

**The Attitudes of Extension Faculty Toward Globalizing Extension Programs:
A Case Study of Virginia Cooperative Extension**

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By Edwin C. Lewis

(Abstract)

Over the past several years, many state Cooperative Extension Services have taken inventory of their engagement with international issues, including barriers (real and perceived) to active participation in globalizing programs as well as staff needs for effective communication with diverse audiences. While Virginia Cooperative Extension (VCE) has actively involved 4-H youth in international exchange programs, they have not engaged in a coherent and proactive effort to globalize all program areas.

The study purpose was to assess attitudes of VCE faculty toward globalizing their programming efforts. Also examined were information related to VCE faculty's current involvement in globally-focused activities and barriers to globalizing programming efforts.

The survey instrument combined various sections of two surveys developed and employed by Barbara Ludwig in studies on Ohio Cooperative Extension. The web-based survey included four sections: 1) Employee Profile, 2) Involvement in International Activities, 3) Perception towards Global Issues, and 4) Perceived Barriers to Globalizing Extension Programs.

The target audience included all VCE faculty members (N = 332). Two hundred six faculty members completed the on-line survey. This represents a return rate of 62%.

Data revealed that 92% of the respondents were involved in international efforts within the past five years. On a scale of one to four, with four representing the highest level of engagement, campus administrators (mean = 2.66) and specialists (mean = 2.13) were the most involved in international programming effort; the least involved were the district directors (mean = 1.21). "Exchanged ideas with colleagues from other countries" and "hosted an international visitor" were the top two activities performed by faculty.

Data also revealed an attitude mean score of 2.9 on a scale from one to four, with four being the most positive. Campus administrators (mean = 3) were the most positive of the four position categories; agents were the least positive (mean = 2.86).

Furthermore, the top two barriers to globalizing VCE programs, as identified by respondents, were “lack of financial support” and “not a programming priority”. Respondents also selected “Lack of time” as a major barrier.

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DEDICATION

I dedicate this dissertation to my wife, Nicole, for her support, encouragement and sacrifices over the past five years. I also dedicate this dissertation to my kids, Sydney, Eryn and Edwin II for sacrificing quality time with their father over the past few years. I promise to make it up to you.

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Chapter 1.0 Introduction

1.1 Background for this Study

In February of 2002, The Extension Committee on Organization and Policy (ECOP) of the National Association of State Universities and Land Grant Colleges released a report entitled *The Extension System: A Vision for the 21st Century*. This report lists the “Impact of Globalization” as one of the six major challenges currently facing the Extension System. ECOP contended that Extension must provide leadership in demonstrating the local implication and potential consequences of global interdependence.

The United States is more interdependent on other nations than ever before. Recent international agricultural trade statistics help to put the growing impact of globalization into perspective. Between 1992 and 2001, U.S. exports of agricultural products grew from \$43.2 to \$53.6 billion, a 24% increase. U.S. imports also grew substantially during this period jumping from \$24.8 to \$39.4 billion, a 59% increase (FAS, 2002a).

Although many recent reports and research articles support the need for Extension to increase its global programming emphasis, this is not a new thrust for the organization. In 1989, Extension’s national program leaders at the United States Department of Agriculture (USDA) published two documents, *Global Perspective for Extension* and *Going global: Cooperative Extension System/USDA*. Both publications demonstrated the foresight of Extension’s USDA partner as they urged state and local programmers to remain relevant by informing their communities of the challenges and opportunities associated with globalization (Cooperative Extension Services [CES], 1989a and 1989b).

Why is the topic of globalization so important for Extension? As suggested in the previous paragraph, Extension’s programs must remain relevant. Relevance is the hallmark of the Extension mission and the key to its survival. Barabara Ludwig (1999), chair of the Department of Extension at The Ohio State University, stated:

Extension programs across the world are being challenged to consider their impact, relevance and effectiveness in our rapidly changing society. In the coming century, global components will become more central to our mission for Extension (pp 61).

Ludwig's (1993 & 1996) research also concluded that Extension staff must be trained in the area of globalization. Curriculum and subject matter specialists must ensure that agents are equipped to deliver the appropriate information to address the plethora of needs and interests associated with globalization. However, globalizing Extension requires more than delivering globally focused information on multiple topics. Ludwig contended that Extension agents must learn to be sensitive to the needs of multiple cultures in a single community. This comment suggests that the diversity of our populations has expanded beyond the few ethnic groups traditionally found in many communities and now include immigrants from hundreds of countries around the world.

1.2 Theoretical Framework

1.2.1 Attitude Theory

Extension faculty must incorporate a global dimension into their educational programs if VCE is to remain a viable organization. Such an action would necessitate a substantive change in behavior. We know that behavior is influenced by action tendencies, which in turn are influenced by attitudes. If Extension leaders want to expand the globalization aspect of Extension programming, then they should seek to understand and influence the attitudes of Extension faculty toward globalizing VCE programs.

1.2.1.1 Attitude definition.

Numerous definitions of "attitudes" have emerged over the past several decades. For example, Allport (1954, p. 45) defines attitudes as "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's responses to all objects and situations with which it is related." The definition used for this study is "The beliefs, feelings, and action tendencies of an individual or groups of individuals toward objects, ideas, and people. An action tendency refers to a disposition to respond in a certain way towards an object or person" (Hutt, et al, 1966, p. 401).

1.2.1.2 Attitude formation.

There are several theories regarding the formation of attitudes. Fishbein & Ajzen (1975) argue that processing information develops attitudes, and they arise from beliefs that people have toward the attitude object. Myers (1990) contends that most social scientists embrace the theory that attitudes are learned through socialization, conditioning and exposure. Socialization

suggests that attitudes can be acquired from others via social learning. Conditioning refers to learning through the association process (Baron & Byrne, 1994). For example, a supervisor who regularly rewards those who perform a certain behavior can influence other employees' attitudes toward that behavior. According to Bornstein (1989), direct experience can be obtained from exposure to an object. He contends that the more familiar the object or behavior, the more we generally like it.

1.2.1.3 Attitude change.

In attitude change theory, persuasion is a key process used to influence others (Petty & Cacioppo, 1986). Based on the Rational Model of Persuasion, beliefs, values and motives shape attitudes, and attitudes impact behavior. Consequently, to change attitudes, persuasive messages must target the audience's beliefs, values and/or motives.

1.2.1.4 Attitude/behavior relationship.

According to attitude/behavior theories, one's attitude towards an object will influence his or her behaviors related to that object (Hogg & Terry, 2000; Ajzen, 1988). Other research suggests that an individual's attitude toward performing a behavior can be impacted by the perceived potential benefits of pleasing others (e.g., supervisors) (Fishbein & Ajzen, 1975; Liska, 1984).

Accordingly, Extension administrators' explicit support for globalizing programming effort can impact the attitudes of Extension agents and specialists.

Globalizing state and local programs have not been a major focus for VCE. However, it is imperative for VCE leadership to begin moving the organization in that direction. Based on the theory that attitudes influence behavior, this study assessed the current attitudes of VCE faculty to determine their disposition or readiness towards incorporating a global dimension into their programs. The theoretical base discussed above also suggests that negative attitudes towards globalizing VCE can be changed, and positive attitudes strengthened, through appropriate training and social conditioning (e.g., setting clear expectations and rewarding desired behaviors).

1.2.2 Cooperative Extension

Virginia Cooperative Extension (VCE) is an informal education organization with the mission to enable the citizens of the Commonwealth to improve their lives by delivering research-based information that focuses on relevant issues and needs (VCE, 2003). For Extension to become truly globalized, faculty from each program area (i.e., Agriculture, Family

and Community Sciences, and 4-H Youth Development) must embrace this concept and identify the most effective ways to globalize their programs.

Historically, the agricultural program area within Extension has been the largest of the three areas of focus. The agricultural programming efforts address issues such as agricultural management, livestock and crop production, and safe use of pesticides (VCE, 2003).

Officials at Extension/USDA stated that a key priority for local Extension programs should be to help agricultural producers and processors identify alternative opportunities. They argued that international markets provide these types of alternatives for profitability (CES, 1989a). According to its 2002 Strategic Plan, one of VCE's goals was to "Continue to emphasize global marketing and economics in staff development and training programs for Extension agents and expand efforts to involve other colleges in assisting agriculture clientele with global marketing of their products (pg 4)."

Globalization is not only relevant in agriculture; implications also exist for clients who participate in the other program areas within VCE. The 4-H Youth Development program has historically been very active in globalizing its efforts. One of 4-H's most reputable programs is the International 4-H Youth Exchange (IFYE) program (IFYE, 2002). Programs like IFYE are essential in assisting youth in understanding other cultures and how their future will be shaped by the impact of global interdependence. The 2002 VCE Strategic Plan also listed increasing IFYE participation among Virginia youth as one of its goals (VCE, 2002).

The Family and Community Sciences (FCS) program area is no exception to the need for incorporating a global dimension into its outreach efforts. The purpose of this program area is to assist families and communities in addressing issues related to economic stability and quality of life (VCE, 2003). An essential quality in impacting families and communities is being sensitive to racial and cultural differences. Anne-Michelle Marsden, a Family and Consumer Science Extension Agent in Atlantic County, NJ, documented how her experience in Belize totally revolutionized the way she approaches program planning. She reported having a greater desire to reach underserved cultures/audiences and increased recognition of the importance of recruiting a culturally diverse group to assist in planning community programs (Marsden, 2000).

1.2.3 Current Situation

Over the past 10 years, several State Extension Systems have heeded the call to globalize their programs. Documented efforts have included staff training, attitude surveys of external stakeholders, and perception studies of staff.

In 1999 Barbara G. Ludwig, Chair of Department of Extension at The Ohio State University, conducted a study of 823 Extension professionals in Ohio, which investigated activities and attitudes related to global programming efforts. In the study, she sought to identify barriers that limit professionals' ability to incorporate global perspectives into local programming. Ludwig concluded that more than 60% of the Extension programming staff was interested in incorporating a global perspective into their educational programs. She also concluded that the perceived barriers to incorporating a global perspective into local programming were "a lack of time, uncertainty that globalizing is a programming priority, and a lack of expertise or information." (p. 61)

In 1996, Ludwig conducted a study in which she sought to identify the characteristics that describe an internationalized State Extension System. The study results indicated that five critical elements were present in an internationalized Extension system:

- "Clientele develops a fundamental understanding of global and national interdependence.
- Extension educational programs within the U.S. stress the impact of international economic forces on agricultural markets.
- Extension educators incorporate international perspectives into on-going activities.
- Extension faculty/agents recognize the relationship between basic international issues and the Extension mission.
- Personnel evaluation systems recognize international efforts." (n.p.)

Professors at the University of Arizona conducted a study of 100 Arizona Extension personnel in which they sought to determine the level of interest and current participation in international programming activities (Knight, Elliot, & Krenzer, 1999). The results indicated that about half the participants had included a global dimension in their programs. Ninety-two percent of the Extension personnel reported an interest in internationalizing their future programming efforts. The participants also reported that the perceived barriers to

internationalizing their efforts included a lack of time and financial support, insufficient language skills, and the organization's programming priorities.

Michigan State University Extension leaders have encouraged their staff to take international training programs and assignments that will provide experiences applicable to their Extension programming efforts. A study was recently conducted to gather information on how these international programs have impacted the professional and personal lives of the Extension staff (William, 2000). The authors found that 73 % of the respondents changed "much" or "very much" professionally as a result of their international training or assignment. Additionally, 63 % felt that they had changed "much" or "very much" personally as a result of their international training or assignment. Finally, 64 % felt that Michigan State University Extension Educators have sufficient opportunities to participate in overseas work.

In a study of Extension directors to determine if their states have made improvements in globalizing educational outreach programs between 1990 and 2000, Ludwig (2002) concluded that although efforts have improved overall, most states continued to lack a clear plan for incorporating a global perspective into their programs. More specifically, most directors indicated that the majority of their state programs focus on local perspectives and that agriculture is the program area in which a global perspective is most likely to be incorporated. The directors also indicated that there is limited recognition for Extension professionals who engage in international efforts. Finally, in 1990 only nine states reported efforts to globalize while 35 states reported that they were making efforts to globalize in 2000.

1.3 Statement of the Problem

For Extension to remain viable in the 21st century, agents, specialists and administrators must buy-in to the relevance of globalization in local Extension programs. Virginia Cooperative Extension has not engaged in a coherent and proactive effort to globalize its programs. An indication that there is buy-in at every level within the organization would be a positive attitude towards globalization and providing relevant information to program participants. Yet no systematic documentation exists to establish attitudes towards globalization among VCE agents, specialists, and administrators.

1.4 Purpose of the Study

The purpose of this study was to assess the current international involvement of VCE faculty and their attitudes toward globalizing their programming efforts. The specific research questions addressed in this study were:

- To what extent are Virginia Cooperative Extension faculty engaged in globalizing their programming efforts?
- What are the attitudes of Virginia Cooperative Extension faculty towards globalizing their programming efforts?
- To what extent are the aforementioned attitudes and behaviors related?
- Is there a difference in the attitudes of Virginia Cooperative Extension agents, specialists, and administrator toward globalizing Extension?
- Is there a difference in the attitudes of Virginia Cooperative Extension faculty in the three major program areas (Agriculture, Family and Community Sciences, and 4-H Youth Development) toward globalizing Extension?
- What are the perceived barriers to globalizing Virginia Cooperative Extension programming? How do perceptions differ between program areas and positions?

1.5 Study Limitations

The intention of this study was to address the globalization of the entire Virginia Extension system. However, available research on this topic is focused primarily on the need for globalizing Extension's agricultural program area. Consequently, there is limited supportive literature for the need to globalize the Family and Community Sciences and 4-H Youth Development program areas.

Additionally, the implications of this study are limited to the employees of Virginia Cooperative Extension. The results of this study should not be generalized to other state Extension programs.

Furthermore, the employee population data for campus administrators and specialists were based on full-time equivalents (FTEs), not the actual number of VCE faculty. Consequently, the actual number of faculty might be larger than the number used to calculate the return rate, resulting in a slightly inflated rate.

Finally, this study consists of self-reported measures. The researcher did not observe actual behaviors of the target audience.

1.6 Definition of Terms

Attitude – “The beliefs, feelings, and action tendencies of an individual or groups of individuals toward objects, ideas, and people. An action tendency refers to a disposition to respond in a certain way toward an object or person” (Hutt, et al, 1966, p. 401).

Cooperative Extension Service – A national education organization created in the United States by the Smith-Lever Act of 1914 with a mission to provide informal education to citizens in the areas of agriculture, home economics, and other related subjects (Lyons, 1982).

Extension Agent – an employee of Virginia Cooperative Extension who is responsible for planning, implementing, and evaluating educational programs designed to address needs identified at the county/city level (Lyons, 1982).

Extension Faculty – Extension agents, specialists, district directors and administrators.

Extension Specialist – an employee of Virginia Cooperative Extension who is responsible for providing statewide leadership, development, implementation, and evaluation of subject-specific, research-based educational programs in cooperation with a local Extension Agents (CSREES, 2003).

Extension Administrator – an employee of Virginia Cooperative Extension who is responsible for providing leadership for state- or district-wide (i.e., district directors) administrative operations and human resource management (CSREES, 2003).

Extension Programs – Educational activities or a set of learning experiences coordinated by local Extension Agents, which are intended to address a problem and achieve predetermined objectives (VCE-Intranet, 2003).

Extension Service, USDA – The Federal government partner in the Cooperative Extension Service responsible for leadership in identifying, developing, and managing programs to support university-based and other institutional research, education, and Extension efforts as well as the administration of Federal assistance in implementing research, education, and Extension awards and agreements. The agency was recently renamed Cooperative State Research, Extension, and Education Service (CSREES, 2003).

Globalization – The growing integration of economies and societies around the world (World Bank, 2004).

Synonym used in this study: global interdependence.

Globalizing Extension – Engagement with American audiences around global issues, interdependence, and the critical role that Extension can play in today's world, both domestically and abroad. This concept includes 1) incorporating global content into Extension programs; 2) tailoring Extension programs to address the ethnic diversity of local communities; and 3) using local Extension resources to assist in addressing needs in other countries (CSREES, 2003; ECOP, 2002; Ludwig, 2002).

The following phrases/terms are used interchangeably with “Globalizing Extension” throughout the study: incorporating a global (or international) dimension, globalizing VCE, adding a global (or international) perspective, globalizing programs or programming efforts, internationalizing Extension).

Leadership – Extension administrators and district directors

Programming Faculty – Extension agents and specialists

Virginia Cooperative Extension – The State organization responsible for carrying out the mission set forth by the Smith-Lever Act of 1914 for the citizens of Virginia. The organization is administered by Virginia’s land grant institutions: Virginia Tech and Virginia State University.

Chapter 2.0 Review of Literature

This chapter contains a review of literature related to globalization and its impact on U.S. agriculture as well as the importance of globalization to Extension. Also included is an overview of relevant literature on attitude measurement and the attitude/behavior relationship. Multiple resources were utilized to collect the pertinent information for this chapter, including 1) the internet, 2) dissertations with a similar focus, 3) research articles published in various related journals, and 4) documents and books published by experts in relevant fields of study.

2.1 Globalization and U.S. Agriculture

Robert D. Havener, President of Winrock International, offered the following statement:

Although the United States remains the dominant economic power in the world, we can no longer dictate our own destiny without considering the needs and wishes of others. In some cases, our destiny is being dictated by others' perceived needs and wishes (1990, p. 23).

This statement by Havener highlights the impact of globalization on the United States. Global interdependence is a reality of our everyday lives. Products from around the world can be found in many department stores and supermarkets within the United States (International Programs, CSREES, 2003).

Some of the greatest impacts of globalization can be seen in the field of agriculture, specifically international trade and development. The following sections highlight the significance of these two areas.

2.1.1 International Trade

Global Interdependence. The World Trade Organization (WTO) (2005) was established in 1947 under the name "General Agreement of Tariffs and Trade" (GATT). In 1990, the WTO consisted of 98 member countries. As of December 2005, membership has grown to 148 countries with an additional 33 countries working through the accession process to become members.

In addition to the WTO, the U.S. has established other multi-lateral and bi-lateral trade agreements. A well-known example is the North American Free Trade Agreement (NAFTA), which was implemented in 1994. NAFTA was designed to remove most barriers to trade and

investment among the United States, Canada, and Mexico (Foreign Agricultural Service [FAS], 2002). In 2003, Canada and Mexico were among the top three export markets for U.S. agricultural goods (FAS, 2004).

James Houck (1992) made the following statement regarding the important role of international trade in agriculture.

Since 1953, each 1 % increase in world output of all goods and services has been accompanied by an average increase in trade of 1.3 %. For agriculture, each 1 % increase in output has been accompanied by a 1.8 % trade increase. Thus, agriculture's worldwide dependence on trade has been growing even faster than industry's. (p. 2)

Statistics from the U.S. Department of Commerce highlight the rapid growth of trade in U.S. agriculture. For example, U.S. exports of agricultural products reached \$59.6 billion in 2003, up 39 % from 10 years prior and peaking at \$60.4 billion in 1996. U.S. imports of agricultural products increased by 88 % over the same period, reaching \$47.3 billion in 2003 (FAS, 2004).

Impact on U.S. farmers. According to Norton and Alwang (1993):

As exports and imports of farm products constitute a higher proportion of agricultural productions and consumption, effects of domestic agricultural policies aimed at influencing the agricultural sector are altered. World prices become more important to farmers than they were previously, and possibilities for maintaining a nation's food security at the aggregate level are improved. However, production and policy changes abroad also tend to have a greater effect on domestic agriculture as international trade grows. While the need for food production self-sufficiency has been reduced, the need to be price competitive with other countries has grown. (p. 9)

2.1.2 Influence of Developing Countries on U.S. Agriculture

Robert Paarlberg (1990) argued that the dependence of U.S. agriculture on markets in the developing world is often under appreciated. According to Paarlberg, in the early 1990s, more than 40% of U.S. agricultural exports went to the developing world, up from 30 % about 15 years prior to that and 20% in the 1960s.

Robert Havener (1990), President of Winrock International, projected that by 2025 the world population will increase by two billion. He contended that the expanding global

population offers tremendous trade and investment opportunities for food-exporting countries, including the United States.

2.2 The Importance of Globalization to Extension

In an introductory message on the Globalizing Agricultural Science and Education Program for America (GASEPA) (2002) website, the chairman of the task force, Bobby Moser, stated the following:

As we position U.S. agriculture for the 21st century, we are cognizant that higher education, research, and outreach programs at our land-grant and similar universities will need to address global issues more than in the past. We urgently need to find ways to increase the level of engagement of our resident teaching faculty, research scientists, and Extension agents in addressing global dimensions of food and fiber industries, and the natural resource base on which they rely. Only in this way will we adequately serve the needs of the citizens of our respective states.

Moser's statement seems to reflect the predominant thinking among the leadership of the U.S. Extension System. Consistent with Moser's views, the ECOP (2002) report mentioned at the beginning of this paper stated,

Globalization of the financial, service, manufacturing and agricultural sectors is having a profound influence on all facets of American society. Today, seemingly unrelated decisions and events occurring throughout the world can have a rapid and profound impact on public institutions, private lives and communities (p. 3).

Consequently, Extension agents need to provide educational programs to promulgate the "local implications and potential consequences of globalization" (p. 3).

The report also suggested that the United States is becoming more multilingual and multicultural. Consequently, Extension must:

. . . utilize fully the capacity of the 1862, 1890, 1994 and territorial institutions to respond to the needs of families and to the diversity of communities while remaining mindful of the distinct generational, social and ethnic diversity that will define our society in the future. (p. 2)

Officials with Extension Service, USDA (1989a) released a report on globalization in which they made the following argument.

To deliver relevant programs and information, CES (Cooperative Extension Service) must internationalize perspectives and consider global linkages in all programs. Technological advances in communication and transportation have created a global marketplace that affects the daily lives of Americans. When Americans make decisions about what foods to eat, what clothing to buy, and what financial investments to make, their decisions have global impacts and linkages. In the past, Americans had to look beyond the boundaries of their communities and states; today, they must look beyond the borders of the nation in order to fully understand and participate in economic, social, political and scientific life. (p. 1)

Barbara Ludwig (2002) conducted a study that compared Extension directors' perceptions regarding the globalization of the Extension system between 1990 and 2001. Extension directors were surveyed because of their broad understanding of Extension in their states and their ability to envision the future for their state programs. As a basis for her study, Ludwig referred to a 1991 study by Poston and O'Rourke, which concluded that 80% of Extension directors believed that their state had achieved either a low level of globalization or none at all.

Ludwig synthesized the recent comments made by Extension directors during her 2002 study. Some of the common responses included "the majority of (our) programs focus on local perspectives" (p. 4) and "many educators have limited knowledge related to global perspectives." One positive outcome was that in 2002, only 13 states reported minimal efforts to globalize compared to 40 states in 1990. Further, 35 state directors indicated that their systems were moving toward internationalization. However, Ludwig's overall conclusion was that most states lacked a plan for globalization or adding an international perspective to their programs.

To assist those who struggle to see the relevance of globalization, GASEPA (1998) identified five goals for internationalizing teaching, research, and Extension programs. These include:

- (1) enhancing global competitiveness of U.S. Agriculture through human resource development;
- (2) development and dissemination of information about markets, trade and business opportunities;
- (3) establishment of mutually beneficial collaborative global partnerships;
- (4) promotion of trade through global economic development; and
- (5)

promotion of global environmental quality and stewardship of natural resources management. (p. 1)

2.2.1 4-H Youth Development

Since the 1940s, the International 4-H Youth Exchange (IFYE) programs have promoted cross-cultural understanding. The 4-H international curriculum is preparing young people for global citizenship responsibilities through practical learning experiences. Programs vary in each country. Some programs focus on agricultural work experience, while others may emphasize working with youth development programs (IFYE, 2002). “Continued support for the integration of international perspectives into programs for youth is critically important” (Extension Services, 1989a, p. 2).

A study by Boyd (2001) determined the impact of IFYE on program participants, their families, and their communities. Boyd concluded that IFYE participants felt they were “more sensitive to other cultures, more aware of global events, and more involved in community activities (p. 7).” than before participating in the program. Family members and others close to the participants believed they had changed as well.

Youth are not the only ones traveling abroad. Linda Kirk Fox (Spring 2003), Associate Director of Washington State Cooperative Extension, noted that international travel provides faculty the opportunity to examine different approaches and solutions for addressing challenges that are common around the world. She highlighted Chris Booker, 4-H Agent in King County, who traveled to Africa to share his expertise. “He continues to work with the U.S. Agency for International Development and plans another trip to South Africa in the very near future.” Fox suggested that visits abroad provide faculty the chance to build relationship that can eventually develop into global partnership.

2.2.2 Family and Consumer Sciences

Family and Consumer Sciences (FCS) agents are also starting to appreciate the impact that globalization is having on their programs. Anne-Michelle Marsden (2000), a FCS Extension agent in Atlantic County, NY, wrote an article about her international experience in Belize. In the article she shared lessons learned from her experience that are relevant to Extension programming staff. The first lesson was to increase one’s knowledge of the client’s culture. Next, she stated that agents must “reach clients where they are (culturally, educationally, and geographically)” (p. 2). The final lesson was to allow the target population to determine their

educational opportunities. Marsden went on to contend that even though an agent may not fully understand others' cultural orientations, the agent can engage individuals from diverse backgrounds in planning, implementing and evaluating programs. Marsden concluded that as a result of her international experience she faces her responsibilities as an agent in New York with more resolve to reach underserved audiences and more confidence in her ability to do so.

Family and Consumer Science faculty from Michigan Cooperative Extension participated in a study tour to India and Thailand. In both countries, they were hosted by various cooking schools in which they learned new cooking techniques and explored new tastes and textures. As a result of their experience, faculty planned to continue professional linkages and begin student exchanges. They also expressed various ways in which they plan to use their new-found knowledge such as "1) in the classroom, 2) with Extensions staff and clientele, and 3) in local clubs and professional groups" (Andrews, 2004).

2.2.3 Agriculture and Natural Resources

Officials from Extension Service, USDA stated,

Helping U.S. producers and processors identify alternative agricultural opportunities is a priority of the Cooperative Extension System. International markets offer U.S. agriculture many new opportunities for profitability. Extension must provide leadership for the development and dissemination of information systems to help identify international market demands and select the most competitive and profitable role for U.S. agriculture.

Extension can also help U.S. producers and commodity groups understand the impacts of public policy decisions on a global level. U.S. agricultural and fiscal policies interact in a complex way with the policies of other nations. Understanding these complex interactions can help U.S. producers and commodity groups improve their competitiveness and profitability in the global marketplace. (Extension Service, 1989a, p. 2)

In a separate report from Extension Service, USDA (1989b), a sentiment very consistent with the focus of this study was expressed. "We have to change attitudes, create a new mindset to think globally, and act locally. This must be accompanied with more entrepreneurship directed towards value-added, sound investment and both domestic and foreign marketing" (p. 3).

Members of GASEPA (2003) acknowledge the need for Extension agents and specialists to be more diligent at disseminating information regarding global opportunities.

Researchers and Extension specialists at agricultural colleges and universities have a unique opportunity to develop information about global agribusiness and investment opportunities and to disseminate it to the citizenry of their respective states. Much information is being generated; however, its accessibility to most agricultural producers, agribusinesses, and consumers is limited. The challenge remains to package existing information in ways that make sense and are easily interpreted by stakeholders. This information should be made accessible to other university Extension personnel and agents working with stakeholder groups, as well as directly through popular publications. (GASEPA, p. 1)

2.2.4 Staff Development

North Carolina Extension leaders recognized the need to help clients view concerns and issues from an international, rather than a national, perspective. They began addressing this need by adding an international dimension to their staff development training (Richardson & Woods, 1991).

In 1989, North Carolina Extension agents, specialists, and administrators began participating in an international staff development program called “North Carolina Agriculture in the World” (p. 2). The program consisted of four components. First, the staff members attended seminars related to international trade, cultural differences and the difference between developed and developing countries. The second phase consisted of a trip to Washington, DC to learn about international involvement in multinational corporations and trade policies. The third part was a two-week trip to six countries in Europe to study foreign trade policies and an array of agricultural issues. The final component was a review and program planning session. The staff members used the knowledge gained to begin developing relevant educational programs for North Carolina citizens that incorporated an international perspective. According to the author,

As a result of the North Carolina Extensionists gaining direct international experience, increased programming dimensions on issues such as animal management and pesticide application are evident. Successful programs expanding international markets for North Carolina farm products have been implemented, and programs that

focus on product quality reflect the knowledge gained. (Richardson & Woods, 1991, p. 4)

2.3 Attitude/Behavior Theory

The relationship between attitudes and behaviors is paramount in this study. That is, the attitude of Extension professionals toward globalization should impact the likelihood of quality globally-focused programs being implemented. In this section, I will summarize some of the literature on the relationship between attitudes and behaviors.

Icek Ajzen (1988) contended that according to the principle of compatibility we should be able to predict individual behaviors (directed at a certain target) from measures of attitudes towards those behaviors. He went on to argue that beyond permitting predictions, the attitude towards the behavior concept can also enhance our understanding of the reasons why people exhibit or fail to exhibit a certain behavioral tendency. In his book, Ajzen reviewed several studies that suggested people are likely to perform a specific behavior if they view its performance favorably, and they are unlikely to perform it if they view its performance unfavorably.

Hogg and Terry (2000) presented a slightly different perspective, suggesting that:

. . . people's attitudes are influenced not only by the perceived costs and benefits of performing the behavior, but also by their perceptions that significant others would want them to perform the behavior. The finding may reflect the fact that the consequences of performing a behavior often include pleasing others, so "pleasing others" is a benefit of performing the behavior, thus meaning that it is a factor that influences people's attitudes. (p. 70)

This view supports the need for Extension leaders to make it known that internationally focused programs are a high priority and key to remaining relevant in outreach efforts.

Krebs and Schmidt (1993) argued that other factors also influence the link between attitude and behavior. They found that attitudes are assumed to interact with other variables in their effects on behavior.

The factors that are said to interact with attitudes include personality characteristics, such as self-monitoring and need for cognition; secondary characteristics of the attitude, such as its experiential base or the confidence with which it is held;

circumstance surrounding performance of the behavior, such as level of self-awareness in the situation; and the nature of the behavior selected to represent the underlying disposition. (p. 46)

Bentler and Speckart (1981) argued that an “intention” is the central determinant of a behavior. Through this construct, one’s attitude towards performing the behavior (attitude towards behavior) indirectly influences the behavior, although other variables contribute to the prediction of behavior, such as past behavior.

Theories on the attitude/behavior relationship vary widely. Nonetheless, there seems to be a general consensus that one’s attitude will influence his/her behavior. However, this may depend on opportunities, incentives, and disincentives to exhibit the behavior.

2.4 Attitude Measurement

Experts have developed multiple methods for measuring attitudes. According to Dawes (1972), attitudes are easier to measure than to define. Chisman (1976) argued “the simplest way to determine what attitude an individual has toward an object would seemingly be to ask him to express his feelings about it” (p. 37).

2.4.1 Basic Assumptions

Hogg and Vaughan (1995) contended that the following assumptions are made when measuring attitudes:

- An individual’s attitude about an object can be measured by questioning him or her about feelings, thoughts and potential actions toward that object.
- Quantitative techniques can be used to measure attitudes.
- Each item on a questionnaire has the same meaning for all participants, resulting in accurate scoring.

2.4.2 Attitude Scaling

Attitude scales are used to measure attitudes. Ebel (1972) acknowledged that many attitude scales had been created, but the Likert scale is the most widely used.

2.4.2.1 Likert scale.

Likert argued that it is easier to measure attitudes toward tangible objects than abstract concepts. He contended that when measuring abstract concepts, researchers must clearly define

the concept to ensure that both the researcher and the subject are dealing with the same concept (Mueller, 1986).

The purpose of the Likert scale is to measure intensity of feelings regarding the area in question. Most commonly, the scale comprises a series of statements (referred to as 'items'), which focus on a certain issue. The respondents are asked to indicate their level of agreement with each item (Bryman, 2004). Most surveys using the Likert scale offer five options ranging from strongly agree to strongly disagree. Each option is coded so that a higher score indicates more agreement with the attitude being measured. The scores from each item are summed, and sometimes averaged, to generate the subject's attitude score (Issac and Michael, 1979).

2.5 Summary of Chapter

This chapter was designed to provide a review of literature pertaining to global interdependence and the impact of globalization on the Extension System. Also included in this chapter is an overview of the literature relative to attitude measurement and the attitude/behavior relationship.

The literature suggested that countries around the world have become critically linked in multiple facets (e.g., economically and politically). The proliferation of bilateral and multilateral trade agreements over the past 50 years has led to exponential growth in international trade. The growing international marketplace has had increasing impact at every level of the food chain. For example, the literature indicated that farmers are faced with numerous challenges and opportunities related to prices, potential markets, international standards, etc. The literature also suggested that the growing need for food in developing countries would create a significant opportunity for U.S. farmers.

Explicit in the literature was the need for Extension programming professionals to become aggressive at educating the public on the challenges and opportunities created by globalization. There is significant documentation of various efforts through State Extension programs to prepare staff to globalize their programs. Studies also exist which assess Extension staff's willingness to globalize their programming efforts. The majority of the Extension staff recognized the need for this type of training and was interested in developing the necessary programs. However, many identified obstacles such as a lack of support from management and a lack of time and resources to conduct international programs.

There is substantial literature that suggests Extension leaders place value on addressing international issues. Some of the efforts conducted under the main program areas (i.e., 4-H, Family and Community Sciences, and Agriculture) within Extension are summarized in this chapter.

Several theories exist which explain the relationship between attitudes and behaviors. While most experts agree that attitudes influence behaviors, there is also a consensus that other variables (e.g., intentions, past behaviors, desire to please others, etc.) work in conjunction with attitudes to influence behaviors.

Chapter 3.0 Research Methodology

This chapter includes a description of the methodology used in this study. Specifically, this chapter includes a description of the study population and the research design. Also highlighted is a description of the survey instrument which consists of four sections, including 1) employee background, 2) current engagement in global programming, 3) attitude related to globalizing Extension, and 4) perceived barriers to globalizing Extension. Additional content includes the data collection procedure and the statistical methods employed in this study.

3.1 Population

The population for this study (N = 332) included 226 Extension agents, 88 specialists, six district directors and 12 administrators for VCE (VCE Intranet, 2005a; VCE Intranet, 2005b). The number of employees was based on the VCE July 2005 staffing report and the VCE Department and Staff Lookup database. Table 3.1 provides a detailed description of the target population.

The Extension agents were located in 107 county and city offices throughout Virginia. The Extension specialists and administrators included in this study were housed primarily at Virginia Tech, Virginia State University (VSU) and Agricultural Research and Extension Centers (ARECs). More specifically, the group of administrators included four from Virginia Tech, two from VSU and six AREC directors. The specialists included 61 from Virginia Tech, 11 from VSU, 10 from ARECS, and six from 4-H Centers. District directors were located in field offices within the regions for which they are responsible. As indicated in Table 3.1, agriculture is the largest program area in terms of the number of agents and specialists followed by 4-H and FCS faculty, respectively.

3.2 Research Design

A non-experimental population census survey design was used for this study. According to Bryman (2004), survey research is used to collect quantitative or quantifiable data on multiple cases and at a single point in time. The data is usually connected to multiple variables and is analyzed to detect patterns of association.

3.3 Instrumentation

Bryman (2004) encouraged researchers to use questions that have been employed by other researchers. He made the following argument:

Employing existing questions allows you to use questions that have in a sense been piloted for you. If any reliability and validity testing has taken place, you will know about the measurement qualities of the existing questions that you use. A further advantage of using existing questions is that they allow you to draw comparisons with other research (2004, p.160).

The survey instrument combined sections of two surveys developed and employed by Barbara Ludwig (1993 & 1999) in studies on Ohio Cooperative Extension.

Table 3.1

VCE Programming Staff

Position	ANR ^a	FCS ^b	4-H	Total
<i>Agents by District</i>				
Central	19	6	15	32
Northeast	12	7	15	31
Northern	23	8	17	38
Northwest	14	4	12	27
Southeast	17	8	9	36
Southwest	18	8	14	34
Total Agents	103	41	82	226
Specialists	59	14	15	88
District Directors				6
Administrators				12
<i>Total Faculty</i>				332

Note. Numbers for Specialists, District Directors, and Administrators are based on FTE; Agent numbers are based on actual people in positions filled at time of monthly report. Table based on employment situation in July 2005.

^aAgricultural and Natural Resources (ANR)

^bFamily and Community Science (FCS); Community Viability agents included with FCS

3.3.1 Construction of the Instrument

The instrument for this study consisted of four parts, including:

Part 1: Employee Profile

Part 2: Involvement in International Activities

Part 3: Perceptions Toward Global Issues

Part 4: Perceived Barriers to Globalizing Extension Programs

3.3.1.1 Employee profile.

The first section of the survey solicited background information about the respondents. The information collected in this section included: age, gender, race/ethnicity, level of education, foreign travel experience, foreign language abilities, current position, and program area responsibility. These data were necessary for accomplishing objectives four through six, which consisted of a comparison of faculty responses by positions and program areas.

3.3.1.2 Involvement in international activities.

The respondents' current level of engagement was assessed by their participation in fourteen different types of activities. Ludwig (1999) calculated the number and percentage of employees who participated in each activity within an eight-year period. She used this information to describe the amount of engagement in globalization-related activities as well as to highlight the types of efforts in which most employees are engaged. The activities are listed in Table 3.2.

Table 3.2

Items Used to Assess Involvement in International Activities

1. Hosted an international visitor
 2. Exchanged ideas by e-mail or phone with a colleague in another country
 3. Served as a communication link between people from different countries
 4. Involved clientele in an international activity
 5. Advised an international student
 6. Participation in an international study tour
 7. Subscribe to international publication
 8. Joined or maintained membership in an international organization in your field
 9. Developed curriculum materials incorporating international issues
 10. Created an Extension program based on international issues
 11. Participated in an international development project
 12. Conducted an international research project
 13. Taught at an overseas institution
 14. Other involvement
-

For this study, the respondents were asked to select one of the following options that best represented their level of engagement in each activity. Each response was assigned a value to allow an average score to be calculated for each respondent. The options included:

- 4 = Done in the past 12 months
- 3 = Done more than one year ago, but less than five
- 2 = Done more than five years ago
- 1 = Have never done

For the purpose of analysis, average scores were also calculated by job category and program area to determine if differences existed in the amount or types of activities in which employees were engaged.

3.3.1.3 Attitudes toward global issues.

A Likert-type scale was used to assess the attitudes of the respondents toward globalization as well as incorporating a global dimension in their programming efforts. Scores ranged from one to four, with the most positive attitude represented by the value of four and the most negative attitude represented by the value of one. The respondents selected from the following options:

- 4 = Strongly Agree (SA)
- 3 = Agree (A)
- 2 = Disagree (D)
- 1 = Strongly Disagree (SD)

An average attitude score was computed for each employee included in the study. Scores were compared by job category and position. The items included in the attitude section of the survey instrument are listed in Table 3.3.

Table 3.3

Items Used to Assess Attitudes Toward the Globalization

1. Less developed countries will be important customers for U.S. agricultural within the next five to ten years.
 2. In the poorest countries of the world, agricultural growth will be necessary to provide the poor with more purchasing power.
 3. U.S. agricultural assistance to less developed countries creates new competition and undercuts American farmers in the international market.
 4. U.S. responsibility extends only to its own farmers.
 5. Extension faculty should not be involved in helping farmers from less developed countries to improve production practices.
 6. Increased agricultural production in less developed countries coincided with their increased demand for agricultural imports.
 7. One of the major obstacles to economic development in poor countries is that there are too many people who do not work hard enough.
 8. Extension can help Virginia citizens understand rationale for supporting agricultural development in less developed countries.
 9. The solution to the world hunger problem is to severely limit the population growth in poor countries.
 10. Trying to help starving people in the world is counterproductive because so much of the food we give never reaches the people in need.
 11. We must stop giving away America's technology to other countries.
 12. Involvement of Extension faculty in development projects to support poor countries can improve their ability to help local clientele.
 13. If the United States helps other countries grow more agricultural products, those countries will import fewer agricultural products from the United States.
 14. American farmers do not need education from Extension faculty on global issues.
 15. Extension faculty should receive training to become more knowledgeable about global marketing.
-

Items Used to Assess Attitudes Toward the Globalization

16. In the future, the U.S. government should not assist countries in producing agricultural commodities if those same countries are producing commodities that compete with the U.S. on world agricultural markets.
 17. Extension faculty in Virginia are rewarded for their international programming efforts through the continued appointment/tenure and promotion system.
 18. One of the main U.S. agricultural problems is that we have too many cheap, subsidized foreign agricultural products flooding the U.S. market.
 19. Extension should develop programs to educate America's farmers, agribusinesses, and rural leaders about competing in the global marketplace.
 20. Small and medium sized American businesses can become effective participants in the global markets.
 21. Extension professionals do not have the expertise to help clientele understand global interdependence.
 22. Citizen exchanges between countries improve the ability of participants to understand and care about how other people live.
 23. Extension faculty in Virginia have a role to play in helping clientele understand global issues.
 24. Getting to know people of another culture is a good idea, but little ever comes of it.
 25. Our customs, beliefs, and values should be used as models by other countries.
 26. International study tours sponsored by Extension would increase clientele awareness of global issues.
 27. Extension faculty can learn from the culture and technology of other countries.
 28. Citizens of the United States are ignorant of world affairs.
 29. The leadership of VCE does not expect faculty to address global issues in their programs.
 30. The large number of foreigners in the United States is a primary reason for the high jobless rate among American citizens.
-

Items Used to Assess Attitudes Toward the Globalization

31. Extension faculty should focus on local problems.
 32. Global interdependence is a myth.
 33. Please provide any additional perspectives on globalizing Extension.
-

3.3.1.4 Perceived barriers.

The respondents were asked to identify potential barriers that would preclude them from incorporating a global dimension into their programming efforts. Table 3.4 includes a list of 15 potential barriers based on the items used in Barbara Ludwig's 1999 study of the Ohio Extension Program. As in Ludwig's study, the respondents to this survey were asked to identify three potential barriers, which are most likely to prevent them from incorporating a global dimension into their programs.

3.3.2 Steps in Constructing the Instrument

Using Lyons' (1982) attitude study as a guide, the five following steps were taken in the construction of the four-part (i.e., employee background, current engagement, attitudes, and perceived barriers) survey instrument for this study: 1) developed an item pool based on the survey instruments used in Ludwig's 1993 and 1999 studies, and added two questions not included in Ludwig's studies; 2) prepared a first draft of the questionnaire, 3) a panel of experts evaluated the questionnaire for content validity; 4) noted the adequate reliability scores calculated by Ludwig for the survey instruments referenced above (post hoc reliability scores were also calculated for the instrument used in this study); and 5) prepared final draft of the questionnaire.

Table 3.4.

Items Used to Assess Barriers to Globalizing Extension Programs

1. Lack of Support from Colleagues
 2. Not a Programming Priority
 3. Not Recognized in Promotion Criteria
 4. Language Skills
 5. Family Commitments
 6. Lack of Financial Support
 7. Lack of Support from Local Clientele
 8. Lack of In-Service Training
 9. Lack of Materials
 10. Fear of Negative Career Impacts
 11. Lack of Time
 12. Not Rewarded in Annual Performance Appraisal
 13. Lack of Expertise
 14. Lack of Support from Administration
 15. Cultural Barriers
 16. Other
-

3.3.2.1 Pilot testing.

A pilot study is a small-scale walkthrough of the entire study and should be directed towards a representative sample of the target population. “The pilot study should involve the administration of a research instrument as nearly identical as possible to the one intended for the final survey” (Babbie, 1990, p. 226). Ludwig (1993 & 1999) pilot tested the two survey instruments used to develop the instrument for this study. The final instrument for this study was not pilot tested.

3.3.2.2 Content validity.

“Content validity refers to the degree to which a measure covers the range of meanings included within the concept (Babbie, 1990, p. 134).” According to Sirkin (1994), the content validity of a survey instrument is based on logic and expertise. Ludwig (1999) stated that a panel of experts from the College of Food, Agriculture, and Environmental Sciences (at The Ohio State University) established the content validity of the instrument used in this study. A panel of experts at Virginia Tech and Virginia State Universities reviewed the final instrument for this study.

3.3.2.3 Reliability.

“In the abstract, reliability is a matter of whether a particular technique, applied repeatedly to the same object, would yield the same results each time (Babbie, 1990, p. 134).” Internal consistency is one of the primary reliability estimators used in research. This process consists of administering a single measurement instrument to a group of people on one occasion. Reliability of the instrument is estimated by how well the items that reflect the same construct yield similar results (Trochim, n.d.).

According to Trochim (n.d.), there are multiple internal consistency measures that can be used. Cronbach's alpha was the method used in this study. The Statistical Package for the Social Science (SPSS) was used to calculate the Cronbach's alpha. Cronbach's alpha coefficient ranges between 0 and 1. As the value of the coefficient increases the internal consistency of the items on the scale is strengthened (Gliem & Gliem, 2003). George and Mallery (2003) developed a guide for interpreting the usefulness of the Cronbach's alpha coefficient. They offer the following rules of thumb: “> 0.9 – Excellent, > 0.8 – Good, > 0.7 – Acceptable, > 0.6 – Questionable, > 0.5 – Poor, and < 0.5 – Unacceptable” (p. 231). The standard for reliability used in this study was 0.8, with a minimum of 0.7.

3.4 Data Collection Procedure

The survey instrument was set-up as a web-based survey using Virginia Tech's on-line survey service (i.e., Survey.vt.edu). Dillman's (2000) Tailored Design Method was used for collecting data. First, the VCE Director included a letter of endorsement and an overview of the study, which was drafted by the researcher, in the weekly VCE electronic newsletter (Partners In Excellence). One week later, the targeted employees received an e-mail, which restated the purpose of the study and included a link to the Internet survey. This message was also drafted by the researcher and disseminated by the Director of VCE.

Dillman (2000) also stressed the importance of conducting follow-up activities to increase the response rate to the survey. Accordingly, two follow-up efforts were conducted with non-respondents only. To identify non-respondents, the researcher included a statement at the end of the survey instrument requesting that the respondents send a brief e-mail message to the researcher at a specified email address to confirm their completion of the survey. This approach allowed the researcher to identify those who had completed the survey, while not linking the respondent with his/her responses to the survey instrument. Those who completed the survey without sending a confirmation e-mail, were included in the follow-up efforts.

The first of the two follow-up efforts to the non-respondents included a concise e-mail message as a friendly reminder one week following the original request. Three weeks after the original request, a second follow-up e-mail was sent, which reiterated the purpose of the study and instruction for completing the survey.

According to Babbie (1990), a 50 % response is considered sufficient for analysis and reporting. A 60 % response rate is considered good, and 70 % is very good. He did caution the reader that these percentages are only rough guides. Nonetheless, the targeted response rate for this study was 60 %.

3.5 Statistical Analysis

The data collected from the survey were analyzed using the statistical software SPSS and Microsoft Excel. Multiple statistical techniques were used, including the derivation of frequencies, means, percentages, standard deviations, regression analysis, and t-tests.

Employee background information was analyzed by calculating frequencies and percentages. Mean scores were calculated to analyze the data pertaining to current efforts to internationalize programs.

A Likert scale was used to measure attitudes of faculty toward internationalizing Extension programs. The responses were summed and mean scores calculated for each participant. Mean scores were also calculated for each position (i.e., agent, specialist, district directors and administrator) and major program areas.

Bivariate regression analysis was conducted to measure the relationship between the behaviors and the attitudes of the respondents. Finally, t-tests were calculated to determine if differences in attitudes existed between the various positions as well as the program areas. A t-test was also used to assess non-respondent error.

3.6 Summary of Chapter

This chapter contained a description of the methodology used to conduct this study. The subjects consisted of all Extension agents, specialists, and administrators of VCE. This study was descriptive in nature, utilizing a four-part survey to collect data. The survey was accessed and completed via the Internet. Various statistical methods were used to analyze the data.

Chapter 4.0 Results

This chapter contains a detailed analysis of the data collected in this study. More specifically, this chapter includes the following: (a) the purpose and research questions, (b) a brief summary of the methodology of the study, and (c) data analyses.

4.1 The Purpose and Research Questions

The purpose of this study was to assess the attitudes of VCE faculty toward globalizing their programming efforts. The specific research questions addressed in this study were:

- To what extent are Virginia Cooperative Extension faculty engaged in globalizing their programming efforts?
- What are the attitudes of Virginia Cooperative Extension faculty towards globalizing their programming efforts?
- To what extent are the aforementioned attitudes and behaviors related?
- Is there a difference in the attitudes of Virginia Cooperative Extension agents, specialists, and administrator toward globalizing Extension?
- Is there a difference in the attitudes of Virginia Cooperative Extension faculty in the three major program areas (Agriculture, Family and Community Sciences, and 4-H Youth Development) toward globalizing Extension?
- What are the perceived barriers to globalizing Virginia Cooperative Extension programming? How do perceptions differ between program areas and positions?

4.2 Summary of the Methodology

The survey instrument used in this study hybridizes two surveys developed and employed by Barbara Ludwig (1993 & 1999) in studies on Ohio Cooperative Extension. The web-based survey for this study included four sections: 1) Employee Profile, 2) Involvement in International Activities, 3) Perception towards Global Issues, and 4) Perceived Barriers to Globalizing Extension Programs. The targeted audience for this study was all faculty members (N = 328) of VCE, including approximately 230 Extension agents, 80 specialists, six district directors and 12 administrators.

4.3 Data Analysis

4.3.1 Survey Response

On July 12, 2005, Dr. Patricia Sobrero (VCE Director) e-mailed VCE faculty to request their participation in this study. One hundred and ten faculty members responded to the first request. Follow-up e-mails were sent to non-respondents on July 20th and July 25th, resulting in an additional 96 responses.

Out of the 206 responses, 205 were considered usable. Based on a total population of 332 VCE faculty members, the response rate was approximately 62%. This rate met the targeted return rate for this study of 60%. However, the employee population data for campus administrators and specialists were based on full-time equivalents (FTEs), not the actual number of faculty in those positions. Consequently, the actual number of faculty might be larger than the number used to calculate the return rate, resulting in a slightly inflated rate.

The responses were coded for analysis using SPSS. Reliability scores were calculated for the behavior (i.e. current involvement) and attitude sections of survey and yielded alphas of 0.86 and 0.87, respectively.

According to Sommer & Sommer (1997), a question that usually arises in survey research is whether there is some bias between respondents and non-respondents within the same population. One method used to answer this question is to compare answers of early and late respondents. That is, compare the responses of those who responded to the initial announcement of the survey to those who responded to the follow-up efforts. Sommer & Sommer contend,

The latter group represents people who did not respond to the first survey (i.e., non-respondents on the first pass). . . . If the respondents in the second e-mail are similar to those in the first mailing, the possibility of a response bias appears to be less likely. (p. 244)

For this study, non-response error was assessed using late respondents from the second (n=64) and third (n=31) reminders as surrogates for non-respondents. T-tests were conducted at the .05 level using mean scores from the attitude section. No significant differences were found between early (n=110) and late respondents. The t-test results are displayed in Table 4.1.

Table 4.1

T-tests Comparing Early and Late Respondents (Attitude Section only)

	1 st E-mail	2 nd & 3 rd E-mails
Mean	2.926	2.875
Variance	0.099	0.078
Df	62.000	
t Stat	0.686	
P(T<=t) two-tail	0.495	
t Critical two-tail	1.999	

	1 st & 2 nd E-mails	3 rd E-mail
Mean	2.918	2.811
Variance	0.091	0.083
Df	62.000	
t Stat^a	1.463	
P(T<=t) two-tail ^b	0.148	
t Critical two-tail ^c	1.999	

Note. E-mail refers to the invitation to respond to the survey.

^a The “t” value calculated from the data

^b The probability of getting the calculated “t” value by chance alone

^c The “t” value that must be exceeded for the difference between the means to be significant

4.3.2 Characteristics of Respondents

The respondents to the study consisted of nine (or 4%) campus administrators, four (or 2%) district directors, 52 (or 25%) specialists, and 135 (or 66%) agents. Based on the data provided in Table 4.1, the respondents closely approximated the proportion in the population for each group.

Table 4.2 also presents the respondents' data by program area. Agricultural and Natural Resources faculty comprised more than half (56%) of the respondents, followed by 4-H (22%) and FCS (16%) faculty, respectively. The data reflects a slight over-representation of 4-H faculty in the study. Representation of the other program areas in the study is proportionate to the groups' representation within VCE.

Table 4.2

Representation of Survey Respondents

Job Classification	Population	%	Respondents	%
Position				
Campus Administrators ^a	12	3.6	9	4.4
District Directors	6	1.8	4	2.0
Specialists ^b	88	26.5	52	25.4
Agents	226	68.2	135	65.9
No Response	N/A	N/A	5	2.4
Total	332	100	205	100
Program Area				
ANR	169	51.1	115	56.1
4-H	98	29.6	45	22
FCS	55	16.7	33	16.1
Community Viability	N/A	N/A	3	1.5
Others/No Response	10	2.7	9	4.9
Total	332	100	205	100

Note. ANR = Agricultural and Natural Resources; 4-H = 4-H Youth Development; FCS = Family and Consumer Science; N/A = Not Applicable or data Not Available.

^a The Campus Administrators include the AREC Directors

^b Specialists exclude AREC Directors, but include other AREC Extension faculty

According to Table 4.3, the respondents included a balanced representation of males (53%) and females (46%). The largest group of respondents by age were faculty in their 50s (32%), followed closely by faculty in their 40s (29%) and 30s (24%), respectively. Eighty-four percent of the employees had obtained graduate-level degrees. Finally, the majority of the respondents classified themselves as non-minority (88%).

Table 4.3

Additional Employee Demographics of Respondents

Age	%	Education	%	Gender	%	Race/Ethnicity	%
20s	9	BS	14	Male	53	Non-minority	88
30s	24	MS	61	Female	46	Minority	10
40s	29	PhD	20				
50s	32	Post Doctoral	3				
60s and older							

4.3.3 Statistical Analysis of Research Questions

As delineated in chapter one, six research questions were formulated to determine to the current state of international programming within Virginia Cooperative Extension. The research questions are listed below, followed by an analysis and discussion of the relevant data.

4.3.3.1 Research question 1: To what extent are Extension faculty engaged in globalizing their programming efforts?

Ninety-two percent of the respondents reported some type of involvement in international efforts within the past five years. The scale used for this section of the study consisted of four options, including “Done in the past 12 months” = 4; “Done more than one year ago, but less than five” = 3; “Done more than five years ago” = 2; “Have never done” = 1. Table 4.4 provides the mean score for each of the fourteen activities included in the international activities section of the survey. “Exchanged ideas with colleagues from other countries” (mean = 2.47) was the most frequently selected activity, followed by “hosted an international visitor” (mean = 2.08). “Taught at an overseas institution” (mean = 1.16) was the least frequently selected activity, followed closely by involvement in international research (mean = 1.45) and development (mean = 1.45) activities.

Table 4.4

Involvement in International Activities

<u>Activities</u>	N	%	Mean	<u>SD</u>
Exchanged ideas by e-mail or phone with a colleague in another country	123	60	2.47	1.33
Hosted an international visitor	116	56	2.08	1.12
Involved clientele in an international activity	103	51	2.07	1.21
Served as a communication link between people from different countries	83	41	1.95	1.27
Advised an international student	76	36	1.83	1.2
Subscribe to international publication	75	36	1.84	1.23
Joined or maintained membership in an international organization in your field	75	37	1.89	1.27
Developed curriculum materials incorporating international issues	67	33	1.75	1.17
Other involvement	61	29	1.75	1.19
Participation in an international study tour	56	27	1.48	0.88
Created an Extension program based on international issues	47	23	1.55	1.06
Participated in an international development project	46	22	1.45	0.92
Conducted an international research project	33	16	1.32	0.8
Taught at an overseas institution	19	9	1.16	0.55

Note. Done in the past 12 months = 4; Done more than one year ago, but less than five = 3; Done more than five years ago = 2; Have never done = 1; SD = Standard Deviation; and N = Number of Respondents.

Table 4.5 provides the mean scores of global activities by position and program area, respectively. Campus administrators (mean = 2.66) and specialists (mean = 2.13) are the most involved in international programming efforts, while the district directors (mean = 1.21) are the least involved. Additionally, ANR faculty (mean = 1.86) exceeded the 4-H (mean 1.68) and FCS (mean = 1.38) faculty in their international efforts.

Table 4.5

Mean Scores of International Activities

Position		
Job Classification	N	Mean
Campus Administrators	9	2.66
Specialists	51	2.13
Agents	132	1.56
District Directors	4	1.21
Program Area		
Community Viability	3	2.67
ANR	112	1.86
4-H	45	1.68
FCS	31	1.38

Note. Done in the past 12 months = 4; Done more than one year ago, but less than five = 3; Done more than five years ago = 2; Have never done = 1; ANR = Agricultural and Natural Resources; 4-H = 4-H Youth Development; FCS = Family and Consumer Science; N = Number of Respondents.

^aThe Campus Administrators include the AREC Directors

^bSpecialists exclude AREC Directors, but include other AREC Extension faculty

Fifty-six respondents representing all the major program areas provided additional comments and activities. Examples of additional activities from various program areas include 1) taught nutrition and fitness classes to Hispanic youth; 2) conducted CHARACTER COUNTS training in Brazil for educators; and 3) worked with Malian agricultural researchers and educators to develop pesticide safety lesson plans.

Analysis of qualitative data usually begins with inductive analysis to discover patterns and categories (Patton, 2002). Some category names are drawn directly from the language used in the collected data (Strauss & Corbin, 1998). That is, one concept might stand out as broader and more abstract than others. A category name might also emerge as an analyst is working with data and he or she has an insight that explains what is going on. Strauss and Corbin (1998) refer to this approach as “open coding”. The form of open coding used in this study was “line-by-line analysis”, which involved phrase-by-phrase examination of the data to discover patterns or themes. The activities listed by respondents fell into one of the following categories.

- Consulting on international projects
- Providing technical assistance to foreign countries via seminars or workshop, domestically or abroad
- Attending and/or presenting at an international conference
- Youth exchange program
- Providing educational materials to foreign countries
- Collaborating with foreign colleagues to develop educational materials
- Organizing and/or participating in trade and investment missions

Several respondents included activities that were not directly related to their current job responsibilities. Those activities were classified as:

- Volunteer efforts through community organizations
- International experience from previous employment

4.3.3.2 Research question 2: What are the attitudes of Extension faculty towards globalizing their programming efforts?

A Likert scale was used in the attitude section of this survey. The scale provided four options, including “Strongly Agree” = 4, “Agree” = 3, “Disagree” = 2, “Strongly Disagree” = 1. The overall mean score for attitudes related to globalization and the need for Extension to

incorporate a global dimension in its programs was 2.9. This score is close to “Agree” (i.e., 3.0) and points to an overall positive attitude of VCE faculty.

In Ludwig’s (1993) attitude study, she conducted a factor analysis, which resulted in the emergence of four dimensions. Ludwig provided the following labels for each dimension: 1) assistance to less developed countries, 2) international trade, 3) other cultures and 4) Extension involvement in global education.

Virginia Cooperative Extension faculty’s attitude toward “other cultures” is the most positive of the four dimensions with a mean score of 3.09. The lowest mean score (2.81) was related to “Extension’s Involvement in Global Education”. This dimension included two variables related to the priority that VCE leadership places on globalizing Extension. These variables were not included in Ludwig’s study. When these two variables were removed, the mean score for this dimension increased from 2.81 to 2.89 (see Table 4.6).

Table 4.6

Attitude Variables by Dimensions

Attitude Dimensions	Mean	<u>SD</u>
<u>Dimension 1: Assistance to Less Developed Countries</u>		
Less developed countries will be important customers for U.S. agricultural within the next five to ten years.	2.91	0.74
In the poorest countries of the world, agricultural growth will be necessary to provide the poor with more purchasing power.	3.02	0.70
U.S. agricultural assistance to less developed countries creates new competition and undercuts American farmers in the international market. *	2.67	0.73
Increased agricultural production in less developed countries coincided with their increased demand for agricultural imports.	2.66	0.55
One of the major obstacles to economic development in poor countries is that there are too many people who do not work hard enough. *	3.36	0.62
The solution to the world hunger problem is to severely limit the population growth in poor countries. *	2.90	0.68
Trying to help starving people in the world is counterproductive because so much of the food we give never reaches the people in need.	2.82	0.71
<i>Dimension 1 Mean</i>	2.9	
<u>Dimension 2: International Trade</u>		
U.S. responsibility extends only to its own farmers. *	3.07	0.70
We must stop giving away America's technology to other countries. *	2.95	0.72
If the United States helps other countries grow more agricultural products, those countries will import fewer agricultural products from the United States. *	2.64	0.63
In the future, the U.S. government should not assist countries in producing agricultural commodities if those same countries are producing commodities that compete with the U.S. on world agricultural markets. *	2.75	0.66
One of the main U.S. agricultural problems is that we have too many cheap, subsidized foreign agricultural products flooding the U.S. market. *	2.56	0.68

Attitude Dimensions	Mean	<u>SD</u>
Small and medium sized American businesses can become effective participants in the global markets	3.00	0.51
<i>Dimension 2 Mean</i>	2.83	
<u>Dimension 3: Other Cultures</u>		
American farmers do not need education from Extension faculty on global issues. *	3.20	0.55
Citizen exchanges between countries improve the ability of participants to understand and care about how other people live.	3.29	0.52
Getting to know people of another culture is a good idea, but little ever comes of it. *	2.90	0.65
Our customs, beliefs, and values should be used as models by other countries. *	2.88	0.69
Extension faculty can learn from the culture and technology of other countries.	3.33	0.49
Citizens of the United States are ignorant of world affairs.	2.77	0.69
The large number of foreigners in the United States is a primary reason for the high jobless rate among American citizens. *	3.13	0.58
Global interdependence is a myth. *	3.18	0.54
<i>Dimension 3 Mean</i>	3.09	
<u>Dimension 4: Extension Involvement in Global Education</u>		
Extension faculty should not be involved in helping farmers from less developed countries to improve production practices. *	3.06	0.74
Extension can help Virginia citizens understand rationale for supporting agricultural development in less developed countries.	2.98	0.56
Involvement of Extension faculty in development projects to support poor countries can improve their ability to help local clientele.	2.95	0.56
Extension faculty should receive training to become more knowledgeable about global marketing.	3.19	0.59

Attitude Dimensions	Mean	<u>SD</u>
Extension should develop programs to educate America's farmers, agribusinesses, and rural leaders about competing in the global marketplace.	3.18	0.55
Extension professionals do not have the expertise to help clientele understand global interdependence. *	2.40	0.67
Extension faculty in Virginia have a role to play in helping clientele understand global issues.	3.05	0.57
International study tours sponsored by Extension would increase clientele awareness of global issues.	3.11	0.51
Extension faculty should focus on local problems. *	2.12	0.73
<i>Dimension 4 Sub-Mean (for comparison with Ludwig's study)</i>	2.89	
<u>Items added to dimension 4 for this study</u>		
Extension faculty in Virginia are rewarded for their international programming efforts through the continued appointment/tenure and promotion system.	2.34	0.69
The leadership of VCE does not expect faculty to address global issues in their programs. *	2.54	0.66
<i>Dimension 4 Mean</i>	2.81	

Note. Strongly Agree = 4; Agree = 3; Disagree = 2; Strongly Disagree = 1; * = Reverse codes; SD = Standard Deviation.

Fifty-six of the respondents provided additional comments regarding Extension's role in globalization and/or this study in general. Twenty-nine of the comments expressed support for globalizing VCE programs. However, several of the comments included caveats for how the globalization components should be implemented. Ten respondents did not support the idea of including a global dimension into VCE programs. Although some recognized the utility of this type of information, they did not consider it a priority in relation to their other responsibilities. Other comments were directed at the purpose and structure of the study. Using line-by-line analysis as described in section 4.3.3.1, several themes emerged from the additional comments. The supportive themes included:

- Extension can support developing countries in agriculture, youth development, and FCS
- We can learn from other countries just as much as they can learn from us
- Agents should focus on local issues while incorporating appropriate global information
- Global education should start with our youth
- Farmers need to understand global markets and the impact of free trade agreements
- Globalizing VCE is important, but we need to hire additional staff to cover this area
- VCE faculty need the necessary training to address global issues

The non-supportive themes were:

- Faculty are spread too thin to take on additional responsibilities
- VCE should not take on an additional focus until it can adequately fund current programs and training for faculty
- Involving specialists in international programs would make it even more difficult to obtain their support for local programs
- Local stakeholders would not be supportive of diverting local VCE resources to support other countries, especially potential competitors in the global marketplace

4.3.3.3 Research question 3: To what extent are the aforementioned attitudes and behaviors related?

A simple linear regression was conducted to assess the relationship between attitudes and behaviors (i.e., current activities). The mean scores for the attitude items were the independent variables and the overall mean score for the behaviors was the dependent variable. As indicated

in table 4.7, the R-square is 0.365, which means that 37% of the variance in behavior is explained by attitudes. This score reflects a weak relationship between attitudes and behaviors.

According to the results of the stepwise regression (see Table 4.7), the following attitude variables are the best predictors of behaviors:

- No. 50 - *Extension faculty can learn from the culture and technology of other countries.*
- No. 45 - *Citizen exchanges between countries improve the ability of participants to understand and care about how other people live.*
- No. 27 - *U.S. responsibility extends only to its own farmers.*

Numbers 45 and 50 fall under the “Other Cultures” dimension, while number 27 is classified under the “International Trade” dimension.

Table 4.7

Summary: Regression of Attitudes on Behaviors

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate	Change Statistics				
					<u>R Square Change</u>	<u>F Change</u>	<u>df1</u>	<u>df2</u>	<u>Sig. F Change</u>
1	.604	.365	.167	8.87697	.365	1.848	32	103	.011*
Stepwise Regression									
1 ^a	.362	.131	.125	.65089	.131	20.245		134	.000
2 ^b	.424	.179	.167	.63496	.048	7.808		133	.006
3 ^c	.456	.208	.190	.62623	.028	4.735		132	.031

^a Predictors: (Constant), Attitude Variable #50

^b Predictors: (Constant), Attitude Variable #50, Attitude Variable #45

^c Predictors: (Constant), Attitude Variable #50, Attitude Variable #45, Attitude Variable #27

* $p < 0.5$.

4.3.3.4 Research question 4: Is there a difference in the attitudes of Extension agents, specialists, and administrators toward globalizing Extension?

The range of mean scores by position was 2.86 to 3.00. The scores revealed an overall positive attitude towards the concept of globalization and VCE's respective role in addressing globalization. However, agents (mean = 2.86) were notably less positive in their attitudes than those in other positions. The mean score for campus administrators was the highest (mean = 3.00), followed closely by district directors and specialists who both had a mean score of 2.98 (see Table 4.8).

Table 4.8 also displays mean scores by position for dimension 4 of the attitude section, which focuses specifically on Extension involvement in global education. The mean score for each position is lower for dimension four than for the overall mean score. Campus administrators demonstrated the most positive attitude (mean = 2.95) regarding VCE's involvement in international programming. The mean scores for campus administrators also reflected the smallest difference between the overall mean score and that of dimension four. While agents demonstrated the least positive attitude (mean = 2.77) toward dimension four, specialists showed the greatest difference between the overall mean score and that of dimension four (2.98 and 2.86, respectively).

Table 4.9 contains the results of a t-test comparing select positions on all dimensions of the attitude scale, while Table 4.10 focuses exclusively on dimension four. None of the differences in mean scores was statistically significant.

Table 4.8

Attitude Means by Position

Position	N	Mean
All Dimensions		
Campus Administrators ^a	9	3.00
District Directors	4	2.98
Specialists ^b	51	2.98
Agents	132	2.86
Dimension #4 Only (Extension Involvement in Global Education)		
Campus Administrators ^a	9	2.95
District Directors	4	2.89
Specialists ^b	51	2.86
Agents	132	2.77

Note. N = Number of Respondents.

^a The Campus Administrators include the AREC Directors

^b Specialists exclude AREC Directors, but include other AREC Extension faculty.

Table 4.9

T-tests Comparing Attitude Means for Select Positions

	CA	Agents
Mean	2.998	2.862
Variance	0.129	0.090
Df	62.000	
t Stat	1.651	
P(T<=t) two-tail	0.104	
t Critical two-tail	1.999	

	Specialists	Agents
Mean	2.983	2.862
Variance	0.091	0.090
Df	62.000	
t Stat^a	1.619	
P(T<=t) two-tail ^b	0.111	
t Critical two-tail ^c	1.999	

Note. CA = Campus Administrator

^a The “t” value calculated from the data

^b The probability of getting the calculated “t” value by chance alone

^c The “t” value that must be exceeded for the difference between the means to be significant

Table 4.10

T-tests Comparing Dimension #4 Attitude Means for Select Positions

	CA	Agents
Mean	2.955	2.772
Variance	0.200	0.145
Df	20.000	
t Stat	1.029	
P(T<=t) two-tail	0.316	
t Critical two-tail	2.086	

	Specialist	Agents
Mean	2.861	2.772
Variance	0.162	0.145
Df	20.000	
t Stat^a	0.529	
P(T<=t) two-tail ^b	0.603	
t Critical two-tail ^c	2.086	

Note. CA = Campus Administrator

^a The “t” value calculated from the data

^b The probability of getting the calculated “t” value by chance alone

^c The “t” value that must be exceeded for the difference between the means to be significant

4.3.3.5 Research question 5: Is there a difference in the attitudes of Extension faculty in Agriculture, Family and Community Sciences, and 4-H Youth Development toward globalizing Extension?

The mean attitude scores by program area toward globalization and VCE's respective role were positive with the scores ranging from 3.29 to 2.86. Four-H faculty (mean = 2.94) revealed the most positive attitude of the three major program areas; FCS faculty followed closely with a mean score of 2.92. Agricultural and Natural Resources faculty (mean = 2.86) were markedly least positive in their attitudes than the other program areas (see table 4.11).

Table 4.11 also displays the mean scores by program area for dimension 4 of the attitude section, which focuses specifically on Extension involvement in global education. The mean score for each program area is lower for dimension four than for the overall mean score. Four-H faculty (mean = 2.85) demonstrated the most positive attitude regarding VCE's involvement in international programming. The mean scores for ANR faculty reflected the smallest difference between the overall mean score and that of dimension four. While ANR and FCS faculty shared the lowest mean score (2.78) for dimension four, FCS faculty reflected the greatest difference between the overall mean score and that of dimension four (2.92 and 2.78, respectively).

Table 4.12 contains the results of a t-test comparing select program areas on all dimensions of the attitude scale; while Table 4.13 focuses exclusively on dimension four. None of the differences in mean scores was statistically significant.

Table 4.11

Attitude Means by Program Area

Program Area	N	Mean
All Dimensions		
ANR	112	2.86
4-H	45	2.94
FCS	31	2.92
Community Viability	3	3.29
Dimension #4 Only (Extension Involvement in Global Education)		
ANR	112	2.78
4-H	45	2.85
FCS	31	2.78
Community Viability	3	3.05

Note. ANR = Agricultural and Natural Resources; 4-H = 4-H Youth Development; FCS = Family and Consumer Science; N = Number of Respondents.

Table 4.12

T-tests Comparing Attitude Means for Select Program Areas

	4-H	ANR
Mean	2.943	2.862
Variance	0.113	0.083
df	62.000	
t Stat^a	1.035	
P(T<=t) two-tail ^b	0.305	
t Critical two-tail ^c	1.999	

	4-H	FCS
Mean	2.943	2.917
Variance	0.113	0.101
df	62.000	
t Stat^a	0.312	
P(T<=t) two-tail ^b	0.756	
t Critical two-tail ^c	1.999	

Note. ANR = Agricultural and Natural Resources;

4-H = 4-H Youth Development; FCS = Family and Consumer Science.

^a The “t” value calculated from the data

^b The probability of getting the calculated “t” value by chance alone

^c The “t” value that must be exceeded for the difference between the means to be significant

Table 4.13

T-tests Comparing Dimension #4 Attitude Means for Select Program Areas

	4-H	ANR
Mean	2.853	2.781
Variance	0.191	0.141
df	20.000	
t Stat^a	0.413	
P(T<=t) two-tail ^b	0.684	
t Critical two-tail ^c	2.086	

	4-H	FCS
Mean	2.853	2.776
Variance	0.191	0.158
df	20.000	
t Stat^a	0.436	
P(T<=t) two-tail ^b	0.668	
t Critical two-tail ^c	2.086	

Note. ANR = Agricultural and Natural Resources;

4-H = 4-H Youth Development; FCS = Family and Consumer Science.

^a The “t” value calculated from the data

^b The probability of getting the calculated “t” value by chance alone

^c The “t” value that must be exceeded for the difference between the means to be significant

4.3.3.6 Research question 6: What are the perceived barriers to globalizing Extension programming efforts? How do perceptions differ between program areas and positions?

The top two barriers to globalizing VCE programs, as identified by respondents, were “Lack of Financial Support” and “Not a Programming Priority”. Both barriers were selected by 47% of the respondents (see Table 4.15). “Lack of Financial Support” was seen as a concern across all positions. However, VCE leadership (i.e., district directors and campus administrators) did not agree with agents and specialists that “Not a Programming Priority” was a top-three barrier. “Lack of Time” was the third largest barrier being selected by 41% of the respondent. “Language Skills” was also considered by all program areas to be a key barrier to globalizing VCE programming efforts (see Table 4.14).

“Not Recognized in Promotion Criteria” and “Fear of Negative Career Impacts” were not considered to be substantial barriers with each being selected by only 5% of all respondents. “Lack of Support from Colleagues” was selected by only 6% of all respondents.

The results by program area were consistent across the board with “Lack of Financial Support” and “Not a Programming Priority” being the top two barriers. “Lack of Time” was the third largest barrier for 4-H and ANR faculty. FCS faculty identified “lack of in-service training”, not “lack of time”, as the third largest barrier (see Table 4.15).

Table 4.14

Barriers by Position

Barrier	<u>Specialists</u> ^b		<u>Agents</u>		<u>D. D.</u>		<u>C. A.</u> ^a	
	N	%	N	%	N	%	N	%
Lack of Financial Support	25	49	63	47	3	75	3	33
Not a Programming Priority	19	37	73	54	1	25	2	22
Lack of Time	23	45	44	33	1	25	5	56
Language Skills	19	37	43	32	2	50	5	56
Lack of Expertise	7	14	39	29	2	50	1	11
Lack of In-Service Training	5	10	34	25	0	0	0	0
Lack of Materials	5	10	26	19	0	0	0	0
Family Commitments	12	24	24	18	1	25	2	22
Lack of Support from Local Clientele	4	8	25	19	1	25	2	22
Lack of Support from Administration	7	14	12	9	1	25	1	11
Cultural Barriers	3	6	11	8	0	0	1	11
Not Rewarded in Annual Performance Appraisal	7	14	6	4	0	0	1	11
Other	5	10	10	7	0	0	2	22
Lack of Support from Colleagues	3	6	10	7	0	0	0	0
Not Recognized in Promotion Criteria	6	12	5	4	0	0	0	0
Fear of Negative Career Impacts	6	12	3	2	0	0	0	0

Note. N = Number of Respondents; D.D. = District Director; C.A. = Campus Administrator.

^a The Campus Administrators include the AREC Directors

^b Specialists exclude AREC Directors, but include other AREC Extension faculty

Table 4.15

Barriers by Program Area

Barrier	All Respondents		4-H		ANR		FCS	
	N	%	N	%	N	%	N	%
Lack of Financial Support	97	47	22	49	53	47	14	44
Not a Programming Priority	96	47	22	49	56	50	16	50
Lack of Time	85	41	17	38	50	44	4	13
Language Skills	72	35	15	33	42	37	10	31
Lack of Expertise	60	29	13	29	26	23	9	28
Lack of In-Service Training	45	22	12	27	15	13	13	41
Lack of Materials	40	19	14	31	4	4	11	34
Family Commitments	39	19	2	4	28	25	8	25
Lack of Support from Local Clientele	35	17	4	9	21	19	6	19
Lack of Support from Administration	25	12	4	9	12	11	3	9
Cultural Barriers	21	10	5	11	7	6	3	9
Not Rewarded in Annual Performance Appraisal	20	10	4	9	8	7	1	3
Other	18	9	3	7	10	9	2	6
Lack of Support from Colleagues	13	6	1	2	12	11	0	0

	All Respondents		4-H		ANR		FCS	
Not Recognized in Promotion Criteria	11	5	1	2	8	7	2	6
Fear of Negative Career Impacts	11	5	0	0	9	8	0	0

Note. ANR = Agricultural and Natural Resources; 4-H = 4-H Youth Development; FCS = Family and Consumer Science; N = Number of Respondents.

4.4 Summary of Chapter

This study utilized a web-based survey to collect data from VCE faculty to respond to six research questions. The data revealed that VCE faculty across all program areas and positions have been engaged in a variety of globally-focused activities. However, agents were noticeably less engaged than specialists and administrators.

The data also revealed that VCE faculty possessed a positive attitude towards globalization and VCE's role in addressing global issues. There was no statistically significant relationship between attitudes and behaviors (i.e., involvement in international activities). Additionally, there were no statistically significant differences in the attitudes between VCE faculty across program areas and positions. However, certain noteworthy differences in attitudes were highlighted in this chapter and discussed further in chapter 5.0.

Finally, several barriers to globalizing VCE emerged from the data. Most faculty agreed that "Lack of Financial Support" and "Not a Programming Priority" were the two most prominent challenges opposing the globalization of VCE.

Chapter 5.0 Conclusions and Recommendations

This chapter contains purpose and objectives of the study, summary of the research methodology, summary of findings, and conclusions and recommendations drawn from the results of this study.

5.1 Purpose and Objectives

The purpose of this study was to assess the current international involvement of VCE faculty and their attitudes toward globalizing their programming efforts. The specific research questions addressed in this study were:

- To what extent are Virginia Cooperative Extension faculty engaged in globalizing their programming efforts?
- What are the attitudes of Virginia Cooperative Extension faculty towards globalizing their programming efforts?
- To what extent are the aforementioned attitudes and behaviors related?
- Is there a difference in the attitudes of Virginia Cooperative Extension agents, specialists, and administrator toward globalizing Extension?
- Is there a difference in the attitudes of Virginia Cooperative Extension faculty in the three major program areas (Agriculture, Family and Community Sciences, and 4-H Youth Development) toward globalizing Extension?
- What are the perceived barriers to globalizing Virginia Cooperative Extension programming? How do perceptions differ between program areas and positions?

5.2 Summary of Research Methodology

A non-experimental population census survey design was used for this study. The survey instrument used in this study combined sections of two surveys developed and employed by Barbara Ludwig in studies on Ohio Cooperative Extension. The web-based survey for this study included four sections: 1) Employee Profile, 2) Involvement in International Activities, 3) Attitudes Towards Global Issues, and 4) Perceived Barriers to Globalizing Extension Programs.

The respondents' current level of engagement was assessed by their participation in fourteen different types of activities. Respondents were also provided the opportunity to include other types of international involvement that were not included in the list of 14 activities.

A Likert-type scale was used to assess the attitudes of the respondents toward globalization as well as incorporating a global dimension in their programming efforts. Scores ranged from 1-4, with the most positive attitude represented by the value of 4 and the most negative attitude represented by the value of 1. An average attitude score was computed for each respondent. Scores were compared by job category and position. Respondents were also offered the opportunity to provide additional comments regarding their perception of globalizing Extension programs.

Finally, the respondents were asked to identify potential barriers that would preclude them from incorporating a global dimension into their programming efforts. As in Ludwig's (1999) study, the respondents were asked to identify three out of 15 potential barriers, which are most likely to prevent them from incorporating a global dimension into their programs.

The survey instrument was set-up as a web-based survey using Virginia Tech's on-line survey service (i.e., Survey.vt.edu). Data collection began with the VCE Director including a letter of endorsement and an overview of the study in the weekly VCE electronic newsletter (Partners In Excellence). One week later, the targeted employees received an e-mail from the VCE Director, which restated the purpose of the study and included a link to the Internet survey.

Two follow-up efforts were conducted with non-respondents only. The first of the two follow-up efforts included a concise e-mail message as a friendly reminder one week following the original request. Three weeks after the original request, a second follow-up e-mail was sent, which reiterated the purpose of the study and instruction for completing the survey.

5.3 Summary of Findings

5.3.1 Research Question 1: To what extent are Extension faculty engaged in globalizing their programming efforts?

According to the data collected in this study, 92% of the 205 respondents were involved in some type of international programming efforts within the past five years. In Ludwig's 1999 Ohio Extension study, 63% of the 654 respondents engaged in at least one of the international activities presented in her study within the past eight years. One explanation for the substantial

difference in the percentages is that Ludwig included both faculty and non-faculty programming professionals in her study, while this study was limited to faculty. Furthermore, Ludwig did not allow participants to identify activities not presented as options in the survey. Another plausible explanation is the proliferation of international cooperation at all levels of government and across multiple sectors over the past 10 to 15 years.

VCE agents are the key points of knowledge transfer to local citizens, VCE's primary stakeholders. Nonetheless, the data revealed that VCE administrators and specialists are much more involved in international activities than agents.

VCE's globalization efforts via the 4-H Youth Development program are highlighted throughout earlier chapters of this study. However, the data revealed that faculty across all programs areas are engaged in some form of global programming.

5.3.2 Research Question 2: What are the attitudes of Extension faculty towards globalizing their programming efforts?

The data revealed an overall positive attitude (mean = 2.9) towards globalization and the role of VCE in addressing global issues. More telling was that the mean score for "Other Cultures" was the highest of the four dimensions. That is, the faculty's positive attitude is strongly tied to their appreciation and respect for diverse cultures. The appreciation for and willingness to reach diverse cultures is especially critical in the highly diverse communities of northern Virginia.

Ludwig's (1993) attitude study targeted agricultural and community leaders in Ohio, not Extension faculty. Consequently, the audiences are not comparable. However, some of the results were strikingly similar. For example, the overall mean score of Ludwig's (1993) study was 2.91 (compared to 2.90 for this study). Also noteworthy is that the "Other Cultures" dimension received the highest mean score in both studies. Finally, the means scores for dimensions four (Extension's involvement in Global Education) were 2.9 and 2.89 for Ludwig's study and the current study, respectively.

More comparable to the current study, Ludwig's 1999 study assessed Ohio Extension faculty's level of interest in incorporating a global dimension into future Extension programs. She used a scale that ranged from 1 to 5, with 1 representing a "slight interest" and 5 representing a "strong interest". The mean score was 3.1, which represented a moderately strong interest. Again, the 2.9 mean attitude score represents a positive attitude towards globalization.

Table 4.6 shows the scores for the “Extension Involvement . . .” dimension, with and without the two attitude variables that were added to the survey instrument for this study. The first variable addresses awards for globally-focused efforts, while the second variable covers expectations of VCE leadership related to global programming. The mean scores for these two variables were so low that they caused the mean score for the dimension to drop sharply (i.e., 2.89 to 2.81). These results reflect VCE faculty’s recognition that a global dimension should be incorporated into programming efforts. However, they may feel that this priority is not communicated effectively by VCE leadership nor supported through any awards system.

As mentioned in chapter 4.0, the majority of the “additional comments” submitted in the attitude section revealed a supportive attitude towards globalizing VCE. Most of those who were not supportive identified time and resource constraints as their primary objection. Several respondents mentioned that programming staff were already “spread too thin” to incorporate another dimension into their regular responsibilities. Another common concern was the lack of resources currently allocated for training of employees. The implication is that VCE should not fund training on new initiatives if training related to current programming priorities is underfunded.

5.3.3 Research Question 3: To what extent are the aforementioned attitudes and behaviors related?

The regression analysis revealed a non-significant relationship between attitudes and behaviors (i.e., current level of international activity). More specifically, 36.5% of the variance in behavior is explained by the attitudes of VCE faculty.

This finding is consistent with the attitude/behavior relationship perspective put forth by Hogg and Terry (2000), which was discussed in Chapter 2.0 of this study. Hogg and Terry argued that attitudes are not only influenced by perceived costs and benefits of performing a behavior, but also by the perception that significant others want the behavior performed.

As mentioned in the previous section, the data revealed a negative attitude towards the support from VCE leadership regarding globalization efforts. That is, faculty do not believe that incorporating a global dimension in their programming efforts is a priority that is valued or rewarded by leadership.

Several other theories were highlighted in section 2.4 Attitude/Behavior Theory, which pointed to other factors that work in conjunction with attitudes to influence behavior. However,

the literature as well as the results of this study supports the argument that attitudes have some degree of influence on behaviors.

5.3.4 Research Question 4: Is there a difference in the attitudes of Extension agents, specialists, and administrators toward globalizing Extension?

The mean scores for all positions were positive ranging from 2.86 to 3.0 on a 4.0 scale. However, while administrators (mean = 3.0), specialists (mean = 2.98) and district directors (mean = 2.98) had almost identical scores, agents (mean = 2.86) were notably less positive. Not surprisingly, these results closely mirror the globally-focused activity levels for each position (except district directors) discussed in sections 5.1.1.

While the attitude mean scores for dimension four (Extension involvement in global education) were lower than the overall attitude scores for all positions, the difference for specialists was larger than the other positions. This outcome suggests that the faculty predominantly responsible for program implementation (i.e., agents and specialists) are the least enthused about globalizing VCE.

5.3.5 Research Question 5: Is there a difference in the attitudes of Extension faculty in Agriculture, Family and Community Sciences, and 4-H Youth Development toward globalizing Extension?

The mean scores for all program areas were positive with scores ranging from 2.86 to 2.94 for the three major program areas. Although 4-H faculty currently have the only organizational structure in place for regular international engagement (i.e. IFYE), their mean score was only slightly more positive than FCS and ANR faculty. The similarity in scores reflects an overarching recognition that globalization is a reality that must be addressed.

However, all scores were lower for dimension four of the attitude scale. This reflects a concern across all program areas related to VCE's involvement in addressing globalization issues.

5.3.6 Research Question 6: What are the perceived barriers to globalizing Extension programming efforts? How do perceptions differ between program areas and positions?

As noted in chapter 4.0, "Lack of Financial Support" and "Not a Programming Priority" were the top two barriers identified related to globalizing VCE. The same barriers were highlighted in the data provided for the open-ended questions in the current activities section as well as the attitude section of the survey.

However, it is interesting to note that neither the campus administrators nor the district directors selected “Not a Programming Priority” as a top barrier to globalizing VCE. Furthermore, campus administrators did not select “Lack of Financial Support” as one of their top two barriers. The difference in perceptions between the programming faculty (i.e., agents and specialists) and the leadership (i.e., campus administrators and district directors) is consistent with the difference in the current level of globalization activities. The difference is especially salient between agents and campus administrators.

Campus administrators did select “Lack of Time” as a top barrier. This constraint also emerged as a critical issue among programming faculty in their responses to the open-ended questions. Additionally, specialists and agents selected “Lack of Time” as their second and third greatest barriers, respectively.

Similarly, the top two barriers identified in Ludwig’s (1999) study were “Lack of Time” and “Not a Programming Priority”. “Lack of Expertise” and “Lack of Financial Support” were also considered significant barriers by Ohio State Extension faculty.

While there seems to be a disconnect between leadership and programming faculty in certain critical areas, there is a consensus that there are significant hurdles that must be overcome before VCE can truly become a globalized organization.

5.4 Conclusions and Recommendations

5.4.1 Leadership

Conclusion 1. The results of this study suggest that VCE leadership recognizes the impact of globalization on Virginia’s local communities as well as the need to share expertise and resources across international borders. Thus far, however, the leadership’s involvement in global education have not transcended to the programming faculty at the grassroots level.

Conclusion 2. According to the data, programming faculty also recognize the need to globalize VCE and they possess a willingness to move in that direction. The problem appears to be a lack of direction from leadership on the level of priority to be placed on globalization efforts. That is, VCE leadership has not established clear performance standards or provided faculty with globalization related training.

Again, attitude formation theory suggests that attitude towards a behavior can be influenced by the perception that the behavior is important to a significant other.

Recommendation 1: VCE leadership must clarify whether incorporating a global dimension into programming efforts is a priority, which aspects of globalizing are priorities, and identify and mobilize resources (e.g., training, funding, and human resources) to support this organizational initiative. A starting point for VCE leadership and programming faculty might be to build a consensus on the meaning and key components of a globalized Extension system. The language used in section 1.5 Definition of Terms could serve as a model:

Globalizing Extension is engagement with American audiences around global issues, interdependence, and the critical role that Extension can play in today's world, both domestically and abroad. This concept includes 1) incorporating global content into Extension programs; 2) tailoring Extension programs to address the ethnic diversity of local communities; and 3) using local Extension resources to assist in addressing needs in other countries (CSREES, 2003; ECOP, 2002; Ludwig, 2002).

Although the phrase “globalizing Extension” is used in this study, it is recommended that VCE leadership use “internationalizing Extension”, which has become the common terminology used by USDA.

Recommendation 2: VCE leadership should also consider expanding the International Service component of the College of Agriculture and Life Science’s Faculty Annual Report to incorporate the globalization of local programming efforts. Attitude formation theory suggests that conditioning can shape attitudes. That is, if leadership holds faculty accountable for globalization efforts through the formal performance review process, faculty are likely to develop a more positive attitude towards globally-focused programming efforts.

Recommendation 3: Considering current budget constraints, it might behoove VCE leadership to begin educating stakeholders on VCE’s role in addressing issues related to globalization and, eventually, include a globalization element as a line item in state and local budgets. This strategy will ensure that the necessary resources are available for training, travel, and curriculum development to support globalization efforts.

5.4.2 Training

Ludwig drew the following conclusion from her 1999 study of Ohio Extension faculty:

If Extension educators have the responsibility to help clientele develop a better understanding of the complexity of global issues, professional growth and development opportunities must be initiated for Extension staff (p. 66).

Conclusion 3. The attitudes of faculty towards globalizing VCE were positive. However, the written feedback provided by respondents revealed a need and desire for training. VCE faculty need guidance on what a “globalized program” looks like, including specific ideas that can be incorporated into their programs.

Conclusion 4. Faculty were also concerned about the lack of time for including this extra dimension into their responsibilities. Therefore, guidance is also needed in setting priorities and understanding how to manage this important element of programming.

Conclusion 5. Finally, some faculty are interested in very specific training such as foreign languages, which will allow them to be more engaged with diverse cultures.

Recommendation 4: VCE leadership should tap into the vast resources made available through USDA and other State Extension Systems that are already heavily involved in globalizing Extension. As mentioned previously, The National Initiative to Internationalize Extension has created a national network of expertise, training resources, and funding opportunities to support states in their efforts to address the ubiquitous issues associated with globalization.

5.4.3 Barriers

The comparisons of the overall attitude mean scores to that of dimension four in sections 4.3.3.4 and 4.3.3.5 are quite instructive. Faculty who possess a positive attitude towards globalization, but a significantly less positive attitude towards VCE’s involvement, are limited in their effort primarily by the “barriers” (time, resources, etc) they face. VCE leadership must reduce or eliminate these barriers (real or perceived) so faculty can be motivated to succeed at globalizing their efforts. Faculty with similar scores for both overall attitude and that of dimension four either see the value of globalization and support VCE’s involvement, or they don’t see the importance of globalization and do not support VCE’s involvement.

Some of the critical barriers highlighted in this study, as well as in Ludwig’s (1999) study, were the lack of time, resources and expertise. Several state Extension systems, such as Indiana (Purdue University), have developed International Extension Coordinator positions to address these potential barriers.

Recommendation 5: VCE leadership should consider creating an International Extension Coordinator position. The responsibilities associated with this position would include 1) coordinating relevant training, 2) organizing international study tours, 3) identifying

opportunities for international collaboration and 4) procuring outside funding for international activities.

5.5 Recommendations for Future Research

The following recommendations for future research are based on the results and conclusions of this study.

1. Conduct a study to determine the level of importance that local and state stakeholders place on VCE faculty globalizing their programming efforts.
2. Conduct a study of a state Extension system that has effectively incorporated a global dimension into their programs to document processes and lessons learned to assist VCE in their transition.
3. A comparative analysis could be conducted to determine if agents in communities with large immigrant populations are more interested and active in global programming.
4. Conduct a needs assessment to determine specific training needed to assist faculty in transitioning to a more globally-focused programming.
5. Conduct a study with VCE leadership to determine a comprehensive definition and the critical components of “global programming” that is appropriate for VCE.

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APPENDIX A
HUMAN SUBJECTS APPROVAL LETTER

Institutional Review Board

Dr. David M. Moore
IRB (Human Subjects) Chair
Assistant Vice President for Research Compliance
CVM Phase II- Duckpond Dr., Blacksburg, VA 24061-0442
Office: 540/231-4991; FAX: 540/231-6033
email: moored@vt.edu

DATE: May 24, 2005

MEMORANDUM

TO: Jerry D. Gibson Agricultural & Extension Education 0452
Michael T. Lambur Agricultural & Extension Education 0452
Edwin Lewis

FROM: David Moore 

SUBJECT: **IRB Exempt Approval:** "Attitudes of Extension Faculty Toward Globalizing
Extension Programs" IRB # 05-360

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of May 24, 2005.

Virginia Tech has an approved Federal Wide Assurance (FWA00000572, exp. 7/20/07) on file with OHRP, and its IRB Registration Number is IRB00000667.

cc: File

Department Reviewer: Jan K. Nespor

APPENDIX B

PARTNERS IN EXCELLENCE NEWSLETTER:
MESSAGE FROM
VCE EXTENSION DIRECTOR

Partners in Excellence

Virginia Cooperative Extension

College of Agriculture and Life Sciences
College of Natural Resources
Virginia-Maryland Regional College of Veterinary Medicine



DIRECTOR'S DIALOGUE

The Impact of Globalization

Friday, July 1, 2005



Dr. Patricia Sobrero

It is hard to deny the growing domestic impact of globalization. Our communities have become more diverse and the issues we face have become more complex. In 2002, CSREES, USDA launched the National Initiative to Internationalize Extension (NIIE) to assist states and the national Extension system in bringing a global focus to programming for domestic audiences. Over the past several years, many state Extension systems have begun to take inventory of their current engagement on international issues; barriers (real and perceived) to being more active in globalizing programs; and staff needs for effectively communicating with diverse audiences on the implications of globalization.

I also recognize that we are serving an increasingly diverse clientele in Virginia. As you know, it is our mission to meet the needs of all audiences and to assist the citizenry in addressing critical issues facing our communities. In the coming weeks, we will engage in a research effort that will allow us to take inventory of our current engagement and potential needs regarding the issue of globalization. Edwin Lewis, a Ph.D. candidate in Agricultural and Extension Education and former VCE agent, along with Michael Lambur, head, Extension Program and Curriculum Development unit, and Jerry Gibson, associate professor, will conduct a study of VCE faculty (agents, specialists, and administrators) related to globalizing our programming efforts. I support this study and encourage your participation.

The results of the study will be shared as soon as they are available. An overview of this research project is also provided in this week's newsletter.

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APPENDIX C

PARTNERS IN EXCELLENCE NEWSLETTER: RESEARCH OVERVIEW



College of Agriculture and Life Sciences
 College of Natural Resources
 Virginia-Maryland Regional College of Veterinary Medicine



TOP STORIES

Research Survey on Globalization

Friday, July 1, 2005

Within the past ten years, several national- and state-level experts have argued that for Cooperative Extension to remain relevant, it must "globalize" its programming efforts. In February 2002, The Extension Committee on Organization and Policy (a national strategy organization for the Cooperative Extension Service) released a report entitled *The Extension System: A Vision for the 21st Century*. This report lists the "Impact of Globalization" as one of the six major challenges currently facing the Extension System. According to the report, Extension must provide leadership in demonstrating the local implications and potential consequences of global interdependence.

The globalization of Extension can be defined as the engagement with American audiences around global issues, interdependence, and the critical role that Extension can play in today's world, both domestically and abroad. This concept includes 1) incorporating global content into Extension programs; 2) tailoring Extension programs to address the ethnic diversity of local communities; and 3) using local Extension resources to assist in addressing needs in other countries.

Several state Extension programs have begun to make strategic efforts to internationalize their programs. Efforts have included staff trainings, attitude surveys of external stakeholders, perception studies of Extension faculty, participation in international tours, and participation in international projects.

Although VCE is actively involved in some international programs, we have not engaged in a coherent and proactive effort to globalize our efforts across all program areas.

Edwin Lewis, a Ph.D. candidate in Agricultural and Extension Education at Virginia Tech and a former VCE agent, is working with Michael Lambur and Jerry Gibson to conduct a study of faculty related to globalizing programming efforts. The proposed study will examine 1) the current level of international engagement within VCE; 2) the perceptions of faculty towards globalization; and 3) perceived barriers to globalizing VCE. The outcome of this study will assist VCE in understanding our progress in becoming viable within the global community as well

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http://www.cals.vt.edu/ee/index.php/partners/article/research_survey_on_globalization/

1/2/2006

as potential areas in which we can improve our efforts.

The survey instrument used in this study originated at The Ohio State University and was used to study their Extension program. The instrument has also been used in other state Extension studies, which allows us to compare the VCE results to those of other states. This instrument has a heavy agricultural focus. However, previous studies have shown the effectiveness of the instrument in measuring respondents' perceptions of key themes related to globalizing Extension.

All VCE faculty will receive an e-mail from Mr. Lewis within the next week which will include further details regarding the study and a link to the Internet-based survey. Your participation is critical to the success of this study. The results of the study will be included in a future edition of *Partners in Excellence*.

[Return to Archive]

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APPENDIX D

INITIAL E-MAIL MESSAGE TO VCE FACULTY

July 12, 2005

Dear VCE Faculty:

I am writing to ask if you will participate in a research survey regarding the globalization of Cooperative Extension. The purpose of this study is to examine 1) the current level of international engagement in VCE; 2) the perceptions of faculty towards globalization; and 3) perceived barriers to globalizing VCE. Your participation is important to the future direction of Extension because of the role you play in influencing the content and structure of VCE educational programs.

In addition to being a former VCE agent, I am working closely with other current and former VCE faculty to conduct this study, including Michael Lambur, Jerry Gibson, and Lorenza Lyons. Furthermore, the Director of VCE, Patricia Sobrero, has endorsed this study (see the July 1st edition of Partners in Excellence). Please complete the Internet-based questionnaire located at <https://survey.vt.edu/survey/entry.jsp?id=1113062108832> by **July 22nd**. The password to access the survey is “VCE” (password is case-sensitive). The survey should take you approximately 15 minutes to complete.

The survey instrument used in this study originated at The Ohio State University and was used to study their Extension program. The instrument has also been used in other state Extension studies, which allows us to compare the VCE results to those of other states. This instrument has a heavy agricultural focus. However, previous studies have shown the effectiveness of the instrument in measuring respondents’ perceptions of key themes related to globalizing Extension.

Your responses to the survey are anonymous and will simply be averaged with other responses received. Once you have completed the survey and submitted your responses, I will receive an e-mail notification that a survey has been completed. The survey responses are automatically stored in database with restricted access. If you prefer to be excluded from follow-up e-mails, please send me an e-mail (Ed_Lewis3@hotmail.com) verifying your completion of the survey. Your e-mail message will not be shared and will be deleted once the follow-up contacts are completed. To further ensure confidentiality, no one other than the survey project team will be given access to the completed questionnaires.

Again, your participation is important to the success of this study. I hope you will take the time to complete the survey. The results will be included in a future edition of VCE’s Partners in Excellence newsletter. Should you wish to contact me, you may reach me by phone at (202) 720-1863 or by e-mail at Ed_Lewis3@hotmail.com.

For additional details regarding this study, see the attached document.

Sincerely,

Pat Sobrero

Director, Virginia Cooperative Extension
Associate Dean, College of Agriculture and Life Sciences
101 Hutcheson Hall,
Virginia Tech (0402)
Blacksburg, VA 24061

Sent on behalf of
Edwin Lewis
PhD Candidate
Agricultural and Extension Education
Virginia Tech

APPENDIX E

FIRST E-MAIL REMINDER TO VCE FACULTY

July 20, 2005

Dear VCE Faculty:

Last week you received an e-mail asking you to participate in a research survey regarding the globalization of Cooperative Extension. If you have already completed the on-line survey, please accept our thanks. If not, then please fill out the survey by **Friday, July 22**. Again, the website address for the survey is <https://survey.vt.edu/survey/entry.jsp?id=1113062108832> and the password is "VCE" (password is case-sensitive).

We are grateful for your help, as your responses are important to the success of this study. If you have problems accessing the survey, please call Edwin Lewis at (202) 720-1863 or send an e-mail to ed_lewis3@hotmail.com.

Sincerely,

Pat Sobrero

Director, Virginia Cooperative Extension
Associate Dean, College of Agriculture and Life Sciences
101 Hutcheson Hall,
Virginia Tech (0402)
Blacksburg, VA 24061

APPENDIX F

SECOND E-MAIL REMINDER TO VCE FACULTY

July 25, 2005

Dear VCE Faculty:

Two weeks ago you received an e-mail asking you to participate in a research survey regarding the globalization of Cooperative Extension. Although the initial deadline was this past Friday, survey responses are still being submitted. To accommodate those who were unable to complete the survey by the deadline, we will be accepting responses to the survey until **Friday, July 29**. Again, the website address for the survey is <https://survey.vt.edu/survey/entry.jsp?id=1113062108832> and the password is "VCE" (password is case-sensitive).

Thanks again to all those who have already completed the survey. If you have problems accessing the survey, please call Edwin Lewis at (202) 720-1863 or send an e-mail to ed_lewis3@hotmail.com.

Edwin Lewis
PhD Candidate
Dept. of Agricultural & Extension Education
Virginia Tech

VITAE

EDWIN C. LEWIS

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Germantown, MD 20874
(301) 353-8990
(202) 720-7233 - Office
Edwin.Lewis@fas.usda.gov

EDUCATION

Virginia Tech, Blacksburg, VA - Doctor of Philosophy in Career and Technical Education – May 2006

Virginia Tech, Blacksburg, VA - Master of Science in Agricultural & Applied Economics - July 1998

Southern University, Baton Rouge, LA - Bachelor of Science in Agricultural Economics - May 1994

PROFESSIONAL EXPERIENCE

12/05– Present **Team Leader, Program Delivery and Compliance, Civil Rights Staff, Foreign Agricultural Service, United States Dept. of Agriculture, Washington, DC**

- ◆ Coordinate agency-wide outreach to underserved, disabled and socially-disadvantaged audiences
- ◆ Monitor program participant’s compliance with USDA Civil Rights and diversity policies
- ◆ Ensure that FAS programs are in compliance with USDA Civil Rights and diversity policies

2/05– 12/05 **Policy Issues Coordinator, Horticultural and Tropical Products Division, Foreign Agricultural Service, United States Dept. of Agriculture, Washington, DC**

- ◆ Coordinated with FAS officials in overseas posts, other domestic and foreign government officials, university faculty, and other relevant experts to plan, conduct, and evaluate technical assistance projects for and in developing countries.
- ◆ Prepared key developments, briefing papers, economic analysis and other written materials regarding technical assistance projects.
- ◆ Evaluated political, trade and economic data to determine appropriate technical assistance to resolve non-tariff trade barriers.

12/02 – 2/05 International Development Specialist, International Cooperation & Development, Foreign Agricultural Service (FAS), United States Dept. of Agriculture, Washington, DC

- ◆ Coordinated with FAS officials in overseas posts, other domestic and foreign government officials, university faculty, and other relevant experts to plan, conduct, and evaluate technical assistance projects for and in developing countries.
- ◆ Evaluated political, trade and economic data to determine appropriate technical assistance to resolve non-tariff trade barriers.
- ◆ Prepared proposals to solicit funding for technical assistance projects from sources such as USAID.

6/01 – 12/02 Agricultural Economist, Horticultural and Tropical Products Division, Foreign Agricultural Service, United States Dept. of Agriculture, Washington, DC

- ◆ Compiled, reviewed and evaluated economic and policy data regarding the supply, demand, prices and other factors affecting the world situation for potatoes, stone fruit, avocados and nursery products.
- ◆ Prepared circular articles, key developments, briefing papers and other written materials regarding the world situation of the aforementioned commodities.
- ◆ Work closely with cooperator groups, exporters and domestic and foreign government officials to address pressing issues affecting the flow trade.

6/98 - 6/99 Human Resources Specialist, Virginia Cooperative Extension (VCE), Virginia Tech, Blacksburg, VA

- ◆ Developed the VCE Internal Civil Rights Compliance Review process.
- ◆ Organized and conducted 14 civil rights compliance reviews of local Extension offices.
- ◆ Counseled and trained employees and volunteers on issues related to diversity and discrimination.

**8/94 - 8/96 Extension Agent, Unit Director, Virginia Cooperative Extension (VCE), Petersburg, VA
Supervisor: Fredrick Custis, (540) 231-7619**

- ◆ *As an Extension agent:*
 - Coordinated and supervised volunteer led experiential clubs, workshops, events and camping programs.
 - Recruited, trained, and managed adult and teen volunteers.
 - Worked cooperatively with local government, agencies and organizations to provide youth developmental programs.
 - Wrote biweekly article for two local newspapers.
- ◆ *As Director of the Petersburg Extension Office:*

- Supervised office staff and provided oversight to all local programming efforts.
- Coordinated local advisory group responsible for providing input of programs
- Ensured adherence to all VCE policies and procedure

PUBLICATIONS

Lewis, E., Lambur, M., Rajgapol, R. (1999). Cost-benefit analysis of the expanded foods & nutrition education program. *Virginia Extension Publication*.

Lewis, E., Lambur, M., Rajgapol, R. (2000). Cost-benefit analysis indicates positive economic benefits of EFNEP related to chronic disease prevention. *Journal of Nutrition Education*.

HONORS

- ◆ Awards for Excellence (Secretary's Science & Technology Conf) - Foreign Agricultural Service, USDA (2004)
- ◆ Cash Award (Trade Policy Training for Serbia & Montenegro), Foreign Agricultural Service, USDA (2003)
- ◆ Letter of Recognition (Coordination of WTO Outreach in Asia), Foreign Agricultural Service, USDA (2003)
- ◆ Awards for Excellence (Work Life Survey) - Foreign Agricultural Service, USDA (2000)
- ◆ Outstanding Program Evaluation Award - Extension Service, USDA (1999)
- ◆ Outstanding Service Award - Extension Service, USDA (1994)