they had indeed lived outside of the U.S. (25.5% of the 829 survey respondents). Faculty respondents then indicated the length of time they had lived outside of the U.S., as shown in the following table.

Table 30. Length of Time Resided Outside of the United States

Number of Years	Frequency	Percent
One to five years	76	36.19%
More than ten years	70	33.33%
Less than one year	48	22.86%
Six to ten years	16	7.62%
Total	210	100.00%

3.3.6.5 Foreign languages In terms of foreign languages, respondents were asked how many languages other than English that they can speak or read. More than half (457 faculty or 56.7%) indicated they speak at least one language besides English, with 258 faculty (32%) indicating they speak one language, 134 (16.6%) indicating they speak two languages, and 65 (8.1%) indicating they speak three or more languages. Those speaking only English represent 43.2% of the total (348 faculty members).

A cross tabulation was done that compares number of languages spoken by discipline of employment. The cross tabulation removes the 348 responses from the "no other languages besides English" group and includes only data for respondents who answered they spoke one, two, or three or more languages other than English. The table is sorted in descending order from most respondents to least respondents who indicated they spoke a language other than English (See Appendix B.4). The discipline with the most number of languages spoken besides English are the Humanities (102 responses), Social and Behavioral Sciences (85 responses), and Education, (71 responses).

Respondents were asked to identify which languages they speak or read besides English. Most faculty (225 or 31.3%) speak French, followed by Spanish (211 or 29.3%) and then German (130 or 18.1%). The languages mentioned least were Arabic and African Languages, which each showed 10 respondents (1.4%) indicating those languages. Respondents were also given a chance to list other languages not on the list of languages provided by the researchers; 85 respondents chose to do so. A variety of languages were offered (e.g. Turkish, Farsi, Sinhala,

Classical Greek, etc.), with the most frequent languages added being Russian and Slavic Languages (10), Latin (9 entries), American Sign Language (9) and Hindi (6).

Faculty were asked to describe their level of language proficiency in a language other than English. Most faculty respondents said they could read sections of a newspaper (75.7%) while many others said they considered their skills at a basic language comprehension level only (72.9%). More than half (56.8%) said they could carry on an informal conversation with a native speaker while less than half (46.8%) said they could read a journal article. About a quarter of respondents (27.8%) said they could do a presentation to native speakers while 16.9% said they could write an article or a book for native speakers.

3.3.6.6 Assessment of campus climate Section V of the survey asked faculty about their perceptions regarding the climate on their campus as it relates to internationalization. This section was designed to get a sense of whether they believed support for internationalization was present from different sectors (i.e. senior leaders, departments, tenure/promotion reviewers), and, if so to what extent. Seven of the questions in this section were newly created and three questions were drawn from the American Council on Education's *Faculty Survey*. The ten items in this section were compiled using several Institutional-Level Organization Strategies for internationalization identified by Knight (2004, pp. 14-15) as part of a conceptual framework for internationalization developed by Knight and de Wit over the past decade (de Wit, 2002; Knight, 1999, 2004). Questions were formulated based on three of the four Organization Strategies listed (Governance, Operations, and Human Resources) as they were most relevant to this survey of faculty.

A frequency distribution of responses to the ten questions in the Assessment of Campus Climate section are listed in descending order, with those having the highest combined total of "Strongly Agree" or "Agree" listed first (See Appendix C.1). The highest percentage of faculty (407 or 52.3%) either "strongly agreed" or "agreed" with the statement, "Participation in international activities by faculty is viewed favorably by my department". The statement, "International expertise is part of recruitment and selection of new faculty" has the lowest percent strongly agreeing or agreeing (12.3% or 96 of the faculty respondents) with that statement. The next two statements with the lowest percentage of faculty agreeing or strongly agreeing with these statements are, "The campus wide tenure committee recognizes and

favorably reviews faculty involvement in internationalization activities" (179 respondents or 23%), and "The campus wide promotions committee recognizes and favorably reviews faculty involvement in internationalization activities" (188 respondents or 24.1%).

A large percentage of faculty respondents indicated they "don't know" whether they agree or disagree with many of the ten statements. Several questions in particular had very high percentages of "don't know" responses. The two highest "don't know" responses indicate that faculty are unaware of whether the campus wide tenure committee and the campus wide promotions committee "recognize and favorably review faculty involvement in internationalization", which is significant given that faculty construct their academic work in line with university reward structures (see Appendix C.2).

At the opposite end of this continuum, the two lowest percentage of "don't know" responses came from the statements, "Participation in international activities by faculty is viewed favorably by my department" (74 respondents or 9.4%), and "Faculty are encouraged to include international perspectives and content in their courses" (67 respondents or 8.6%). Therefore, it appears that departmental and curricular emphases are well-known to more than 90% of faculty.

The issue of how faculty members perceive internationalization activities in the tenure and promotions process as conducted by campus wide committees is worth more explanation. Data from these statements are viewed by tenure status and by academic rank of respondents (see Appendix C.3). Within tenured faculty, 105 respondents (27%) strongly agree or agree that participation in internationalization is recognized and valued by the tenure committee, while 30 (16%) of tenure track faculty feel the same way. About 22% of tenured faculty and less than 18% of tenure track faculty neither agree nor disagree, and 76 (19.5%) of tenured faculty and 29 (15.4%) of tenure track faculty disagree or strongly disagree that internationalization activities are recognized and valued by the tenure committee. A large number of tenured faculty (122 or 31.4%) and tenure-track faculty (96 or 51.1%) don't know whether participation in internationalization activities is recognized and valued in the review.

Another important facet of academic life is the promotions process for faculty. PASSHE faculty are employed as Instructors, Assistant Professors, Associate Professors and full Professors. In order to move from one group to the next, faculty must apply for and be granted promotion, based upon their teaching, research and scholarly works. Getting promoted is highly competitive and therefore, knowing what types of activities may lead to a successful bid for

promotion is important. When asked whether they believe participation in internationalization activities is recognized and valued by the promotions committee, a higher percentage of faculty strongly agreed or agreed at higher academic ranks than at lower academic ranks through the level of Associate Professor (20.6% of Instructors, 23% of Assistant Professors, 27.5% of Associate Professors, and 25.4% of full Professors). On the other hand, 10.8% of Instructors, 17.1% of Assistant Professors, 19.1% of Associate Professors and 25% of full Professors either disagreed or strongly disagreed that internationalization is recognized and valued by the promotions committee. A large percentage of faculty at all ranks did not know whether participation in internationalization was recognized and valued by the promotions committee, but there percentages decreased as faculty moved up the ranks as follows: 52% of Instructors, 44.8% of Assistant Professors, 32.6% of Associate Professors, and 24.4% of full Professors (see Appendix C.4).

When comparing tenured to tenure-track faculty and their perceptions of how internationalization activities are viewed by the promotions committee, more than a quarter (111 or 28.5%) of tenured faculty and about half of tenure-track faculty (94 or 50.3%) don't know whether participation is recognized and valued by the promotions committee. About 28% of tenured faculty (109 respondents) strongly agree or agree that participation is recognized and valued by the promotions committee, as compared with about 18% of non-tenured faculty (33 respondents). About 23% of tenured and 14% of non-tenured faculty neither agree nor disagree, and slightly more than 20% of tenured and slightly less than 18% either disagree or strongly disagree that internationalization is recognized and valued by the promotions committee (See Appendix C.5).

This information is significant because it identifies areas where large numbers of faculty claim to lack information about support for internationalization. It follows that increasing awareness of support for internationalization might be one way for campuses to increase faculty involvement and engage more faculty. There are also high numbers of faculty who claim to "neither agree nor disagree" with the statements about campus climate. This indicates there are a large number of undecided faculty members who could potentially become involved with more information or support from campus sectors interested in increasing internationalization.

3.3.6.7 Faculty involvement in internationalization This section of the survey asked faculty to indicate whether they had engaged in specific behaviors related to internationalization over the past three years. Questions were grouped according to program strategies identified by Knight (2004): academic programs; research and scholarly collaboration; external relations (domestic and cross-border); and extracurricular. Faculty were asked to indicate "yes" or "no" for each activity; each yes response was coded "one" and each no response was coded "zero". A summated Faculty Involvement score was calculated for each respondent, ranging from 0-13. Almost a quarter of all faculty (23.9%) reported no involvement in these internationalization activities, 15.7% of faculty reported involvement in one item, 14.7% of faculty reported involvement in two items, while 12.7% reported involvement in three items. About 88% of respondents reported engagement in six or less items, while 12% of respondents indicated engagement in seven to thirteen items. A table that lists summed Faculty Involvement scores is found in Appendix D.1.

The most frequently cited international activity was teaching a course with a significant component about other countries, cultures, or global issues, with nearly half of respondents (363 or 47%) answering yes to this question (See Appendix D.2 for list sorted in descending order of activity, by gender). Within that group, more than half of those answering yes to this question (195 respondents or 53.70%) are female. The second most cited activity was revising an existing course or proposing a new course that includes a significant component about other countries, cultures, or global issues, with more than a third (290 or 37.6%) answering yes to this question. Of those, more than half (155 respondents or 53.45%) are female. Both of these questions fall within the *Academic Programs* strategy identified by Knight (2004). The third highest response is presenting research or creative works at seminars, conferences or exhibitions held outside the United States, with 239 respondents (30.9%) answering yes. Of this group, 126 respondents (52.72%) of those responding yes are male. This question is grouped in the *Research and Scholarly Collaboration* program strategy by Knight. More than a quarter of respondents (201 or 26.2%) also said that in the past three years, they had been involved with campus based student clubs and associations of an international nature, which is an *Extracurricular* program strategy according to Knight. More than half of respondents (55.22% or 111) are male faculty members.

The next cluster of responses fall around 18-20% of respondents indicating "yes" to these questions: Submission or publishing in a foreign journal or press (155 or 20.18%, of which 58.06% are male) which is a *Research and Scholarly Collaboration* program strategy; Working with local organizations or schools on projects of an international nature (155 or 20.18%, 52.26% of whom are male) which is an *External Relations (Domestic)* program strategy; or Planning campus events of an international nature (150 or 19.4%, 57.33% of whom are male) which is an *Extracurricular* program strategy. Next listed are Revising an existing program of study or proposing a new program of study that includes a significant component about other countries, cultures, or global issues (149 or 19.3%, 54.36% of whom are male) which is an *Academic* program strategy; Conducting research outside of the United States (144 or 18.6%, 62.5% of whom are males) which is a *Research and Scholarly Collaboration* program strategy; and Traveling outside of the United States to participate in a professional service or development project at a foreign college or university (140 or 18.2%, 56.43% of whom are male) which is an *External Relations (Cross Border)* program strategy.

Less than 15% of respondents said they had been involved in a grant-funded project of an international nature (113 or 14.7%, 59.29% of whom are male) which could fall within any of the four program strategies depending on the activity funded by the grant; or in the development or delivery of educational programs to other countries through any of a variety of delivery modes or through different administrative arrangements (108 respondents or 14%, of whom 61.11% are male) which is also an *External Relations (Cross Border*) program strategy. The smallest number of respondents (57 or 7.4%, of whom 71.93% are male) said they had taught at a foreign college or university located outside the United States, which is an *Academic* program strategy. These low numbers of faculty teaching at a foreign college or university are consistent with findings from the Carnegie study: "Teaching abroad is rare. About one in ten U.S. academics served as a faculty member in another country over the previous three years; 14 percent in the last ten years" (Haas, 1996, p. 379).

3.3.6.8 Attitudes and beliefs about internationalization This 14-item section of the survey asked faculty to share their attitudes and beliefs about the internationalization of higher education (see Appendix E.1). More than half of faculty respondents strongly agreed with the top three attitudes and beliefs questions: The presence of international students on U.S.

campuses enriches the learning experience for American students (69.5%), Knowledge of international issues is important for younger generations (58.1%), and Knowledge of international issues is important to me (52.8%). When responses of "strongly agree" and "agree" are combined, the top six attitudes and beliefs questions show responses of more than half either strongly agreeing or agreeing with those questions: The presence of international students on U.S. campuses enriches the learning experience for American students (91.2%), Knowledge of international issues is important for younger generations (86.6%), Knowledge of international issues is important to me (83.5%), Colleges and universities should require all students to take courses covering international topics (75.7%), An international perspective in my discipline is an important and valued part of my teaching and research (53.2%), and It is the responsibility of ALL faculty to provide undergraduate students with an awareness of other countries, cultures, or global issues (53.7%).

The next five questions show that respondents have a combined "strongly agree" and "agree" score that range from 49% to 33%: In order to keep up with developments in my discipline, a scholar must read books and journals published abroad (48.1%), Connections with scholars in other countries are very important to my professional work (46.4%), I am developing more of an international perspective in my teaching (45.2%), The curriculum at my institution should be more international in focus (44.1%), and I am developing more of an international perspective in my research (33.7%).

The next two questions can be considered unfavorable or negatively stated items, and the majority of responses to these two questions show that more than 60% of respondents either strongly disagree or disagree with these statements: The more that is spent teaching students about other countries, cultures, or global issues, the less time is available for teaching the basics (60.7%), and International education is a useful, but not a necessary component of undergraduate education (65.8%). According to Ary, Jacobs & Razavieh (2002, p. 225), "disagreement with an unfavorable statement is psychologically equivalent to agreement with a favorable statement", so in analyses of these responses, they are reverse scored when computing attitudes for statistical tests. Only 16.2% of faculty strongly agree or agree with the statement, "Most undergraduate students graduate with an awareness about other countries, cultures, or global issues"; more than half (56.5%) either disagree or strongly disagree with this statement.

3.3.7 Comparison of PASSHE sample to other research samples

3.3.7.1 International experiences Data from the ACE *Faculty Survey* are useful here for comparison purposes. The ACE data is sorted by university Carnegie Classification, and the two categories applicable to the PASSHE universities are "Comprehensive Universities" and "Research Universities"[11]. One of the participating PASSHE universities fits into the "Research Universities" category, while the other eight fit into the "Comprehensive Universities" category as grouped by ACE in their research project, Mapping Internationalization on U.S. Campuses (Siaya & Hayward, 2003).

Table 31. Comparison of Data Regarding International Experiences

ACE Question		ACE FACULTY		PASSHE Faculty
		Comprehensive	Research	
Did you ever attend classes outside the United States prior to college?	Yes	23%	31%	15%
	No	77%	69%	85%
Did you ever attend classes or participate in research outside the United States as an undergraduate student?	Yes	20%	27%	25%
	No	80%	72%	75%
Have you ever attended classes outside the United States as a graduate student or faculty member?	Yes	30%	38%	
	No	70%	61%	
Have you ever conducted research outside the United States as a graduate student or faculty member?	Yes	40%	55%	
	No	60%	45%	
As a graduate student I had one or more academic experiences in a country (countries) other than the U.S.	Yes			26%
	No			75%
As a faculty member I had one or more academic experiences in a country (countries) other than the U.S.	Yes			36%
	No			64%
Have you ever traveled outside the United States to accompany undergraduates in a study abroad program?	Yes	17%	17%	17%
	No	83%	83%	83%

The preceding table shows that the percentage of PASSHE faculty reporting attending classes outside the United States prior to college (15.2%) is less than that reported in the ACE

[11] The ACE study used the term "research university" which includes the two Carnegie classifications of "intensive" and "extensive" doctoral/research universities, and the term 'comprehensive university" which includes the two Carnegie classifications of "master's colleges and universities I" and "master's colleges and universities II".

study (23% - 31%), but the percentage of those reporting attending classes or participating in research outside the United States as undergraduates (25%) is within the range reported by the ACE study (20%-27%). The data for attending classes or participating in research as graduate students or faculty members cannot be easily compared as the ACE study collapsed those two educational stages into one, however, the percentage of PASSHE faculty reporting academic international experiences as a graduate student (25.5%) and as a faculty member (36.4%) is still lower than that reported by faculty in the ACE study (30% to 55%). However, PASSHE faculty are equal to faculty in the ACE study in the percentage of faculty who accompany undergraduates in a study abroad program (17.3% and 17%).

3.3.7.2 Foreign languages Respondents were asked how many languages other than English that they can speak or read. The following table compares PASSHE and ACE faculty.

Table 32. Comparison of Data Regarding Foreign Languages

	PASSHE DATA		ACE DATA	
Languages	Frequency	Percent	Percent: Comprehensive Universities	Percent: Research Universities
None	348	43%	43%	34%
One	258	32%	33%	32%
Two	134	17%	13%	19%
Three or more	65	8%	11%	15%
Total	805	100%	100%	100%

The data related to language proficiency of PASSHE faculty are at generally smaller percentages overall than data from faculty completing the ACE survey as shown in the following table.

Table 33. Comparison of Data Regarding Language Proficiency

		PASSHE DATA		ACE DATA	
If you know a language other than English, in that language are you able to:		Count	Percent	Percent: Comprehensive Universities	Percent: Research Universities
Read sections of newspaper	yes	364	76%	89%	94%
	no	117	24%	9%	5%
	Total	481	100%		
Basic language comprehension only	yes	353	73%		
	no	131	27%		
	Total	484	100%		
Informal conversation with native speakers	yes	268	57%	72%	85%
	no	204	43%	28%	15%
	Total	472	100%		
Read journal article	yes	221	47%	69%	82%
	no	251	53%	30%	18%
	Total	472	100%		
Present to native speakers	yes	130	28%	36%	59%
	no	338	72%	63%	41%
	Total	468	100%		
Write article or book for native speakers	yes	78	17%		
	no	384	83%		
	Total	462	100%		

3.3.7.3 Assessment of campus climate Three survey questions from the Assessment of Campus Climate section were drawn from the *Faculty Survey* of the American Council on Education. An important difference between the way the questions were administered concerns the possible responses that faculty could make. The ACE survey included a five point Likert scale, (Strongly Agree, Somewhat Agree, Somewhat Disagree, Strongly Disagree, and Neither Agree nor Disagree), and did not include a "Don't know" response choice. The PASSHE survey included a five point Likert scale (Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree) and also included a "Don't know" response. For the purpose of this data comparison, the "Don't know" responses were removed from the responses to each question, and were not used in the calculation of the total number of responses and the percent of total for each remaining response choice for that question.

The first question that was used in both surveys was, "Faculty are actively encouraged to include international perspectives and content in their courses." Data from the ACE study were presented from the two Carnegie classification types applicable to this study, namely those from

Comprehensive Universities and Research Universities. A much smaller percentage of PASSHE faculty strongly agreed (13.5% as compared with 41% and 40%), and somewhat agreed (23.7% as compared with 35% and 29%) with this statement. A much greater percentage of PASSHE faculty (25.3%) neither agreed nor disagreed as compared to ACE faculty (4% and 6%), and much larger percentages of PASSHE faculty either somewhat disagreed (23% as compared to 11% and 14%) or strongly disagreed (14.5% as compared with 6% and 8%) with the statement that faculty are encouraged to include international perspectives and content in their courses.

Table 34. Inclusion of International Perspectives and Contents

Inclusion of International Perspectives and Contents	PASSHE Data		ACE Data	
			Comprehensive	Research
	Frequency	Percent	Percent	Percent
Strongly Agree	96	13.5%	41.0%	40.0%
Somewhat Agree	169	23.7%	35.0%	29.0%
Neither agree nor Disagree	180	25.3%	4.0%	6.0%
Somewhat Disagree	164	23.0%	11.0%	14.0%
Strongly Disagree	103	14.5%	6.0%	8.0%

The second question, "Funds are available to support internationalization and the development of faculty members' international skills and knowledge" showed similar patterns with PASSHE showing smaller percentages of those who strongly agreed (9.4%) and somewhat agreed (22.5%) than faculty from the ACE study (28% and 26% strongly agreed, and 39% and 43% somewhat agreed). As shown in the previous question, the percentage of PASSHE faculty who neither agreed nor disagreed was higher (21.9%) than the national study (2% and 6%). PASSHE faculty who somewhat disagreed (20.2%) or strongly disagreed (26%) represented larger percentages of the total than faculty from the ACE data (11% or 10% somewhat disagreed, and 14% and 6% strongly disagreed) with the statement that "funds are available to support internationalization and the development of faculty members' international skills and knowledge".

Table 35. Comparison of Data Regarding Availability of Funds

Funds are available for international skills and faculty development	PASSHE data		ACE Data	
			Comprehensive	Research
	Frequency	Percent	Percent	Percent
Strongly Agree	59	9.4%	28%	26%
Somewhat Agree	142	22.5%	39%	43%
Neither agree nor Disagree	138	21.9%	2%	6%
Somewhat Disagree	127	20.2%	11%	10%
Strongly Disagree	164	26.0%	14%	6%

The third research question, "Commitment to international education is primarily symbolic" also showed differences between this PASSHE research sample and the national sample. Higher percentages of PASSHE faculty either strongly agreed (13.9%) or agreed (25%) with this statement as compared to those from comprehensive and research universities (7% and 5% strongly agreed, and 10% somewhat agreed). Again, the percentage of PASSHE faculty who neither agreed nor disagreed (22.6%) was higher than the national sample (1% and 2%), and lower percentages of PASSHE faculty somewhat disagreed (21.8%) or strongly disagreed (16.8%) with the statement as compared with 32% and 30% of ACE faculty who somewhat disagreed and 47% and 49% who strongly disagreed with the statement that commitment to internationalization is primarily symbolic.

Table 36. Comparison of Data Regarding Commitment to International Education

Commitment to International Education is Primarily Symbolic	PASSHE data		ACE Data	
			Comprehensive	Research
	Frequency	Percent	Percent	Percent
Strongly Agree	86	13.9%	7%	5%
Somewhat Agree	155	25.0%	10%	10%
Neither agree nor Disagree	140	22.6%	1%	2%
Somewhat Disagree	135	21.8%	32%	30%
Strongly Disagree	104	16.8%	47%	49%

3.3.7.4 Faculty involvement in internationalization Also useful here is a comparison of PASSHE data to data from the ACE *Faculty Survey* and data from a campus internationalization assessment that Missouri South State College (now University) conducted in 2001 (Stebbins,

Martin, Murdock, & Honey, n.d.) as part of their participation in the American Council on Education's *Promising Practices* initiative (Engberg & Green, 2002). When survey questions are phrased differently by different studies, differences in the ACE questions are noted in the first column, and in the far right column for MSSC questions.

Table 37. Comparison of Data Regarding Faculty Involvement in Internationalization

Survey Question		PASSHE DATA		ACE DATA		MSSC DATA
		Frequency	Percent	Comp.	Research	
In the past 3 years, have you taught a course with a significant component about other countries, cultures, or global issues?	yes	363	47.0	44%	41%	13.1% (core course) 10.2%(int'l studies/ business course)
	no	409	53.0	56%	59%	
In the past 3 years, have you revised an existing course or proposed a new course that includes a significant component about other countries, cultures, or global issues?	yes	290	37.6			37.2% (Revised Existing) 19.7% (Proposed New)
	no	482	62.4			
In the past 3 years, have you presented your research or creative works at seminars, conferences or exhibitions held outside U.S.?	yes	239	30.9			28.5% (Attended, not presented)
	no	534	69.1			
In the past 3 years, have you submitted to or published in a foreign journal or press, excluding reprints?	yes	155	20.2	20%	40%	
	no	613	79.8	79%	60%	
In the past 3 years, have you conducted research outside the U.S.? *(ACE SAYS "EVER AS A GRAD STUDENT OR FACULTY MEMBER")*	yes	144	18.6	40%	55%	8%
	no	630	81.4	60%	45%	
In the past 3 years, have you traveled outside the U.S. to participate in a professional service or development project at a foreign college or university?	yes	140	18.2	21%	24%	
	no	630	81.8	78%	73%	
In the past 3 years, have you taught at a foreign college or university located outside the U.S.?	yes	57	7.4	23%	32%	
	no	717	92.6	77%	68%	

With 47% of PASSHE faculty responding affirmatively to the question, "In the past 3 years, have you taught a course with a significant component about other countries, cultures, or global issues?", they exceed the frequency and percent of "yes" responses from both the ACE

study (44% and 41% of comprehensive and research universities respectively) and the MSSC data, which are in response to a campus specific breakdown of courses "related to teaching a course satisfying core curriculum requirements for "international and cultural studies" (13.1%) or teaching a course that is part of the majors curriculum for international studies or for international business (10.2%). Data are similar between PASSHE faculty and MSSC faculty in response to questions about curriculum. In response to the question, "In the past 3 years, have you revised an existing course or proposed a new course that includes a significant component about other countries, cultures, or global issues?" 37.6% of PASSHE faculty replied "yes". The MSSC data are broken into two types of curriculum actions, the first, "revision of an existing course" garnered 37.2% of "yes" responses, and the second, "proposing a new course" received affirmative responses from 19.7% of faculty members.

More than thirty percent of PASSHE faculty (30.9%) replied they had presented their research or creative works at seminars, conferences or exhibitions held outside the U.S., as compared with 28.5% of MSSC faculty who were not limited to presenting but rather could include attendance at such international gatherings. In terms of publishing or submitting for publication work in a foreign journal or press, 20.2% of PASSHE faculty indicated they had done so, as compared to 20% of ACE faculty from Comprehensive Universities and 40% of ACE faculty from Research Universities. When asked about their research activities conducted outside of the United States in the past three years, 18.6% of PASSHE faculty responded affirmatively, which is less than half of that reported by ACE faculty (40% and 55%), although the ACE survey question asked respondents whether they had EVER conducted research abroad, both as a faculty member and/or as a graduate student. Eight percent of faculty responding to the MSSC survey replied they had conducted research abroad in their discipline.

Participation in a professional service or development project at a foreign college or university was undertaken by 18.2% of PASSHE faculty, 21% of ACE faculty from comprehensive universities and 24% from research universities. In terms of teaching at a foreign college or university located outside of the United States, just 7.4% of PASSHE indicated they had done so, as compared to 23% and 32% of ACE faculty, although again, the wording in the ACE survey is much broader, asking respondents to indicate "yes" if they EVER taught abroad, not just in the past three years.

3.3.7.5 Attitudes and beliefs about internationalization Faculty attitudes and beliefs about internationalization of PASSHE faculty are also compared to five attitudes and beliefs questions from the ACE *Faculty Survey*. The first two questions show the greatest differences between the PASSHE faculty and the national faculty sample. For the question, "The more time that is spent teaching students about other countries, cultures, or global issues, the less time is available for teaching the basics" a combined total of 17.2% of PASSHE faculty strongly agreed (4.3%) or agreed (12.9%), which is less than the total of 37% and 30% from Comprehensive and Research universities (11% from both groups strongly agreed, and 26% and 19% from Comprehensive and Research universities respectively agreed). For the question, "Most undergraduate students graduate with an awareness about other countries, cultures, or global issues", only 17% of PASSHE faculty (3.4% strongly agreed and 13.6% agreed) felt this way, as compared with 70% of faculty from Comprehensive universities (30% strongly agreed and 40% agreed) and 59% of faculty from Research universities (18% strongly agreed and 41% agreed).

Table 38. Comparison of Data Regarding Curriculum and Students

Comparison of Data Regarding Curriculum and Students

	Time spent teaching int'l means less time to teach basics			Students graduate w/awareness of other count/cultures/ global			Colleges universities should require all students to take international topics courses			ALL faculty are responsible for providing undergraduates with int'l awareness			International Education is useful, but not necessary part of UG education		
	% PASSHE	% COMP	% RSCH	% PASSHE	% COMP	% RSCH	% PASSHE	% COMP	% RSCH	% PASSHE	% COMP	% RSCH	% PASSHE	% COMP	% RSCH
Strongly Agree	4.3	11	11	3.4	30.0	18.0	44.8	60	60	27.2	39.0	39.0	3.5	8.0	5.0
Agree	12.9	26	19	13.6	40.0	41.0	31.5	25	21	27.3	30.0	26.0	10.8	20.0	17.0
Neither Agree nor Disagree	18.8	4	5	23.6	5.0	6.0	14.7	1	2	24.2	3.0	3.0	18.5	2.0	4.0
Disagree	27.5	26	28	31.1	12.0	19.0	5.7	10	12	12.4	15.0	16.0	27.3	29.0	24.0
Strongly Disagree	36.5	28	35	28.3	9.0	13.0	3.3	2	3	8.9	12.0	17.0	40.0	39.0	49.0

For the question, "Colleges and universities should require all students to take courses covering international topics" a total of 76.3% of PASSHE faculty either strongly agreed (44.8%) or agreed (31.5%), as compared to a total of 85% from Comprehensive universities (60% strongly agreed and 25% agreed) and 81% from research universities (60% strongly agreed and 21% agreed). When answering the question, "It is the responsibility of ALL faculty to provide undergraduate students with an awareness of other countries, cultures, or global issues", 54.5% of PASSHE faculty either strongly agreed (27.2%) or agreed (27.3%), as compared with

69% of faculty from Comprehensive universities (39% strongly agreed and 30% agreed) and 65% from research universities (39% strongly agreed and 26% agreed). With the final comparison question, “International education is a useful, but not a necessary component of undergraduate education”, 14.3% of PASSHE faculty either strongly agreed (3.5%) or agreed (10.8%), as compared to 28% of faculty from Comprehensive universities who strongly agreed (8%) or agreed (20%) and 22% of faculty from research universities who either strongly agreed (5%) or agreed (17%) with this question.

4.0 FACULTY INVOLVEMENT IN INTERNATIONALIZATION

The study sought to answer this research question: *How does faculty involvement in internationalization relate to campus climate, international experiences, and selected faculty characteristics?* In order to answer this research question, several analyses investigated faculty involvement in internationalization and campus climate, international experiences, and by selected faculty characteristics. The *Faculty Involvement* score, calculated for each respondent by adding together responses to each of the 13 questions in Section VI of the survey, was used as a measure of Faculty Involvement in Internationalization. A higher score represents a higher level of faculty involvement in internationalization.

4.1 AND CAMPUS CLIMATE

The first analysis investigated whether there is a relationship between Faculty Involvement in Internationalization and Campus Climate. It was expected that data would reveal that there is a relationship between campus climate and faculty involvement.

H_0: There is no relationship between campus climate and faculty involvement

H_1: There is a relationship between campus climate and faculty involvement

Several statistical tests were performed to investigate the relationship between faculty involvement and campus climate. A Bivariate Regression Analysis was performed with Campus Climate as the Independent Variable and Faculty Involvement as the Dependent Variable (N=338). With a p-value of .550, the analysis shows that there is no statistical significance between Campus Climate and Faculty Involvement: $F_{(1,336)} = .358$ (p. >.05). A Pearson Correlation of r=.-.033 shows that a weak to no relationship exists between the two variables. The Null Hypothesis is not rejected. (See Appendix F.1 for statistical tables).

4.1.1 Governance, Operations and Human Resources

In trying to explain why the null hypothesis was not rejected as anticipated, the researcher investigated whether any of the organizational strategies identified by Knight and used in the research instrument would emerge as statistically significant in the relationship between Faculty Involvement and Campus Climate. Therefore, a bivariate regression analysis was performed using the three strategies identified by Knight and included in the survey instrument (Governance, Operations, and Human Resources) to test for significance.

The bivariate regression analysis between Governance as the independent variable and Faculty Involvement as the dependent variable (N=514) showed no statistical significance: $F_{(1, 486)} = .809$, $p > .001$. The bivariate regression analysis between Human Resources as the independent variable and Faculty Involvement as the dependent variable (N=422) showed no statistical significance $F_{(1, 396)} = .212$, $p > .001$.

The bivariate regression analysis between Operations as the independent variable and Faculty Involvement as the dependent variable (N=630) did show statistical significance $F_{(1, 593)} = 4.114$, $p < .05$. A Pearson Correlation test ($r = -.083$) shows a weak negative correlation between the variables indicating a weak or no relationship. This is statistically significant. The R Square (.007) indicates that the independent variable (Operations) accounts for .07% of the variation in the dependent variable (Faculty Involvement). Analysis of Variance (ANOVA) indicates that the slopes are not equal to 0. It is borderline significant (p-value=.043). The slope (-.186) means that as the independent variable increases by 1 unit, the dependent variable decreases by .186 unit. It is statistically significant (p-value=.043). (See Appendix F.2).

Therefore, the research hypothesis is accepted:

H_2: There is a relationship between the Operations strategy of Campus Climate and Faculty Involvement

The question that represents the Operations strategy of Campus Climate states, “Funds are available to support internationalization and the development of faculty members’ international skills and knowledge”. Therefore, one explanation for the significance between Faculty Involvement and this Operations strategy is that the provision of funding to support internationalization is related to faculty involvement in internationalization. This is consistent with earlier findings in one national research study (Henson, Noel, Gillard-Byers, & Ingle, 1991)

that showed the provision of funds is considered to be very important for internationalization and universities with a higher degree of internationalization indicate that the availability of funds played an important role in internationalization. According to Henson, Noel, et. al:

> Not only are funds important in terms of their support for ongoing international activities, but it appears that internationalization is enhanced by the availability of additional sources (frequently small amounts) of funds that can be accessed by faculty to be used entrepreneurially or to support new initiatives and programs. The presence of such funds also contributes to a supportive internal university environment and is viewed as a further indication of commitment on the part of the university. (p. 9)

The relationship between Campus Climate (Operations) and Faculty Involvement in Internationalization is weak, but is included as it may provide a basis for future research projects.

4.1.2 Cross tabulations and chi square

In continuing the analysis between faculty involvement and campus climate, a series of cross tabulations between items in the two survey sections was conducted. Sixty cross tabulations were conducted using ten items from the Faculty Involvement variable and six items from the Campus Climate variable. The ten items from the Faculty Involvement variable represent three of Knight's Program Strategies (Activity [ACT], Research & Scholarship [R/S], and External Relations [EXR]) and the six items from the Campus Climate represent three of Knight's Organization Strategies (Governance [GOV], Operations [OP], and Human Resources [HR]). Each of these sixty cross tabulations was tested using Chi Square to determine the statistically significant association between the responses. Of these sixty cross tabulations, almost 75% were shown to be statistically significant using the Chi Square statistic. Therefore it appears that some aspects of campus climate are indeed related to some aspects of faculty involvement.

The following matrix shows the items included and their program or organizational strategy category as identified by Knight. The body of the table indicates whether the Chi Square test showed statistical significance (S) or statistical insignificance (I) between the responses. The highlighted cells are used as examples with more information about the cross

tabulations and Chi Square statistics. Further study of these 60 cross tabulations can reveal more depth about respondents, however, just three are provided here for reference.

Table 39. Cross Tabulations and Chi Square

Campus Climate		Faculty Involvement									
		ACT				R/S			EXR		
		P6Q1	P6Q2	P6Q3	P6Q4	P6Q5	P6Q6	P6Q7	P6Q8	P6Q9	P6Q10
GOV	P5Q1	S	S	S	I	S	I	I	S	S	S
GOV	P5Q3	S	S	S	I	S	I	I	S	I	I
OP	P5Q4	S	S	S	S	S	S	I	S	S	S
HR	P5Q5	S	S	S	I	S	S	S	S	S	I
HR	P5Q7	I	I	S	S	S	S	S	S	S	S
HR	P5Q8	I	I	S	I	S	S	S	S	S	S

Campus Climate Items

P5Q1: Commitment to internationalization by senior leaders

P5Q3: Faculty are encouraged to include international perspectives and content in courses

P5Q4: Funds are available to support internationalization and to develop faculty expertise

P5Q5: Participation viewed favorably by department

P5Q7: Promotions committee recognizes and favorably reviews

P5Q8: Tenure committee recognizes and favorably reviews

Faculty Involvement Items

P6Q1: Taught course with international component

P6Q2: Revised existing or proposed new course with international component

P6Q3: Revised existing program or proposed new program with international component

P6Q4: Taught at foreign college or university

P6Q5: Presented research or creative works outside United States

P6Q6: Conducted research outside the United States.

P6Q7: Submitted or published in foreign journal or press

P6Q8: Worked with local organizations or schools on international project

P6Q9: Professional service or development project at foreign college or university

P6Q10: Develop or deliver education programs to other countries

Example 1:

- Independent Variable: There is an expressed commitment to internationalization by senior leaders (P5Q1).
- Dependent Variable: In the past three years, have you worked with local organizations or schools on projects of an international nature? (P6Q8).

The chi-square statistic is statistically significant at the 0.05 level (p-value = 0.01), indicating that there is a statistically significant association between responses to Questions P5Q1 and P6Q8: $X^2_{(5)} = 14.996$, $p < .05$ (see Appendix F.3). A cross tabulation of the two variables shows that of those who have worked with local organizations or schools on international projects in the past three years, 44.6% either strongly agree or agree that there is expressed commitment to internationalization by senior leaders, 33.5% either disagree or strongly disagree that there is expressed commitment by senior leaders, and 14.2% neither agree nor disagree. About a third of those of those who engage in projects with local organizations or schools do so in spite of noting a lack of expressed commitment to internationalization by senior leaders. Of those who have NOT worked with local organizations or schools on international projects, 34% either strongly agree or agree that there is expressed commitment to internationalization by senior leaders, 28.1% either disagree or strongly agree that there is that commitment, and 23.7% of respondents neither agree nor disagree.

Therefore, those who have been involved in this activity over the past three years have fewer neutral responses, and seem to have stronger opinions (either positive or negative) about the commitment of senior leaders to internationalization than faculty who have not worked with local organizations or schools on international projects. Faculty who have participated in these activities also appear to be twice as knowledgeable about the levels of commitment by senior leaders than those who have not participated (e.g. 7.7% of those who have participated vs. 14.2% of those who have not participated don't know).

Example 2:

- Independent Variable: Funds are available to support internationalization and the development of faculty members' international skills and knowledge (P5Q4).

- Dependent Variable**:** In the past three years, have you revised an existing course or proposed a new course that includes a significant component about other countries, cultures, or global issues? (P6Q2).

The chi-square statistic is statistically significant at the 0.01 level (p-value = 0.001), indicating that there is a statistically significant association between responses to Questions P5Q4 and P6Q2: $X^2_{(5)} = 21.612$, $p < .05$ (see Appendix F.3). Of those faculty who said they had revised an existing course or proposed a new course with a significant component about other countries, cultures, or global issues, 29.4% strongly agree or agree that there are funds available to support internationalization or faculty development in international skills and knowledge, 40.5% disagree or strongly disagree that funds are available, 18% neither agree nor disagree, and 12.1% don't know if funds are available or not. Of those faculty who have NOT revised an existing course or proposed a new course with a significant component about other countries, cultures, or global issues, 23.4% either strongly agree or agree that there are funds available for internationalization, 35.9% either disagree or strongly disagree that there are funds available for internationalization, 17% neither agree nor disagree, and 23.7% don't know. A greater percentage of the group who have created or revised international courses believe that funds are not available for internationalization or developing the international skills and knowledge of faculty. As before, those faculty who have been involved in this internationalization activity are almost twice as likely to know about availability of funds, than those who have not been involved (e.g. 12.1% of those involved in this activity vs. 23.7% of those not involved, don't know if funds are available).

Example 3:

- Independent Variable: The campus wide promotions committee recognizes and favorably reviews faculty involvement in internationalization activities (P5Q7)**.**
- Dependent Variable: In the past three years, have you conducted research outside the United States? (P6Q6).

The chi-square statistic is statistically significant at the 0.01 level (p-value = 0.000), indicating that there is a statistically significant association between responses to Questions P5Q7 and P6Q6: $X^2_{(5)} = 34.346$, $p < .01$ (see Appendix F.3). Of those faculty who have

conducted research outside the United States over the past three years, 22.3% strongly agree or agree that their participation is recognized and valued by the Promotions Committee. However, 34.7% of those who have conducted research either disagree or strongly disagree that their participation is recognized and valued by the Promotions Committee, 23.6% don't know, and 19.4% neither agree nor disagree. Faculty who have NOT conducted research outside the United States over the past three years are similar to those have conducted research in their level of agreement that internationalization is recognized by the Promotions Committee (24.6% strongly agree or agree) and in the percentage of those who neither agree nor disagree (20.4%). However, differences between the groups emerge when considering those who disagree or strongly disagree that participation is recognized and valued. Just 14.8% of those who have NOT conducted research disagree or strongly disagree, while faculty from the group who have conducted research are twice as likely to disagree or strongly disagree (34.7%) that their participation is recognized and valued by the Promotions Committee. A larger percentage of those who have NOT conducted research don't know if participation is recognized and valued by the Promotions Committee (40. 2%), as compared to 23.6% of those who have conducted research who profess they don't know. However, the numbers of those who don't know represent the largest percentage of both those who have participated or have not participated in research in countries other than the United States.

4.2 AND INTERNATIONAL EXPERIENCES

The next analysis investigated whether there is a relationship between faculty involvement in internationalization and international experiences. It was expected that data would reveal that there is a relationship between these two variables. In other words, it was expected that faculty who have had international experiences at different educational stages are more likely to be involved in internationalization as faculty members.

H_0: There is no relationship between international experiences and faculty involvement

H_3: There is a relationship between international experiences and faculty involvement

A Pearson Correlation was performed that shows a moderately strong positive correlation between the independent variable (International Experience, Q1-5) and the dependent variable

(Faculty Involvement). This correlation (r = .598) is statistically significant (p-value = .000). A regression analysis shows an R Square (.358) that indicates the independent variable accounts for 35.8% of the variance in the dependent variable. ANOVA indicates that the slope is not equal to 0. It is statistically significant (p-value = .000). The slope (.507) means that as the independent variable increases by 1 unit, the dependent variable increases by .507 units. It is statistically significant (p-value =.000). (See Appendix F.4)

A second regression analysis was done with International Experiences (Q1-3, before Faculty Status) as the independent variable and Faculty Involvement as the dependent variable. This was done so that the summed items included only the first three questions (educational stages before college, as an undergraduate, and as a graduate student), and excluded questions 4 and 5 that concerned international experiences as a faculty member that could possibly confound the analysis. Eliminating these two questions did reduce the strength of the correlation between the independent and dependent variables, but the correlation is still moderately strong (r = .456) and significant (p-value =.000, $p < .05$). A regression analysis shows an R Square (.208) that indicates the independent variable accounts for 20.8% of the variance in the dependent variable. ANOVA indicates that the slope is not equal to 0. It is statistically significant (p-value = .000). The slope (.518) means that as the independent variable increases by 1 unit, the dependent variable increases by .518 units. It is statistically significant (p-value =.000, $p < .05$). (See Appendix F.5)

4.3 BY FACULTY CHARACTERISTICS

Survey data were sorted and analyzed by groups, in order to determine whether certain faculty characteristics (gender, discipline of employment, type of teaching responsibilities, tenure status, faculty rank, and teaching or research preference) resulted in differences between groups. The research revealed that there are significant differences between groups as it relates to Faculty Involvement in Internationalization. When two groups were compared, a two-sample t-test for independent means with unequal variances was performed. When more than two groups were compared, Analysis of Variance (ANOVA) and post-hoc tests were performed. All tables, charts and graphs illustrating faculty involvement by selected characteristics are found in Appendix F.6.

4.3.1 Gender

There are statistically significant differences between male and female faculty members in the Pennsylvania State System of Higher Education (PASSHE) in terms of their levels of involvement in internationalization. Levene's Test for Equality of Variances, with equal variances not assumed, resulted in statistically significant differences by gender and faculty involvement with a p-value of .019: $t_{(738)} = 2.349$, $p < .05$. Therefore, males (N=363, Mean = 3.16) are more likely to have higher faculty involvement in internationalization than females (N=377, Mean = 2.66).

Male faculty outnumber female faculty in 11 of 13 different activities regarding international involvement (see Appendix D.2). The two activities that female faculty are more likely to be involved in than males are: teaching a course with a significant international component (53.7% of those who said "yes" to this question were female), and revising or proposing a new course with significant international component (53.45% of those who said "yes" to this question were female). Two items in which females are close to half of those responding "yes" are: presenting research or creative works outside of the U.S. (47.28%), and working with local organizations or schools on international projects (47.74%). However, female faculty are less likely to publish in a foreign press (41.94% said "yes" to this activity), to conduct research outside of the U.S. (37.5% said "yes" to this activity), to develop or deliver an educational program to other countries (38.89% said "yes" to this activity), or to teach at a foreign college or university outside of the U.S. (28.07% said "yes" to this activity). Some of these findings are consistent with data from United States faculty who participated in The Carnegie Foundation's *Study of the International Academic Profession* (Haas, 1996):

> Females have about half as many foreign publications and about one-third as many publications written in another language as do their male counterparts. On average, they devote about half as much time to collaborative research with foreign academics. But women's commitment to teaching and working directly with students in U.S. colleges and universities apparently does not unduly constrain potential international involvement if such activity is related to the teaching function. U.S. women academics are not appreciably different from men faculty in time given to serving as a faculty member in a foreign university or in

taking sabbatical leave abroad. And they are just about as likely as men to have traveled abroad for study or the conduct of research. (pp. 384-385)

4.3.2 Discipline of employment

Respondents could select one of ten disciplines of employment, therefore, the analysis of these group means was done using a one-way Analysis of Variance (ANOVA). A significant F value indicates that there are differences in the means: $F_{(9,730)} = 10.590$, $p < .05$. A post-hoc comparison test, Fisher's Least Significant Differences (LSD), was conducted to show significant pairwise differences between the groups that contribute to the overall significant difference between all groups. The Multiple Comparisons Table shows many statistically significant pairwise comparisons with p-values of less than .05 (statistically insignificant comparisons have been removed).

This Multiple Comparisons Table shows that humanities faculty have statistically significantly higher means than faculty from the other nine disciplines, while faculty from the Physical and Mathematical Sciences have statistically significantly lower means than faculty from five other disciplines. Faculty teaching in Education had approximately one less yes response than faculty teaching in Business and Commerce; approximately two less yes responses than faculty teaching in the Humanities; approximately one more yes response than faculty teaching in Physical and Mathematical Sciences; and approximately one less yes response than faculty teaching in the Social and Behavioral Sciences. The following table provides a summary of the means of faculty involvement by discipline, sorted in descending order.

Table 40. Faculty Involvement Means by Discipline of Employment

	Mean	N	Std. Dev.
Humanities	4.7589	112	3.28042
Business and Commerce	3.7297	37	3.29687
Social and Behavioral Sciences	3.3382	136	3.14636
Other Academic Discipline	2.7083	72	2.68243
Fine, Applied, and Performing Arts	2.5417	48	2.17293
Education	2.5282	142	2.70459
Life Sciences and Health	1.9806	103	2.22279
Agricultural and Animal Sciences	1.6364	11	1.91169
Physical and Mathematical Sciences	1.5942	69	1.65671
Engineering and Applied Sciences	1.5	10	1.35401
Total	2.9027	740	2.88222

Findings from The Carnegie Foundation's *Study of the International Academic Profession* are useful for comparison purposes. When describing U.S. faculty by discipline, Haas (1996) writes:

> Regardless of institutional affiliation, academics in the physical sciences, biological sciences, mathematics, and engineering top other disciplines in number of publications in foreign professional journals and books as well as in number of publications written in a foreign language. They also lead in number of months spent collaborating on a research project with an academic from another country. On average, however, these scientists, mathematicians and engineers do not lead the parade in foreign travel for professional activities. Apparently their research work with foreign academics does not require extensive time abroad. When it comes to traveling abroad to study or do research, faculty in the social sciences and humanities lead the way; they give significantly more months to those professional activities.
>
> It should be noted that it is social scientists who have spent the most time serving as faculty members in universities in other countries. It is somewhat unusual, by comparison, for academics in the physical sciences, biological sciences, mathematics, and engineering to engage in such service abroad. Their participation level is among the lowest. (pp. 383-384)

In a previous study by Goodwin and Nacht (1991), commissioned by the Council for the International Exchange of Scholars (CIES), interviews with faculty, department chairpersons and senior administrators at 37 institutions showed that certain disciplines and sub-disciplines are "avowedly international and therefore see repeated international experiences as essential to their health and growth" (p.18). These disciplines fall into one of two subcategories: (1) subjects that require materials, data, or specific experiences that can be found only overseas, or (2) other "applied subjects and fields that have decided they require an international dimension to be meaningful and to reach fulfillment" (p.19).

The sciences are the most complex to sort out and understand as there are several subcategories of reasons why scientists go abroad, such as field work and the need to gather specialized materials overseas: "We found scientists conducting this kind of field work not deeply affected by the "international" nature of the experience required of them. It just involves the complication of a passport and a longer plane ride....The local culture and even the language are minor impediments to these scientists, but seldom enough to justify the expenditure of effort sufficient to understand them fully" (p.21-22). Further, the study found that scientists look to the rest of the world for particular persons with whom to study and collaborate or for particular laboratories with specialized instrumentation in which to work. "There is not a great deal of "foreignness" in the time spent overseas....The language used on site is almost invariably English, and the attitude of many U.S. scientists is that the people and facilities are substantially the byproducts and extension of science in the United States" (p.22). Getting the answers overseas is of interest to scientists who believe they absolutely must go because that is where the scientific action is. For example, other countries are way ahead of the U.S. and results and publications are not done in English or are the domain of R&D firms (not universities). Access can be gained, "to the frontiers of scientific development only through a process of human interaction among scientists that is far more complex and demanding than the attendance at meetings and consultations with the English-language literature that are said to be all that is required at the moment in pure science" (p. 25).

Goodwin and Nacht (1991) also list four categories that often go into the decision-making process when considering an international experience. The first category, **personal costs**, includes considerations such as health and safety, family complications, and finances – including lost revenue or a loss in the step in the academic salary ladder. The second category,

professional costs, includes promotion and tenure. They say, “faculty in area studies and international disciplines most easily make good use of their time, by professional standards, manifested mainly in publications….foreign activities are perceived as legitimate within various disciplines" (p.42). The same is true for scientists who pursue fieldwork, collaboration, and instrumentation in other countries. Yet,

> All others face lowered estimation by colleagues. Since international travel connotes both wealth and dissipation to many Americans, any overseas experience suggests the danger of incipient if not actual moral decay....this is true especially in those disciplines and subdisciplines whose practitioners typically stay home. This prejudice is widely distributed throughout academe, and young faculty members should fear its presence especially on college or university-wide advisory committees on promotion and tenure. Even in several institutions that have a strong commitment to development assistance we were told of committees with members outside the development fields penalizing those within for their international involvement. (p.43)

Other professional costs might include an interruption in grants from a funding agency, a hiatus in publications and presentations at professional meetings, the loss of graduate students, and defeats in the scramble for space. A researcher noted, “The downtime is so great, a period abroad is a high-stakes roll” (p.44). Another social scientist reported that, “typically the catch-up time required after return from a trip abroad stood in the way of the timely writing up of research” (p.44). In addition, “For many capable, well-intentioned researchers it is difficult to translate experience abroad into publishable output because upon return, in addition to needing readjustment to their local scholarly climate, they are inundated with academic responsibilities that arise from their absence” (p.44). Another professional cost might be the attitudes of colleagues as, “their views of academic associates determine, in part, whether career advancement is affected positively or negatively by activity abroad….In general, we found that those who do not travel, for whatever reason, do not harbor much love for those who do...A young scholar in particular must think carefully about the real costs of incurring the effects of such attitudes” (p.44).

Professional benefits include the opportunity to collect research materials and advance scholarly sharing and idea generation; improvement in teaching; the “inevitability of

unpredictable consequences" (p. 47) that leads to shifts in career direction, new scholarly interests, collaborations, or transformations resulting in intellectual creativity; and professional prestige that accrue from international academic experiences. **Personal benefits** can include greater self-understanding; family participation that can draw family members closer together; an opportunity to serve their profession by sharing knowledge; and the opportunity to see a wider horizon and to get away from campus pressures for a while.

4.3.3 Type of teaching responsibility

Respondents could select one of four types of teaching responsibilities: entirely undergraduate; some undergraduate, some graduate or professional; entirely graduate or professional; no teaching at the present time. These four groups were compared using a one-way Analysis of Variance (ANOVA). A significant F value indicates that there are differences in the means: $F_{(3,736)} = 4.027$, $p < .05$

A post-hoc comparison test, Fisher's Least Significant Differences (LSD), was conducted and it shows significant pairwise differences between the groups that contribute to the overall significant difference between all groups. The Multiple Comparisons Table shows four statistically significant pairwise comparisons with p-values of less than .05 (statistically insignificant comparisons have been removed). Faculty with teaching responsibilities that are "Entirely Undergraduate" have statistically significant lower means in faculty involvement in internationalization than both faculty who teach "Some Undergraduate, Some Graduate or Professional" and faculty who teach "Entirely Graduate or Professional". Also, faculty with teaching responsibilities that are "Entirely Graduate or Professional" had significantly higher involvement means than faculty "Not teaching at the present time."

4.3.4 Tenure status

Respondents could select one of three choices for tenure status, "Tenured," "Tenure-Track", or "Non Tenure-Track". The analysis of these group means was done using a one-way Analysis of Variance (ANOVA). A significant F value indicates that there are differences in the means: $F_{(2,598)} = 3.131$, $p < .05$. A post-hoc comparison test, Fisher's Least Significant Differences

(LSD), was conducted to show significant pairwise differences between the groups that contribute to the overall significant difference between all groups. With a p-value of less than .05, one significant pairwise comparison of the means was found between tenured and non-tenure track faculty in that tenured faculty had statistically significant higher means than non-tenure track faculty. There were no statistically significant pairwise differences between tenure-track and tenured faculty, which implies that these two faculty groups share similar levels of international involvement.

4.3.5 Academic rank

Respondents could indicate which of the four faculty classifications they currently hold: Instructor, Assistant Professor, Associate Professor, or Professor. A significant F value from the one-way Analysis of Variance (ANOVA) indicates that there are differences in the means: $F_{(3,736)} = 7.842$, $p < .05$. A post-hoc comparison test, Fisher's Least Significant Differences (LSD) shows four statistically significant pairwise comparisons with p-values of less than .05. The LSD shows that faculty at Instructor rank had statistically significant lower means than Associate Professors and lower means yet than Professors. Assistant Professors and Associate Professors also had statistically significantly lower means than Professors.

4.3.6 Teaching or research preference

Faculty were asked to select their own academic preferences as to whether their interests lie primarily in teaching or in research. They were given four choices from which to select one: Primarily in teaching; In both, but leaning toward teaching; In both, but leaning toward research; and Primarily in Research. For the purpose of comparing these independent samples, respondents who selected "Primarily in teaching" and "In both, but leaning toward teaching" were combined into one group named "Teaching Preference." Those who selected "Primarily in Research" or "In both, but leaning toward research" were combined into one group named "Research Preference." Faculty who stated a teaching preference (N=580) had a Faculty Involvement in Internationalization Mean of 2.55 with a Standard Deviation of 2.611. Faculty

who stated a research preference (N=152) had a Faculty Involvement in Internationalization Mean of 4.22 and a Standard Deviation of 3.45.

A two-sample t-test for independent means with unequal variances was performed for faculty with Teaching and Research Preferences. Levene's Test for Equality of Variances, with equal variances not assumed, resulted in statistically significant differences between teaching/research preferences and faculty involvement with a p-value of .000: $t_{(730)} = -5.560$, $p < .05$. Therefore, faculty with a research preference are more likely to have higher faculty involvement in internationalization than faculty with a teaching preference. These findings are consistent with data from the Carnegie Foundation's Survey of the International Academic Profession. Altbach and Lewis (1996) state:

> On all but two of the fourteen measures of international activity (teaching classes for foreign students within the last three years and within the last ten years), those more committed to research than teaching had a greater likelihood of international involvement. That is, professors oriented to research are, not surprisingly, the professors who more often write for an international audience, travel and work abroad, and have relationships with academics in other countries. (p. 38)

5.0 ATTITUDES AND BELIEFS ABOUT INTERNATIONALIZATION

This study also sought to answer this research question: *How do faculty attitudes and beliefs about internationalization relate to faculty involvement in internationalization, faculty members' international experiences, and selected faculty characteristics?*

A factor analysis of the fourteen items in the Attitudes and Beliefs about Internationalization section was conducted and three factors emerged, indicating that these items are related to one another (Punch, 2005). The identification of these factors strengthens the analysis because it is now possible to closely examine and compare each of these factors as a variable, rather than using the overall attitudes and beliefs section as the variable. A lower Attitudes and Beliefs score for each factor indicates more agreement or more favorable attitudes. The statistical analyses were conducted between each of these three factors and the variables of faculty involvement in internationalization, international experiences, and selected faculty characteristics.

5.1 AND FACULTY INVOLVEMENT

The first analysis investigated whether there is a relationship between attitudes and beliefs about internationalization, and faculty involvement in internationalization. Each of the three attitudes and beliefs factors were used as independent variables in the analysis.

5.1.1 Factor 1

Factor 1: Scholarship of Research and Teaching. The first analysis investigated whether there is a relationship between Attitudes and Beliefs (Factor 1) as the independent variable and Faculty

Involvement in Internationalization as the dependent variable (N=672). It was expected that data would reveal that there is a relationship between Attitudes and Beliefs (Factor 1) and Faculty Involvement. Statistical analyses show that the relationship between Attitudes and Beliefs (Factor 1) and Faculty Involvement is statistically significant and has a rather strong correlation (Pearson r = -.631) (see appendix G.1). The relationship is negatively correlated because a lower score on Attitudes and Beliefs shows more agreement with the items while a higher score on Faculty Involvement indicates greater participation in internationalization activities. The R^2 value of .398 shows that the independent variable, Attitudes and Beliefs (Factor 1), accounts for 39.8% of the variance in the dependent variable, Faculty Involvement. The slope (-.318) means that as the independent variable increases by 1 unit, the dependent variable decreases by .318 unit. It is statistically significant (p-value=.000). Therefore the Null Hypothesis is rejected and the Research Hypothesis is accepted:

> H_4: There is a rather strong relationship between Attitudes and Beliefs (Factor 1: Scholarship of Teaching and Research) and Faculty Involvement in Internationalization.

5.1.2 Factor 2

Factor 2: Instruction and Curriculum. The second analysis investigated whether there is a relationship between Attitudes and Beliefs (Factor 2) as the independent variable and Faculty Involvement in Internationalization as the dependent variable (N=652). It was expected that data would reveal that there is a relationship between Attitudes and Beliefs (Factor 2) and Faculty Involvement. With a Pearson r of -.462, there is a moderately strong negative correlation between Attitudes and Beliefs (Factor 2) and Faculty Involvement that is statistically significant (p-value = .000) (see Appendix G.2). The R Square (.213) indicates that Factor 2 accounts for 21.3% of the variation in Faculty Involvement. The slope (-.360) means that as the independent variable increases by 1 unit, the dependent variable decreases by .360 unit. It is statistically significant (p-value =.000). Therefore the Null Hypothesis is rejected and the Research Hypothesis is accepted:

> H_5: There is a moderately strong relationship between Attitudes and Beliefs (Factor 2: Curriculum and Instruction) and Faculty Involvement in Internationalization.

5.1.3 Factor 3

Factor 3: Impact of Curriculum on Students. The third analysis investigated whether there is a relationship between Attitudes and Beliefs (Factor 3) as the independent variable and Faculty Involvement as the dependent variable (N= 687). With a Pearson Correlation of -.263, there is a rather weak negative correlation between Attitudes and Beliefs (Factor 3) and Faculty Involvement (N=687) (see Appendix G.3). This is statistically significant (p-value = .000). The R Square (.069) indicates that Factor 3 accounts for 6.9% of the variation in Faculty Involvement. The slope (-.381) means that as the independent variable increases by 1 unit, the dependent variable decreases by .381 unit. It is statistically significant (p-value =.000). Therefore the Null Hypothesis is rejected and the Research Hypothesis is accepted:

> H_6: There is a rather weak relationship between Attitudes and Beliefs (Factor 3: Impact of Curriculum on Students) and Faculty Involvement in Internationalization.

5.1.4 Multiple regression

A multiple regression was performed with all three Factors of Attitudes and Beliefs as independent variables and Faculty Involvement as the dependent variable (N=589). The purpose of this test was to determine what unique contribution to understanding and predicting the dependent variable each of the independent variables make. With multiple regression, it is possible to see which variables are of most and least importance in accounting for the variance in the dependent variable (Punch, 2005, p. 79).

The R Square (.400) indicates that the independent variables account for 40% of the variation in the Dependent Variable. Analysis of Variance (ANOVA) indicates that at least one of the slopes is not equal to 0, which is statistically significant (p-value = .000). Based on the Beta weights, Factor 1 has the most substantial impact on the faculty involvement compared to other factors. Factor 1 (p-value =.000) and Factor 3 (p-value=.039) are statistically significant. Factor 2 (p-value =.259) is insignificant (see Appendix G.4).

5.2 AND INTERNATIONAL EXPERIENCES

The next analysis investigated whether there is a relationship between International Experience and Attitudes and Beliefs. It was expected that data would reveal that there is a relationship between these two variables. In particular, it was expected that faculty who have more international experiences will also have more positive attitudes and beliefs about internationalization. As before, the analysis was conducted with each of the three attitudes and beliefs factors.

5.2.1 Factor 1

Factor 1: Scholarship of Research and Teaching. The first analysis reviewed the relationship between International Experience as the independent variable and Attitudes and Beliefs (Factor 1) as the dependent variable (N=673) (see Appendix G.5). This relationship is statistically significant and has a moderately strong correlation (Pearson r = -.500). The relationship is negatively correlated because a lower score on Attitudes and Beliefs shows more agreement with the items (a more favorable Attitudes and Beliefs score) while a higher score on International Experience indicates greater levels of experience. The R^2 value of .250 shows that International Experience accounts for 25% of the variance in the dependent variable. The slope (-.837) means that as the independent variable increases by 1 unit, the dependent variable decreases by .837 unit. It is statistically significant (p-value=.000). Therefore the Null Hypothesis is rejected and the Research Hypothesis is accepted:

> H_7: There is a moderately strong relationship between International Experiences and Attitudes and Beliefs (Factor 1: The Scholarship of Research and Teaching).

5.2.2 Factor 2

Factor 2: Instruction and Curriculum. The second analysis investigated whether there is a relationship between International Experience as the independent variable and Attitudes and Beliefs (Factor 2) as the dependent variable (N=647) (see Appendix G.6). Statistical analyses

show that the relationship between International Experience, and Attitudes and Beliefs (Factor 2) is statistically significant and has a moderate correlation (Pearson r = -.385). The relationship is negatively correlated because a lower score on Attitudes and Beliefs shows more agreement with the items (a more favorable Attitudes and Beliefs score) while a higher score on International Experience indicates greater levels of experience. The R^2 value of .149 shows that International Experience accounts for 14.9% of the variance in the dependent variable, Attitudes and Beliefs (Factor 2). The slope (-.418) means that as the Independent Variable increases by 1 unit, the Dependent Variable decreases by .418 unit. It is statistically significant (p-value =.000). Therefore the Null Hypothesis is rejected and the Research Hypothesis is accepted:

H_8: There is a moderate relationship between International Experiences and Attitudes and Beliefs (Factor 2: Curriculum and Instruction).

5.2.3 Factor 3

Factor 3: Impact of Curriculum on Students

The third analysis investigated whether there is a relationship between International Experience as the independent variable and Attitudes and Beliefs (Factor 3) as the dependent variable (N=682) (see Appendix G.7). Statistical analyses show that the relationship between International Experience, and Attitudes and Beliefs (Factor 2) is statistically significant but has a weak correlation (Pearson r = -.178). The R^2 value of .032 shows that International Experience accounts for 3.2% of the variance in the dependent variable, Attitudes and Beliefs (Factor 3). ANOVA indicates that the slope is not equal to 0. It is statistically significant (p-value = .000). The slope (-.104) means that as the independent variable increases by 1 unit, the dependent variable decreases by .104 unit. It is statistically significant (p-value =.000). Therefore the Null Hypothesis is rejected and the Research Hypothesis is accepted:

H_9: There is a weak relationship between International Experiences and Attitudes and Beliefs (Factor 3: Impact of Curriculum on Students).

5.3 BY FACULTY CHARACTERISTICS

Survey data were sorted and analyzed by groups, in order to determine whether certain faculty characteristics (gender, discipline of employment, type of teaching responsibilities, tenure status, faculty rank, and teaching or research preference) resulted in attitudes and beliefs differences by groups. The research revealed that there are differences between groups relating to the three Factors of Attitudes and Beliefs. When two groups were compared, a two-sample t-test for independent means with unequal variance was performed. When more than two groups were compared, Analysis of Variance (ANOVA) and post-hoc tests were performed. All tables, charts and graphs illustrating attitudes and beliefs by selected characteristics are found in Appendix G.8.

5.3.1 Gender

Factor 1: Scholarship of Research and Teaching. With a p-value of .590, Levene's Test for Equality of Variances, with equal variances not assumed, resulted in no statistical difference between males (Mean=15.09) and females (Mean = 14.85) regarding Attitudes and Beliefs (Factor 1: Scholarship of Research and Teaching). Therefore attitudes related to the Scholarship of Research and Teaching are not significantly different by gender.

Factor 2: Instruction and Curriculum. Levene's Test for Equality of Variances, with equal variances not assumed, resulted in statistically significant differences by gender of Attitudes and Beliefs (Factor 2: Instruction and Curriculum) with a p-value of .001. This means that females (Mean = 9.48) are more likely than males (Mean = 10.43) to have more positive Attitudes and Beliefs (lower means) about Internationalization related to Instruction and Curriculum.

Factor 3: Impact of Curriculum on Students. Levene's Test for Equality of Variances, with equal variances not assumed, resulted in statistically significant differences between gender and Attitudes and Beliefs (Factor 3: Impact of Curriculum on Students) with a p-value of .000. This means that females (Mean = 4.03) are more likely than males (Mean = 4.61) to engage in positive perceptions of Attitudes and Beliefs about Internationalization (Impact of Curriculum on Students).

The data show that gender is a predictor of Attitudes and Beliefs in two of three factors that are closely related to instruction and curriculum. Given that females comprise more than half of the faculty who list a primary preference for teaching (59.62% of respondents), and they also make up the majority of those faculty involved in the top two curriculum items listed in Faculty Involvement, this finding about attitudes and beliefs related to instruction and curriculum makes sense. It is also conceivable that because most, if not all, of curriculum and instruction "happens at home[12]," it is possible that female faculty are able to follow through on their favorable attitudes about internationalization by incorporating it in their teaching.

5.3.2 Discipline of employment

Factor 1: Scholarship of Teaching and Research. The ANOVA indicates that there are significant differences between discipline of employment and Factor 1, with a p-value of .000. The discipline with the lowest Mean (most favorable attitudes) is Humanities, followed by Social and Behavioral Sciences, and then by Agricultural and Animal Sciences. The discipline with the highest mean (least favorable attitudes) is the Physical and Mathematical Sciences. The Multiple Comparisons Table shows multiple statistically significant pairwise comparisons with a p-value of less than .05.

Factor 2: Instruction and Curriculum. The ANOVA indicates that there are statistical differences between discipline of employment and Factor 2 with a p-value of .000. The discipline with the lowest mean is Humanities; followed by the Fine, Applied, and Performing Arts; and the Social and Behavioral Sciences. The discipline with the highest mean for this Factor is Engineering and Applied Sciences. The Multiple Comparisons Table shows multiple statistically significant pairwise comparisons.

[12] The concept of Internationalization at Home (IaH) is instructive here. While the educational community in the United States has been considering diversity and multicultural issues in the curriculum and schools for many years, the European community has recently approached this topic with the introduction of the concept of Internationalisation at Home (IaH), a new approach "to 'internationalise' the education of that vast majority of higher education students [in Europe] who would never leave their home country" (Wachter, 2003, p.5). Two pillars of this concept put forth by Bengt Nilsson in the late 1990's are identified: an understanding of internationalisation that goes beyond mobility and a strong emphasis on the teaching and learning in a culturally diverse setting (Wachter, 2003).

Factor 3: Impact of Curriculum on Students. The ANOVA indicates that there are statistical differences between discipline of employment and Factor 3 with a p-value of .000. The discipline with the lowest mean is Humanities, followed by Social and Behavioral Sciences and Agricultural and Animal Sciences. The discipline with the highest mean is again Engineering and Applied Sciences. The Multiple Comparisons Table shows multiple statistically significant pairwise comparisons.

All three factors of *Attitudes and Beliefs* show significant differences by discipline of employment. This indicates the presence of very real differences by discipline in how faculty view and engage in internationalization activities. Given the strong affiliations that faculty have to their disciplines (which is stronger than their affiliations to their departments and universities), the key to internationalization by discipline could rest in how these scholarly communities construct their academic work and shape the direction of the disciplines for future generations. Disciplinary associations, publications and conferences could be helpful in emphasizing the internationalization of their professions.

5.3.3 Type of teaching responsibilities

Factor 1: Scholarship of Teaching and Research. The ANOVA indicates that there are significant differences in the means according to type of teaching responsibilities. The Multiple Comparisons Table shows two statistically significant pairwise comparisons with a p-value of less than .05. Faculty who teach "some undergrad, some grad or professional" have significantly lower means than faculty who teach at the "entirely undergraduate" level or who have "no teaching responsibilities at the present time." A lower mean indicates a more favorable attitude towards internationalization. The differences in the means between faculty who teach "entirely at the graduate or professional level" and those who teach "some undergraduate, some graduate or professional" are not statistically significant. Therefore faculty who teach some or all at the graduate level have similar attitudes toward internationalization as they relate to Factor 1: Scholarship of Teaching and Research.

Factor 2: Instruction and Curriculum. The ANOVA indicates that there are no significant differences in the means by type of teaching responsibilities for Factor 2 of Attitudes and Beliefs.

Factor 3: Impact of Curriculum on Students. The ANOVA indicates that there are no significant differences in the means by type of teaching responsibilities for Factor 3 of Attitudes and Beliefs.

5.3.4 Tenure status

The ANOVA indicates that there is no statistical significance between Tenure Status and any of the three Attitudes and Beliefs factors. Therefore, faculty at all tenure status levels are similar in their attitudes and beliefs about internationalization.

5.3.5 Faculty rank

The ANOVA indicates that there is no statistical difference between Academic Rank and any of the three Attitudes and Beliefs factors. Therefore, faculty at all academic ranks are similar in their attitudes and beliefs about internationalization.

5.3.6 Teaching or research preference

Factor 1: Scholarship of Teaching and Research. Levene's Test for Equality of Variances, with equal variances not assumed, resulted in statistically significant differences between teaching/research preferences and Factor 1 of Attitudes and Beliefs with a p-value of .000. This means that faculty with a research preference are more likely to have more favorable (lower scores) attitudes and beliefs about internationalization on Factor 1 (Scholarship of Teaching and Research) than faculty with a teaching preference.

Factor 2: Instruction and Curriculum. Levene's Test for Equality of Variances, with equal variances not assumed, resulted in statistically significant differences between teaching or research preferences and Factor 2 of Attitudes and Beliefs with a p-value of .002. Faculty with a research preference are more likely to have more favorable (lower scores) attitudes and beliefs about internationalization on Factor 2 (Instruction and Curriculum) than faculty with a teaching preference.

Factor 3: Impact of Curriculum on Students. Levene's Test for Equality of Variances, with equal variances not assumed, resulted in a borderline statistically significant difference between teaching or research preferences and Factor 3 of Attitudes and Beliefs with a p-value of .047. Given that the variances are very close to being equal, statistical significance is too close to call for Factor 3 of Attitudes and Beliefs. Therefore, the means of faculty with a research preference and faculty with a teaching preference are not interpreted as statistically significant.

6.0 DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

This research study investigated the attitudes, beliefs, experiences and involvement related to internationalization by faculty members at a select group of public universities in the United States. The study collected data that were used to provide a descriptive and correlational analysis in order to: explore and describe faculty attitudes, beliefs and experiences regarding internationalization; review the extent to which faculty members incorporate an international perspective into their own teaching, research, and scholarship; determine whether relationships exist between faculty characteristics, campus climate, and internationalization attitudes, beliefs and behaviors; and to examine whether patterns emerge that may be used to describe or predict faculty members' orientation to internationalization.

Data were collected using a survey instrument that was accessed over the internet (Best & Krueger, 2004; Dillman, 2000). Potential respondents were invited to participate in the study by an e-mail message that contained an embedded hyperlink to a website hosting the instrument. The survey instrument, which included existing questions from previous national or international surveys and new questions developed by the researcher, was translated to a web-based format and administered with help from a university center that specializes in software systems and information technology applications. Data collection occurred in a carefully controlled environment that addressed issues of survey access, security, response monitoring, and trouble shooting in the event of problems or questions from the research population. Faculty from nine public universities were invited to participate in the study (n=3,599); 829 faculty members chose to do so.

The research project included seven research questions. The first five research questions sought descriptive and attitudinal data about faculty members' academic backgrounds and preferences, international experiences, foreign language fluency, assessments of campus climate, attitudes and beliefs about internationalization of higher education in the United States, and the

extent to which they incorporate an international perspective into their own teaching, research and scholarship. The next two questions sought to establish relationships, correlations and factors between the research variables in order to provide a basis to understand and predict attributes related to internationalization by faculty. The analysis helps to explain the internationalization of faculty at this select group of public universities in the United States and provides a basis with which to compare data to previous national and international studies.

6.1.1 International experiences are important

This research project provided rich data describing characteristics of the faculty that could be applied in analyzing the state of faculty opinions, attitudes, preparation and practices related to internationalization. Of special interest are data related to the international experiences of faculty, which shows increasing percentages of respondents having international experiences at later stages of their educational careers. Over 36% have had international academic experiences as faculty members, 25.5% as graduate students, 25% as undergraduate students, and 15% before college. This trend is worth noting because it speaks to the possibility that faculty are increasingly interested in international experiences as time goes on.

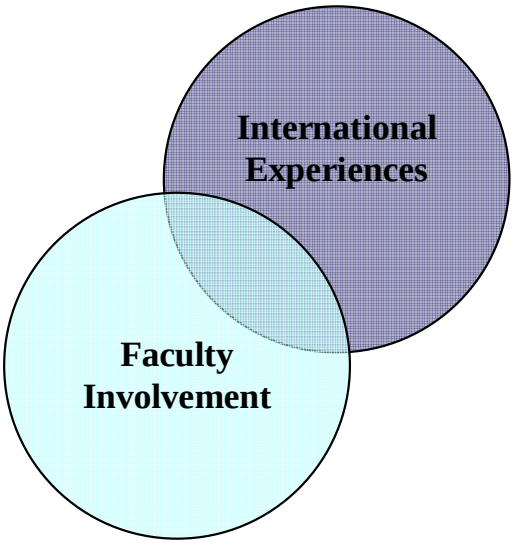
The length of international experiences varies at different educational stages, with more students than faculty reporting periods of *one year or more* abroad, and more faculty reporting educational experiences of *less than one month* than students. Shorter times abroad for faculty are more than double that of graduate students, and more than triple that of undergraduate students. This may reflect differences in program structures, or it may reflect a preference for faculty to take shorter trips given their other responsibilities. However, providing opportunities for shorter experiences may help to boost faculty participation even further.

The percentage of faculty who reported they had international experiences of *one month or more and less than one year* is similar to the percentage of faculty who indicated they had been abroad for *one month or less* (13.1% and 14% respectively). The percentage of faculty reporting they had been abroad for *one month or more and less than one year* was higher than that of students (8% for graduate students, 9% for undergraduate students, and 2% pre-college). Given that respondents were asked to provide the cumulative total of time spent abroad at each educational stage, it is not possible to know whether these amounts of time reflect one or more

trips abroad. Therefore it would be beneficial to study the patterns of faculty international experiences in greater detail to record the frequency and duration of such trips, so that faculty-friendly experiences could be designed.

Understanding the breadth and depth of international experiences is important because this study shows that they are related to faculty involvement in internationalization. As international experiences increase, so too does faculty involvement in internationalization. In other words, faculty who have higher international experiences scores also have higher levels of involvement in internationalization activities as faculty members. These two variables are strongly correlated and statistically significant.

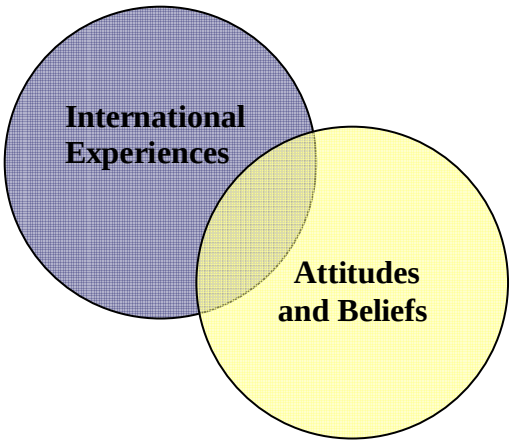
Figure 1. International Experiences and Faculty Involvement



Even with the strong correlation between international experiences and faculty involvement, causality is not established. While the data show a strong relationship between the two, it is not appropriate to assume that international experiences cause faculty international involvement. Rather, it is just as possible that an interest in international experiences existed all along, beginning in the earlier stages of educational preparation and simply continuing in the expression of academic work as faculty members. Therefore, to better understand the depth and nuances of the relationship between international experiences at different stages and international involvement as faculty members, more research is recommended.

The research also shows that international experiences are related to attitudes and beliefs about internationalization. In general, faculty with the highest international experiences scores also have the most favorable attitudes and beliefs about internationalization. The strength of the relationship varies by the three Attitudes and Beliefs Factors identified in the analysis. The strongest relationship is between international experiences and Factor 1, the Scholarship of Research and Teaching. It is easy to see why attitudinal questions relating to an international disciplinary perspective, keeping up with works published in other countries, and connecting with scholars in other countries naturally fit with more international experiences. Also significant but somewhat less strong is the relationship between international experiences and Factor 2, Instruction and Curriculum. The importance of the curriculum as a means to internationalize the campus cannot be overlooked. The weakest, yet still significant, relationship is between international experiences and Factor 3, Impact of Curriculum on Students.

Figure 2. International Experiences, and Attitudes and Beliefs

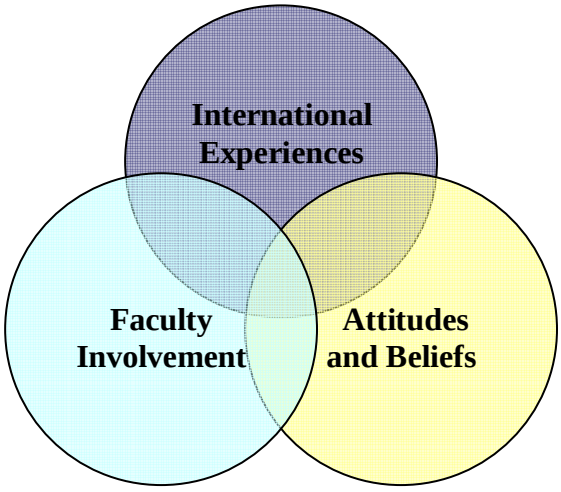


As before, causality is not established. International experiences are related to attitudes and beliefs, but it is not established whether international experience causes favorable attitudes, or whether favorable attitudes lead to more international experiences. However, given the importance of the connection between international experience and favorable attitudes, it is possible that providing international experience to faculty will positively affect attitudes and beliefs, which may very well result in increased faculty involvement in internationalization. Alternatively, when hiring new faculty members, screening for international experiences may lead to a cadre of faculty who are more likely to be involved in internationalization.

6.1.2 Attitudes and beliefs about internationalization are important

Another important finding is that of the relationship between Attitudes and Beliefs about Internationalization, and Faculty Involvement. Faculty with more favorable attitudes about internationalization are likely to have higher levels of involvement in internationalization, although the strength of the relationship varies by the three attitude and beliefs factors. A rather strong relationship is shown between faculty involvement and Factor 1, the Scholarship of Research and Teaching. A moderately strong relationship exists between faculty involvement and Factor 2, Instruction and Curriculum. A rather weak, but still statistically significant, relationship exists between faculty involvement and Factor 3, the Impact of Curriculum on Students. Therefore, attitudes toward internationalization can be considered a predictor of faculty involvement in internationalization, especially for the first two factors. When this finding is combined with the relationship between international experiences, and attitudes and beliefs about internationalization, it is possible to see that the relationships between these three variables are all related. The following illustration joins together these three variables.

Figure 3. International Experiences, Faculty Involvement, and Attitudes and Beliefs



Even with the relationships established, it is still not possible to show the direction of these relationships. However, if it is the case that international experiences shape attitudes and beliefs in a more favorable direction, and the ultimate benefit is greater faculty involvement in internationalization, then the key is to provide more opportunities for international experiences to

the faculty. These international experiences can be geared to researchers and teachers alike, with the benefit of involvement in activities that benefit the curriculum and instruction, as well as the research and scholarship of the faculty. If indeed favorable attitudes and beliefs come first, and international experiences and/or faculty involvement come later, making international opportunities available can convert favorable attitudes and beliefs into behaviors – including eventual incorporation of international perspectives in faculty teaching, research and service activities. The involvement of students in international experiences can also nurture and transform attitudes and beliefs at an earlier stage, especially for students who go on to become teachers or university professors.

6.1.3 Complexity of campus climate

One of the hypotheses of the study is that campus climate is an important factor in faculty involvement in internationalization. In other words, it was thought that faculty involvement in these activities could be explained, enhanced or determined in part by the campus climate. However, testing between responses of the Campus Climate and Faculty Involvement variables did not show statistical significance. Does this mean that campus climate does not affect faculty involvement? Or does this mean that further study is needed to more conclusively answer this question?

In an effort to understand the relationship between campus climate and faculty involvement, further analysis was done by breaking the items into sections of items following Knight's (2004) organizational strategies. Questions were sorted into "governance", "human resources" and "operations". Additional testing was done, and of these three variables, only operations showed a relationship (although it was weak) with faculty involvement. The operations item dealt with the availability of funding to "support internationalization and the development of faculty members' international skills and knowledge". The provision of funds to support internationalization was found to be very important in a 1991 study by Henson, Noel, Gillard-Byers, & Ingle, in that "The presence of such funds also contributes to a supportive internal university environment and is viewed as a further indication of commitment on the part of the university" (p.9); and is listed as a strategy for increasing faculty involvement in other works (American Association of State Colleges and Universities, 1995; Harari, 1981; McCarthy,

2003; Pickert, 1992; Siaya & Hayward, 2003; Stimpfl, 1996; Van de Water, Hoemeke, Kopp, & Smuckler, 1989).

When individual items from faculty involvement and campus climate were compared, chi square tests showed many cross tabulations were statistically significant, indicating that some aspects of campus climate are indeed related to some aspects of faculty involvement. These item by item comparisons provide the basis for further interpretation and study of the possible effect of climate on faculty involvement. For example, of those who have conducted research abroad, 35% either disagree or strongly disagree that their participation is recognized and valued by the Promotions Committee. This indicates a cultural element on campus that excludes international activities from a very important part of academic life – that of being promoted. Therefore, strategies to incorporate internationalization as a positive consideration for achieving promotion can be considered as one way to improve campus climate and to further faculty involvement in international activities. These item by item comparisons provide a rich basis from which to draw upon for further analysis. In addition, such analyses can provide direction for cultural studies that may involve other data collection approaches – such as case studies and individual interviews.

An important trend in responses to items in the campus climate section should also be noted – that of the very large percentages who indicated they "don't know" how aspects of campus climate play out as it related to international activities. Several items in particular had very high percentages of "don't know" responses, with the two highest "don't know" percentages indicating that faculty are unaware of whether the campus wide tenure committee and the campus wide promotions committee "recognize and favorably review faculty involvement in internationalization". Using the cross tabulation provided above, 40.2% of faculty who have not conducted research abroad and 23.6% of those who have conducted research abroad "don't know" whether such participation is recognized and valued by the Promotions Committee. This lack of knowledge about how international activities are evaluated by this committee will certainly not endear faculty who are working to build their portfolios for a favorable promotions review. Promotion on campus is considered to be very competitive. Not knowing how international activities fare in the review can provide a further detriment to getting involved in international work at earlier stages of an academic career because of uncertainty in the promotions process.

Other "don't know" responses indicate a lack of knowledge (in descending order) about opportunities for international scholars to teach, conduct research or collaborate with U.S. based faculty; whether commitment to international education is mostly symbolic; whether funds are available to support internationalization and the development of faculty members' international skills and knowledge; whether there is an expressed commitment to internationalization by senior leaders; if international expertise is part of recruitment and selection of new faculty; or whether there is active involvement in internationalization by faculty and staff. The percentages of don't know responses are lowest in two questions that could be considered as peer-to-peer network based – for example, whether participation is viewed favorably by the faculty member's academic department, and whether they are actively encouraged to include international perspectives and content in their courses. Therefore information networks seem strongest within departments, so if university leaders wish to inform and encourage internationalization, building upon departmental networks may be an effective communication strategy. Raising awareness and reducing uncertainty about support for international activities is one approach to increasing involvement by faculty.

The conclusion here is that campus climate and university culture[13] is an important consideration. However, it is a complex phenomenon and not easily understood with just one type of data collection. Kuh and Whitt (1988) note that, "The nature of culture (complex, mutually shaping, holistic, continually evolving, essentially tacit) suggests that traditional methods of social science research, grounded in positivism, are not capable of describing the multiple, overlapping layers of institutional culture" (pp. 102-103). While this survey provides some clues as to the relationship between campus climate and faculty involvement in internationalization, future analyses, following an ethnographic, interpretive, or culture audit approach (Austin, 1990; Kuh & Whitt, 1988; Masland, 1985; M. W. Peterson & Spencer, 1990; Tierney, 1985, 1988; Wilkins, 1983) are recommended.

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[13] M.W. Peterson and Spencer (1990) say that *culture* and *climate* are concepts describing a subset of the internal environment of an institution. *Culture*, "focuses on the deeply embedded patterns of organizational behavior and the shared values, assumptions, beliefs, or ideologies that members have about their organization or its work" (p. 6). *Climate* can be defined as, "the current common patterns of important dimensions of organizational life or its members' perceptions of and attitudes toward those dimensions" (Hellriegel and Slocum, 1974 cited in M.W. Peterson and Spencer, 1990, p. 7).

6.1.4 Faculty characteristics are important

Earlier analyses reviewed faculty involvement by selected faculty characteristics, and attitudes and beliefs by selected faculty characteristics. This section discusses faculty characteristics in light of findings related to BOTH faculty involvement and the three factors of attitudes and beliefs about internationalization. In this way, differences by faculty characteristics can illuminate possibilities for understanding and enhancing internationalization of the academic profession. The discussion is organized first by selected faculty characteristic, which is compared to Faculty Involvement AND the three factors for Attitudes and Beliefs.

6.1.4.1 Gender The data show that male faculty are more likely than female faculty to be involved in internationalization. Male faculty outnumber female faculty in all activities except for two: teaching a course with a significant international component, and revising or proposing a new course with significant international. When it comes to attitudes and beliefs about internationalization, male and female attitudes are not significantly different for Factor 1 (Scholarship of Teaching and Research), but they are significantly different for Factor 2 (Instruction and Curriculum) and Factor 3 (Impact of Curriculum on Students), in that females are more likely than males to have positive attitudes and beliefs about internationalization. The finding that female faculty have similar or more favorable attitudes about internationalization, yet are less engaged overall in internationalization, presents an opportunity to identify gender specific benefits or costs (to borrow from earlier research by Goodwin and Nacht) and in structuring opportunities in order to increase female participation in internationalization.

6.1.4.2 Discipline of employment The data show that faculty from different disciplines or fields of study have significant differences in their levels of involvement in internationalization, as well as in their attitudes and beliefs about internationalization. For example, faculty from the humanities had statistically significant higher faculty involvement means than faculty from the other nine disciplines, while faculty from the physical and mathematical sciences had statistically significantly lower involvement means than faculty from five other disciplines. Attitudes and beliefs about internationalization also vary by discipline. In all three factors, faculty from the humanities had the most favorable attitudes and beliefs. Social and behavioral sciences was

second for Factor 1 (Scholarship of Research and Teaching) and for Factor 3 (Impact of Curriculum on Students), and third for Factor 2 (Instruction and Curriculum). Fine, Applied and Performing Arts was second for Factor 2 (Instruction and Curriculum), fifth for Factor 1 (Scholarship of Research and Teaching), and sixth for Factor 3 (Impact of Curriculum on Students). Least favorable attitudes toward internationalization were shown by faculty from the physical and mathematical sciences, from the engineering and applied sciences, and from the life sciences and health for all three factors.

Differences by discipline are not surprising, given what we already know about academic work in different fields of study. As noted by Goodwin and Nacht (1991), some subjects require materials, data or specific experiences that can only be found overseas, while other applied fields have determined an international dimension is needed to make the field meaningful. Goodwin and Nacht's research also reviewed personal and professional benefits and costs related to international work, which might help to explain differences in involvement and/or attitudes. Personal costs, such as health and safety, family complications, and finances – including lost revenue or a loss in the step in the academic salary ladder – could be applied to any faculty member, regardless of field of study. However professional costs, including promotion and tenure, are more discipline specific, for example: "faculty in area studies and international disciplines most easily make good use of their time, by professional standards, manifested mainly in publications….foreign activities are perceived as legitimate within various disciplines" (p.42). The same is true for scientists who pursue fieldwork, collaboration, and instrumentation in other countries. Yet,

> All others face lowered estimation by colleagues. Since international travel connotes both wealth and dissipation to many Americans, any overseas experience suggests the danger of incipient if not actual moral decay....this is true especially in those disciplines and subdisciplines whose practitioners typically stay home. This prejudice is widely distributed throughout academe, and young faculty members should fear its presence especially on college or university-wide advisory committees on promotion and tenure. Even in several institutions that have a strong commitment to development assistance we were told of committees with members outside the development fields penalizing those within for their international involvement. (p.43)

6.1.4.3 Type of teaching responsibilities Faculty who are teaching solely at the undergraduate level are less involved in internationalization than those who have some or all graduate teaching responsibilities. Undergraduate only faculty also have less favorable attitudes and beliefs about internationalization for Factor 1 (Scholarship of Research and Teaching), but there are no significant differences by type of teaching responsibilities for Factor 2 (Instruction and Curriculum) and Factor 3 (Impact of Curriculum on Students). Furthermore, faculty who are teaching entirely at the graduate or professional level have significantly higher levels of involvement and more favorable attitudes than faculty who are not currently teaching. The two groups of faculty who teach a combination of undergraduate and graduate students, or who teach entirely at the graduate level have similar attitudes toward internationalization.

6.1.4.4 Tenure status There are significant differences between faculty who are tenured and those who are in non tenure-track positions, in that tenured faculty are more involved in internationalization. Tenured and tenure-track faculty are not significantly different, implying that these two groups have similar levels of international involvement. There are not statistically significant differences between tenure status and all three factors of attitudes and beliefs. Therefore, the attitudes of faculty in non tenure-track positions are not that different from faculty who are tenured or who are in tenure-track positions. Given that non tenure-track faculty are less involved in internationalization, despite similar attitudes as other faculty, this indicates that hiring faculty in non tenure track positions is detrimental to advancing internationalization. While these faculty have ample opportunity for interaction with students through their teaching, they are not as involved in internationalization and thus another opportunity for reaching students through the curriculum is lost. Further analysis as to the nature of these non-tenure track faculty appointments would better define the areas and disciplines that are most affected by this finding.

6.1.4.5 Faculty rank There are significant differences in faculty involvement by rank. Faculty at Instructor rank had lower means than Associate Professors and lower means yet than Professors. Assistant Professors and Associate Professors also had statistically significant lower means than Professors. In reference to attitudes and beliefs about internationalization, the analysis indicates that there are no statistical differences between Academic Rank and any of the

three attitudes and beliefs factors. Therefore, faculty attitudes are not different by faculty rank, yet faculty involvement in internationalization is significantly different by rank. While it is encouraging that faculty attitudes about internationalization are not that different between the faculty at different academic levels, it is important to investigate why faculty are not getting involved in internationalization at earlier stages of their academic life. Although there could be many explanations for why faculty involvement varies by rank, it is worth considering the impact that the promotions process has on guiding faculty involvement in international activities. This finding could suggest that international activities are not strongly supported during the promotions process and therefore faculty who are working toward promotion do not invest their time in these activities during the earlier stages of their careers. This research finding should be studied in more depth to better understand why faculty at lower ranks have lower average levels of involvement in internationalization than faculty at the highest rank.

6.1.4.6 Teaching or research preference Faculty with a research preference are more likely to have higher levels of involvement in internationalization than faculty with a teaching preference. These findings are consistent with data from the Carnegie Foundation's Survey of the International Academic Profession that also show more involvement in internationalization by faculty who have a research preference. Faculty with a research preference also have more favorable attitudes and beliefs about internationalization on Factors 1 and 2 of Attitudes and Beliefs than faculty with a teaching preference. Regarding Factor 3, there is a borderline statistically significant difference between faculty with teaching or research preferences, with variances that are very close to being equal, therefore statistical significance is too close to call for Factor 3. Given the parallels between faculty involvement and attitudes, along the lines of research or teaching preferences, the data reinforce a possible connection between teaching or research preference as they coincide with actual involvement in internationalization and attitudes about internationalization.

6.1.5 Orientation to internationalization

One of the goals of this research project was to define a construct, *Orientation to Internationalization*, mentioned by Morris (1996) in his work about internationalizing the

curriculum by internationalizing the faculty, part of a working paper series at the University of Minnesota. The data from this research project show that significant relationships exist between international experiences, attitudes and beliefs about internationalization, involvement in internationalization, and faculty characteristics. The relationships between these variables provide a way to think about what an *orientation to internationalization* by faculty members might look like. Therefore, the following definition is offered:

> An *Orientation to Internationalization* by university faculty members is defined as the combination of favorable attitudes and beliefs about internationalization, greater breadth and/or depth of international experiences at different educational stages, higher levels of involvement in internationalization activities as faculty members, and key demographics that predict a greater likelihood of interest and involvement in internationalization.

Additional research is recommended to see whether these same patterns emerge with other faculty populations. Collecting data about the variables included in this definition of an orientation to internationalization would be useful to test the construct and to see whether findings replicate the results of the current study. Using this survey instrument as a benchmark to measure faculty attitudes and beliefs, international experiences, involvement and faculty characteristics would also advance knowledge about internationalization of the faculty at institutions of higher education in the United States.

6.1.6 Implications of the research

The research data show that there are important differences among faculty in their approaches to internationalization, and that there are significant relationships between several variables identified in this study. These findings make it possible to better understand faculty attitudes, beliefs and involvement in internationalization. This understanding can in turn, lead to institutional strategies and decision-making related to increasing the levels of faculty involvement in internationalization. Perhaps the question to ask first, however, is "Why internationalize?" An assumption made by the researcher throughout the research project is that internationalization is a worthy goal that will lead to multiple favorable outcomes at these institutions, such as: college graduates who are better prepared and able to succeed in a society

that is increasingly interconnected and globally oriented; more cosmopolitan faculty that will interact not just with American colleagues but with those from specialized centers from around the world in the dynamic and iterative processes of teaching, research and service; the creation of an on-campus environment or ethos (Klasek, 1992a; Knight, 1999; Knight & de Wit, 1999) that looks outward to the world beyond the treed campuses of these rural centers of education, and in so doing, prepares students to understand and deal with other perspectives that will influence how they address important issues facing society in the 21st century; and to strengthen the capacity of an important educational system in one of these fifty American states by coming to terms with an international worldview that has been largely neglected, except for a core group of programs and faculty at individual campuses.

6.1.6.1 Why internationalize? At this point it is useful to go back to the literature to help answer the question, "Why internationalize?" Different rationales for internationalization, offered as part of a conceptual framework for internationalization by Knight (de Wit, 2002; Knight, 1999, 2004), include: political (foreign policy, national security, technical assistance, peace and mutual understanding, national identity, regional identity); economic (economic growth and competitiveness, labour market, financial incentives); and academic (international dimension to research and teaching, extension of academic horizon, institution building, profile and status, enhancement of quality, international academic standards); and social/cultural (national cultural identity, intercultural understanding, citizenship development, social and community development) rationales.

In her *remodeled* version of the internationalization framework (2004) Knight discusses changes in rationales within and between the four groups of rationales (de Wit, 2000, 2002; van Vught, van der Wende, & Westerheijden, 2002, as cited in Knight, 2004) and noting that "significant changes in nature and priority within each category need to be highlighted" (p. 21). In particular, Knight says that, "This framework of rationales does not distinguish between national- and institutional-levels rationales, which is becoming increasingly important" (p. 22). Her article explains that looking at both the institutional level and the national/sector levels are important:

> The national/sector level has an important influence on the international dimension of higher education through policy, funding, programs, and regulatory

> frameworks. Yet it is usually at the individual, institutional level that the real process of internationalization is taking place. Therefore, this analysis of internationalization uses a bottom-up (institutional) approach and a top-down (national/sector) approach and examines the dynamic relationship between these two levels. (pp. 6-7)

Knight separates rationales by national and institutional levels and adds several emerging rationales to the previously constructed list. At the national level she adds: (1) *human resources development: brain power*, due to "an increasing emphasis on the knowledge economy, demographic shifts, mobility of the labour force, and increased trade in services" that are leading nations to "place more importance on developing and recruiting human capital or brain power through international education initiatives" (Knight, 2004, p. 22); (2) *strategic alliances* are now seen as a way to "develop closer geopolitical ties and economic relationships" as a shift from viewing "alliances for cultural purposes to economic purposes" (p. 22); (3) *commercial trade*, with an increased emphasis on "economic and income-generating opportunities attached to cross-border delivery of education" (p. 24), noting the inclusion of education as one of 12 service sectors in the General Agreement on Trade in Services (GATS); (4) *nation building*, on the part of countries interested in the "importing of education programs and institutions for nation-building purposes" (p. 24); and (5) *social and cultural development*, related to promoting intercultural understanding and national cultural identity, which, according to Knight is still significant yet seems to carry less importance in comparison to the economic and political rationales just listed.

Knight turns her attention to the institutional level approaches, observing that the relationship between national-level and institutional-level rationales differs due to many factors,

> one of which is how much the internationalization process is a bottom-up or top-down process within any given country. It is probably accurate to say that, in countries where internationalization is not given much prominence at the national level, which is still very much the case in many regions of the world, then institutional-level rationales have greater importance and may also differ more from one institution to another. (Knight, 2004, p. 25)

Knight names factors that may influence institutional-level rationales, such as mission, student population, faculty profile, geographic location, funding sources, level of resources, and

orientation to local, national, and international interests. Emerging rationales at the institutional level are the following: (1) *international profile and reputation*, related to the quest for name recognition internationally and for branding purposes to compete domestically and internationally; (2) *student and staff development*, related to the need for enhanced international/ intercultural understanding and skills, increased pressures for accountability and student competencies related to internationalization, and expanded information and communication technologies (i.e. the internet) that provide both an opportunity and a need to cultivate a "deeper knowledge and understanding of the world" (p. 26); (3) *income generation*, and a push to seek alternative sources of income at a time of "decreased public funding and increased operational costs" (p. 27) of universities, although internationalization for the sake of income generation is a complex issue with various parties viewing income differently, with some seeing the revenue as profit and others seeing it as cost recovery, which is all occurring within a changing higher education framework that increasingly includes new, private, for-profit commercial-based providers as commercialization and commodification of education grows; (4) *strategic alliances,* in the form of bilateral or multilateral educational agreements, that have clear purposes and articulated outcomes, as a means to achieve "academic, scientific, economic, technological, or cultural objectives" (p. 27) for the institution; and (5) *research and knowledge production*, which continues as an important role of higher education institutions. Knight notes, "Given the increasing interdependence among nations, it is clear that there are global issues and challenges that cannot be addressed at the national level only. International and interdisciplinary collaboration is key to solving many global problems such as those related to environmental, health, and crime issues" (p. 28).

Knight's framework helps to illuminate why institutions may choose to internationalize. Another part of Knight's framework reviews the perspectives of various stakeholders to clarify "internationalisation according to whose perspective" (Knight, 1999, p. 21). Her model identifies three sectors – the government sector, the education sector, and the private sector – and within each sector she notes that there are different stakeholder groups who have individual and different viewpoints on why and how higher education should be internationalized. The framework is intended to show that many different groups have a vested interest in higher education, beyond the institution. In her description, Knight explains that the *government sector* includes different levels ranging from supra-national bodies to national, regional and local

government groups. The *education sector* can be viewed from the system level, the institutional, level and the individual level, and is comprised of diverse stakeholder groups, such as different types of educational institutions; scholarly research and discipline groups; professional and membership associations; students, teachers, researchers, and administrators; and other advocacy and issue groups. The *private sector* includes various manufacturing, service or trade companies that vary according to products and services, geographic interests, company size and ownership (Knight, 1999, p. 21).

Alternatively, the American Council on Education (ACE), in their publication, *Internationalizing the Campus: A User's Guide* (Green & Olson, 2003), provides an overview of terminology and rationales about internationalization that can "assist leaders in identifying stakeholders' points of view and enable them to create a vision appropriate for their campus and community" (p. v). Their framework is intended to guide universities to carry out a strategy for internationalizing by addressing these leading questions: Why internationalize? Who should be involved? How shall we proceed? What do we need to do? They set forth academic goals that include strengthening liberal education, and enhancing the quality of teaching and research. They also list economic and entrepreneurial goals that include preparing students for careers, generating income for the institution, and contributing to local economic development and competitiveness. Social goals that are named include enhancing the development, excellence and relevance of institutions in other countries, and contributing to international and intercultural understanding. In reference to government stakeholders, they note that they are likely to view "national security and foreign policy as the most important rationale for internationalization" (p. 15), producing experts required to support U.S. foreign policy and diplomacy, and creating goodwill and support for the United States in other countries. They continue by addressing external sources of support for internationalization, such as the public, the business community, and the local community.

Once a conversation begins about internationalization, institutions of higher education can engage in an assessment of institutional readiness and support for such an undertaking. The American Council on Education discusses the change process, and provides recommended steps and a framework for an internationalization review (Green & Olson, 2003). Other institutional assessments are available, such as the Internationalisation Quality Review Process (IQRP) designed and piloted by the program on Institutional Management in Higher Education of the

Organisation for Economic Cooperation and Development (OECD) in cooperation with the ACA (Academic Co-operation Association), and implemented in collaboration with the European Association of Universities (de Wit, 2002, p. 154). The purpose of the IQRP, "to assist institutions of higher education to assess and improve the quality of their international dimension" (de Wit, 2002, p. 158), has guiding principles, an operational framework that includes a Self-Assessment Team and process, a Peer Review Team and process, and a voluntary follow-up phase.

Universities from across the world have used the IQRP to assess the international dimension at their own institutions, and many universities have used the assessment to advance an internationalization strategy. One of these universities, Malaspina University-College in Nanaimo, British Columbia, Canada presented a session at the 2006 Association of International Education Administrators (AIEA) annual meeting, entitled "Reinvestment to Support Internationalization: A Canadian Example". This presentation is cited here because of the many similarities between Malaspina University-College and the universities in the current research sample. Malaspina University-College is located on Vancouver Island, described as a semi-rural community with a homogenous, largely blue-collar, population that is not considered to be "internationally thinking". The University-College is a public, comprehensive teaching institution that enrolls 10,000 Canadian students, and has a traditionally funded organizational structure. The Malaspina Model for Internationalization builds upon the Knight framework for internationalization, employing her definition and organizational and program elements into the institutional strategy on their path to internationalization.

Noting that internationalization encompasses both "educational and economic opportunities for colleges" (Deas & Jenkins-Deas, 2006), the presenters list the *economic opportunities* (export value [brings students in], creates campus employment, brings money into community, and import value [gets students and faculty out]), and the *educational opportunities* (domestic – help prepare students for a global future, give an international experiences to students and faculty; and international – exposure to different perspectives by having international students on campus, through international experiences). The uniqueness of the Malaspina Model is that it includes a *Reinvestment* in internationalization, with a structure and approach that lists all international **revenues** (contracts, overseas delivery royalties, government grants for teaching, learning and research, and student tuition for language programs, high school

program, undergraduate programs and an MBA program), and subtracts from these revenues the **direct costs** associated with program delivery and administration and general support, and the **indirect costs**, which are those costs incurred by other Faculties and Departments as a result of International Education, (indirect costs include general student support services, financial services, human resources, information technology, facilities services, capital projects and other non-recurring expenditures), to arrive at the **Net Revenue Potential for Internationalization**, which is then reinvested in a planned and strategic manner to support internationalization activities.

The benefits of this model for North American students, faculty and staff are listed as: internationalization of the curriculum, North American students studying abroad, international studies, faculty and staff mobility, international training and development, institutional linkages and community linkages. The challenges faced by the model include: fitting a revenue generating function into a traditionally funded organization; internal and external drives listed as college mission and culture, community culture, and state/province policy; external factors over which there is little immediate control such as national/cultural attitudes, national immigration policy, education as international trade or not, and world events; and the sustainability of international education in the event that it cannot continue to create net revenues.

The internationalization conceptual framework of Knight's definition, rationales, stakeholders and approaches, in combination with one institutional example that brings Knight's model to life in its approach to internationalization, shows possibilities for PASSHE institutions should they choose to embrace an internationalization strategy. Yet, such an approach has to be seen as desirable, with an understanding that a move towards comprehensive internationalization will be a transformation that will require, "new mindsets, a culture change, significant curricular reform, and intentional strategies to make the whole greater than the sum of its parts and to create connections among disconnected aspects of internationalization" (Green & Olson, 2003, p. 23).

At the present time, such institutional aspirations at these campuses may exist, but there has not yet been a broad conversation about internationalization taking place system-wide, although the 2004-2009 Strategic Plan of the PASSHE mentions (but does not prominently position) global awareness, increasing global interdependence, preparing students to work in a global/pluralistic society, expanding international experiences for students, and adding

international perspectives in curricula, programs and services as a possible new measure of university and system excellence in the document ("Leading the Way. The Pennsylvania State System of Higher Education: A Plan for Strategic Directions 2004-2009", 2004). The five-year plan discusses critical trends shaping the future, one of which is an emerging global economy,

> …that calls for graduates to be equipped with different skills, different working styles, and a new appreciation for lifelong learning. Many System graduates will work with teams and partners from across the world and will need to be able to adapt to fluid labor markets…Such patterns call for collaboration between and among Universities, businesses, and other agencies and entities. It also calls for language instruction, training in cross-cultural communication, and interaction with people from many nations. Preparing students for a technologically sophisticated global economy while helping to build local and regional economies will be both a challenge and an opportunity for the System. (p. 6)

Therefore, the prospect of internationalization does appear in the 2004-2009 Strategic Plan, which may encourage some PASSHE institutions to develop international programs and services that could address stated goals of Student Achievement and Success, and University and System Excellence. However, institutions interested in internationalization should also consider strategies and assessment plans outlined by the American Council on Education or the Internationalisation Quality Review Process (IQRP) in order to elevate internationalization on their own campus and build momentum for such transformations.

6.1.6.2 Recommendations to internationalize the faculty An underlying assumption of this research project is that faculty members are instrumental to university internationalization because they play a critical role in advancing international education on their campuses (Burn & Smuckler, 1995; Carter, 1992; Engberg & Green, 2002; Green & Olson, 2003; Harari, 1981, 1992; Henson, Noel, Gillard-Byers, & Ingle, 1991; Morris, 1996; P. M. Peterson, 2000, 2002). Harari (1981) goes so far as to estimate that "having 25% of the faculty committed to a serious international dimension is sufficient to move the campus significantly in the international area" (p. 29) if it is accompanied by strong institutional leadership. If indeed building a faculty cadre with strong international intent will move internationalization efforts forward, findings from this research project can be used to understand how to build such a faculty cadre. With faculty as the

unit of analysis in this research project, the data provide important clues about how to internationalize the faculty, and by so doing, internationalize the curriculum, the campus, and eventually the students who graduate from these universities.

Build on the importance of international experiences – Two earlier key findings show that faculty who have higher international experiences scores have higher levels of involvement in internationalization, and more favorable beliefs and attitudes about internationalization. While the research shows these relationships exist and are statistically significant, it is not established whether international experiences causes these two attributes, or whether the two attributes lead to more international experiences. Nevertheless, universities can capitalize on this relationship by using a two-pronged approach in internationalizing the faculty. For faculty yet to be hired, consciously including international experiences criteria in the hiring, interviewing and selection process increases the chances that new faculty will be more internationally oriented and have more favorable attitudes and beliefs about internationalization than faculty who have not had such international experiences.

For faculty already on campus, it is never too late to offer opportunities for international experiences through a variety of means (e.g. new international collaborations, partnerships or affiliations with other faculty members or universities, taking students abroad as part of an educational program, developing international research or teaching opportunities) and with different levels of support (i.e. department, college or university-wide). For example, a brief conversation with a science faculty member recently returned from his first ever international experience showed a "turning towards" the international as he reflected on the depth and impact of the experience he had just had, and the excitement over the possibility of future involvement in international experiences (C. Luciano, personal communication, August 2005). Perhaps one of the best-known American programs that open the world of international experiences to faculty members is the Fulbright Program, a U.S. government sponsored international educational exchange program signed into law by President Truman in 1946. Fulbright grants are made to U.S. citizens and nationals of other countries for educational activities, including teaching, research and graduate study (see http://www.cies.org/about_fulb.htm). When reflecting upon his award to Poland, U.S. professor Christopher Phelps (2005) says, "A Fulbright grant, like the changing of seasons, has the appearance of being about environment or geography but is just as much about consciousness. A Fulbright is an experience of the mind. It causes one to rethink

oneself and one's country while puzzling out another" (p. C1). Grants such as the Fulbright program can be used as a vehicle to increase and encourage international experiences.

Strengthen international experiences at all educational stages – Given that faculty members have many years of academic training on their way to becoming faculty members, universities and K-12 educational systems should provide opportunities for international experiences at earlier educational stages, which can set the stage for a lifetime of interest in internationalization. Schools and universities who promote these opportunities for students stand to gain when students later enter the workforce as teachers or researchers, and serve as mentors to younger students interested in similar opportunities. Other sectors of the American economy also benefit when personal involvement in international experiences leads to a workforce more familiar with different customs, languages, and beliefs and a worldview that leads to refinement of critical analysis skills and the ability to see different perspectives.

Study patterns of international experiences in order to structure and maximize opportunities for faculty participation – Patterns found in this research indicate that increasing percentages of respondents have international experiences at later stages of their education careers. This indicates either increasing interest or increasing ability to undertake international experiences as time goes on. At the same time, the duration of international experiences varies at different educational stages. Participation in shorter times abroad (one month or less) as faculty are more than double that of graduate students, and more than triple that of undergraduate students. Alternatively, longer stays abroad of one year or more occurred at earlier educational stages than at faculty stages. The middle ground – that of experiences of one month or more and less than one year – had respondents showing higher participation rates at faculty stages than at student stages, but it is not known if this is a feature of the cumulative nature of the data reported over time. An attempt to better understand the patterns of international experiences at different educational stages (frequency and duration) would be beneficial to designing faculty-friendly international experiences. If such a review reinforces the trends of shorter trips abroad as faculty members, or indicates that faculty could stay for up to one year abroad per trip, then universities can design different programs to take advantage of faculty flexibility and increasing interests in international experiences. This would maximize participation in international experiences and create opportunities for greater faculty involvement and more favorable attitudes and beliefs about internationalization.

Review the types of international involvement that faculty report – Faculty involvement in internationalization was studied by different activities that faculty participate in, following Knight's (2004) list of program strategies. A review of the types of activities faculty most frequently engage in are a good indication of faculty behavior that can also be used as a basis for achieving greater participation in internationalization activities. The top two activities (teaching a course with a significant international component, and revising or proposing a new course with significant international component) fall within the category of "Internationalization at Home"(Nilsson, n.d.), a concept introduced in the European community that describes "the education of a vast majority of higher education students [in Europe] who would never leave their home country" (Wachter, 2003, p.5). Given the small numbers of American students who go abroad during their baccalaureate programs, estimated at 10 percent[14] of those participating in the ACE student survey that collected data from representative sample of 1,290 undergraduate students (Siaya & Hayward, 2003), adopting an approach of Internationalization at Home is one way to reach a greater percentage of both students and faculty. The third most popular international activity is presenting research and creative works outside of the United States. Giving faculty an opportunity to interact with an international community of academics is perhaps an easy way to introduce them to peer faculty from around the globe, which may lead to opportunities for future international activities that hinge on personal contacts and conversations. Activities that show smaller percentages of participation could also be considered areas ripe for greater involvement. For example, teaching at a foreign college or university, delivering educational programs to other countries, participating in grants of an international nature, undertaking service or development projects at a foreign college or university, or conducting research outside of the United States are the least participated in activities, but these types of activities would provide intense international experiences. An institution could strategically work to support these types of activities, after ascertaining what it would take to increase such involvement. Perhaps the addition of financial resources, time off from teaching, the creation of

[14] A November 14, 2005 press release issued by the Institute of International Education (IIE) shows that the number of American students studying abroad for academic credit increased by 9.6% in 2003/2004, building on a previous year's 8.5% increase. The total of U.S. students abroad in the 2003/2004 year is a record 191,321, and is seen as "the latest evidence of the greater importance of a study abroad experience in the post-9/11 world". Overall, since academic year 2000-2001, the number of U.S. students studying abroad has gone up by almost 20%. There are also trends of students going to other host countries (non-traditional destinations) including several where English is not the primary language. More information about this report is available from Open Doors 2005, an annual report published by IIE (see: http://opendoors.iienetwork.org).

structured programs, or even greater awareness or information sharing could open doors to increasing these types of faculty activities.

Review and address attitudes/involvement patterns by faculty characteristics – The data affirm that there are differences in attitudes and beliefs about internationalization and faculty involvement by gender, by discipline of employment, by type of teaching responsibilities, by tenure status, by faculty rank and teaching or research preference. For example, the data show that male faculty are more likely than female faculty to be involved in internationalization, yet attitudes and beliefs about internationalization between the two groups are not significantly different for Factor 1, but they are different for Factors 2 and 3 with females more likely than males to have positive attitudes and beliefs about internationalization. This finding presents an opportunity to identify gender specific benefits or costs to involvement in internationalization, with a view towards structuring opportunities that can increase female involvement in internationalization and build upon existing favorable attitudes. In the case of involvement by type of teaching responsibilities, the data show that faculty teaching solely at the undergraduate level are less involved in internationalization than those who have some or all graduate teaching responsibilities, and that they also have less favorable attitudes and beliefs about internationalization for Factor 1. The policy implication is that faculty who are teaching solely at the undergraduate level (44% of this sample), should be especially targeted for involvement in internationalization. This should lead to more favorable attitudes and beliefs and a more internationalized faculty, especially for those who are exclusively involved in teaching undergraduates.

In reference to tenure status, there are differences between faculty who are tenured and those who are in non tenure track positions, with non tenure track faculty having similar attitudes and beliefs about internationalization, but reporting less involvement in internationalization. This indicates that hiring faculty in non tenure track positions is detrimental to building an internationally involved faculty. Further study of the nature of the non tenure track faculty is recommended to better define the areas and disciplines most affected by this finding, and provide remedies in the form of faculty hires that are of a more permanent nature wherever possible.

Faculty attitudes about internationalization are not different by faculty rank, but faculty involvement is. Assistant and Associate Professors have statistically significant lower involvement means than full Professors, as do faculty at Instructor ranks. While there could be

several explanations as to why faculty involvement varies by rank, one strong possibility for these findings is that the promotions process that guides the types of research, teaching and scholarship that faculty perform to achieve a higher academic rank, does not, in fact, recognize or reward international involvement overall. For example, a Chi Square comparison of faculty involvement and one of the indicators of campus climate (the promotions committee) in this research indicated that 35% of faculty who have conducted research abroad either disagree or strongly disagree that their participation is recognized and valued by the promotions committee. Universities who want to internationalize should involve faculty in a dialogue about the value and rigor of internationalization that could lead to favorable review of these activities through the promotions process.

Other differences by faculty characteristics, specifically differences by teaching/research preference and by disciplines follow trends noted in other research projects (Altbach & Lewis, 1996; Forest, 2002; Goodwin & Nacht, 1991; Haas, 1996). In the case of teaching/research preferences, faculty with a research preference are more likely to be involved in internationalization than those with a teaching preference, and they are also more likely to have favorable attitudes and beliefs about internationalization for Factor 1 and Factor 2 (there is a borderline difference for Factor 3). These findings are similar to that of the Carnegie Survey of the International Academic Profession (Altbach, 1996) that found that faculty with a research preference are more likely to be involved in internationalization than those with a teaching preference. The policy implication here is to provide support for research and scholarly opportunities in order to broaden faculty participation beyond teaching activities. Given that these universities are primarily undergraduate, non-research intensive universities (with the exception of one university), this may take some special initiatives to move the academic culture towards more of a research focus. However, anecdotally at least, there does appear to be a tendency for newer faculty hires to have more of a research focus as they come out of traditional Ph.D. and other terminal degree programs. There is also a push from the PASSHE Chancellor's Office to "increase the percentage of tenured and tenure-track faculty who have earned the terminal degree in their field" ("Leading the Way. The Pennsylvania State System of Higher Education: A Plan for Strategic Directions 2004-2009", 2004, p. 11). Broadening the base of faculty activities and expanding the reward structure to include more research and scholarly activities should have consequences on expanding internationalization as well.

In the case of disciplines, notable differences in both levels of faculty involvement, and attitudes and beliefs about internationalization exist. For example, in this research study, average faculty international involvement is higher in the humanities, business and commerce, and the social and behavioral sciences, than the life sciences and health, agricultural and animal sciences, physical and mathematical sciences, and engineering and applied sciences. In the literature, the types of faculty involvement vary by discipline, with certain types of international involvement (e.g. publishing in foreign professional journals and books, and publications written in a foreign language) occurring more frequently in the physical sciences, biological sciences, mathematics and engineering, as compared with traveling abroad for study or research that is led by faculty in the social sciences and humanities, and time spent as faculty members in other countries that most often occurs by social scientists (Haas, 1996). Attitudes and beliefs about internationalization also vary by discipline (and by attitudes and beliefs factors), with faculty from the humanities having the most favorable attitudes and beliefs for all three factors. For Factor 1 (Scholarship of Teaching and Research) and Factor 3 (Impact of Curriculum on Students), the next two most favorable attitudes and beliefs are held by faculty from social and behavioral sciences, and by the agricultural and animal sciences. Least favorable attitudes for Factor 1 are held by faculty in the physical and mathematical sciences, and for Factor 3 least favorable attitudes are held by faculty in the engineering and applied sciences. For Factor 2 (Instruction and Curriculum), the second and third most favorable attitudes and beliefs are held by faculty in the social and behavioral sciences, and fine, applied and performing arts, and the least favorable attitudes and beliefs for Factor 2 are held by faculty in the engineering and applied sciences. Given these trends, further analysis of the data from this research sample, along with new data collection about disciplinary differences could be helpful in understanding differences and coming up with strategies to increase internationalization by less represented disciplinary faculty.

Provide resources for faculty involvement in internationalization – While the data point to the complexity of campus climate as a factor in internationalization, one aspect of campus climate did emerge as a possibly significant indicator of faculty involvement. Just one of the campus climate questions, "Funds are available to support internationalization and the development of faculty members' international skills and knowledge" was found to be statistically significant (although it was a weak relationship) with the faculty involvement score.

At many of these campuses, professional development funds are limited – as evidenced by scarce travel funds to present at conferences, a PASSHE Collective Bargaining Agreement that cut in half the funding for the Faculty Professional Development Council after it was restored to the contract following a 3-year hiatus in support, and limited grant funds to support innovation in teaching and research. Given that previous research in internationalization has shown the importance of providing funds to support internationalization (Henson, Noel, Gillard-Byers, & Ingle, 1991), and different proponents have discussed the importance of providing faculty development, rewards and funding to encourage participation (American Council on Education, 1995; Carter, 1992; Klasek, 1992b; Lindsay, Braxton, Glassman, & Larew, 1999; McCarthy, 1998; Mestenhauser & Ellingboe, 1998; P. M. Peterson, 2000; Schneider & Burn, 1999; Speck & Carmical, 2002; Stimpfl, 1996), building support to the faculty should be a priority of universities who want to internationalize. Such support can be in the form of seed grants to internationalize the curriculum, to support travel to international conferences, to provide supplementary salary support to faculty going on Fulbright grants, to develop or maintain research and scholarly projects at universities or research centers outside of the United States, to underwrite group projects abroad for faculty and students, and to support exchange agreements that promote faculty, staff and student mobility. Such support not only provides financial support but also indicates a value placed on such activities by the institution.

6.1.7 Representativeness of this research sample

In many respects, the research sample is very similar to that of the overall faculty population of the PASSHE. The percentage in the research sample for gender, academic rank, terminal degrees, and tenure status closely match the percentage in the PASSHE population, with just a few exceptions (percentage of non-tenure track faculty in this sample is smaller than that of PASSHE faculty, and the research sample has a slightly higher percentage of tenure track faculty than the percent of tenure track faculty in the population). Some demographic data tracked in this research project (e.g. geographic region of birth, country of highest earned degree, visa or citizenship status, level of teaching responsibilities) were not provided by the PASSHE for comparison purposes. Therefore, on several important demographics, the research sample can be considered fairly representative of the overall PASSHE population. On other demographics, it

would be useful to have more descriptive data from the PASSHE to better depict the complexity and diversity of the university faculty at the PASSHE.

The segment of American higher education found included in this research population can be considered in relation to other groups of United States institutions of higher education that have similar histories and stages of growth. For example, these universities originated as "Normal" schools dedicated to the training of teachers, they evolved into colleges and then later became universities that are regional, or comprehensive in scope. Those wishing to compare this research sample to other groups of institutions could look to similar state institutions, such as the California State University System or the State University of New York (University Colleges). Other institutions of higher education (e.g. research intensive universities, or liberal arts, private colleges or universities) may have different academic profiles; therefore representativeness of this sample in different institutional types may not be assured.

6.1.8 Conducting internet research: Points to consider

Data were collected using a survey instrument that was accessed over the internet. Respondents were invited to participate by an e-mail message that contained an embedded hyperlink to a website hosting the instrument. The sample size of 3,599 was spread over a large geographic area (the Commonwealth of Pennsylvania) at nine different universities who agreed to participate in the study. The survey instrument was customized in design, translated to a web-based format and administered with help from a university center that specializes in software systems and information technology applications. Technical expertise was critical to both the design and data collection using the web-based instrument, as well as the facilitation, communication and coordination of technical requirements required to work with the information technology departments at each of the participating universities. The Software Development Center (SDC) at Indiana University of Pennsylvania provided these two aspects of the work plan, which required more than 26 hours[15] of professional services rendered by two faculty members and several graduate students employed at the SDC. The SDC also performed critical functions related to security – such as restricting survey access to only those respondents in the intended research

[15] The researcher was billed for 26 hours of work, but the number of billed hours was less than the actual number of hours of work performed (personal communication, R. Adkins, December 2005).

sample, creating a login procedure that ensured faculty respondents could only submit one survey response, ensuring anonymity of survey responses by separating data from e-mail addresses of those who submitted data, and compiling an ever-shrinking list of e-mail addresses that could be used for follow-up messages to those who did not submit surveys.

Many of the advantages of collecting data in this manner were listed earlier, but two reasons that are particularly advantageous to a project managed by just one researcher include the ability to more easily sample a larger number of faculty over the internet than through a paper-based survey and follow-up, and the elimination of manual data entry made possible by the immediate transfer of data into a database that could be copied to a spreadsheet for statistical analysis purposes. These two reasons in particular were instrumental in the ability of the researcher to conduct the project as envisioned. Another important consideration is cost. While it may be possible to conduct a survey over the internet using survey tools that are free, the researcher chose to entrust technical issues and survey administration to a professional center that could guarantee high standards in the project. The use of such a center resulted in a cost to the researcher in terms of dollars, but the confidence gained in the reliability of the data was considered to be worth the cost.

There were a few problems encountered during the survey administration that are worth mentioning as a caution to others interested in undertaking such a study. One expectation was that data responses would be coded by responder's university without the need for the respondent to indicate their home university on the survey instrument. Due to a compressed timeline for administering the survey, this element in the survey administration was set aside and the ability to analyze responses by university was not included. The advice for other researchers is to include all important fields in the survey instrument, rather than relying on technical processes that could add special programming duties and additional time to the administration of the survey.

Another important consideration is that the researcher and the design team need to stay in close communication during the entire process to deal with any technical issues that may come up. In this case, thorough preparation and a high level of technical expertise resulted in few instances of troubleshooting. Most of the problems had to do with re-sending e-mails to those faculty who had overextended their "diskquota" or who had spam filters on their accounts to block non-home university e-mail messages from getting through. One of the features that this

design team set up was the use of the researcher's e-mail account to be set as the "reply to" address, in the event of return messages from those contacted for the survey. This required frequent monitoring by the researcher, and in the cases of diskquota or spam filters messages, necessitated deleting extra messages from this home account.

In several cases, however, the immediacy of the data collection and the ease of communication back to the researcher by e-mail provided an unexpected benefit of the mode of survey delivery. The e-mail vehicle provide an easy outlet for those contacted for the research project to communicate their reactions, comments, and in just a few cases, criticisms of the study. The immediacy of these responses from the "researched" to the "researcher" was extremely interesting and valuable as it provided a method to share information about the topic, the availability of related studies and names of other researchers studying similar topics, the instrument, or the importance (or lack thereof) of internationalization on their campuses. As these types of responses were received, they were printed and also saved in the researcher's e-mail account. A very unfortunate incident happened several months later, however, when the researcher went to retrieve these very important messages from the e-mail account. The commercial provider had emptied all of the messages from the e-mail folders that had been meticulously sorted by folders and saved, so the electronic proof was lost. Follow-up calls to the e-mail provider only served to verify that the messages were indeed irretrievable, and that this deletion of messages was pro-forma for such commercial providers. Subsequent searches of this policy on the internet service providers' website did not yield any mention of this practice, and what should have been an archive turned into a great frustration and sense of loss on the part of the researcher. Therefore, an understanding of a commercial provider's e-mail privileges and practices is strongly suggested as a word of advice to future researchers who can't afford to lose electronic data.

One other drawback to this method concerns the idea of saturation of e-mail and internet survey participation. In these days of high volume of e-mail messages and a proliferation of web-based survey requests, it is possible that requests for survey participation will be ignored. Certain precautions were taken in this study to minimize rejection of the survey request – such as working closely with senior leadership to gain permission to university personnel, working with technical personnel to gain access to faculty lists, and working with research support offices to obtain human subjects approval – but nevertheless, several responses came back from faculty

asking to be removed from any such mailings or future reminders to participate in the research project. As this survey methodology continues to proliferate, additional measures – such as letters of support from institutional personnel or personalized messages to individual recipients – might be needed to counter survey saturation and fatigue.

6.1.9 Suggestions for future research

This research project examined the faculty attitudes, beliefs and involvement related to internationalization of higher education at a select group of public universities in Pennsylvania. Additional administrations of this same survey instrument in different faculty populations is suggested in order to further examine the *Orientation to Internationalization* construct introduced earlier by Morris (1996) and defined in this study. Advancement of an understanding of this construct could have real applications for benchmarking purposes and for testing the reliability and validity of this construct.

Further research is also recommended at different types of educational institutions (i.e. private institutions, research intensive institutions, community colleges, other state universities) for comparison purposes. Studying other types of institutions, both in Pennsylvania and in other U. S. states would be useful to see if the relationships found within this group of faculty members are replicated in other faculty populations. In this way, additional policy implications and recommendations can be solidified and used by other sectors interested in the internationalization of higher education in the United States. Other studies could also be conducted in faculty populations from other countries to see whether similar patterns and relationships are found.

Studies of institutions that have adopted internationalization as a strategic goal and are intentionally implementing internationalization strategies could also be studied and compared with this research population to examine faculty differences that may arise in different cultural and institutional settings. Research undertaken with different faculty populations at a variety of institutional settings with differing levels of internationalization activities can be used to frame approaches to internationalization. A plan for implementing a program of internationalization can then be drawn based on these studies, in concert with educational leaders and policy makers at institutional, state and national levels.

Given the findings of the study related to the complexity of campus culture and climate as it relates to faculty involvement in internationalization and attitudes and beliefs about internationalization, additional research is suggested to better understand these relationships. Other methods of data collection and analysis, such as case studies, culture audits, in-depth interviews, observations and qualitative approaches would be very useful in understanding how culture relates to faculty involvement, and whether certain organizational strategies identified by Knight (2004) are successfully employed on individual campuses with groups of faculty and with institutional leadership.

6.1.10 Conclusion

This study of faculty at a select group of public universities in the United States met the fourfold purpose of the research project, which was: to explore and describe faculty attitudes, beliefs and experiences regarding internationalization; to review the extent to which faculty members incorporate an international perspective into their own teaching, research, and scholarship; to determine whether relationships exist between faculty characteristics, campus climate, and internationalization attitudes, beliefs and behaviors; and to examine the patterns that emerge in a description of faculty members' *orientation to internationalization* (Morris, 1996).

APPENDIX A. COVER LETTER & SURVEY INSTRUMENT

[Cover e-mail to Invite Survey Participation]

The beginning of knowledge is the discovery of something we do not understand . –Frank Herbert

Dear [name of university] Faculty Member,

Faculty at Pennsylvania public universities teach more than 104,000 students annually, yet very little is known about faculty attitudes, beliefs and involvement in internationalization. This lack of information is long-standing, given that the most recent systematic study of international education in Pennsylvania higher education institutions occurred more than 25 years ago.

You are invited to participate in a dissertation research study concerning the internationalization of higher education. Internationalization is defined as *the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education.*

You are encouraged to participate in this study, irrespective of your current level of involvement in internationalization activities.

Your participation involves the completion of a survey that will take about 10 minutes of your time. The survey will be completed on-line, using a web interface that has been designed especially for this purpose. You will be directed to a website with a secure login and password to access the survey instrument. Your responses will be separated from any identifying information when the survey is submitted. The survey questions do not pose any risk to participants.

Completion of the survey is completely voluntary. Results from the survey will be used as part of a doctoral dissertation and may be presented or published in other scholarly venues. Faculty members who complete the survey in its entirety will be given an opportunity to participate in a random drawing for an incentive prize. Two digital cameras, each valued at $200, will be given away, as a token of appreciation to faculty who complete the survey.

This project has been approved by the Institutional Review Board for the Protection of Human Subjects at [name of university], at Indiana University of Pennsylvania, and at the University of Pittsburgh. Questions regarding this human subjects approval may be directed to the IRB Chair [university's local IRB chairperson and local phone number].

Should you decide to participate in this research project, simply click here: (URL to survey's login screen). By submitting a completed survey, you are indicating your informed consent to participate in this research project.

Further questions about the research project may be directed to:

Michele S. Schwietz, Doctoral Candidate
University of Pittsburgh
Dept. of Administrative and Policy Studies
Pittsburgh, PA 15260
mschwietz@verizon.net

John C. Weidman, III, Faculty Advisor
University of Pittsburgh
Dept. of Administrative and Policy Studies
5S38 Posvar Hall
Pittsburgh, PA 15260
weidman@pitt.edu

Follow-up e-mails to those respondents who have not submitted a survey:

Dear Faculty Member:

Approximately ten days (twenty/twenty-five days) ago, you received an e-mail invitation to participate in a survey about faculty attitudes, beliefs and experiences regarding the internationalization of higher education at public universities in Pennsylvania.

If you have already completed and returned the survey, thank you. If not, please do so today. Your input to the survey is very important, and will help to advance our knowledge of internationalization of higher education in the United States. Please remember that although your participation is solicited, it is strictly voluntary.

Please contact me at micheles@iup.edu, or by phone at (724) 357-2655 if you have any questions about the research project.

Sincerely,

Michele S. Schwietz, Doctoral Candidate
University of Pittsburgh
Dept. of Administrative and Policy Studies
Pittsburgh, PA 15260
micheles@iup.edu
(724) 357-2655

John C. Weidman, III, Advisor
University of Pittsburgh
Dept. of Administrative and Policy Studies
5S38 Posvar Hall
Pittsburgh, PA 15260
weidman@pitt.edu

Internationalization of the Academic Profession:
Faculty of the Pennsylvania State System of Higher Education

Therefore search and see if there is not some place where you may invest your humanity.
-Albert Schweitzer

Thank you for agreeing to participate in this survey on internationalization of higher education. Internationalization is defined as the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education.

Please click on the *Continue* button to begin the survey.

Continue

Section I:
Demographics And Academic Preparation

In this section we are seeking information about you, your educational background and your experience in higher education

1. What is your gender? [Male]
   Male
   Female

2. In what year were you born? [1920] *1920 through 1985 (1920, 1921, etc... 1985)*

3. In what geographic region were you born? [United States]
   United States, Canada, Mexico, Africa, East Asia, South and Central Asia, Southeast Asia, Eastern Europe, Western Europe, Caribbean, Central America, South America, Middle East, Australia/Oceania

4. Please indicate which of the following describes your status in the United States (U.S.): [U.S. Citizen]
   U.S. Citizen;
   U.S. Resident;
   U.S. Visitor – Academic Student (F or M Visa);
   U.S. Visitor – Exchange Visitor (J Visa)

   Other (please describe): [ ]

5. Please provide information about your degree credentials:

a. What is your highest earned degree? [Ph.D.]
   Ph.D.;
   Ed.D.;
   M.D.;
   J.D.;
   Doctorate, Other;
   M.F.A.;
   Masters, Other;

Bachelors

b. In which discipline was your highest degree awarded?

Agricultural and Animal Sciences

Agricultural and Animal Sciences; Business and Commerce; Education; Engineering and Applied Sciences; Fine, Applied and Performing Arts; Humanities; Life Sciences and Health; Physical and Mathematical Sciences; Social and Behavioral Sciences; Other Academic Discipline

c. In which geographic region was your highest degree awarded?

United States

United States, Canada, Mexico, Africa, East Asia, South and Central Asia, Southeast Asia, Eastern Europe, Western Europe, Caribbean, Central America, South America, Middle East, Australia/Oceania

6. In which discipline would you classify the department or unit in which you are employed?

Agricultural and Animal Sciences

Agricultural and Animal Sciences; Business and Commerce; Education; Engineering and Applied Sciences; Fine, Applied and Performing Arts; Humanities; Life Sciences and Health; Physical and Mathematical Sciences; Social and Behavioral Sciences; Other Academic Discipline

7. How many years have you been employed at this institution as a faculty member? (include current year)

0-5 years

0-5 years;
6-10 years;
11-15 years;
16-20 years;
21-25 years;
26 years or more

8. Which of the following represents your teaching responsibilities at this institution?

Entirely undergraduate

Entirely undergraduate;
Some undergraduate, some graduate or professional;
Entirely graduate or professional;
My faculty responsibilities do not include teaching at the present time

9. Please select one answer for **each** of items (a) through (e) regarding your faculty appointment:

a. ☐ Full-time or ☐ Part-time

b. ☐ Permanent or ☐ Temporary

c. ☐ Tenured or ☐ Tenure-Track or ☐ Non Tenure-Track

d. ☐ Teaching Faculty or ☐ Administrative Faculty

e. Academic Rank: Instructor

Instructor;
Assistant Professor;
Associate Professor;
Professor

Continue

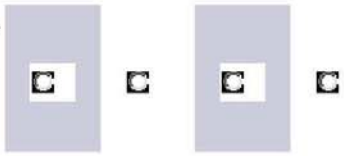
Section II.
International Experiences

In this section we are seeking information about academic international experiences you may have had at different educational stages in your life. If you have had multiple international experiences, please estimate the combined amount of time you have spent abroad for each educational stage. Do not include time spent abroad while attending conferences or professional meetings. Please select one choice for each item that best describes your international experiences.

I have had the following experience in countries other than the United States for the length of time indicated for each:	Never	One month or less	More than one month and less than one year	One year or more
1. Before beginning college, I attended classes in a country other than the United States.	☐	☐	☐	☐
2. As an undergraduate student I had one or more academic experiences in a country (or countries) other than the United States.	☐	☐	☐	☐
3. As a graduate student, I had one or more academic experiences in a country (or countries) other than the United States.	☐	☐	☐	☐
4. As a faculty member, I had one or more academic experiences (teaching or conducting research) in a	☐	☐	☐	☐

country (or countries) other than the United States.

5. As a faculty member, I have taken students to one or more foreign countries for an academic experience abroad.



6. If you have had academic experiences in countries other than the United States, which world regions have you gone to? (Select as many as are appropriate).

☐ Africa	☐ East Asia	☐ South and Central Asia	☐ South East Asia
☐ Eastern Europe	☐ Western Europe	☐ Caribbean	☐ Central America
☐ South America	☐ Middle East	☐ North America	☐ Australia/ Oceania

7. If you have had academic experiences in countries other than the United States throughout your educational life, please indicate the number of different countries in which you have had such experiences.

None
None;
One to three countries;
Four to six countries;
Seven to nine countries;
Ten or more countries

8. Have you ever lived outside of the United States before becoming a faculty member at your current institution? **Do not include the time you may have spent abroad as a student.** (If no, skip to next section.)

-Select one-
Yes;
No

9. If yes, how long did you live outside of the United States?

-Select one-
Not applicable;
Less than one year;
One to Five Years;
Six to Ten Years;
More than Ten Years

Continue

Section III.
Foreign Language Ability

1. Besides English, how many other languages can you speak or read? (If none, skip to next section.)

None
None;

			One; *Two;* *Three or more*
2. If you know a language other than English, in that language are you able to :	**Yes**	**No**	
a. Understand that language at **only** a basic level of comprehension?	☐	☐	
b. Read some sections of a daily newspaper?	☐	☐	
c. Read a journal article in your field?	☐	☐	
d. Write an article or book in your field for native speakers?	☐	☐	
e. Carry on an informal conversation about daily events with a native speaker?	☐	☐	
f. Give a presentation on a topic in your field to native speakers?	☐	☐	

3. Besides English, which language(s) can you speak or read:

☐ Spanish ☐ French ☐ German ☐ Other European Languages ☐ Arabic

☐ Japanese ☐ Chinese ☐ Other Asian Languages ☐ African Languages

Other: _____

Continue

Section IV.
Academic Orientation

Most faculty members have a variety of commitments to the institution as well as to the academic profession in general. Please indicate the degree to which you agree that each of the following affiliations is important to you.

SA-Strongly Agree = 1; SD-Strongly Disagree = 5; DN-Don't Know	**SA**				**SD**	**DN**
1. My affiliation to my academic discipline is very important to me.	☐	☐	☐	☐	☐	☐

2. My affiliation to my university is very important to me. ☐ ☐ ☐ ☐ ☐ ☐

3. My affiliation to my department is very important to me. ☐ ☐ ☐ ☐ ☐ ☐

We would like to learn more about your perceptions regarding faculty preferences for teaching and research. Please select an answer that best describes your perceptions.

SA-Strongly Agree = 1; SD-Strongly Disagree = 5; DN-Don't Know	**SA**				**SD**	**DN**
4. Faculty members view themselves primarily as teachers.	☐	☐	☐	☐	☐	☐
5. Faculty members view themselves as both teachers and researchers.	☐	☐	☐	☐	☐	☐
6. Faculty members view themselves primarily as researchers.	☐	☐	☐	☐	☐	☐

7. Regarding your *own* preferences, do your interests lie *primarily* in teaching or in research? -Select one-

Primarily in teaching;
In both, but leaning toward teaching;
In both, but leaning toward research;
Primarily in research

Continue

Section V.
Assessment Of Campus Climate

We would like to learn more about your perceptions regarding the climate on your campus as it relates to internationalization of higher education. Please indicate the extent to which you agree with each of the following statements using the scale below.

SA-Strongly Agree = 1; **SD**-Strongly Disagree = 5; **DN**-Don't Know			
AT MY UNIVERSITY:	**SA**	**SD**	**DN**

1. There is an expressed commitment to internationalization by senior leaders.	☐	☐	☐	☐	☐	☐
2. There is active involvement in internationalization by faculty and staff.	☐	☐	☐	☐	☐	☐
3. Faculty are actively encouraged to include international perspectives and content in their courses.	☐	☐	☐	☐	☐	☐
4. Funds are available to support internationalization and the development of faculty members' international skills and knowledge.	☐	☐	☐	☐	☐	☐
5. Participation in international activities by faculty members is viewed favorably by my department.	☐	☐	☐	☐	☐	☐
SA-Strongly Agree = 1; SD-Strongly Disagree = 5; DN-Don't Know	**SA**				**SD**	**DN**
6. International expertise is part of recruitment and selection procedures of new faculty.	☐	☐	☐	☐	☐	☐
7. The campus wide promotions committee recognizes and favorably reviews faculty involvement in internationalization activities.	☐	☐	☐	☐	☐	☐
8. The campus wide tenure committee recognizes and favorably reviews faculty involvement in internationalization activities.	☐	☐	☐	☐	☐	☐
9. There are opportunities for international scholars to teach, conduct research or develop collaborations with U.S. based faculty.	☐	☐	☐	☐	☐	☐
10. Commitment to international education is primarily symbolic.	☐	☐	☐	☐	☐	☐

Continue

Section VI.
Faculty Involvement In

Internationalization

In this section we would like to learn more about your involvement in international activities related to your teaching, research and scholarship. Please indicate yes or no for each of the items.

	Please indicate yes or no for each item	Yes	No
1.	In the past three years, have you taught a course that includes a significant component about other countries, cultures, or global issues?	☐	☐
2.	In the past three years, have you revised an existing course or proposed a new course that includes a significant component about other countries, cultures, or global issues?	☐	☐
3.	In the past three years, have you revised an existing program of study or proposed a new program of study that includes a significant component about other countries, cultures, or global issues?	☐	☐
4.	In the past three years, have you taught at a foreign college or university located outside the United States?	☐	☐
5.	In the past three years, have you presented your research or creative works at seminars, conferences or exhibitions held outside the United States?	☐	☐
6.	In the past three years, have you conducted research outside the United States?	☐	☐
7.	In the past three years, have you submitted to or published in a foreign journal or press, excluding reprints?	☐	☐
8.	In the past three years, have you worked with local organizations or schools on projects of an international nature?	☐	☐
9.	In the past three years, have you traveled outside the United States to participate in a professional service or development project at a foreign college or university?	☐	☐

10. In the past three years, have you been involved in the development or delivery of education programs to other countries through any of a variety of delivery modes (face to face, distance, e-learning) or through different administrative arrangements (franchises, twinning, branch campuses, etc.)?	☐	☐
11. In the past three years, have you planned campus events of an international nature?	☐	☐
12. In the past three years, have you been involved with campus-based student clubs and associations of an international nature?	☐	☐
13. In the past three years, have you been involved in a grant-funded project of an international nature?	☐	☐

Continue

Section VII.
Attitudes And Beliefs About Internationalization

We would like to learn more about your attitudes and beliefs about internationalization of higher education. Please indicate how you feel about *each* of the following issues.

SA-Strongly Agree = 1; **SD**-Strongly Disagree = 5; **DN**-Don't Know

	SA				SD	DN
1. Knowledge of international issues is important to me.	☐	☐	☐	☐	☐	☐
2. Knowledge of international issues is important for younger generations	☐	☐	☐	☐	☐	☐
3. Connections with scholars in other countries are very important to my professional work.	☐	☐	☐	☐	☐	☐
4. In order to keep up with developments in my discipline, a scholar must read books and journals published abroad.	☐	☐	☐	☐	☐	☐

5. An international perspective in my discipline is an important and valued part of my teaching and research.	☐	☐	☐	☐	☐	☐
6. I am developing more of an international perspective in my teaching.	☐	☐	☐	☐	☐	☐
SA-Strongly Agree = 1; SD-Strongly Disagree = 5; DN-Don't Know	**SA**				**SD**	**DN**
7. I am developing more of an international perspective in my research.	☐	☐	☐	☐	☐	☐
8. The more time that is spent teaching students about other countries, cultures, or global issues, the less time is available for teaching the basics.	☐	☐	☐	☐	☐	☐
9. International education is a useful, but not a necessary component of undergraduate education.	☐	☐	☐	☐	☐	☐
10. Colleges and universities should require all students to take courses covering international topics.	☐	☐	☐	☐	☐	☐
11. The presence of international students (students from other countries) on U.S. campuses enriches the learning experience for American students.	☐	☐	☐	☐	☐	☐
12. Most undergraduate students graduate with an awareness about other countries, cultures, or global issues.	☐	☐	☐	☐	☐	☐
13. It is the responsibility of ALL faculty to provide undergraduate students with an awareness of other countries, cultures, or global issues.	☐	☐	☐	☐	☐	☐
14. The curriculum at my institution should be more international in focus.	☐	☐	☐	☐	☐	☐

Finish

Thank You for Your Survey Response. Enter a Drawing for a Free Digital Camera.

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.
- Margaret Mead

Dear Faculty Member,

In appreciation for your time, you are invited to enter a random drawing for one of two digital cameras valued at $200. Winners will be notified by e-mail.

Your survey responses have already been submitted anonymously. Entering this drawing will not compromise your anonymity.

Please type your university assigned e-mail address to be entered into the drawing:

Enter e-mail here | Submit

Questions regarding the study or requests for a summary of the research findings may be addressed to Michele Schwietz, University of Pittsburgh Doctoral Candidate, at mschwietz@verizon.net.

Thank You

Thank you for participating in the survey.

APPENDIX B. DESCRIPTIVE STATISTICS

A) GENDER * TENURE STATUS * ACADEMIC RANK

Academic Rank	Gender	Tenure Status			Total
		Tenured	Tenure-track	Non Tenure-track	
Instructor	Male	6	8	19	33
	Female	5	11	22	38
	Total	**11**	**19**	**41**	**71**
Assistant Professor	Male	35	66	5	106
	Female	44	83	9	136
	Total	**79**	**149**	**14**	**242**
Associate Professor	Male	68	16	2	86
	Female	66	9	0	75
	Total	**134**	**25**	**2**	**161**
Professor	Male	101	1	1	103
	Female	79	0	0	79
	Total	**180**	**1**	**1**	**182**
	Grand Total	**404**	**194**	**58**	**656**

B) REGION WHERE BORN * REGION WHERE EARNED DEGREE CROSS TABULATION

Region Where Born	Region Where Earned Degree									Total
	United States	Canada	East Asia	SE Asia	Eastern Europe	Western Europe	Caribbean	Middle East	Australia/ Oceania	
United States	726	3	1	0	0	5	0	0	0	735
Canada	6	2	0	0	0	1	0	0	1	10
Mexico	3	0	0	0	0	0	0	0	0	3
Africa	16	0	0	0	0	0	0	0	0	16
East Asia	8	0	0	0	0	0	0	0	0	8
South and Central Asia	10	0	0	0	0	0	0	0	0	10
Southeast Asia	9	0	0	1	0	0	0	0	0	10
Eastern Europe	5	0	0	0	3	0	0	0	0	8
Western Europe	10	0	0	0	0	2	0	1	0	13
Caribbean	4	0	0	0	0	0	1	0	0	5
Central America	2	0	0	0	0	0	0	0	0	2
South America	1	0	0	0	0	0	0	0	0	1
Middle East	4	0	0	0	0	0	0	1	0	5
Australia/Oceania	2	0	0	0	0	0	0	0	1	3
Total	806	5	1	1	3	8	1	2	2	829

C) REGION WHERE BORN * CITIZENSHIP STATUS CROSS TABULATION

		Citizenship Status					
		U.S. Citizen	U.S. Resident	U.S. Visitor - Academic Student (F or M visa)	U.s. Visitor - Exchange Visitor (J visa)	Other	Total
Region where born	United States	722	10	2	0	1	735
	Canada	4	4	0	0	2	10
	Mexico	3	0	0	0	0	3
	Africa	10	4	0	0	2	16
	East Asia	7	0	0	0	1	8
	South and Central Asia	7	1	0	0	2	10
	Southeast Asia	7	2	0	0	1	10
	Eastern Europe	5	2	0	0	1	8
	Western Europe	4	8	0	0	1	13
	Caribbean	3	1	0	0	1	5
	Central America	2	0	0	0	0	2
	South America	0	1	0	0	0	1
	Middle East	3	0	0	1	1	5
	Australia/Oceania	2	1	0	0	0	3
Total		779	34	2	1	13	829

D) DISCIPLINE OF EMPLOYMENT BY NUMBER OF LANGUAGES BESIDES ENGLISH

		Number of Languages Beside English			
		One	Two	Three or more	Total
Field of Employment	Humanities	37	39	26	102
	Social and Behavioral Sciences	58	19	8	85
	Education	52	15	4	71
	Physical and Mathematical Sciences	23	17	9	49
	Life Sciences and Health	22	15	4	44
	Other Academic Discipline	33	6	5	41
	Business and Commerce	14	8	4	27
	Fine, Applied and Performing Arts	12	11	4	26
	Agricultural and Animal Sciences	3	2	1	6
	Engineering and Applied Sciences	4	2	0	6
Total		258	134	65	457

APPENDIX C. ASSESSMENT OF CAMPUS CLIMATE

E) FREQUENCY DISTRIBUTION BY ITEM

	Participation in international activities by faculty is viewed favorably by my department		There is an expressed commitment to internationalization by senior leaders		There are opportunities for int'l scholars to teach, conduct research, or develop collaborations with U.S. based faculty		Faculty are actively encouraged to include international perspectives and content in their courses		There is active involvement in internationalization by faculty and staff	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Strongly Agree	172	22.1	115	14.7	69	8.9	96	12.3	69	8.9
Agree	235	30.2	166	21.3	202	26.0	169	21.7	194	24.9
Neither Agree nor Disagree	168	21.6	170	21.8	188	24.2	180	23.1	219	28.1
Disagree	75	9.6	124	15.9	92	11.8	164	21.1	135	17.4
Strongly Disagree	54	6.9	103	13.2	63	8.1	103	13.2	79	10.2
Don't Know	74	9.5	102	13.1	163	21	67	8.6	82	10.5
Total	778	100	780	100	777	100	779	100	778	100

	Commitment to international education is primarily symbolic		Funds are available to support internationalization and the development of faculty members' int'l skills and knowledge		The campus wide promotions committee recognizes and favorably reviews faculty involvement in internationalization activities		The campus wide tenure committee recognizes and favorably reviews faculty involvement in internationalization activities		International expertise is part of recruitment and selection procedures of new faculty	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Strongly Agree	86	11.1	59	7.6	47	6.0	43	5.5	26	3.3
Agree	155	20.0	142	18.2	141	18.1	136	17.5	70	9.0
Neither Agree nor Disagree	140	18.1	138	17.7	158	20.3	166	21.3	152	19.5
Disagree	135	17.4	127	16.3	84	10.8	72	9.2	181	23.3
Strongly Disagree	104	13.4	164	21	59	7.6	59	7.6	248	31.9
Don't Know	155	20	150	19.2	289	37.1	303	38.9	101	13
Total	775	100	780	100	778	100	779	100	778	100

F) DON'T KNOW RESPONSES TO ASSESSMENT OF CAMPUS CLIMATE

SORTED BY Don't Know

	The campus wide tenure committee recognizes and favorably reviews faculty involvement in internationalization activities		The campus wide promotions committee recognizes and favorably reviews faculty involvement in internationalization activities		There are opportunities for int'l scholars to teach, conduct research, or develop collaborations with U.S. based faculty		Commitment to international education is primarily symbolic		Funds are available to support internationalization and the development of faculty members' int'l skills and knowledge	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Strongly Agree	43	5.5	47	6	69	8.9	86	11.1	59	7.6
Agree	136	17.5	141	18.1	202	26	155	20	142	18.2
Neither Agree nor Disagree	166	21.3	158	20.3	188	24.2	140	18.1	138	17.7
Disagree	72	9.2	84	10.8	92	11.8	135	17.4	127	16.3
Strongly Disagree	59	7.6	59	7.6	63	8.1	104	13.4	164	21
Don't Know	303	38.9	289	37.1	163	21	155	20	150	19.2
Total	779	100	778	100	777	100	775	100	780	100

	There is an expressed commitment to internationalization by senior leaders		International expertise is part of recruitment and selection procedures of new faculty		There is active involvement in internationalization by faculty and staff		Participation in international activities by faculty is viewed favorably by department		Faculty are actively encouraged to include international perspectives and content in their courses	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Strongly Agree	115	14.7	26	3.3	69	8.9	172	22.1	96	12.3
Agree	166	21.3	70	9	194	24.9	235	30.2	169	21.7
Neither Agree nor Disagree	170	21.8	152	19.5	219	28.1	168	21.6	180	23.1
Disagree	124	15.9	181	23.3	135	17.4	75	9.6	164	21.1
Strongly Disagree	103	13.2	248	31.9	79	10.2	54	6.9	103	13.2
Don't Know	102	13.1	101	13	82	10.5	74	9.5	67	8.6
Total	780	100	778	100	778	100	778	100	779	100

G) TENURE STATUS * PARTICIPATION RECOGNIZED & VALUED BY TENURE COMMITTEE CROSS TABULATION

Tenure status		Participation Recognized & Valued by Tenure Committee						Total
		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Don't Know	
Tenured	Count	19	86	86	44	32	122	389
	% within tenure status	4.9%	22.1%	22.1%	11.3%	8.2%	31.4%	100.0%
Tenure-track	Count	11	19	33	15	14	96	188
	% within tenure status	5.9%	10.1%	17.6%	8.0%	7.4%	51.1%	100.0%
Non Tenure-track	Count	3	10	8	1	1	29	52
	% within tenure status	5.8%	19.2%	15.4%	1.9%	1.9%	55.8%	100.0%
Total	Count	33	115	127	60	47	247	629
	% within tenure status	5.2%	18.3%	20.2%	9.5%	7.5%	39.3%	100.0%

H) ACADEMIC RANK * PARTICIPATION RECOGNIZED & VALUED BY PROMOTIONS COMMITTEE CROSS TABULATION

academic rank		Participation Recognized & Valued by Promotions Committee						Total
		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Don't Know	
Instructor	Count	10	11	17	9	2	53	102
	% within academic rank	9.8%	10.8%	16.7%	8.8%	2.0%	52.0%	100.0%
Assistant Professor	Count	18	44	41	25	21	121	270
	% within academic rank	6.7%	16.3%	15.2%	9.3%	7.8%	44.8%	100.0%
Associate Professor	Count	9	44	42	19	16	63	193
	% within academic rank	4.7%	22.8%	21.8%	9.8%	8.3%	32.6%	100.0%
Professor	Count	10	42	58	31	20	52	213
	% within academic rank	4.7%	19.7%	27.2%	14.6%	9.4%	24.4%	100.0%
Total	Count	47	141	158	84	59	289	778
	% within academic rank	6.0%	18.1%	20.3%	10.8%	7.6%	37.1%	100.0%

I) TENURE STATUS * PARTICIPATION RECOGNIZED & VALUED BY PROMOTIONS COMMITTEE CROSS TABULATION

Tenure status		Participation Recognized & Valued by Promotions Committee						Total
		Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Don't Know	
Tenured	Count	21	88	90	47	32	111	389
	% within tenure status	5.4%	22.6%	23.1%	12.1%	8.2%	28.5%	100.0%
Tenure-track	Count	13	20	27	21	12	94	187
	% within tenure status	7.0%	10.7%	14.4%	11.2%	6.4%	50.3%	100.0%
Non Tenure track	Count	4	11	5	2	1	29	52
	% within tenure status	7.7%	21.2%	9.6%	3.8%	1.9%	55.8%	100.0%
Total	Count	38	119	122	70	45	234	628
	% within tenure status	6.1%	18.9%	19.4%	11.1%	7.2%	37.3%	100.0%

APPENDIX D. FACULTY INVOLVEMENT IN INTERNATIONALIZATION

J) FREQUENCY DISTRIBUTION OF RESPONSES

Yes Responses	Frequency	Percent
.00	177	23.9
1.00	116	15.7
2.00	109	14.7
3.00	94	12.7
4.00	68	9.2
5.00	57	7.7
6.00	31	4.2
7.00	26	3.5
8.00	15	2.0
9.00	15	2.0
10.00	10	1.4
11.00	15	2.0
12.00	4	.5
13.00	3	.4
Total	740	100.0

K) INTERNATIONAL INVOLVEMENT: YES RESPONSES BY GENDER

Activity	Total		Male		Female	
	N	%	N	%	N	%
Taught course with significant international component.	363	47.02	168	46.30	195	53.70
Revise or propose new course with significant int'l component.	290	37.56	135	46.55	155	53.45
Presented research/creative works outside U.S.	239	30.92	126	52.72	113	47.28
Student clubs & associations of an international nature (in U.S.).	201	26.21	111	55.22	90	44.78
Submitted/published in foreign press (not reprints).	155	20.18	90	58.06	65	41.94
Work with local organizations or schools on international projects.	155	20.18	81	52.26	74	47.74
Plan campus events of an international nature (in U.S.).	150	19.43	86	57.33	64	42.67
Revise or propose new program of study with significant int'l comp	149	19.28	81	54.36	68	45.64
Conducted research outside U.S.	144	18.60	90	62.50	54	37.50
Service or development project at foreign college/university.	140	18.18	79	56.43	61	43.57
Grants of an international nature.	113	14.71	67	59.29	46	40.71
Develop/deliver educational programs to other countries.	108	14.03	66	61.11	42	38.89
Taught at foreign college or university outside U.S.	57	7.36	41	71.93	16	28.07

APPENDIX E. ATTITUDES AND BELIEFS

L) FREQUENCY DISTRIBUTION BY ITEMS

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Don't Know
The presence of international students on U.S. campuses enriches the learning experience for American students	69.5	21.7	5.8	1.4	0.5	1
Knowledge of international issues is important for younger generations	58.1	28.5	8.6	2.5	1.6	0.8
Knowledge of international issues is important to me	52.8	30.7	12.9	2.9	0.4	0.4
Colleges and universities should require all students to take courses covering international topics	44.4	31.3	14.6	5.6	3.3	0.9
An international perspective in my discipline is an important and valued part of my teaching and research	29.5	23.7	21	17.5	7.3	0.9
It is the responsibility of ALL faculty to provide undergraduate students with an awareness of other countries, cultures, or global issues	26.8	26.9	23.8	12.2	8.7	1.6
In order to keep up with developments in my discipline, a scholar must read books and journals published abroad	26.8	21.3	24.2	16.3	9.9	1.6
Connections with scholars in other countries are very important to my professional work	22.1	24.3	28.3	17	7.6	0.8
I am developing more of an international perspective in my teaching	21.5	23.7	24.3	18.1	10.3	2.1
The curriculum at my institution should be more international in focus	19.5	24.6	29	13.1	5	8.8
I am developing more of an international perspective in my research	16.8	16.9	25.4	20.3	16.2	4.3
The more time that is spent teaching students about other countries, cultures, or global issues, the less time is available for teaching the basics	4	12.3	17.9	26.1	34.6	5.2
International education is a useful, but not a necessary component of undergraduate education	3.4	10.5	18.1	26.7	39.1	2.2
Most undergrad students graduate with an awareness about other countries, cultures, or global issues	3.3	12.9	22.5	29.6	26.9	4.8

APPENDIX F. STATISTICAL TESTING: FACULTY INVOLVEMENT

F.1 CAMPUS CLIMATE AND FACULTY INVOLVEMENT

Descriptive Statistics

	Mean	Std. Deviation	N
Faculty_Involvement	3.6183	3.15089	338
Campus_Climate	29.5266	8.52092	338

Correlations

		Faculty_ Involvement	Campus_ Climate
Pearson Correlation	Faculty_Involvement	1.000	-.033
	Campus_Climate	-.033	1.000
Sig. (1-tailed)	Faculty_Involvement	.	.275
	Campus_Climate	.275	.
N	Faculty_Involvement	338	338
	Campus_Climate	338	338

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.033[a]	.001	-.002	3.15389

a. Predictors: (Constant), Campus_Climate

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.558	1	3.558	.358	.550[a]
	Residual	3342.208	336	9.947		
	Total	3345.766	337			

a. Predictors: (Constant), Campus_Climate

b. Dependent Variable: Faculty_Involvement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.974	.620		6.415	.000	2.756	5.193
	Campus_Climate	-.012	.020	-.033	-.598	.550	-.052	.028

a. Dependent Variable: Faculty_Involvement

F.2 GOVERNANCE, OPERATIONS AND HUMAN RESOURCES

		Campus Climate	Governance	Operations	Human Resources
N	Valid	358	514	630	422
	Missing	473	317	201	409
Mean		29.4888	14.3794	3.3095	11.9692
Median		29.0000	14.0000	3.0000	12.0000
Std. Deviation		8.55293	4.70805	1.32281	3.68621
Minimum		10.00	5.00	1.00	4.00
Maximum		50.00	25.00	5.00	20.00

OPERATIONS AND FACULTY INVOLVEMENT

		Faculty Involvement	Operations
Faculty Involvement	Pearson Correlation	1	-.083(*)
	Sig. (2-tailed)		.043
	N	740	595
Operations	Pearson Correlation	-.083(*)	1
	Sig. (2-tailed)	.043	
	N	595	630

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.083(a)	.007	.005	2.95387

a. Predictors: (Constant), Operations

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.895	1	35.895	4.114	.043[a]
	Residual	5174.148	593	8.725		
	Total	5210.044	594			

a. Predictors: (Constant), Operations

b. Dependent Variable: Faculty_Involvement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.880	.326		11.887	.000	3.239	4.522
	Operations	-.186	.092	-.083	-2.028	.043	-.366	-.006

a. Dependent Variable: Faculty_Involvement

F.3 CHI SQUARE STATISTICS FROM EXAMPLES 1, 2 AND 3 OF CROSS TABULATIONS OF ITEMS RELATED TO CAMPUS CLIMATE AND FACULTY INVOLVEMENT

EXAMPLE 1: COMMITMENT BY SENIOR LEADERS * WORK WITH LOCAL ORGANIZATIONS OR SCHOOLS

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.996[a]	5	.010
Likelihood Ratio	15.751	5	.008
Linear-by-Linear Association	3.878	1	.049
N of Valid Cases	767		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.01.

		Work with local organizations or schools on international projects in past 3 years		
		No	Yes	Total
Commitment by senior leaders	Strongly Agree	13.9%	18.1%	14.7%
	Agree	20.1%	26.5%	21.4%
	Neither Agree nor Disagree	23.7%	14.2%	21.8%
	Disagree	14.9%	20.0%	15.9%
	Strongly Disagree	13.2%	13.5%	13.3%
	Don't Know	14.2%	7.7%	12.9%
Total		100.0%	100.0%	100.0%

EXAMPLE 2: FUNDS AVAILABLE * REVISE OR PROPOSE NEW COURSE

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.612[a]	5	.001
Likelihood Ratio	22.240	5	.000
Linear-by-Linear Association	8.614	1	.003
N of Valid Cases	771		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 21.37.

		Revise or propose new course with significant international component		Total
		No	Yes	Total
Funds available for Internationalization	Strongly Agree	5.6%	10.4%	7.4%
	Agree	17.8%	19.0%	18.3%
	Neither Agree nor Disagree	17.0%	18.0%	17.4%
	Disagree	17.0%	15.6%	16.5%
	Strongly Disagree	18.9%	24.9%	21.1%
	Don't Know	23.7%	12.1%	19.3%
Total		100.0%	100.0%	100.0%

EXAMPLE 3: PARTICIPATION RECOGNIZED & VALUED BY PROMOTIONS COMMITTEE * CONDUCTED RESEARCH OUTSIDE U.S,

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.346[a]	5	.000
Likelihood Ratio	31.402	5	.000
Linear-by-Linear Association	1.228	1	.268
N of Valid Cases	771		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.40.

		Conducted research outside U.S. in past 3 years		
		No	Yes	Total
Participation recognized & valued	Strongly Agree	5.9%	5.6%	5.8%
	Agree	18.7%	16.7%	18.3%
	Neither Agree nor Disagree	20.4%	19.4%	20.2%
	Disagree	8.9%	19.4%	10.9%
	Strongly Disagree	5.9%	15.3%	7.7%
	Don't Know	40.2%	23.6%	37.1%
Total		100.0%	100.0%	100.0%

F.4 INTERNATIONAL EXPERIENCES (Q1-5) AND FACULTY INVOLVEMENT

Descriptive Statistics

	Mean	Std. Deviation	N
Faculty_Involvement	2.8652	2.89793	705
International Experiences Q1-Q5	7.4553	3.41929	705

Correlations

		Faculty_ Involvement	International Experiences Q1-Q5
Pearson Correlation	Faculty_Involvement	1.000	.598
	International Experiences Q1-Q5	.598	1.000
Sig. (1-tailed)	Faculty_Involvement	.	.000
	International Experiences Q1-Q5	.000	.
N	Faculty_Involvement	705	705
	International Experiences Q1-Q5	705	705

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.598(a)	.358	.357	2.32380

a Predictors: (Constant), International Experiences Q1-Q5

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2115.951	1	2115.951	391.838	.000(a)
	Residual	3796.248	703	5.400		
	Total	5912.199	704			

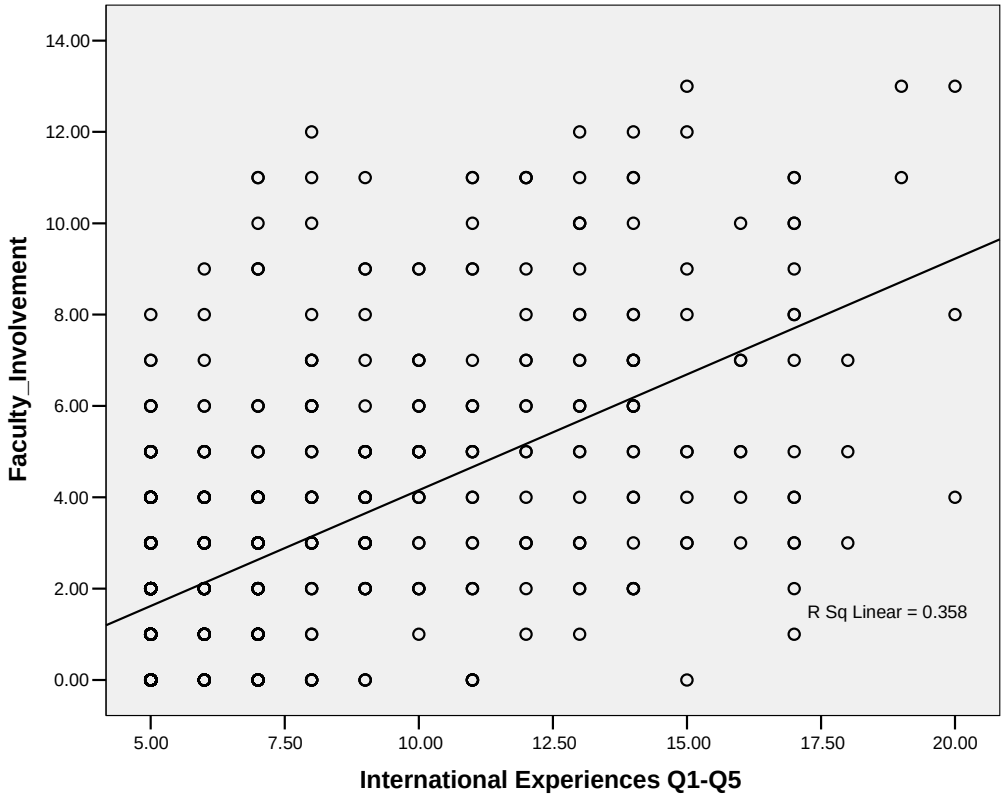
a Predictors: (Constant), International Experiences Q1-Q5
b Dependent Variable: Faculty_Involvement

SLOPE:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.915	.210		-4.355	.000	-1.327	-.502
	International Experiences Q1-Q5	.507	.026	.598	19.795	.000	.457	.557

a. Dependent Variable: Faculty_Involvement



F.5 INTERNATIONAL EXPERIENCES (Q1-3) AND FACULTY INVOLVEMENT

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IE before faculty status	770	3.00	12.00	4.5442	2.56945
Faculty_Involvement	740	.00	13.00	2.9027	2.88222
Valid N (listwise)	716				

Correlations

		IE before faculty status	Faculty_Involvement
IE before faculty status	Pearson Correlation	1	.456(**)
	Sig. (1-tailed)	.	.000
	N	770	716
Faculty_Involvement	Pearson Correlation	.456(**)	1
	Sig. (1-tailed)	.000	.
	N	716	740

** Correlation is significant at the 0.01 level (1-tailed).

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.456(a)	.208	.206	2.57812

a Predictors: (Constant), IE before faculty status

ANOVA(b)

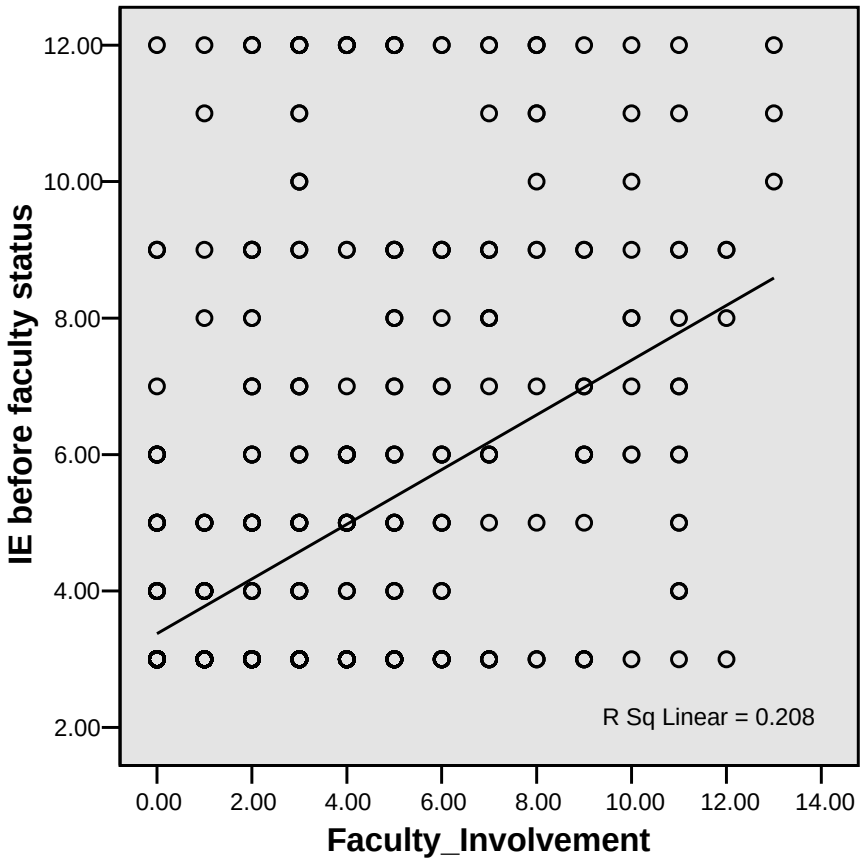
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1243.171	1	1243.171	187.036	.000(a)
	Residual	4745.749	714	6.647		
	Total	5988.920	715			

a Predictors: (Constant), IE before faculty status
b Dependent Variable: Faculty Involvement

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.527	.197		2.681	.008
	IE before faculty status	.518	.038	.456	13.676	.000

a. Dependent Variable: Faculty Involvement


12.00
10.00
8.00
6.00
4.00
2.00
IE before faculty status
R Sq Linear = 0.208
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
Faculty_Involvement

F.6 FACULTY INVOLVEMENT BY FACULTY CHARACTERISTICS

GENDER

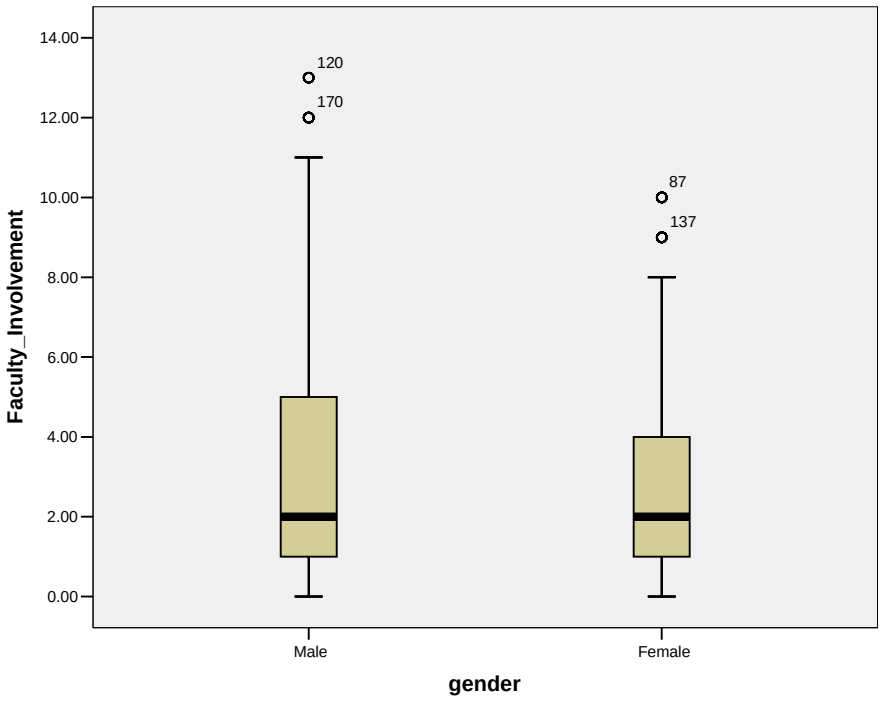
Group Statistics

	gender	N	Mean	Std. Deviation
Faculty Involvement	Male	363	3.1570	3.30162
	Female	377	2.6578	2.38950

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Faculty_Involvem	Equal variance assumed	28.608	.000	2.363	738	.018	.49920	.21129	.08440	.91400
	Equal variance not assumed			2.349	658.069	.019	.49920	.21254	.08186	.91654

BOXPLOT



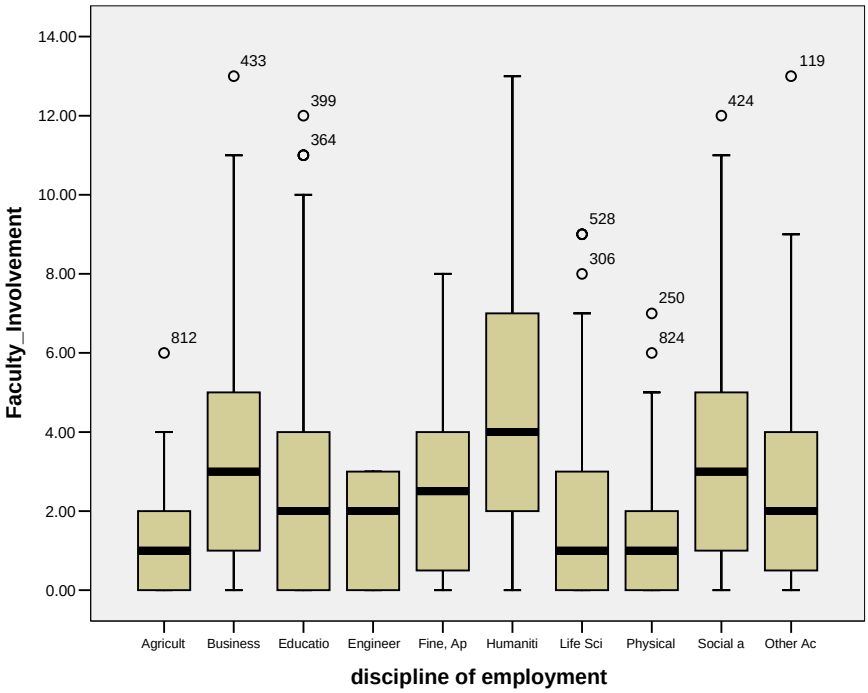
DISCIPLINE OF EMPLOYMENT

ANOVA

Faculty_Involvement

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	708.942	9	78.771	10.590	.000
Within Groups	5430.053	730	7.438		
Total	6138.995	739			

BOXPLOT



Multiple Comparisons (Significant Only)

Dependent Variable: Faculty Involvement

(I) discipline of employment	(J) discipline of employment	Mean Difference (I-J)	Std. Error	Sig.
Agricultural and Animal Sciences	Business and Commerce	-2.09337(*)	.93662	.026
	Humanities	-3.12256(*)	.86176	.000
	Social and Behavioral Sciences	-1.70187(*)	.85494	.047
Business and Commerce	Agricultural and Animal Sciences	2.09337(*)	.93662	.026
	Education	1.20156(*)	.50341	.017
	Engineering and Applied Sciences	2.22973(*)	.97205	.022
	Fine, Applied, and Performing Arts	1.18806(*)	.59666	.047
	Humanities	-1.02920(*)	.51716	.047
	Life Sciences and Health	1.74915(*)	.52274	.001
	Physical/ Mathematical Sciences	2.13553(*)	.55574	.000
Education	Business and Commerce	-1.20156(*)	.50341	.017
	Humanities	-2.23076(*)	.34467	.000
	Physical /Mathematical Sciences	.93397(*)	.40023	.020
	Social and Behavioral Sciences	-.81007(*)	.32723	.014
Engineering and Applied Sciences	Business and Commerce	-2.22973(*)	.97205	.022
	Humanities	-3.25893(*)	.90014	.000
	Social and Behavioral Sciences	-1.83824(*)	.89361	.040
Fine, Applied, and Performing Arts	Business and Commerce	-1.18806(*)	.59666	.047
	Humanities	-2.21726(*)	.47051	.000
Humanities	Agricultural and Animal Sciences	3.12256(*)	.86176	.000
	Business and Commerce	1.02920(*)	.51716	.047
	Education	2.23076(*)	.34467	.000
	Engineering and Applied Sciences	3.25893(*)	.90014	.000

	Fine, Applied, and Performing Arts	2.21726(*)	.47051	.000
	Life Sciences and Health	2.77835(*)	.37233	.000
	Physical/ Mathematical Sciences	3.16473(*)	.41739	.000
	Social and Behavioral Sciences	1.42069(*)	.34801	.000
	Other Academic Discipline	2.05060(*)	.41198	.000
Life Sciences and Health	Business and Commerce	-1.74915(*)	.52274	.001
	Humanities	-2.77835(*)	.37233	.000
	Social and Behavioral Sciences	-1.35765(*)	.35625	.000
Physical/ Mathematical Sciences	Business and Commerce	-2.13553(*)	.55574	.000
	Education	-.93397(*)	.40023	.020
	Humanities	-3.16473(*)	.41739	.000
	Social and Behavioral Sciences	-1.74403(*)	.40311	.000
	Other Academic Discipline	-1.11413(*)	.45947	.016
Social and Behavioral Sciences	Agricultural and Animal Sciences	1.70187(*)	.85494	.047
	Education	.81007(*)	.32723	.014
	Engineering and Applied Sciences	1.83824(*)	.89361	.040
	Humanities	-1.42069(*)	.34801	.000
	Life Sciences and Health	1.35765(*)	.35625	.000
	Physical/ Mathematical Sciences	1.74403(*)	.40311	.000
Other Academic Discipline	Humanities	-2.05060(*)	.41198	.000
	Physical/ Mathematical Sciences	1.11413(*)	.45947	.016

The mean difference is significant at the.05 level.

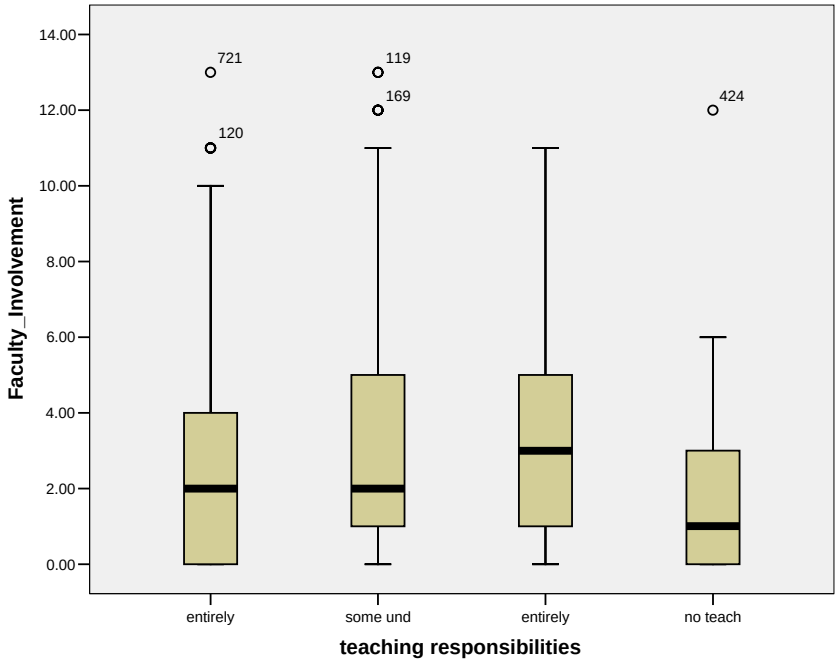
TYPE OF TEACHING RESPONSIBILITY

ANOVA

Faculty_Involvement

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	99.149	3	33.050	4.027	.007
Within Groups	6039.846	736	8.206		
Total	6138.995	739			

BOXPLOT



Multiple Comparisons

Dependent Variable: Faculty Involvement
LSD

(I) Teaching responsibilities	(J) Teaching responsibilities	Mean Difference (I-J)	Std. Error	Sig.
Entirely undergraduate	Some undergrad, some grad or professional	-.59340(*)	.22082	.007
	Entirely graduate or professional	-1.09443(*)	.49743	.028
Entirely graduate or professional	No teaching at the present time	1.56853(*)	.71755	.029

* The mean difference is significant at the .05 level.

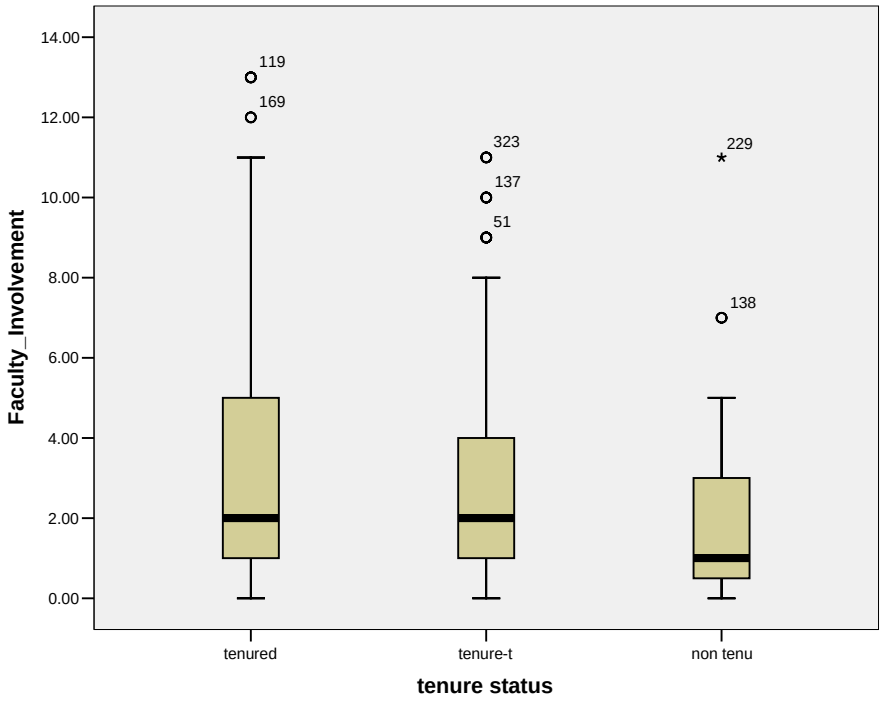
TENURE STATUS

ANOVA

Faculty_Involvement

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	50.774	2	25.387	3.131	.044
Within Groups	4849.359	598	8.109		
Total	4900.133	600			

BOXPLOT



Multiple Comparisons

Dependent Variable: Faculty Involvement
LSD

(I) tenure status	(J) tenure status	Mean Difference (I-J)	Std. Error	Sig.
tenured	non tenure track	1.05391(*)	.44090	.017

* The mean difference is significant at the .05 level.

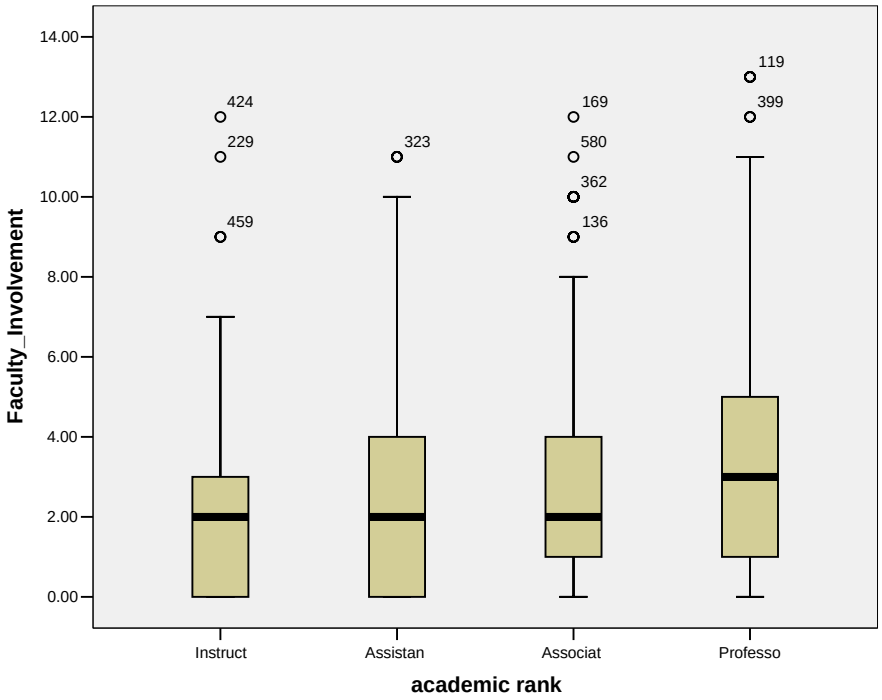
ACADEMIC RANK

ANOVA

Faculty_Involvement

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	190.162	3	63.387	7.842	.000
Within Groups	5948.832	736	8.083		
Total	6138.995	739			

BOXPLOT



Multiple Comparisons

Dependent Variable: Faculty Involvement
LSD

(I) academic rank	(J) academic rank	Mean Difference (I-J)	Std. Error	Sig.
Instructor	Associate Professor	-.95716(*)	.36077	.008
	Professor	-1.56510(*)	.35524	.000
Assistant Professor	Professor	-.97488(*)	.26657	.000
Associate Professor	Professor	-.60794(*)	.29048	.037

* The mean difference is significant at the .05 level.

TEACHING OR RESEARCH PREFERENCE

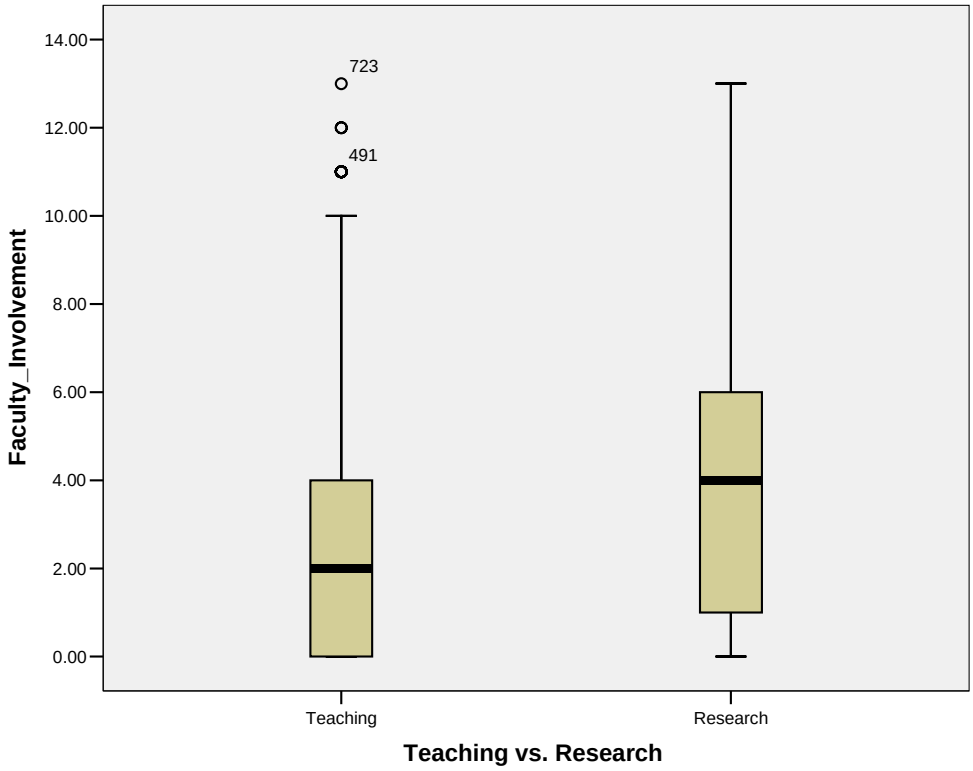
Group Statistics

	Teaching or Research	N	Mean	Std. Deviation	Std. Error Mean
Faculty_Involvement	Teaching	580	2.5483	2.61114	.10842
	Research	152	4.2171	3.45054	.27988

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Faculty_Involvement	Equal variances assumed	25.519	.000	-6.528	730	.000	-1.66883	.25564	-2.17070	-1.16696
	Equal variances not assumed			-5.560	198.557	.000	-1.66883	.30014	-2.26071	-1.07695

BOXPLOT



APPENDIX G. STATISTICAL TESTING: ATTITUDES AND BELIEFS

M) FACTOR 1 AND FACULTY INVOLVEMENT

Descriptive Statistics

	Mean	Std. Deviation	N
Faculty_Involvement	3.0149	2.94506	672
Attitudes and Beliefs about Internationalization Scholarship/Research	15.0179	5.84114	672

Correlations

		Faculty_ Involvement	Attitudes and Beliefs about Internationaliz ation Scholarship/ Research
Pearson Correlation	Faculty_Involvement	1.000	-.631
	Attitudes and Beliefs about Internationalization Scholarship/Research	-.631	1.000
Sig. (1-tailed)	Faculty_Involvement	.	.000
	Attitudes and Beliefs about Internationalization Scholarship/Research	.000	.
N	Faculty_Involvement	672	672
	Attitudes and Beliefs about Internationalization Scholarship/Research	672	672

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.631[a]	.398	.397	2.28714

a. Predictors: (Constant), Attitudes and Beliefs about Internationalization Scholarship/Research

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2315.082	1	2315.082	442.570	.000[a]
	Residual	3504.769	670	5.231		
	Total	5819.851	671			

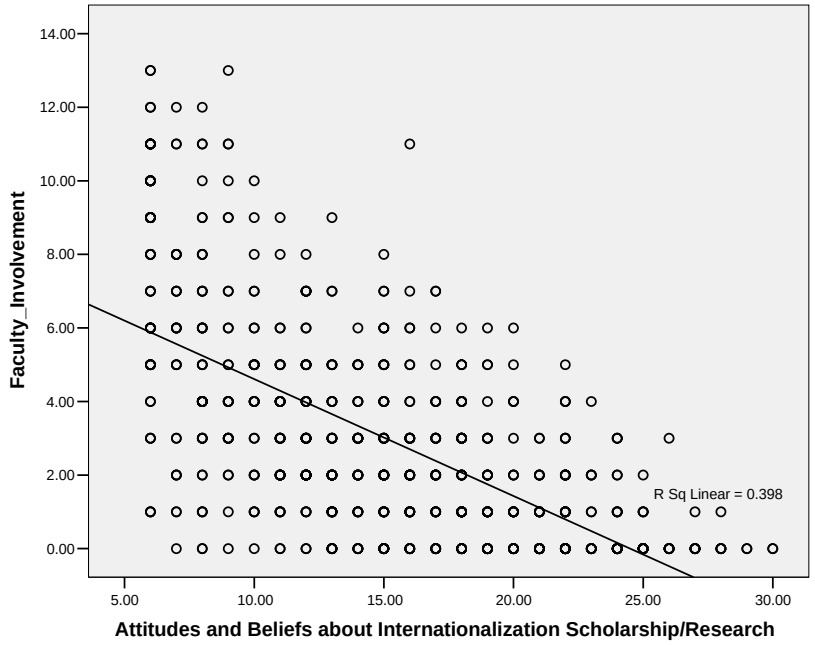
a. Predictors: (Constant), Attitudes and Beliefs about Internationalization Scholarship/Research

b. Dependent Variable: Faculty_Involvement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	7.791	.244		31.987	.000	7.312	8.269
	Attitudes and Beliefs about Internationalization Scholarship/Research	-.318	.015	-.631	-21.037	.000	-.348	-.288

a. Dependent Variable: Faculty_Involvement



N) FACTOR 2 AND FACULTY INVOLVEMENT

Descriptive Statistics

	Mean	Std. Deviation	N
Faculty_Involvement	3.0061	2.91086	652
Attitudes and Beliefs about Internationalization Teaching/Curriculum	9.9479	3.73842	652

Correlations

		Faculty_ Involvement	Attitudes and Beliefs about Internationaliz ation Teaching/ Curriculum
Pearson Correlation	Faculty_Involvement	1.000	-.462
	Attitudes and Beliefs about Internationalization Teaching/Curriculum	-.462	1.000
Sig. (1-tailed)	Faculty_Involvement	.	.000
	Attitudes and Beliefs about Internationalization Teaching/Curriculum	.000	.
N	Faculty_Involvement	652	652
	Attitudes and Beliefs about Internationalization Teaching/Curriculum	652	652

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.462[a]	.213	.212	2.58380

a. Predictors: (Constant), Attitudes and Beliefs about Internationalization Teaching/Curriculum

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1176.561	1	1176.561	176.237	.000[a]
	Residual	4339.414	650	6.676		
	Total	5515.975	651			

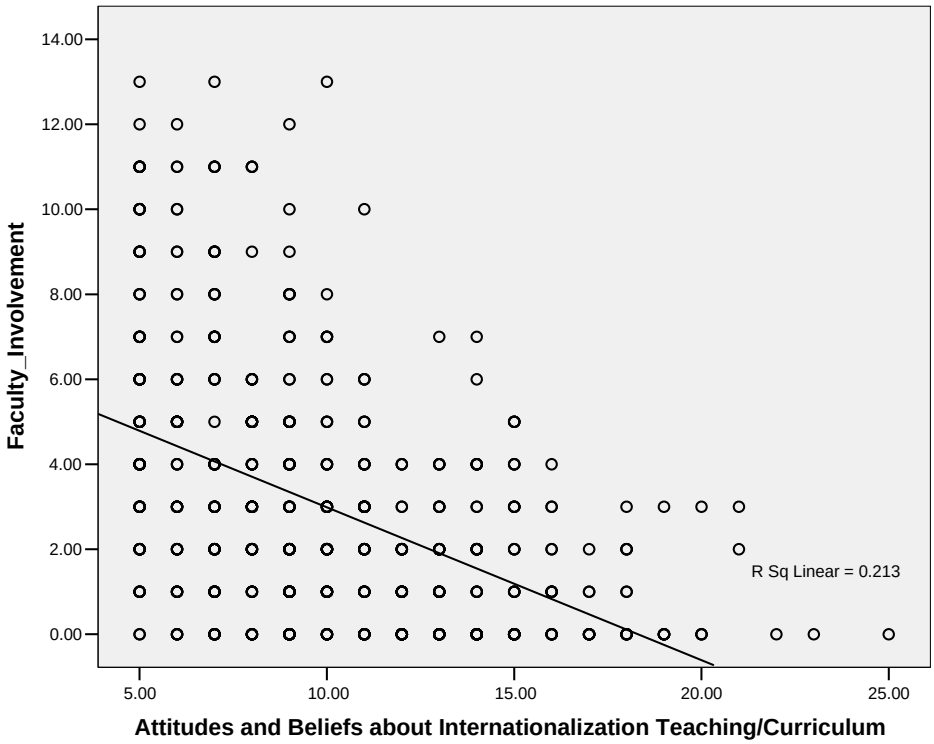
a. Predictors: (Constant), Attitudes and Beliefs about Internationalization Teaching/Curriculum

b. Dependent Variable: Faculty_Involvement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	6.583	.288		22.872	.000	6.018	7.149
	Attitudes and Beliefs about Internationalization Teaching/Curriculum	-.360	.027	-.462	-13.275	.000	-.413	-.306

a. Dependent Variable: Faculty_Involvement



O) FACTOR 3 AND FACULTY INVOLVEMENT

Descriptive Statistics

	Mean	Std. Deviation	N
Faculty_Involvement	2.9330	2.90795	687
Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	4.3319	2.00594	687

Correlations

		Faculty_ Involvement	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students
Pearson Correlation	Faculty_Involvement	1.000	-.263
	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	-.263	1.000
Sig. (1-tailed)	Faculty_Involvement	.	.000
	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	.000	.
N	Faculty_Involvement	687	687
	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	687	687

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.263[a]	.069	.068	2.80756

a. Predictors: (Constant), Attitudes and Beliefs about Internationalization Impact of Curriculum on Students

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	401.491	1	401.491	50.935	.000[a]
	Residual	5399.429	685	7.882		
	Total	5800.920	686			

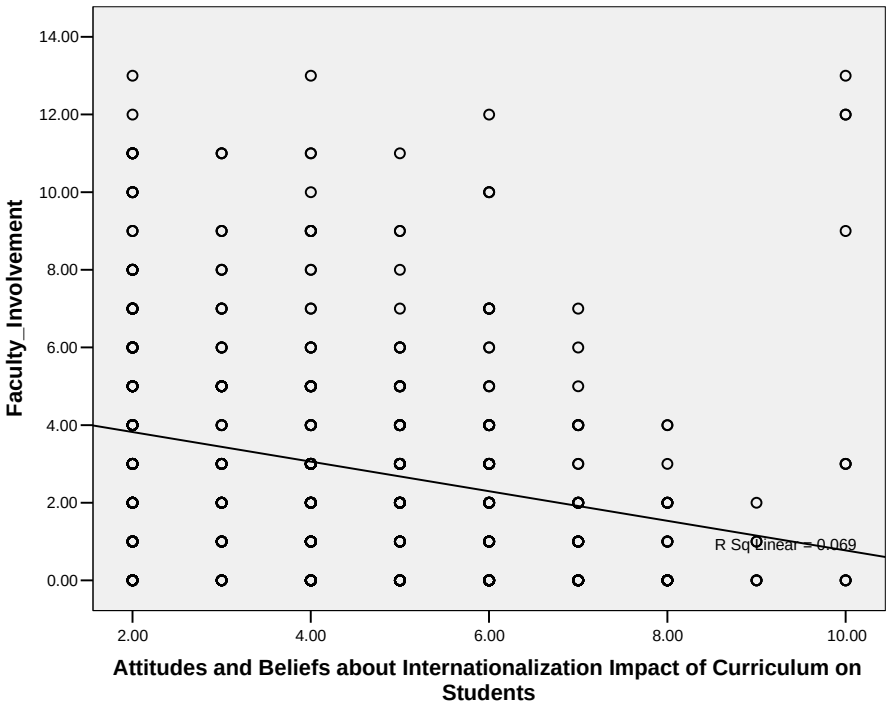
a. Predictors: (Constant), Attitudes and Beliefs about Internationalization Impact of Curriculum on Students

b. Dependent Variable: Faculty_Involvement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	4.585	.255		17.976	.000	4.084	5.086
	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	-.381	.053	-.263	-7.137	.000	-.486	-.276

a. Dependent Variable: Faculty_Involvement



P) MULTIPLE REGRESSION (ATTITUDES AND BELIEFS & FACULTY INVOLVEMENT)

Descriptive Statistics

	Mean	Std. Deviation	N
Faculty_Involvement	3.0696	2.94570	589
Attitudes and Beliefs about Internationalization Scholarship/Research	14.9711	5.80442	589
Attitudes and Beliefs about Internationalization Teaching/Curriculum	9.9219	3.75174	589
Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	4.3005	1.99481	589

Correlations

		Faculty_ Involvement	Attitudes and Beliefs about Internationaliz ation Scholarship/ Research	Attitudes and Beliefs about Internationaliz ation Teaching/ Curriculum	Attitudes and Beliefs about Internationaliz ation Impact of Curriculum on Students
Pearson Correlation	Faculty_Involvement	1.000	-.626	-.467	-.286
	Attitudes and Beliefs about Internationalization Scholarship/Research	-.626	1.000	.673	.332
	Attitudes and Beliefs about Internationalization Teaching/Curriculum	-.467	.673	1.000	.460
	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	-.286	.332	.460	1.000
Sig. (1-tailed)	Faculty_Involvement	.	.000	.000	.000
	Attitudes and Beliefs about Internationalization Scholarship/Research	.000	.	.000	.000
	Attitudes and Beliefs about Internationalization Teaching/Curriculum	.000	.000	.	.000
	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	.000	.000	.000	.
N	Faculty_Involvement	589	589	589	589
	Attitudes and Beliefs about Internationalization Scholarship/Research	589	589	589	589
	Attitudes and Beliefs about Internationalization Teaching/Curriculum	589	589	589	589
	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	589	589	589	589

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.632[a]	.400	.397	2.28753

a. Predictors: (Constant), Attitudes and Beliefs about Internationalization Impact of Curriculum on Students, Attitudes and Beliefs about Internationalization Scholarship/Research, Attitudes and Beliefs about Internationalization Teaching/Curriculum

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2040.960	3	680.320	130.011	.000[a]
	Residual	3061.186	585	5.233		
	Total	5102.146	588			

a. Predictors: (Constant), Attitudes and Beliefs about Internationalization Impact of Curriculum on Students, Attitudes and Beliefs about Internationalization Scholarship/Research, Attitudes and Beliefs about Internationalization Teaching/Curriculum

b. Dependent Variable: Faculty_Involvement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	8.249	.301		27.375	.000	7.657	8.841
	Attitudes and Beliefs about Internationalization Scholarship/Research	-.287	.022	-.566	-13.069	.000	-.331	-.244
	Attitudes and Beliefs about Internationalization Teaching/Curriculum	-.041	.036	-.052	-1.129	.259	-.112	.030
	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	-.110	.053	-.074	-2.064	.039	-.215	-.005

a. Dependent Variable: Faculty_Involvement

Q) FACTOR 1 AND INTERNATIONAL EXPERIENCES

Descriptive Statistics

	Mean	Std. Deviation	N
Attitudes and Beliefs about Internationalization Scholarship/Research	15.0104	5.86517	673
International Experiences Q1-Q5	7.5840	3.50669	673

Correlations

		Attitudes and Beliefs about Internationalization Scholarship/ Research	International Experiences Q1-Q5
Pearson Correlation	Attitudes and Beliefs about Internationalization Scholarship/Research	1.000	-.500
	International Experiences Q1-Q5	-.500	1.000
Sig. (1-tailed)	Attitudes and Beliefs about Internationalization Scholarship/Research	.	.000
	International Experiences Q1-Q5	.000	.
N	Attitudes and Beliefs about Internationalization Scholarship/Research	673	673
	International Experiences Q1-Q5	673	673

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.500[a]	.250	.249	5.08207

a. Predictors: (Constant), International Experiences Q1-Q5

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5786.700	1	5786.700	224.052	.000[a]
	Residual	17330.227	671	25.827		
	Total	23116.927	672			

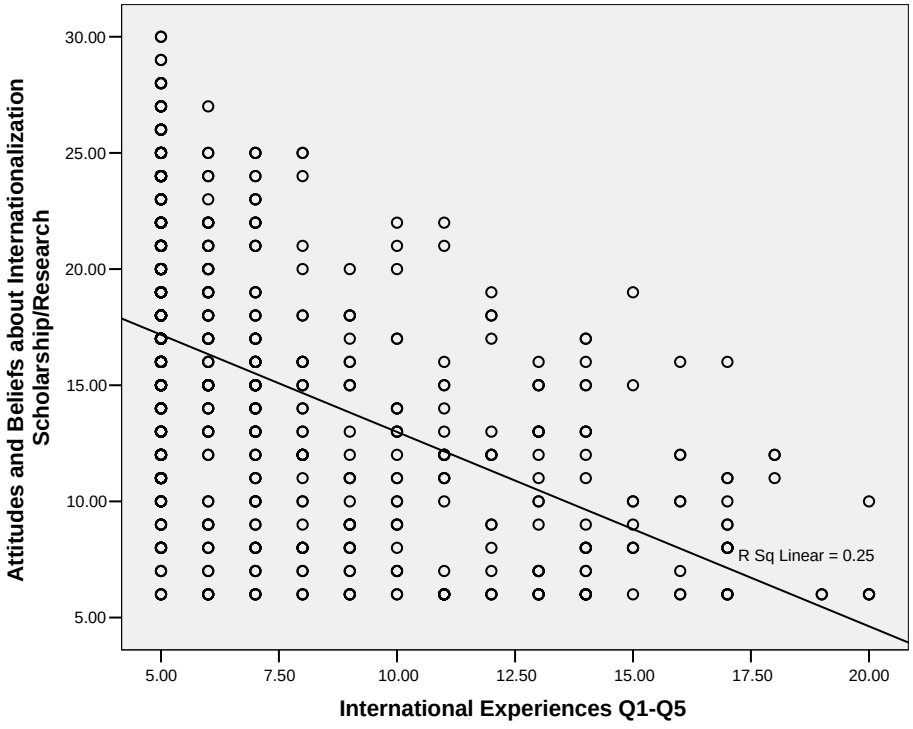
a. Predictors: (Constant), International Experiences Q1-Q5

b. Dependent Variable: Attitudes and Beliefs about Internationalization Scholarship/Research

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	21.357	.467		45.726	.000	20.440	22.274
	International Experiences Q1-Q5	-.837	.056	-.500	-14.968	.000	-.947	-.727

a. Dependent Variable: Attitudes and Beliefs about Internationalization Scholarship/Research



R) FACTOR 2 AND INTERNATIONAL EXPERIENCES

Descriptive Statistics

	Mean	Std. Deviation	N
Attitudes and Beliefs about Internationalization Teaching/Curriculum	9.9521	3.77164	647
International Experiences Q1-Q5	7.5270	3.48088	647

Correlations

		Attitudes and Beliefs about Internationalization Teaching/ Curriculum	International Experiences Q1-Q5
Pearson Correlation	Attitudes and Beliefs about Internationalization Teaching/Curriculum	1.000	-.385
	International Experiences Q1-Q5	-.385	1.000
Sig. (1-tailed)	Attitudes and Beliefs about Internationalization Teaching/Curriculum	.	.000
	International Experiences Q1-Q5	.000	.
N	Attitudes and Beliefs about Internationalization Teaching/Curriculum	647	647
	International Experiences Q1-Q5	647	647

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.385[a]	.149	.147	3.48297

a. Predictors: (Constant), International Experiences Q1-Q5

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1364.989	1	1364.989	112.520	.000[a]
	Residual	7824.525	645	12.131		
	Total	9189.515	646			

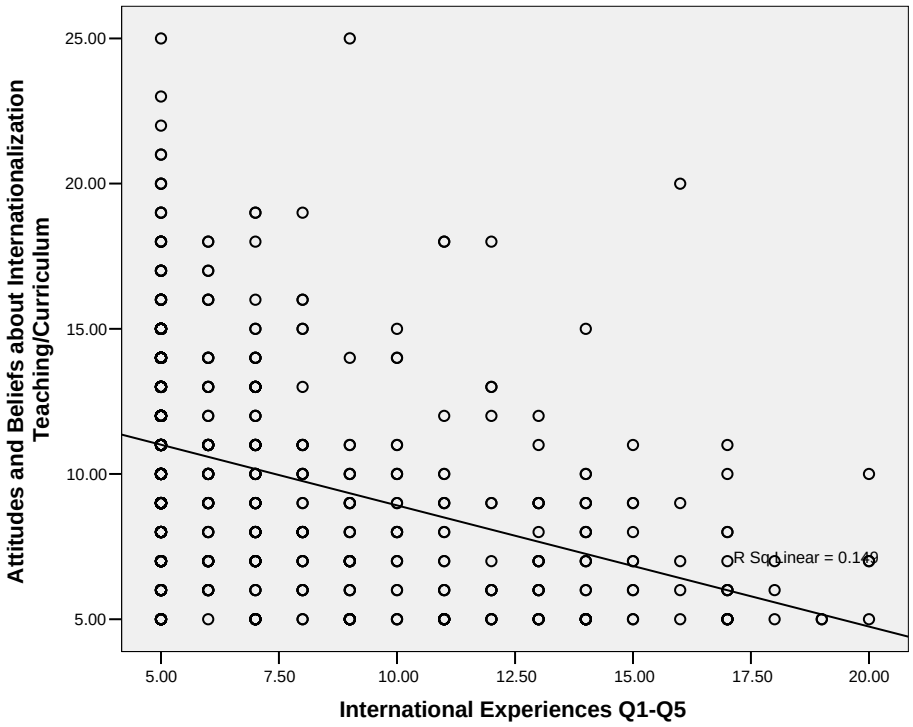
a. Predictors: (Constant), International Experiences Q1-Q5

b. Dependent Variable: Attitudes and Beliefs about Internationalization Teaching/Curriculum

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	13.095	.326		40.117	.000	12.454	13.736
	International Experiences Q1-Q5	-.418	.039	-.385	-10.608	.000	-.495	-.340

a. Dependent Variable: Attitudes and Beliefs about Internationalization Teaching/Curriculum



S) FACTOR 3 AND INTERNATIONAL EXPERIENCES

Descriptive Statistics

	Mean	Std. Deviation	N
Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	4.3211	2.00831	682
International Experiences Q1-Q5	7.4487	3.42160	682

Correlations

		Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	International Experiences Q1-Q5
Pearson Correlation	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	1.000	-.178
	International Experiences Q1-Q5	-.178	1.000
Sig. (1-tailed)	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	.	.000
	International Experiences Q1-Q5	.000	.
N	Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	682	682
	International Experiences Q1-Q5	682	682

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.178[a]	.032	.030	1.97782

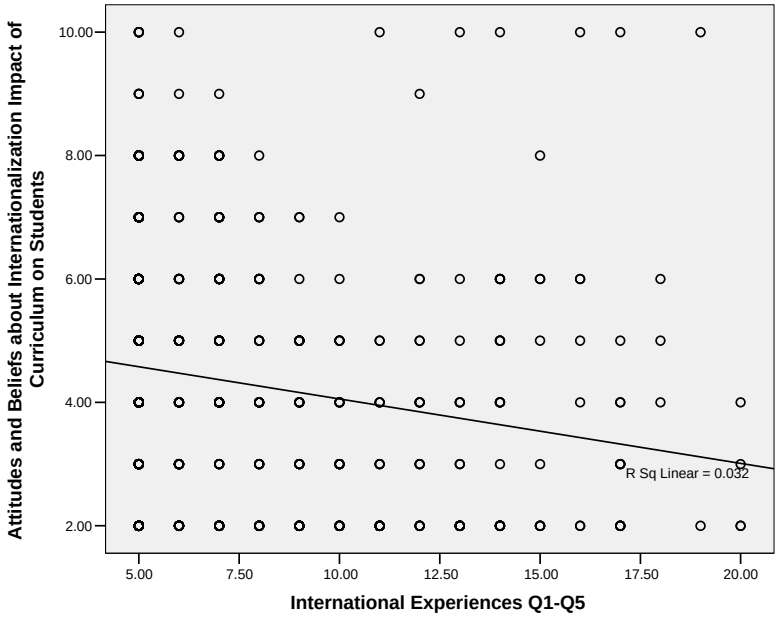
a. Predictors: (Constant), International Experiences Q1-Q5

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	86.670	1	86.670	22.156	.000[a]
	Residual	2660.006	680	3.912		
	Total	2746.676	681			

a. Predictors: (Constant), International Experiences Q1-Q5

b. Dependent Variable: Attitudes and Beliefs about Internationalization Impact of Curriculum on Students



T) ATTITUDES AND BELIEFS BY FACULTY CHARACTERISTICS

GENDER

Factor 1: Scholarship of Teaching and Research (no significance by gender)

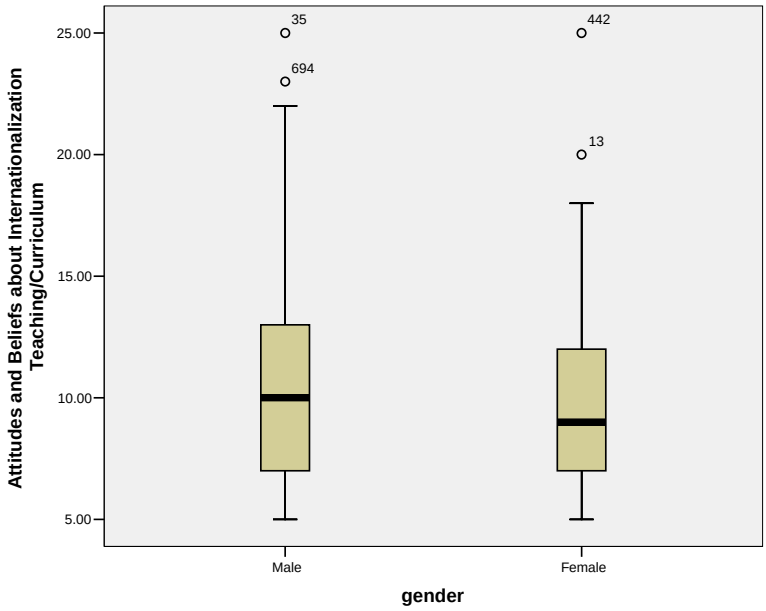
Group Statistics

	gender	N	Mean	Std. Deviation	Std. Error Mean
Attitudes and Beliefs about Internationalization Scholarship/Research	Male	359	15.0891	5.98815	.31604
	Female	345	14.8522	5.68951	.30631

Factor 2: Instruction and Curriculum

Group Statistics

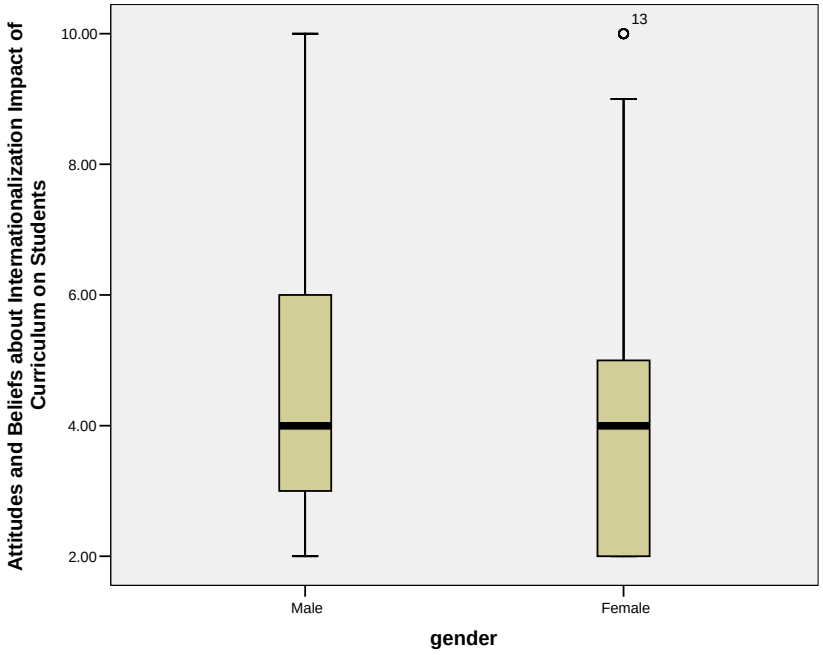
	gender	N	Mean	Std. Deviation	Std. Error Mean
Attitudes and Beliefs about Internationalization Teaching/Curriculum	Male	342	10.4298	3.98598	.21554
	Female	340	9.4794	3.46106	.18770



Factor 3: Impact of Curriculum on Students

Group Statistics

	gender	N	Mean	Std. Deviation	Std. Error Mean
Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	Male	351	4.6097	2.06573	.11026
	Female	367	4.0272	1.89746	.09905



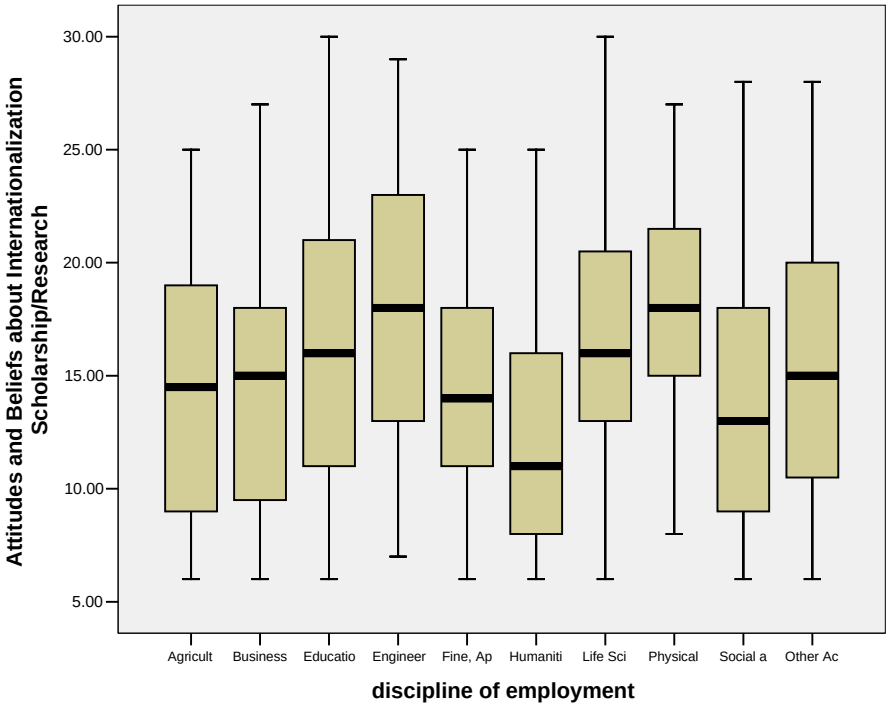
DISCIPLINE OF EMPLOYMENT

Factor 1: Scholarship of Teaching and Learning

ANOVA

Attitudes and Beliefs about Internationalization Scholarship/Research

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2369.307	9	263.256	8.453	.000
Within Groups	21613.180	694	31.143		
Total	23982.487	703			



Multiple Comparisons

Dependent Variable: Attitudes and Beliefs about Internationalization Scholarship/Research
LSD

(I) discipline of employment	(J) discipline of employment	Mean Difference (I-J)	Std. Error	Sig.
Business and Commerce	Humanities	2.49447(*)	1.04127	.017
	Physical and Mathematical Sciences	-3.54688(*)	1.12399	.002
Education	Humanities	3.97430(*)	.71743	.000
	Physical and Mathematical Sciences	-2.06705(*)	.83295	.013
	Social and Behavioral Sciences	2.56618(*)	.67675	.000
Engineering and Applied Sciences	Humanities	5.64832(*)	1.93547	.004
	Social and Behavioral Sciences	4.24020(*)	1.92076	.028
Fine, Applied, and Performing Arts	Humanities	3.00546(*)	1.01351	.003
	Physical and Mathematical Sciences	-3.03589(*)	1.09832	.006
Humanities	Life Sciences and Health	-4.44481(*)	.78328	.000
	Physical and Mathematical Sciences	-6.04135(*)	.86633	.000
	Other Academic Discipline	-3.60070(*)	.88320	.000
Life Sciences and Health	Social and Behavioral Sciences	3.03669(*)	.74620	.000
Physical and Mathematical Sciences	Social and Behavioral Sciences	4.63323(*)	.83295	.000
	Other Academic Discipline	2.44065(*)	.97936	.013
Social and Behavioral Sciences	Fine, Applied, and Performing Arts	-1.59734	.98513	.105
	Life Sciences and Health	-3.03669(*)	.74620	.000
	Other Academic Discipline	-2.19258(*)	.85048	.010

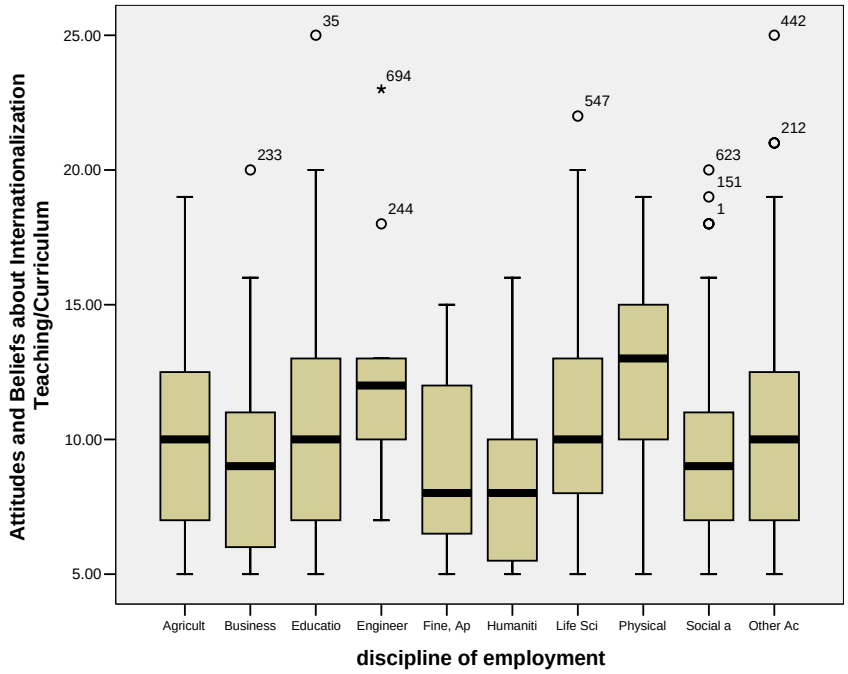
* The mean difference is significant at the .05 level.

Factor 2 – Instruction and Curriculum

ANOVA

Attitudes and Beliefs about Internationalization Teaching/Curriculum

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1000.595	9	111.177	8.655	.000
Within Groups	8632.086	672	12.845		
Total	9632.680	681			



Multiple Comparisons

Dependent Variable: Attitudes and Beliefs about Internationalization Teaching/Curriculum
LSD

(I) discipline of employment	(J) discipline of employment	Mean Difference (I-J)	Std. Error	Sig.
Business and Commerce	Engineering and Applied Sciences	-3.01667(*)	1.28115	.019
	Humanities	1.41026(*)	.69306	.042
	Physical and Mathematical Sciences	-2.98118(*)	.75100	.000
Education	Humanities	2.12016(*)	.46914	.000
	Physical and Mathematical Sciences	-2.27128(*)	.55115	.000
	Social and Behavioral Sciences	1.07842(*)	.43787	.014
Engineering and Applied Sciences	Fine, Applied, and Performing Arts	3.45714(*)	1.28513	.007
	Humanities	4.42692(*)	1.18661	.000
	Social and Behavioral Sciences	3.38519(*)	1.17460	.004
Fine, Applied, and Performing Arts	Life Sciences and Health	-1.57624(*)	.71508	.028
	Physical and Mathematical Sciences	-3.42166(*)	.75776	.000
Humanities	Life Sciences and Health	-2.54602(*)	.51754	.000
	Physical and Mathematical Sciences	-4.39144(*)	.57506	.000
	Other Academic Discipline	-2.12543(*)	.56146	.000
Life Sciences and Health	Physical and Mathematical Sciences	-1.84542(*)	.59289	.002
	Social and Behavioral Sciences	1.50429(*)	.48937	.002
Physical and Mathematical Sciences	Business and Commerce	2.98118(*)	.75100	.000
	Education	2.27128(*)	.55115	.000
	Fine, Applied, and Performing Arts	3.42166(*)	.75776	.000
Physical and Mathematical Sciences	Social and Behavioral Sciences	3.34970(*)	.54985	.000
	Other Academic Discipline	2.26601(*)	.63159	.000
Social and Behavioral Sciences	Humanities	1.04174(*)	.46762	.026
	Other Academic Discipline	-1.08369(*)	.53561	.043

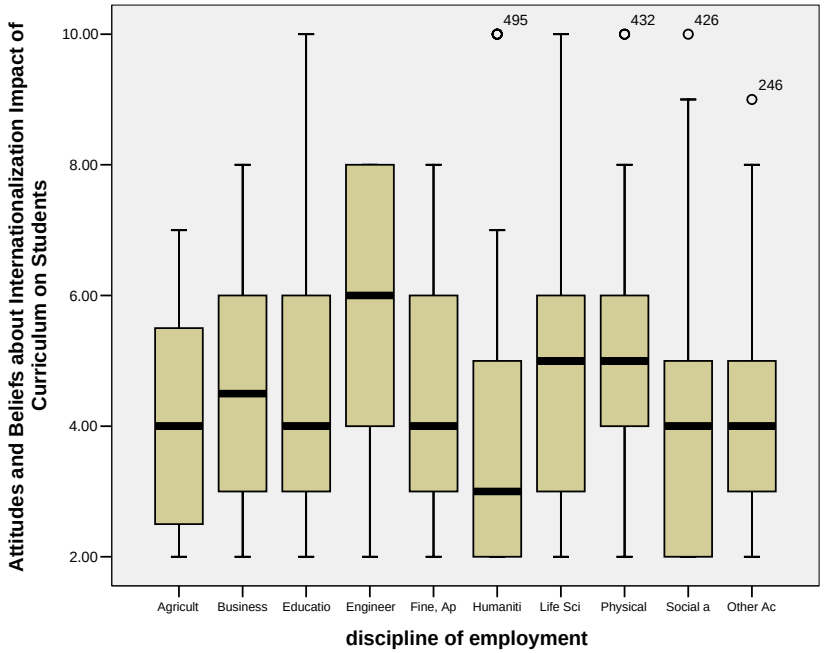
* The mean difference is significant at the .05 level.

Factor 3: Impact of Curriculum on Students

ANOVA

Attitudes and Beliefs about Internationalization Impact of Curriculum on Students

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	213.241	9	23.693	6.309	.000
Within Groups	2658.876	708	3.755		
Total	2872.117	717			



Multiple Comparisons

Dependent Variable: Attitudes and Beliefs about Internationalization Impact of Curriculum on Students

LSD

(I) discipline of employment	(J) discipline of employment	Mean Difference (I-J)	Std. Error	Sig.
Agricultural and Animal Sciences	Engineering and Applied Sciences	-1.71667(*)	.82976	.039
Business and Commerce	Humanities	1.17355(*)	.37088	.002
	Social and Behavioral Sciences	.88889(*)	.36267	.014
Education	Engineering and Applied Sciences	-1.40140(*)	.63388	.027
	Humanities	.84993(*)	.24392	.001
	Life Sciences and Health	-.49936(*)	.25413	.050
	Physical and Mathematical Sciences	-.83473(*)	.29808	.005
	Social and Behavioral Sciences	.56527(*)	.23125	.015
Engineering and Applied Sciences	Fine, Applied, and Performing Arts	1.34762(*)	.68188	.049
Engineering and Applied Sciences	Humanities	2.25133(*)	.63936	.000
	Social and Behavioral Sciences	1.96667(*)	.63463	.002
	Other Academic Discipline	1.57273(*)	.65761	.017
Fine, Applied, and Performing Arts	Humanities	.90371(*)	.35021	.010
	Physical and Mathematical Sciences	-.78095(*)	.38988	.046
Humanities	Life Sciences and Health	-1.34929(*)	.26750	.000
	Physical and Mathematical Sciences	-1.68466(*)	.30956	.000
	Other Academic Discipline	-.67860(*)	.30023	.024
Life Sciences and Health	Social and Behavioral Sciences	1.06463(*)	.25600	.000
	Other Academic Discipline	.67069(*)	.30858	.030
Physical and Mathematical Sciences	Social and Behavioral Sciences	1.40000(*)	.29967	.000
	Other Academic Discipline	1.00606(*)	.34568	.004

* The mean difference is significant at the .05 level.

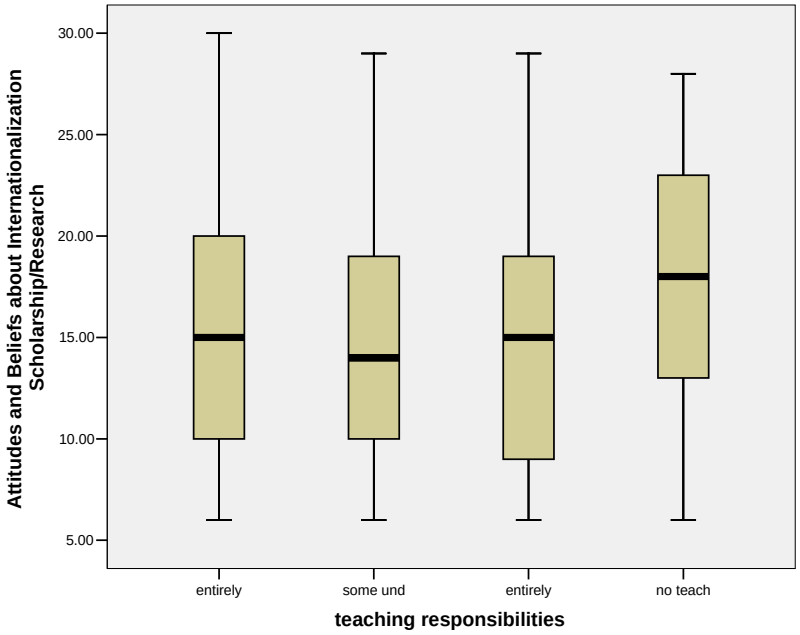
TYPE OF TEACHING RESPONSIBILITY

Factor 1: Scholarship of Teaching and Research. (Factors 2 & 3 have no significant differences by type of teaching responsibility)

ANOVA

Attitudes and Beliefs about Internationalization Scholarship/Research

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	277.112	3	92.371	2.728	.043
Within Groups	23705.375	700	33.865		
Total	23982.487	703			



Multiple Comparisons

Dependent Variable: Attitudes and Beliefs about Internationalization Scholarship/Research
LSD

(I) Teaching responsibilities	(J) Teaching responsibilities	Mean Difference (I-J)	Std. Error	Sig.
Entirely undergraduate	Some undergrad, some grad or professional	.95611(*)	.45869	.037
Some undergrad, some grad or professional	No teaching at the present time	-2.90364(*)	1.27909	.024

* The mean difference is significant at the .05 level.

TENURE STATUS

No significant differences by Tenure Status for Factor 1, Factor 2, or Factor 3.

ACADEMIC RANK

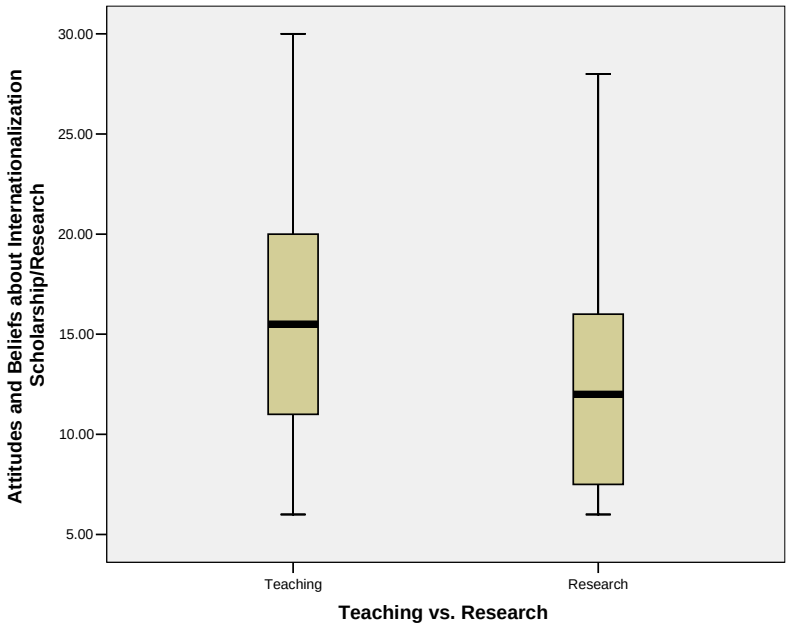
No significant differences by Academic Rank for Factor 1, Factor 2, or Factor 3.

TEACHING OR RESEARCH PREFERENCE

Factor 1: Scholarship of Teaching and Research

Group Statistics

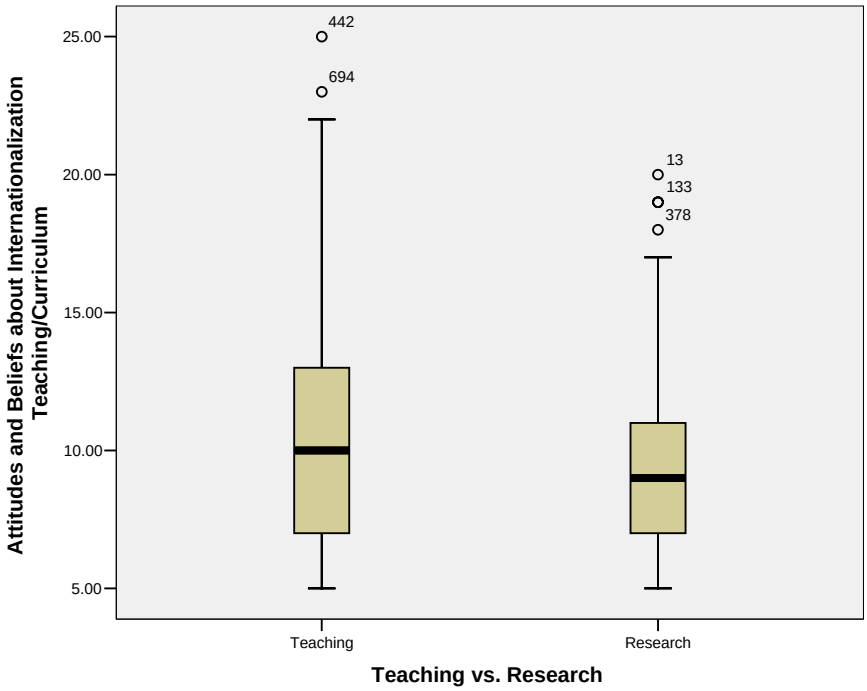
	Teaching vs. Research	N	Mean	Std. Deviation	Std. Error Mean
Attitudes and Beliefs about Internationalization Scholarship/Research	Teaching	546	15.6337	5.66670	.24251
	Research	151	12.6225	5.77667	.47010



Factor 2: Instruction and Curriculum

Group Statistics

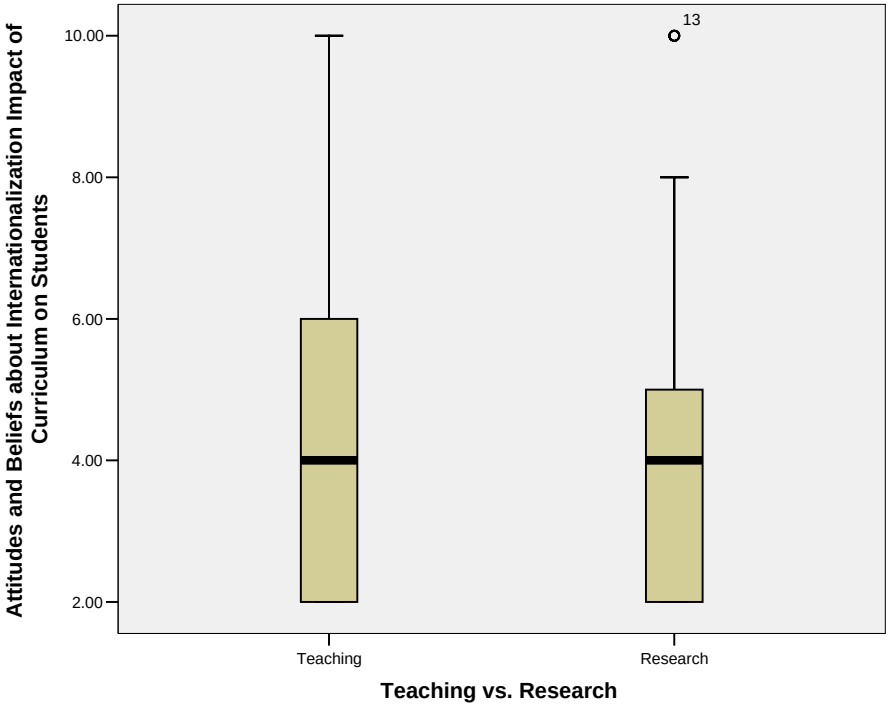
	Teaching vs. Research	N	Mean	Std. Deviation	Std. Error Mean
Attitudes and Beliefs about Internationalization Teaching/Curriculum	Teaching	532	10.1823	3.77057	.16347
	Research	141	9.1135	3.46841	.29209



Factor 3: Curriculum and Impact on Students (borderline significance)

Group Statistics

	Teaching vs. Research	N	Mean	Std. Deviation	Std. Error Mean
Attitudes and Beliefs about Internationalization Impact of Curriculum on Students	Teaching	563	4.3872	2.02018	.08514
	Research	147	4.0272	1.93010	.15919



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