Internationalization of Programming at New Mexico State University[1]

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Abstract

As globalization has increased, agricultural faculty have been encouraged to internationalize their programming efforts. The purpose of this study was to assess the attitudes of agricultural faculty at New Mexico State University (NMSU) towards globalizing their programming efforts. Current international programming efforts and barriers to participating in these efforts were assessed. The results showed that 85% of respondents were involved in international activities within the past ten years. Many, however, have not participated in these activities within the past year indicating that it is not an ongoing component of their work. The mean attitude score of NMSU agricultural faculty towards global issues was 2.93 in a scale from one to four, with four being the most positive. Teaching faculty and faculty over the age of 50 reported more participation in international activities and a more positive attitude toward international issues than their colleagues. The primary barriers towards globalizing programming efforts were "Lack of Financial Support," "Lack of Time," and "Not a Programming Priority." These results were consistent with the attitude section, which showed that respondents did not consider it a priority that was rewarded or communicated effectively.

Introduction

In 2002, The Extension Committee on Organization and Policy (ECOP) published a report that listed the "Impact of Globalization" as one of the six major challenges currently facing the extension system. ECOP asserted that the Extension Service must be a leader in a world that is becoming more globally interdependent. The National Association of State Universities and Land Grant Colleges (NASULGC), (now the APLU), released a strategic vision statement for Land Grant Colleges in May of 2000. In this vision statement, NASULGC contends that the United States higher education sector needs to produce leaders for the 21st century that are capable of understanding current challenges and influence the direction of the global community.

Agricultural faculty have been encouraged to internationalize their efforts for over 30 years. Land Grant Universities and the CES have a unique role to play in a globalizing world. According to Ludwig and McGirr (2003), the CES can help Americans deal with the issues associated with globalization and assist in forming the view that Americans have of other cultures. Our universities and the CES are in a position to educate leaders about a global market, international trade agreements, cross-cultural skills and global responsibility.

In 1989, the United States Department of Agriculture put forth a document entitled Global Perspectives for Extension. This document discussed the shrinking effect of globalization and stated the importance of global competency for agricultural faculty. In addition, goals were put forth for the integration of international perspectives into all programming development (Ludwig, 1993).

In order to remain relevant in a quickly changing global climate, globalization is becoming increasingly important to the Land Grant Extension mission. In 1993 and 1996, Ludwig conducted research that revealed the need for Extension staff to undergo globalization training. As numerous needs arise due to globalization, agricultural faculty must be ready to deliver appropriate information to answer this need. Ludwig also proposed that it is important that Extension faculty receive cross-cultural training to learn sensitivity to the needs of other cultures as members of our global community.

Although the goal of internationalizing has been mandated by ECOP and NASULGC (APLU), NMSU has not formally documented the extent of interest, participation and attitudes of NMSU faculty and staff toward internationalizing. The purpose of this study was to assess the attitudes of agricultural faculty at NMSU toward globalizing their programming efforts. This study was conducted to address the following research questions:

- To what extent are agricultural faculty engaged in globalizing their programming efforts?

[1]The New Mexico State University Institutional Review Board approved the study protocol and all participants voluntarily participated in this survey research.

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- What are the attitudes of agricultural faculty toward globalizing programming efforts?
- To what extent are the previously mentioned attitudes and behaviors related?
- What are the perceived barriers towards globalizing programming efforts?
- What is the relationship between select antecedent characteristics and engagement in globalizing programming efforts?

Methods

The population for this study includes all agricultural faculty at New Mexico State University. The frame for this census study was obtained from the Dean's office at NMSU in order to compile a complete and updated list. The final usable population in the frame was N = 231.

The survey instrument used in this study combined sections that were developed and used by Barbara Ludwig in 1993 and 1999 and by Edwin Lewis in 2006 on the Ohio State Cooperative Extension Service and the Virginia State Cooperative Extension Service respectively. The instrument was reviewed and slight modifications were made, based on the assessment of a panel of experts.

The electronic instrument contained four sections including demographic information, current involvement in international activities, attitudes towards international issues and barriers towards internationalizing programming efforts.

The employee profile solicited information about the respondents including gender, age and current position. This data was collected to determine if position or previous experience is an indicator of international programming interest.

The level of participation in international activities of the respondents' was assessed by using 14 questions developed by Ludwig (1999) and modified by Lewis and Gibson (2006) that itemize 14 different types of activities. By calculating the number and percentage of respondents' participation in these activities over an eight-year period, Ludwig was able to employ this information to characterize their level of engagement in international activities.

Respondents in this study were asked to describe their engagement in international activities by choosing the most appropriate option that best describes them. Each response was assigned a value to allow a mean 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

Mean scores were also calculated by job category in order to identify if differences exist in the amount or types of activities in which respondents are engaged.

A Likert-type scale was used to determine the attitudes of respondents toward global issues. This was used to determine the level of interest in incorporating an international dimension to their programming efforts. Scores were on a four-point Likert scale, with four indicating the most positive attitude and a one indicating the most negative value. The respondents had the following options to choose from:

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

A mean attitude score was determined for each respondent in the study. The scores of participants were compared by job category.

The participants were asked to identify potential barriers to their involvement in future international programming efforts. This section identified the top barriers to incorporating an international dimension into programming efforts. A list of fifteen potential barriers based on the items used by Barbara Ludwig (1999) and revised by Lewis and Gibson (2006) was used. The participants were asked to identify the three barriers that were most likely to prevent them from incorporating an international dimension into their programming efforts.

The validity and reliability of this instrument was assessed. In 1999, Ludwig reported 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 NMSU also reviewed the final instrument for this study and established the content validity of this instrument. Cronbach's alpha was used to determine the degree of internal consistency in this study. The Cronbach's alpha scale is between 0-1 and as the number increases, the instrument is more reliable. The coefficient for this instrument as conducted by Lewis and Gibson (2006) was 0.87. The reliability score was also tested post hoc resulting in a coefficient of 0.89.

A modified Dillman's (2007) Tailored Design Method was used to collect data using an electronic survey. Dillman (2007) stresses the importance of follow-up activities in order to increase the response rate of the survey. Two follow-up efforts were made with non-respondents.

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. The response rate for this study was 54%.

The data collected from the survey was analyzed using Microsoft Excel and the statistical software SAS. Many statistical techniques were used, which included the derivation of frequencies, means, percentages, standard deviations and t-tests. Information on employee background was analyzed by calculating frequencies and percentages. International programming efforts were analyzed by calculating the means and frequencies of the response scores. A four-point Likert scale was used to measure attitudes of faculty toward internationalizing

their programming efforts. The responses were summed and the mean scores were calculated for all respondents. A t-test assessed non-respondent error and determined if differences exist between faculty members based on select antecedent characteristics. Bivariate regression analysis was employed to measure the correlation between the attitudes and behaviors of the respondents.

Results and Discussion

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

Eighty-five percent of respondents reported involvement in at least some international activity within the past ten years. Respondents were asked to choose from four options Table 1 describes these activities by frequency and mean. A mean score is given for each of the international activities included in the survey. The most frequently selected activity was "exchanged ideas by email or phone with a colleague in another country" (mean 2.18), followed by "hosted an international visitor" (mean 2.89). The activities selected least frequently were "taught at an overseas institution" (mean 1.79) and "assisted in the creation of an Extension program based on international issues" (mean 1.33). The mean scores indicate that most of the activities, on average, were not performed within the past twelve months.

Table 1. Involvement in International Activities

Activities	*N*	Percent	Mean	Std Dev
Exchanged ideas by e-mail or phone with a colleague in another country	93	74.4	2.18	1.20
Hosted an international visitor	70	56	2.89	1.28
Served as a communication link between people from different countries	69	55.6	2.40	1.35
Advised an international student	68	54.8	2.20	1.29
Joined or maintained membership in an international organization in your field	64	52	2.38	1.37
Subscribe to international publication	62	50.8	1.57	0.97
Involved clientele in an international activity	61	52	2.30	1.40
Assisted in the development of curriculum materials incorporating international issues	60	48.8	2.44	1.46
Collaborated in an international research project	56	45.2	2.13	1.27
Participated in an international development project	46	38	1.40	0.88
Participated in an international study tour	39	31.7	1.75	1.10
Assisted in the creation of an Extension program based on international issues	25	20.3	2.02	1.25
Taught at an overseas institution	25	20.3	1.33	0.72
Other involvement	34	27.2	1.79	1.19

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.

The results of this study show a high level of participation in international activities by NMSU agricultural faculty, however, much of this participation has not been within the past year. These results demonstrate that although it is something that is valued by NMSU agricultural faculty, it is not something that is necessarily an ongoing component of their work. One conclusion to be drawn from this is that although it is part of the mission of NMSU to be involved in global activities, there is not a system in place to provide incentives and opportunities for faculty to be regularly involved in these activities. Many faculty continue to be involved in these activities through altruistic motives, even though it is not a requirement for their position. These opportunities may arise circumstantially for faculty members as they meet colleagues at conferences and other events and become involved in these activities, as opposed to planned international activities through NMSU.

Research Question 2: What are the attitudes of agricultural faculty toward globalizing programming efforts?

To determine the attitude scores of agricultural faculty, a survey was developed using a Likert scale. Thirty-two questions were asked in this section, which covers a range of issues related to globalization. The overall mean score for attitudes was 2.93. This score is close to the "Agree" score of 3.0 in the Likert scale and indicates an overall positive attitude of the NMSU agricultural faculty towards international issues and globalizing their programming efforts. A mean score for each of the four attitude dimensions was obtained. NMSU faculty's attitude toward "other cultures" was the most positive of the four dimensions, with a mean score of 3.10. This is very significant because it shows respect for other cultures around the world. As a school that exists on an international border and in a tri-cultural state (Caucasian, Latino and Native American), the positive attitude score of agricultural faculty at NMSU is closely tied with their respect for people of other cultures. The lowest score was "international trade" with a mean score of 2.84

The lowest three variable scores in "faculty involvement in global education," were the variables that had to do with faculty being rewarded at NMSU for global efforts, expectation by leadership to globalize and the need to focus on local problems. The low mean score for this last variable shows that faculty think that they should not only focus on local problems, but should also be involved in global education. It is very clear from the high mean scores in this dimension that NMSU faculty recognize that a global dimension should be incorporated into their programming efforts. However, the low scores concerning leadership expectations and rewards for international involvement reveal that this priority is not being communicated effectively by leadership or promoted through the tenure or promotion system.

Research Question 3: To what extent are the previously mentioned attitudes and behaviors related?

There was a very weak relationship between the attitudes and behaviors in this study. The R-square number obtained means that only 28% of the variance in behavior is explained by attitudes.

Although the results show that attitude has some degree of influence on behavior, the amount of influence

is very weak. This is significant, because the overall mean attitude score of NMSU agricultural faculty towards international activities was 2.93. This is a positive attitude score, but the influence of this overall positive attitude on behavior is fairly low which is seen in the lack of participation in international activities in recent years. This suggests that there are other unknown factors influencing their behavioral choices.

Research Question 4: What are the perceived barriers towards globalizing programming efforts?

Participants were asked to choose the top three barriers that they felt were limiting them from participating in more global programming from a list of 15 common barriers. The top barrier listed was "Lack of Financial Support" with 67.8% of respondents listing this as a barrier. The next most common barrier was "Lack of Time" with 55.7% of respondents listing this as a barrier towards globalizing their programming efforts. The third largest barrier was "Not a Programming Priority" and was listed by 47.8% of respondents. These results reflect the results of the attitude section, which showed that respondents felt like it was not a programming priority that was communicated effectively or rewarded.

The three barriers listed the least were "Lack of Support from Colleagues" (0.9%), "Fear of Negative Career Impacts" (3.5%) and "Lack of Materials" (3.5%). A list of the barriers and the frequency of their selection is listed in Table 2.

Table 2. Barriers Identified by Respondents

Barriers	*N*	Percent
Lack of Financial Support	78	67.8
Lack of Time	64	55.7
Not a Programming Priority	55	47.8
Language Skills	39	33.9
Family Commitments	30	26.1
Lack of Expertise	20	17.4
Lack of Support from Administration	18	15.7
Not Rewarded in Annual Performance Appraisal	12	10.4
Lack of In-Service Training	10	8.7
Not Recognized in Promotion Criteria	9	7.8
Lack of Support from Local Clientele	7	6.1
Cultural Barriers	6	5.2
Fear of Negative Career Impacts	4	3.5
Lack of Materials	4	3.5
Lack of Support from Colleagues	1	0.9

The results of this section of the study are consistent with Lewis and Gibson (2006) and Ludwig (1999). Lewis and Gibson found that "Lack of Financial Support" and "Not a Programming Priority" to be the top barriers to involvement in global activities at Virginia Tech and Ludwig found that "Lack of Time" and "Not a Programming Priority" were the top barriers at Ohio State. These similar results show that resources of time and finances are usually limited for faculty at Land Grant Universities. However, "Not a Programming Priority" was the only barrier listed in the top in all three studies, which shows that there is a lack of communication by the leadership in stating this as a priority as has been mandated by the APLU.

Research Question 5: What is the relationship between select antecedent characteristics and engagement in globalizing programming efforts?

The fifth research question sought to identify if there was a relationship between engagement in globalizing programming efforts and certain demographic or employment characteristics. The first relationship explored was whether age affected faculty attitudes toward global programming. The t-test procedure was used to compare respondents who were fifty and older to respondents who were under fifty. Respondents fifty and over scored significantly higher than their younger counterparts in areas regarding international trade and other cultures, based on a 95% confidence level. These results suggest that faculty over the age of fifty are at a different place in life than their younger colleagues which has significantly affected their attitudes toward international issues. Respondents over fifty are likely to have had more travel opportunities and consequently more exposure to other cultures which could have led to a more positive attitude score in this dimension. As noted previously, faculty do not see international activities as something encouraged in the promotion and tenure system, or through any other rewards (financial, recognition, etc.). This could be the reason why many of the faculty members under fifty, who are less likely to have attained tenure, score lower in the attitude dimensions. They are not encouraged to be involved in these activities and consequently their limited exposure leads to a lower attitude score.

In addition to the attitude dimensions, a t-test was performed to determine if there is a difference in behavior between agricultural faculty over fifty years old as compared to their younger colleagues. The p value found was 0.004*, which shows a significant difference between older and younger faculty members concerning behavior. Faculty over fifty were significantly more likely to have participated in international activities than faculty under fifty. This shows more exposure to other cultures, which could affect their attitudes towards global issues. Respondents under 50, in addition to being busier with working towards tenure, are generally more likely to have children at home. This means that they may have more family obligations and less time to participate in international activities.

Teaching faculty were compared to Extension and Experiment station faculty to determine if they scored higher with regards to attitude and behavior as well. Teaching faculty scored significantly higher than their colleagues with regards to items dealing with assistance to less developed countries, but there was no significant difference in other areas. Additionally, teaching faculty scored significantly higher concerning behavior. The reason for this could be that they are more likely to have exposure to international students and international activities working on campus than their colleagues who are working in rural areas. They also may have more opportunities available to them to participate in these

activities for research or through meeting colleagues at conferences who are involved in these types of activities. Additionally, teaching faculty may have more time to participate in these activities due to their block schedule. During the summers they are teaching less, which may give them more time to participate in international activities.

Summary

The findings of this study demonstrate a high level of participation in international activities at NMSU, but there are not extrinsic incentives for participation in these activities provided by the University. The attitude of agricultural faculty at NMSU towards international issues is very positive, but they do not see involvement in international activities as something that is expected of them. There is a lack of direction from leadership on whether international activities should be a programming priority and at what level this should be a priority. There are not clear standards for participation in international activities and there is very little training provided in this area. Lack of time and financial support are the two barriers listed the most by respondents in this study, demonstrating that if the leadership at NMSU recognizes this as a programming priority, they need to provide the resources for faculty to be able to participate in these activities. There is also a need for guidance in setting priorities about what level of importance this should be given.

Finally, participation in international activities leads to a more positive attitude towards international issues. This in turn could lead to more participation in these activities. It is important that agricultural faculty at NMSU have the opportunity to participate in cross-cultural activities as this leads to further participation in these activities.

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