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A Longitudinal Study of Learner Characteristics and Experiences with a Distance Master of Agriculture Degree Program

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A Longitudinal Study of Learner Characteristics and Experiences with a Distance Master of Agriculture Degree Program

Introduction

[State] University began offering a Master of Agriculture Degree to distant learners in 1979. This was done to provide educational opportunities in agriculture to persons who could not or preferred not to study on campus (Author, 1995). Graduates of the program were surveyed in 1993 to develop a demographic profile of graduates, describe their experiences with the program, and to examine their perceptions of selected obstacles to off-campus study (Author, 1995). Students who graduated from the program between 1994 and 2001 were surveyed in 2001 to examine trends (Author and Author, 2005). In 2001, asynchronous delivery of courses was predominant in the Master of Agriculture program. By 2009 all courses were online. Many technological developments occurred between 2001 and 2009. Technologies that are now ubiquitous like YouTube, Facebook, iPod, and the BlackBerry were all introduced during this time. Because distance education continues to evolve, it is important to periodically monitor distant learner characteristics and experiences and use this information for program improvement.

Purpose

This purpose of this longitudinal study was to identify trends in learner characteristics and program related experiences in a Master of Agriculture distance degree program.

Methodology

The population for this study included 30 persons who earned a Master of Agriculture degree at [State] University between spring 1994 and spring 2001 and 73 person who earned a Master of Agriculture degree between summer 2001 and summer 2009. Relevant portions of the questionnaires used to collect data in 2001 and 2009 were identical. The questionnaires contained demographic questions, questions related to experiences with the Master of Agriculture program, and a scale to measure perceptions of obstacles faced by off-campus students. The obstacles scale had a Cronbach's alpha reliability coefficient of .78 for data collected in 2001 and .83 for data collected in 2009. A panel of experts judged the questionnaire to be content and face valid. Data were collected by mailed questionnaire. The response rate was 80% in 2001 and 86% in 2009. The researchers followed Lindner, Murphy, and Briers' (2001) recommendations for handling nonresponse. The protocol for comparing early and late respondents was used for the 2001 data. No statistically significant differences were found. Because the response rate exceeded 85% in 2009, control of non response was not necessary (Lindner et al.) It was concluded that the results were generalizable to the target population.

Results

The typical graduate who participated in the 2001 survey was male (75%), 42 years old, and took 74 months to complete the program. The typical graduate who participated in the 2009 survey was male (70%), 41 years old, and took 55 months to complete the program. The percentage of graduate who credited their Master of Agriculture degree with occupational changes increased from 42% in 2001 to 49% in 2009. Career advancement as a motivation for pursuing the degree ranked third among motivating factors in 2001 and first in 2009. Survey participants in 2009 came to campus much less often than survey participants in 2001 (68% vs. 22% in the lowest category for number of campus visits). Table 1 shows trends in graduates' perceptions of obstacles to off-campus study. The proportion of graduates who rated the obstacles as slightly significant to significant declined from 2001 to 2009 for 11 out of thirteen obstacles and declined by 10% or more for six obstacles.

Table 1

Percentage of Respondents Who Rated Each Obstacle as Slightly Significant to Significant

Obstacle	2001 *%*	2009 *%*
Difficulty in balancing school, personal, and work responsibilities.	66.7	54.9
Limited number of courses offered.	62.5	37.1
Cost of the program.	50.0	40.3
Lack of access to library facilities.	43.5	24.2
Course offerings did not fit needs.	37.5	35.5
Dealing with a number of different departments.	37.5	24.1
Lack of scholarships.	34.7	30.7
Lack of access to instructors.	29.2	27.4
Lack of access to other students.	29.2	32.3
Prerequisites required for classes.	25.0	14.5
Accessing financial aid at the University.	21.7	16.1
Attending sessions held on campus.	20.8	63.3
Faculty did not understand student needs.	8.4	8.1

Conclusions and Recommendations

The Master of Agriculture degree program has done an increasingly better job of serving students over time. Students are able to complete the degree program in a timelier manner and are finding that the degree contributes to career opportunities. Graduates reported traveling to campus much less frequently, but expect to travel even less as indicated by their perception that attending sessions on campus was a significant obstacle. Graduates believed that faculty have done a consistently good job of understanding their needs. Several developments may have contributed to improved program performance. Some of these developments include ongoing technology enhancements that improved the quality of course materials and communications; training for faculty and staff provided by the Center for Excellence in Learning and Teaching; expanded access to electronic publications through the university library; course development and enhancement grants provided by the College of

Agriculture and Life Sciences; and employment of a student support specialist to assist distance learners in the college. We recommend that program administrators focus on completely asynchronous delivery, control costs, and maintain reasonable program and course expectations so that students are able to balance their various responsibilities.

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Research Poster

A Synthesis of Research Measuring Student Developmental Outcomes as a Result of Participation in the National FFA Organization

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A Synthesis of Research Measuring Student Developmental Outcomes as a Result of Participation in the National FFA Organization

Introduction/Need for Research

Adolescence is the period of time occurring during the second decade of life (Lerner, 2009). Other than infancy, it is considered to be the time in life when more physical and psychological change occurs to a person than any other period in their life (Lerner, 2009). This stage of life is particularly important because it is a period of transformation from childhood to adulthood (Lerner, 2009). However, the study of adolescent development remains more limited than other areas of human development research. According to Lerner (2009), the progression of adolescent development research can be broken into three major phases. The first research phase, spanning from 1904 to the 1960's, considered adolescence a chaotic time for youth during which "at-risk" behaviors were expected (p.150). The second research phase, spanning until the late 1980's, began to identify adolescent youth as a group of highly diverse individuals with differing developmental needs. This phase of adolescent research could also be summarized as an era of preventing negative behaviors rather than promoting positive outcomes in youth. The third research phase, spanning to the present day, has been an era in which promoting and building upon positive youth attributes has become the basis for adolescent development research. Understanding and promoting positive adolescent development is crucial to the well being of our society now more than ever (McLaughlin, 2000).

Helping youth realize their potential for success is a goal and benefit associated with many organized youth activities including sports, school organizations, and civic activities (McLaughlin, Irby, & Langman, 1994). The National FFA Organization is a school-based youth led organization with a mission to "…develop [student] potential for premier leadership, personal growth, and career success through agricultural education" (National FFA Organization, 2010, p. 5). This mission is accomplished utilizing numerous activities offered by the National FFA Organization. These activities are designed to provide developmental outcomes for FFA members in the adolescent stage of life (National FFA Organization, 2010). Previous research has sought to identify and measure these developmental outcomes, but further research in this area is needed (Balschweid & Talbert, 2003; Doromody & Seevers, 1994a; Rutherford, Townsend, Cummins, & Conrad, 2002).

Methodology

This research synthesis focused on student developmental outcomes resulting from student participation in National FFA Organization activities. Literature for the synthesis was included if research objectives sought to identify student developmental outcomes by participation in local, state, or national FFA activities. Student developmental outcomes were operationally defined as the attainment of leadership skills, personal attributes, and career abilities (National FFA Organization, 2010). Studies prior to 1990 were not considered for the review. No other restrictions were placed on inclusion criteria due to the limited number of existing research articles focusing on identifying student developmental outcomes from student participation in the National FFA Organization.

Five sources were used to locate existing literature: *Journal of Agricultural Education*, *Journal of Southern Agricultural Education Research*, obtainable proceedings from Regional and

National American Association of Agricultural Education Research Conferences, Educational Resources Information Center (ERIC) database, and doctoral dissertations from ProQuest Dissertations & Theses database.

Results/Findings

Upon completion of the literature review, 11 studies were identified that met inclusion criteria. A summary of these studies are displayed in Table 1.

Table 1
Identified Research Articles Measuring Developmental Outcomes of FFA Activity Participation

Year	Researcher(s)	Method	Description of Outcome(s) Measured
1994a	Doromody & Seevers	Quantitative	FFA leadership activities that have made the greatest contribution to leadership life skills
1996	Talbert	Mixed Methods	Leadership skills learned, school retention rates, and reduced risk behaviors resulting from participation in the FFA Partners in Active Learning Support (PALS) Program
1997	Wingenbach & Kahler	Quantitative	Relationship between self perceived leadership and life skills development and FFA participation
2000	Balschweid & Talbert	Qualitative	Level of FFA involvement perceived to be most beneficial, applicability of benefits to other aspects of life, and uniqueness of benefits compared to other youth activities.
2002	Rutherford, Townsend, Cummins, & Conrad	Quantitative	Ability to lead, make decisions, work in groups, and understand self
2003	Balschweid & Talbert	Quantitative	Attitudes and perceptions of FFA members towards school and work as compared to typical American youth
2004	Fraze, Smith, Kistler, & Colvin	Quantitative	Secondary principal perceptions of leadership skills attained through FFA participation
2005	Larson, Hansen, & Walker	Qualitative	Student perceptions of developing initiative and teamwork while planning and conducting a community activity in an FFA chapter
2007	Miller, Anderson, Swafford, & Seibel	Quantitative	Student perceptions of career development event influence on future employment advantages and introduction to new careers
2009	Horstmeier & Rickets	Qualitative	Student perceptions of benefits from participation in an FFA civic engagement project
2009	Wood, Larson, & Brown	Qualitative	Student perceptions of developing responsibility in FFA activities

Conclusions/Implications/Recommendations

It can be concluded that research concerned with measuring developmental outcomes from FFA participation is limited. The majority of existing research focuses on perceived leadership development and personal growth experiences more than potential career benefits of FFA participation. Quantitative research methods have been used slightly more than qualitative methods by researchers measuring outcomes of FFA participation. Both methods of research inquiry should continue to be utilized to gain a better understanding of how FFA participation can benefit agriculture students, specifically benefits related to career entry and success. Areas of empirical youth development research outside agricultural education should

be consulted to help guide future research concerned with measuring student developmental outcomes of FFA participation.

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A Ten-Year Institutional Longitudinal Study on the Learning Preferences on Pre-Service Teachers.

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A Ten-Year Institutional Longitudinal Study on the Learning Preferences on Pre-Service Teachers.

Introduction

Learning preferences and styles have been researched and evaluated for several decades (Roberts & Dyer, 2005; Cox & Sproies, 2000; Gregoric, 1979; Taylor 1997; Dunkin & Biddle, 1974) to assess how they impact student learning. Pre-service training has become a critical topic that has surfaced over the years, because of teacher recruitment and retention issues in the field of Agricultural Education. The National Study of Supply and Demand for Teachers in Agricultural Education (2006) it is estimated that only 53% of new qualified teachers secure teaching positions after graduation, based upon historical data. The study also proposed that 38% of the positions to be filled in the fall of 2007 will be left unfilled, due to the lacked of qualified individuals and the lack of interest among qualified individuals to pursue the field of Agricultural Education. The field of Education has a shared interest in recruiting and retention of all types of learning preferences to ensure a vibrant learning environment for all students. Thus, it is important that teacher training institutions recruit, train, graduate, and place qualified teachers that possess different learning and teaching styles.

This ten-year study assesses pre-service teachers at a specific teacher training institution for the analysis of completion, placement, and retention rates based upon their learning preferences. This type of data collection could be used for the purposes of recruitment, program analysis, and the development of trends.

Conceptual Framework

In this project, Mitzel's (1960) model was used for the conceptual framework as well as Dunkin and Biddle (1974) adaption of the four major types of variables that influenced the teaching and learning process: Presage variable – variables associated with the teacher, context variables – those where the teacher has little control, process variables – what takes place in the classroom, and product variables – the result of the education. The first two of the variables (presage and context variables) have an influence on process variables and the outcome or product variable.

Gregorc (1979) proposed a model that organizes how the mind works. He proposed that people's mind can be organized by perceptual and ordering ability. He proposed four combinations with people showing a major strength in an area with each other area contributing proportionally as minor areas. Those areas are: concrete sequential, abstract random, abstract sequential, and concrete random. Concrete sequential are learners who like order, logical sequence, following directions, predictability, and getting facts. Concrete random learners like experimenting to find answers, taking risks, use their tuition, and solving problems independently. Abstract sequential learners have to have their point heard, analyze situations before making a decision or acting, applying logic in finding solutions to problems.

Methodology

Over a ten year period from 2001 till present, candidates were given a color assessment personality test by the researcher after a formal lecture on learning preferences. Students self evaluated themselves and identified their primary and secondary color. Based on results from the test,

students were categorized on their primary color; either Gold, Blue, Orange, or Green. The researchers directly linked the color codes to Gregorc Mind Style Model (1979) with Gold tied to Abstract Sequential, Blue to Abstract Random, Orange to Concrete Random, and Green to Concrete Sequential by the researcher. Students were tracked on entrance, completion, placement, and retention rates over the ten-year period.

Results/Findings

In analyzing the data (table 1), pre-teacher students with Gold personalities were ones who did not need as much direction or attention in class. They had the highest percent of program completers and placement rates for entrance into teaching. Each color is represented according to the characteristics relating to each color. Gold color personalities were most likely to thrive on routine tasks and following directions, blue personalities were more compassionate, communicative, and creative and showed success in placement as well. Green personalities were more objective, logical, and rational and showed lower success. Finally, orange personalities were risk-taking, fun, active, spontaneous and showed the lowest placement and retention.

Table 1

	Gold	Orange	Blue	Green
Enrollees n=84	37% n = 31	19% n = 16	24% n = 20	20% n = 17
Completers n = 50	42% n = 21	10% n = 5	28% n = 14	20% n = 10
NonCompleters n = 34	29% n = 10	32% n = 11	18% n = 6	21% n = 7
Placed n = 40 (80%)	40% n = 16	10% n = 4	30% n = 12	20% n = 8
Retention n = 27 (68%)	44% n = 12	7% n = 2	30% n = 8	19% n = 5

Conclusions

This research has been ongoing for the past ten years. It directly shows that there is a strong relationship between pre-teacher success and identification of personality traits that lend to success.

Implications/Recommendation/Impact on Ag Education

According to learning models, our product variable should be our end product of having qualified program completers and high placement rates.. If knowing a pre-teacher's strengths and weaknesses could help in focusing on directing a student in the educational process, the process of identifying a student's color code would result in an educational outcome with positive results for the student as well as for the college. Pre-teacher students could have their strong traits identified by a personality test. Students who need more personalized direction would be identified. The result would be higher placement of students along with higher retention of agriculture teachers. Programs would

have teachers teaching at schools longer, adding continuity to the agriculture programs. Educators at all levels can use this research to improve the outcome success of individual students.

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Agricultural Education Teachers' Competence with SAEs

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Introduction/Need for Research

Agricultural education programs are composed of three integral and interrelated components: classroom and laboratory instruction, supervised agricultural experience programs (experiential learning component), and leadership development. The three components of the total agricultural education program complement each other in the teaching and learning process (Dyer & Williams, 1997a). SAEs can take many forms including agricultural production, agriculture placement, agribusiness placement, career exploration, and research opportunities. Are agricultural education teachers familiar enough with SAE practices to provide students with this valuable educational component?

Conceptual Framework

The theoretical framework for this study originated from the work of Dyer and Osborne (1996). Arrington and Price (1983), Berkey and Sutphin (1984), Harris and Newcomb (1985), and Iverson (1980) indicate that teachers support the concept of SAE programs; however they have difficulty implementing programs with students. Dyer and Osborne (1995) found that teachers' attitudes toward SAEs were a key factor in student participation in SAEs. Teachers, students, parents, and employers value the supervision component of SAEs (Dyer & Williams, 1997b). Teachers in departments with strong SAE programs emphasize SAEs more than teachers in departments with weak SAE programs (Herren & Cole 1984). While agricultural knowledge and positive work attitudes are benefits of SAEs (Dyer & Williams, 1997), the number of teachers with high school SAE experience as students is declining (Dyer & Osborne, 1996). It is crucial to any SAE that both student and teacher see it as a valuable learning experience and that both are willing to put the work into the SAE program. Agricultural education teachers rated SAEs as valuable in the development of work attitudes, values and habits; technical skills; and of general benefit to the agricultural education program (Berkey and Sutphin, 1984). Parents also recognize the benefits of SAEs in the areas of work attitude, occupational development, and human relations (Rawls, 1982).

Methodology

A descriptive survey research design (Ary, Jacobs, and Sorenson, 2010) in the form of an electronic questionnaire was used to obtain data for this study. The accessible population was all agricultural education teachers in the states of Kentucky, Maryland, Ohio, Pennsylvania, Virginia and West Virginia that could be reached by e-mail/list serve. After reviewing the research on the topic, the research instrument was developed and pilot tested. The instrument was presented to a panel of experts to establish its content and face validity. Reliability of the instrument was established as exemplary (Robinson, Shaver, & Wrightsman, 1991) using the entire data set (Spearman-Brown = .86). Dillman's Tailored Design Method (2007) was used to collect data.

Results/Findings

Respondents were presented with seven Likert statements regarding teacher competence with SAEs. Three hundred and nine respondents agreed (92.5%) that they were familiar enough with concepts of SAEs to feel comfortable teaching the topic. Three hundred and four respondents (90.4%) expressed some level of agreement with the statement that they have an adequate understanding of SAEs. When asked if they were familiar enough with SAE record keeping to feel comfortable teaching the practices, 303 respondents (89.6%) expressed some level of agreement. Two hundred and thirty-one respondents (68.5%) agreed with the statement that they had received training on how to supervise SAEs in their teacher preparation program (classes, workshops, etc.). One hundred and ninety-five respondents (57.8%) agreed they were familiar with newer types of SAEs such as the research SAE. One

hundred eighty-four respondents (54.6%) agreed that they were familiar with the exploratory SAE. When asked if they regularly refer to SAEs during class period instruction, 258 respondents (76.6%) agreed or strongly agreed (see Table 1).

Table 1
Self-Evaluation of Teacher Competence with SAEs

	Strongly Disagree		Disagree		Agree		Strongly Agree	
	N	%	N	%	N	%	N	%
Familiar enough with SAEs to feel comfortable teaching the topic	7	2.1	18	5.4	152	45.5	157	47.0
Familiar enough with SAE record keeping to feel comfortable teaching practices	9	2.7	26	7.7	163	48.2	140	41.4
Received training on SAE supervision in teacher preparation program	32	9.5	74	22.0	139	41.2	92	27.3
Familiar with newer types of SAEs such as the research SAE	21	6.2	121	35.9	140	41.5	55	16.3
Familiar with newer types of SAEs such as the exploratory SAE	27	8.0	126	37.4	133	39.5	51	15.1
Adequate understanding of SAEs	7	2.1	25	7.4	194	57.7	110	32.7
Regularly refer to SAEs during class period instruction	9	2.7	70	20.8	161	47.8	97	28.8

Conclusions

Agricultural education teachers in Kentucky, Maryland, Ohio, Pennsylvania, Virginia and West Virginia had an adequate understanding of SAEs, felt comfortable teaching the subject, and were comfortable teaching record keeping practices. Although over 90 percent of the respondents indicated they had an adequate understanding of SAE concepts, nearly 50 percent of the respondents indicated they were not familiar with newer SAE concepts such as research and exploratory SAEs. Nearly one-third of the respondents indicated they had not received training on SAE supervision as a part of their teacher preparation program.

Implications/Recommendations

At first glance the results looked great for agricultural education and teacher preparation programs. However, the results also highlighted some disturbing trends for agricultural education. Approximately one teacher in 15 did not feel comfortable teaching SAE concepts. One teacher in 10 was not comfortable teaching record keeping skills. Nearly 50 percent of the teachers were not familiar with the research and exploratory SAEs. Teacher preparation programs must evaluate the emphasis they place on SAE concepts in their teacher preparation programs.

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Graduates perspective on the impact of the integration of experiential learning in academic programs

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Graduates perspective on the impact of the integration of experiential learning in academic programs

Introduction/Theoretical Framework

Experiential learning, which is the process of making meaning from direct experience (Itin, 1999), has been recognized for its educational value in higher education (Smith, 2005). It is often called "learning by doing" because students are involved in a range of skills and activities that require active observation and reflection. Experiential learning can involve laboratory work, field trips, problem solving and an assortment of other highly engaging activities included in academic coursework (Roberts, 2006).

Science With Practice (SWP) and AgPAQ are two examples of experiential-based courses at a Midwestern university. AgPAQ is an upper division learning community where students concurrently enroll in a cluster of four courses (i.e., agronomic, agribusiness, and communication courses). Small teams of students work with real clients and precision agriculture tools to address the client's needs by preparing a complete crop and soil management plan. SWP is an academic and work experience for undergraduate students who work closely with faculty and staff members on specific projects and/or work assignments. The students set goals at the beginning of the experience, journal and reflect throughout the semester, and at the end of the experience 1) submit a final portfolio and final reflection of the experience and 2) make a professional poster presentation.

While end of experience evaluations and anecdotal statements suggest these programs are impactful ways in which to educate students, it is important to determine the effectiveness and impact the programs have had on students who have graduated and either entered the workforce or graduate school. Therefore, the purpose of this descriptive survey study was to explore the impact of participation on a Midwestern university's College of Agriculture and Life Sciences graduates who participated in one of the college's integrated, experiential learning programs, AgPAQ or SWP.

Methodology

The researchers modified the Summer Undergraduate Research Experiences (SURE) Survey (Taraban, & Blanton, 2008) and included other questions that had been used on previous end-of-the-year evaluations from the AgPAQ and SWP programs. The instrument was reviewed for face and content validity. Comments and feedback were incorporated into the instrument before approval from Institutional Review Board (IRB) was obtained.
All students who participated in AgPAQ and SWP and had graduated (N=123) were contacted by email and asked to participate in the study. The participants were contacted a total of five times via email using Dillman's (2007) conventions and SurveyMonkey (SurveyMonkey Corporation, 2009) was used for data collection. A total of 62 graduates responded resulting in a response rate of 50.41%.

Results

Preliminary results of the study show 53.2% of the respondents had participated in AgPAQ and the remaining 46.8% of the respondents were in the SWP program. Upon graduating, 53.2% of the respondents entered the workforce and 32.3% entered graduate school. Of the 62 respondents that participated in the study, 83.4% of the respondents reported their experience had a significant impact in their career/advanced education and nearly all of the respondents (94.3%) said they would recommend this experience to others.

Participants were asked to what extent their skills and abilities improved as a result of their experience in SWP or AgPAQ. Most of the respondents reported realizing at least some improvement in areas of communication (93.2%), research skills (91.5%), writing skills (91.5%), organization (89.8%), responsibility (88.1%), technical skills (88.1%), self-confidence (86.4%), time management (84.7%), and listening skills (84.7%).

Participants were asked the extent to which their experience influenced their view of the workplace or graduate school. Many of the respondents stated the experience had some influence on their workplace or graduate school in regards to being better prepared for the workplace/graduate school (90.7%), influencing career/educational advancement (77.4%), and in helping to clarify career/educational goals (75.9%).

Conclusion/Recommendations

The preliminary results of this study suggest there was a positive impact on the Midwestern university's College of Agriculture and Life Science graduates who participated in one of these experiential learning programs. As a result of their experience, participants have reported an improvement in skills and abilities that are utilized in the workplace. The findings suggest the experience was influential in their career/graduate school preparation. Finally, because nearly all respondents recommended the programs to future students, it may be concluded that students prefer active, real-world, experientially-based academic programs and courses.

It is recommended that College of Agriculture and Life Sciences faculty and staff continue experiential learning programs, like AgPAQ and SWP, provided the courses are developed using experiential learning principles and the focus on skill development is maintained. Other educational institutions should consider implementing experiential learning programs that combine academics, career development and real-world experiences because of the significant impact these programs have on skill development and the transition to either the workplace or graduate school.

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Impact of Laboratory Component on Student Course Outcomes

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Impact of Laboratory Component on Student Course Outcomes

Introduction/Need for Research

Thousands of students attend anatomy lectures all over the country. Many human anatomy courses require a cadaver laboratory, so the question arises, what is the potential impact of an animal anatomy laboratory? Researchers have described the value of problem-based learning in the application of clinical knowledge, specifically recognizing increased knowledge retention. Problem-based learning is a teaching method used to engage students and requires them to apply knowledge, compared with rote memorization (Beers & Bowden, 2005). What is the impact of the addition of a 'hands on' laboratory in conjunction with a traditional lecture in animal anatomy on student learning?

Conceptual Framework

Often testing and other specific assignments are used to assess student academic success; however the type of learning environment can play a role in a student's academic success as well. Studies conducted at a young age have shown that for science based courses, students tend to do better with lecture material when it's combined with a laboratory (Odubunmi, 1991). Laboratories encourage learners to explore their subject more in depth than just a traditional lecture atmosphere (Johnston & McAllister, 2008). In 2008, Johnston and McAllister, found that with discovery-based and problem-based approach knowledge retention was significant due to the fact that students were engaged in problem-based active learning instead of passively learning (Johnston & McAllister, 2008). In 2005, Beers & Bowden tested the concept of knowledge retention resulting from a laboratory paired with a lecture versus a lecture without a laboratory. The study presented "problem-based learning" (PBL) as the foundation of the laboratory. No significant difference was found when comparing the final scores from laboratory versus non-laboratory lectures. The researcher tested the students again one year later, and found knowledge retention was higher for those who participated in the laboratory in contrast to those without the laboratory. Researchers have examined whether or not student's academic success or achievement is predetermined. Many colleges look at standardized testing as one of the factors that determines scholastic achievement American College Testing (ACT). ACT is shown to have significant correlations with standard IQ tests, which can correspond with academic success later on in a college setting (Koenig, Frey, & Detterman, 2008).

Methodology

The study was a quasi-experimental study of students enrolled in the animal anatomy course in the Department of Animal and Nutritional Sciences at {University} during Spring semesters of 2007 and 2009 (N=47). The 2007 animal anatomy course was taught as lecture only with no laboratory (N=23). In 2009 an elective laboratory was offered to all students (N=24) in addition to the lecture. Students self-selected whether or not they took the laboratory in conjunction with the lecture. Sixteen of the twenty-four (66%) students enrolled in the animal anatomy course in 2009 elected to take the lecture laboratory combination, while eight students (33%) took only the lecture portion of the course. Academic achievement in the course was measured using final course grades earned in the anatomy lecture. ACT and/or SAT scores were collected to be used as a covariant in the study. The covariant was required to equalize the students on academic abilities (Koenig, Frey, & Detterman, 2008). The final

grades and ACT scores where then analyzed to see if the laboratory had more of an effect on their final grade or if the standardized testing was a better estimate of their academic success in lecture.

Results/Findings

Twenty-three students were enrolled in the 2007 animal anatomy course which was taught as lecture only with no laboratory offered. In 2009 an elective laboratory was offered to all students (N=24) in addition to the lecture. Students self-selected whether or not they took the laboratory in conjunction with the lecture. Sixteen of the twenty-four (66%) students enrolled in the animal anatomy course in 2009 elected to take the lecture laboratory combination, while eight students (33%) took only the lecture portion of the course. The ACT scores from the 2007 class with no laboratory had a mean of 23.96, a standard deviation of 3.77. Students in the 2009 class who chose not to participate in the laboratory had a mean ACT score of 24.75, a standard deviation of 3.92. The 2009 class members who participated in the optional laboratory had a mean ACT score of 24.75, with a standard deviation of 4.42. The final grades in the anatomy course in 2007 had a mean of 85.74%, and a standard deviation of 11.55. The students in 2009 who chose not to participate in the laboratory had a mean score of 84.36%, and a standard deviation of 11.08. The students in 2009 who chose to participate in the laboratory had a mean score of 85.31%, and a standard deviation of 15.13. An analysis of covariance was used to compare final grades between those who participated in the laboratory component and those who did not. The laboratory experience did not have a statistically significant effect on the students final grades, 60.6% of variance is explained by the covariant ACT-SAT scores. While the students who participated in the laboratory did 1% better on their final grades than those who didn't participate in the laboratory with equivalent ACT scores. The student's ACT scores reflect on their course grades despite the addition of the laboratory. The ACT scores were found to be good indicators on how students would do in the course. The higher the ACT score, the higher the final grade was in the course.

Conclusions

The study sought to determine whether or not addition of a hands-on laboratory in combination with lecture would have an effect on the participants' final grades in the course. The students were found to have equivalent academic potential based on their ACT scores. While their grades in the course were increased, the laboratory effect on the course grades was shown to have no statistical significance. The study concluded that academic success rests more on ACT/SAT scores than what the laboratory provided. There was a small effect on the grades with the addition of the laboratory but ACT/SAT scores were a better predictor of final course grades

Recommendations

Based on the findings of this study the researchers offer the following recommendations would be suggested. The laboratory was found to be a great opportunity for associative learning and it is recommended that the lab be continued as an elective. The recommendation to leave the lab as optional for anatomy lecture students to provide them more flexibility in their schedules.

Implications/Recommendations

Laboratory settings need to be designed to provide hands on activities to reinforce lecture materials. Future research needs to be conducted on the long term impact of laboratory courses on knowledge retention.

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Selected Social Factors that Influence Student Matriculation at a Land-Grant University

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Selected Social Factors that Influence Student Matriculation at a Land-Grant University

Introduction

Student retention and matriculation is an important component for the livelihood of colleges and universities. Each year, millions of students enroll in colleges and universities to advance their education for monetary and non-pecuniary reasons. According to Day and Newburger (2002), a person with a bachelor's degree usually earns around $19,500 more per year than an individual with only a high school diploma. Additionally, data on postsecondary education show that college enrollment has increased yearly and is expected to continue to set new enrollment records throughout the next decade (Snyder, Dillow, & Hoffman, 2009). Conversely, as postsecondary enrollment numbers continue to rise, student attrition rates continue to be of concern to university personnel. Although college attrition has been examined on many student characteristics, there is modest research on the social factors that influence students to continue their education at their perspective institution. The purpose of this study was to determine the social factors that influence student matriculation at a land-grant university.

Theoretical Framework

The theoretical framework guiding this study is grounded in Tinto's (1975) *Student Integration Model* theory concerning dropout behavior among students. Cabrera, Nora, and Castañeda (1993) stated that " the matching between the student's motivation and academic ability and the institution's academic and social characteristics help shape two underlying commitments: commitment to an educational goal and commitment to remain with the institution" (p. 124). As an individual enrolls into a college or university, their personal characteristics, prior experiences, and personal commitments play a large role in student matriculation. Additionally, as colleges and universities are made up of both social and academic systems (Tinto, 1975), it is important to note that the student's initial level of dedication to a university has a direct influence on the succeeding level of commitment to a university. Thus, it is the succeeding level of commitment that positively affects the extent to which a student integrates into the social communities of the university (Braxton, Milem, & Sullivan, 2000).

Methodology

The target population consisted of all students enrolled in the [College Name] at [University] during the spring semester (N = 1968). However, due to confidentiality of student records, the accessible population consisted of all students enrolled in select Agricultural and Extension Education courses 101 [Course title] 110 [Course title] and 220 [Course title] at [University] during spring semester 2010 (n = 320). The questionnaire used in this study was based on a modified Delphi technique. During the first phase, researchers solicited open-ended responses from students enrolled in an agricultural and extension education course to identify social factors that influenced them to stay at the university. During the next phase, researchers examined the responses for emerging themes and responses that were similar in context were grouped accordingly. The pilot group of students was then asked to rank the social factors through an online questionnaire. Questionnaire responses were compiled and categorized by frequency. The most frequently selected responses were used to develop an instrument of Likert scale items. The instrument was presented to a panel of experts to establish content and face

validity. The target population was asked to complete the online questionnaire. Spearman-Brown Split half statistic was used to establish reliability. Reliability was found to be exemplary with a coefficient of .43 (Robinson, Shaver, & Wrightsman, 1991). Final response rate was 90.9% (*n* = 281).

Findings

Seven statements were presented to respondents concerning social factors that influence their decisions to remain at [University]. A majority (67.9%) of the respondents strongly agreed or agreed to the statement: I remained at [University] because "My friends are enrolled." Similarly, a majority (74.2%) of the respondents strongly agreed or agreed to the statement: "I remain at [University] because "I enjoy the athletic events." Concerning the social climate of the university ([University] social climate), 89.9% of respondents strongly agreed or agreed that it was a factor in their decision to remain at [University]. When asked if school-related parties were a social factor that encouraged continuous enrollment, 57.5% of the respondents strongly agreed or agreed to the statement while 40.2% disagreed or strongly disagreed. Respondents were also asked if access to electronic resources (i.e. computers, Internet, etc.) factored in their decisions to remain at the university. A majority (63.3%) of the respondents strongly agreed or agreed to the statement while 34.5% disagreed or strongly disagreed. When asked if the university provided increased opportunities for social involvement, the majority (87.9%) of respondents strongly agreed or agreed to the statement. Respondents were asked if [University] provided a "home-like" atmosphere. A majority (83.5%) of the respondents strongly agreed or agreed to the statement.

Conclusions/Recommendations

Based on the results, the identified characteristics that make-up the social structure at [University] supports student matriculation. Given the nature of increased competition to recruit students, it is recommended that university personnel actively seek input from students to ensure that their societal needs are being attained. Findings show that students are connected to a wide range of external societal factors that may evolve outside of the university setting. Based on this finding, it is recommended that university policy makers collaborate with local businesses and organizations to promote a safe and structured college experience. If university policy makers want to promote their institutions and develop successful recruitment efforts, they must take this into consideration. Institutions have a vested interest in understanding the factors that influence student enrollment decisions (DesJardins, Dunbar, & Hendel, 1999). Based on these findings, it is recommended that future research of a qualitative nature be conducted with college students to identify factors influencing their decisions to enroll and remain at selected institutions.

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The Bachelor of Science in Professional Agriculture Off-Campus Degree Program: A Final Alumni Evaluation

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The Bachelor of Science in Professional Agriculture Off-Campus Degree Program: A Final Alumni Evaluation

Introduction

[State] University began offering a Bachelor of Science Degree in Professional Agriculture to distant learners in 1991. This was done to expand on its off-campus Master of Agriculture degree program which began in 1979. Both programs were created to extend educational opportunities in agriculture to persons who could not or preferred not to study on campus ([Author], 1995). A decision was made to begin phasing out the BS program in the fall of 2003. No students were admitted after summer 2003 and students who were already in the program had until the summer of 2009 to finish. We decided to survey recent graduates as a summative program evaluation focused on processes and outcomes (Fitzpatrick, Sanders, & Worthen, 2004). The findings will be used to enhance continuing distance education programs in the College of Agriculture and Life Sciences.

Purpose

This purpose of this study was to conduct a final program evaluation of the Bachelor of Science in Professional Agriculture Degree Program from the perspective of recent alumni.

Methodology

The population for this study included 33 persons who earned a Bachelor of Science in Professional Agriculture degree at [State] University between summer 2001 and summer 2009. Since program inception in 1991, 60 persons had graduated. The questionnaire used to collect data contained demographic questions, questions related to experiences with the degree program, and a scale to measure perceptions of obstacles faced by off-campus students. The obstacles scale had a Cronbach's alpha reliability coefficient of .75. A panel of experts judged the questionnaire to be content and face valid. Data were collected by mailed questionnaire. The response rate was 72% (n=24). The researchers followed Lindner, Murphy, and Briers' (2001) recommendations for handling nonresponse. The protocol for comparing early and late respondents was used. No statistically significant differences were found. It was concluded that the results were generalizable to the target population.

Results

The typical graduate of the Bachelor of Science in Professional Agriculture degree program was male (54%), 46 years old, and took 60 months to complete the program. Most (87%) graduates had completed the program within six years. The occupation most frequently held by graduates was farmer (29%). Two gradates (8%) were in each of the following occupations: agribusiness, soil conservation, and consulting. No other occupational area was identified by more than one graduate. The percentage of graduates who credited their degree with occupational changes was 58%. Graduates' highest ranked factor for enrolling in the program was to pursue a degree followed by career advancement, acquiring

current technical knowledge, and the enjoyment of learning. Most (83%) of the graduates came to campus 10 or fewer times during the course of their program. Of thirteen obstacles to off-campus study a majority of graduates perceived four of them to be significant. With percentage of graduates indicating significance in parentheses these included limited course offerings (87%), difficulty in balancing school, personal and work responsibilities (65%), program cost (52%), and lack of scholarships (52%). Dealing with a number of different departments (0%), and faculty that did not understand student needs (13%) had the fewest number of graduates indicating that they were significant obstacles. Graduates were asked to indicate how satisfied they were with the program on a scale ranging from very dissatisfied to very satisfied. Half (50%) were very satisfied, 46% were satisfied, and 4% were somewhat dissatisfied. Graduates were asked what specific aspects of the program that they liked best. Responses came from 23 different graduates. The most frequently cited strengths had to do with flexibility and convenience (n=15). One graduate commented that "I could do my class work when my time permitted" while another wrote that "it allowed me to complete a degree program without being in [city]." Quality instruction and advising were mentioned as positive program aspects seven times. One student wrote "the teachers/professors were excellent to understand and learn under. Some of my professors I still read about in the local ag news papers, farm magazines, etc." Twenty one graduates commented on aspects of the program that were liked least. The lack of courses clearly stood out as a weakness and was mentioned seven times. One student wrote "the ability to choose different classes for the requirements" and another stated "the lack of different courses. Often it seemed the courses were geared towards crop science and not towards animal science." Less frequently cited weaknesses included slow response to questions by some instructors (n=3) and technical problems (n=3).

Conclusions and Recommendations

The Bachelor of Science in Professional Agriculture Off-Campus Degree Program was successful in extending educational opportunities in agriculture to distant learners. The program served a diverse clientele of adults with an almost equal number of males and females graduating between 2001 and 2009. Graduates overall were satisfied with the program and gave it credit for positive occupational changes. Regarding process, the program offered convenience and flexibility that was much appreciated by graduates. Faculty and advisors did a good job of working with students in the program. The most significant obstacle faced by graduates was the limited course offerings which was also the most frequently listed weakness of the program. Difficulty in offering sufficient numbers and variety of off-campus courses at the undergraduate level was a major factor in the decision to discontinue this program. The College of Agriculture and Life Sciences no longer offers an undergraduate degree program at a distance, but it has expanded the emphasis on distance learning at the master's degree level to include programs in Community Development, Agriculture, Agricultural Education, Agronomy, and Seed Technology and Business. We recommend that persons responsible for these graduate programs continue to pursue strategies (e.g. sharing course revenue with departments and faculty, sharing courses with other universities) that will ensure sufficient numbers and variety of courses. This will ultimately determine program sustainability.

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The Effects of National FFA Alumni Affiliation and Presence of a Volunteer Alumni Group on Local FFA Chapter's Fulfillment of the National FFA Alumni's Mission Statement

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The Effects of National FFA Alumni Affiliation and Presence of a Volunteer Alumni Group on Local FFA Chapter's Fulfillment of the National FFA Alumni's Mission Statement

Introduction/Need for Research

Because of the innate hands-on nature of agricultural education, additional assistance from volunteers is often needed. The purpose of this study was to determine the effect that the presence of a local volunteer group has on a local FFA chapter's contribution to fulfilling the National FFA Alumni mission statement to create an environment where people and communities can develop their potential for premier leadership, personal growth and career success (National FFA Organization, 2010). The study investigated (1) local FFA chapter fulfillment of the National FFA Alumni Association's mission on the three pillars of premier leadership, personal growth and career success, (2) the volunteer group's degree of integration and/or affiliation with the National FFA Alumni, and (3) the perceptual differences between those teachers with five or fewer years of experience and those who had been teaching more than five years toward a volunteer support group.

Conceptual or Theoretical Framework

The conceptual framework for this study was the Volunteer Process Model proposed by Omoto and Snyder (2002). Their model can be described as having three stages of involvement which can be analyzed at the level of agency, individual or society. The first stage is antecedents of volunteerism which, in the case of an individual, addresses the question "what motivates people to volunteer"? The second stage identifies experiences of volunteerism; elements that promote or deter continuing volunteer involvement, such as interpersonal relationships that develop and self perception of performance quality. The final stage explains the consequences of volunteerism. Impacts of volunteer service are addressed at this stage. Some possible individual impacts are changes in attitudes, knowledge and behavior of volunteers and longevity of service, while a consequence of the volunteer process at the agency level is the fulfillment of the organization's mission.

Methodology

The population considered for this study consisted of high school agriculture education teachers from across the United States. The estimated number of agriculture teachers in the United States was 12,000 (J. Jackman, personal communication, May 15, 2008). Due to limitations of time and resources available, a priori power analysis using a medium effect size of .30 and alpha of .05 was used to identify a necessary sample size of 200.

The survey for this study was designed by the researcher. Exemplar questions for the survey were derived from a hand analysis of documents created by the National FFA Alumni between the years 2005-2007. Survey validity was established through a panel of experts consisting of three current university faculty members, one current state FFA consultant, and the director of the National FFA Alumni Association. The survey was administered to participants through an online tool. Each participant received an e-mail inviting them to participate in the research through their state FFA staff. 262 individual teachers responded to the survey request

A two-tailed T-test was performed to compare early versus late responders to the survey. The test resulted in non-significant differences between early and late responders.

Results/Findings

The degree of mission fulfillment was greatest in the pillar of personal growth followed by career success and leadership, in that order. It should be noted that activities in these areas were reported as seldom being led by a volunteer group. Individual scores revealed that personal growth occurred most frequently through community member assistance in the form of time and/or money, functions and interaction in the form of community service.

Respondents whose programs have either a formal but unaffiliated volunteer program or a formal affiliated program demonstrate exemplars of career success more frequently than those with a limited (non-formal, unaffiliated) volunteer program, and, in both circumstances, programmatic leadership is initiated with greater frequency by their volunteer programs.

Teachers with six or more years of experience show exemplars of premier leadership, personal growth and career success more frequently than their counterparts with five or fewer years of experience. Further, these exemplars are being influenced by their volunteer groups more frequently.

Conclusions/Recommendations/Implications

Evidence of personal growth and career success are happening more frequently than premier leadership. The composite trends of all chapters indicate that while there may be evidence of the three pillars of achievement taken from the Alumni mission statement happening, it is seldom led by volunteers.

FFA chapters with a volunteer program of any kind show evidence of the three pillars of achievement from the Alumni mission statement more frequently than those FFA chapters without a volunteer program. Simply having a volunteer program, regardless of degree of integration, shows a significant difference on all three pillars.

Based on these conclusions, a recommendation to practicing agriculture instructors is to form some type of volunteer program. Chapters who have a volunteer component are more frequently demonstrating a fulfillment of these three pillars than those chapters electing not to have a volunteer program.

Overall, formalizing the volunteer group seems to be the most significant function a volunteer group can provide. Surprisingly, there is no significant difference between a formalized unaffiliated group and a formalized affiliated group. Perhaps the sheer act of formalizing the volunteer group provides enough of a platform from which to operate that taking the next step of becoming affiliated with the National FFA Alumni is unnecessary. The evidence does not suggest that affiliation with the Alumni is unimportant, but rather of equal importance with formalizing the volunteer program. Perhaps the National FFA Alumni provides a standard from which non-affiliated groups can operate. In the absence of the FFA Alumni, results may have been very different. Further research, however, is needed to reinforce these ideas.

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Innovative Idea

A Food Safety Education Delivery Model for Extension Educators in the Cooperative Extension Service of the North Central Region of the U.S.

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A Food Safety Education Delivery Model for Extension Educators in the Cooperative Extension Service of the North Central Region of the U.S.

Introduction/Theoretical Framework

Food safety is a serious concern in the United States (Ellis, 2006) with CDC reporting 76 million cases of foodborne diseases annually (Centers for Disease Control and Prevention (CDC), 2007). World Health Organization has identified food safety as "…an increasingly important public health issue" (World Health Organization, 2007, p.1), and Barton and Barbeau (1992) stated that food safety is a scientifically complex issue and not easily understood by the general public, signifying the importance of food safety education. There are many food safety education providers in the U.S. with the Cooperative Extension Service (CES) being one of the most reliable ones. Extension professionals have been educating people on food safety for many years (Barton & Barbeau) indicating their expertise in food safety issues. However, according to The Theory of Expert Competence, knowledge domain alone is not sufficient for the competence of experts (Shanteau, 1992). Further, the educational process has been identified as one of the needed competency areas for effective extension work (Brown, Gibson, & Stewart, 2008).

The NCR-158 Committee on Adult Education in Agriculture (1990) identified needs assessment, learning systems, delivery systems and evaluation systems as essential components in adult educational processes in agriculture. Extension research and literature indicate that extension educators need inservice education in one or more of these components (Chapman- Novakofski et al., 1997; Gibson & Hillison, 1994; Radhakrishna, 2001; Stone & Coppernoll, 2004). The purpose of this study was to identify the educational process related inservice needs of food safety extension educators in the CES of the North Central Region (NCR) and develop a Food Safety Education Delivery model (Figure 1). Perceptions of extension educators toward food safety were also analyzed as research shows the influence of perceptions on behavior (Dijkshetrius & Bargh, 2001; Ferguson & Bargh, 2004). The purpose of this poster is to share the model that was developed from this study.

Methods & Findings

The background for development of the model was provided by a descriptive cross-sectional survey of the population that consisted of all extension educators in the program areas of Family and Consumer Sciences and Agriculture and Natural Resources, and the County Extension Directors in the NCR of the U.S was used for this study. A disproportional stratified random sample of 64 extension educators were randomly selected from each of the 12 states (strata) yielding a sample of 768 extension educators. A margin of error of ± 5% at 95% confidence level with a 0.5 variance of hypothesized proportion yielded an appropriate sample size of 384 but the sample was oversampled by 100% anticipating 50% response rate, duly following the suggestion of Ary, Jacobs, Razavieh, and Sorenson (2006). A questionnaire reviewed by experts and tested for reliability, with five point Likert-type scales was used to collect the extent of perceived inservice need and perceptions toward food safety. Extension educators had a summated mean perception score of 3.86 with an *SD* of .40 (operationally defined as 'moderate' perceptions), while they were in "Some" to "High" need (*M*= 2.09-2.58 and *SD* of .96-1.07) of inservice education on all five identified food safety educational process need areas.

How the Idea (Model) Works

The Food Safety Education Delivery model proposes that inservice education for food safety extension educators should focus on three components: (1) 'perceptions' of extension educators, (2) educational processes, and (3) subject matter. As research indicates the importance of perceptions on behavior, and extension educators had only moderate perceptions toward food safety, 'perceptions' were identified as the first component in the model, which need to be addressed during inservice education so they are transformed to a positive range.

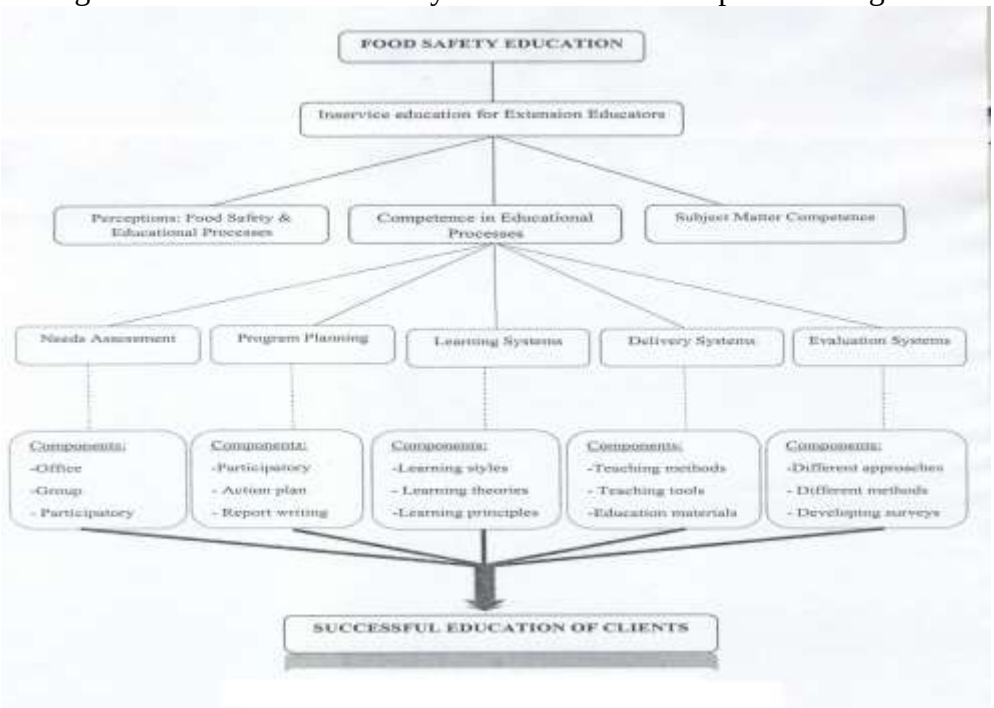

Figure 1. Food Safety Education Delivery Model for Extension Educators of the NCR

Further, as extension educators perceived need for inservice in the 'educational processes', they were identified as the second important component in this model. Different focus areas (given as 'components' in the model) gleaned from the literature were included under each of the educational process topic areas so they can serve as educational topics for inservice programs. In addition, subject matter expertise of extension educators is very important for successful educational programs. So, 'subject matter' was identified as the third component of inservice education. Once the extension educators are educated based on the three proposed components of inservice education, it is proposed that they will be able to more successfully communicate with their clients about food safety issues.

Future Plans

This model will be developed into a journal article and shared with the administrators designing inservice programs for food safety extension educators so they can have a guide to organize the programs.

Costs/Resources Needed

No anticipated costs/resources are needed to implement this model. Some restructuring of the existing inservice programs may be needed.

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Agricultural EDbassadors: Paving the Way for a New Cadre of Agricultural Educators

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Agricultural EDbassadors: Paving the Way for a New Cadre of Agricultural Educators

Introduction/Need for Innovation

The National Council for Agricultural Education has established a goal to increase the number of secondary Ag programs nationwide to 10,000 by the year 2015 (Loudenslager, 2006). Even though there has been an increased demand for secondary Ag educators, there are several factors impeding progress, including a decline in enrollment in Ag teacher education programs and an increase in the number of teacher candidates choosing not to teach. It was expected in 2007 that only 53% of the new teachers would take a teaching position after graduation, leaving 38% of vacant positions unfilled (Kantrovich, 2007). Research shows that increasing students' interest in Ag education will potentially result in more successful recruitment processes, thus increasing student enrollment and the number of highly qualified Ag teachers (Esters, 2007).

Therefore, to attract students, we must reach out to a variety of populations, provide students with an understanding of the importance of Ag education to the sustainability of society, provide early experiences so that students understand the responsibilities of an Ag educator, and create a connection between students' passions and those responsibilities (Vincent, Ball, & Anderson, 2009). To this end, an Ag literacy program was developed that gives high school sophomores, juniors, and seniors a unique opportunity to promote Ag education in elementary and middle schools in their area as part of a statewide team.

How It Works

The program consisted of a residential 2- or 7-week summer orientation, or 4-day winter orientation. The duration was based on the agricultural background of the student. The 2-week program was for students enrolled in an urban Ag program. The 4-day program was for students enrolled in a traditional Ag program. Both programs consisted of all-day agricultural education curriculum development training. Finally, the 7-week program was for urban students who were participating in a summer Ag research program at the university and consisted of 2-hour agricultural education curriculum development training lessons throughout the summer. An additional component of agricultural business tours was added to the 2- and 7-week programs as a way to expose these urban students to the vast options of careers in agriculture for which Ag teachers prepare students. At the time of application, students must have a minimum G.P.A. of 2.5/4.0, have successfully completed three Ag classes with a minimum G.P.A. of 3.0, and a recommendation from their Ag teacher or the director of the college research program. In addition, participants must have identified one elementary school to partner with and presented the lesson to at minimum four classes or 100 students. All applicants that met the aforementioned requirements were accepted to the program.

The program was coordinated by a paid Ag education student. This student's responsibility was to recruit students through the state Ag education listserv and FFA events; develop and send out all correspondence; schedule meeting rooms, guest presenters, lessons, activities, tours and meals; and chaperone students. During the orientations, agricultural education faculty and students taught participants about the importance of Ag literacy, characteristics of effective presenters, Ag literacy resources for educators, student learning

styles, how to develop a lesson plan, and effective use of visuals. In addition, group enrichment activities were planned in the evening to help encourage team cohesion. After developing the 30 minute Ag literacy lesson of their choice, participants were able to practice and receive peer and instructor feedback on the lesson's content and the presentation style and flow. At the end of the orientation, participants received an instructional case with all the supplies and materials needed to conduct 100 presentations, permission letters for school administrators, presentation evaluation forms and a thank you gift for the elementary school teachers, small giveaways for their presentations, and an Ag EDbassador polo to wear while presenting.

Results to Date/Implications

Twenty-three students from across the state were selected to participate in the program and completed orientation. Of those, 17 completed the presentations reaching 1749 elementary students. The lessons included topics dealing with nutrition, Ag commodities, Ag careers, recycling, and leadership development. The feedback from both the Ag EDbassadors and the participating schools was very positive. Most common statements from teachers were that the presentation was very engaging; the presenter was prepared and professional; and they would participate in the program again. The most common statement from the Ag EDbassadors was that they really enjoyed presenting and would definitely like to pursue more experiences in Ag literacy. Although there were only 6 strong commitments for going into Ag education as a major, this program is successful in that it is beginning to make more students aware of this option. It is important to realize that substantive contact with students is necessary to develop the relationships needed to increase interest in Ag education. In a survey, high school students rated 12 recruitment strategies with the opportunity to visit colleges and interact with faculty as the only one with a “very effective” rating (Betts & Newcomb, 1986). Furthermore, expanding Ag literacy and instruction outside of the vocational classroom will introduce Ag practices to more students and prepare them to make a decision to pursue agriculture (Thompson & Russell, 1993).

Future Plans

Unfortunately, many students do not have a complete understanding of the type of careers available to them in agriculture, particularly in education; therefore, this program innovatively addresses the issue. We realize that it will take some time to fully realize the benefits of this program, but we believe that it is worth the effort to continue it using the 4-day model. The 4-day model proved to be just as effective as the other options but more cost effective and easier to schedule. In addition, the program has become increasingly popular with Ag teachers in the state.

Costs/Resources Needed

The three variations was funded by the state department of education for $25,000. This included a stipend for the faculty member ($2500) and student worker ($2000), residential housing for all participants ($4000), three meals a day ($3500), instructional supplies and materials ($2000), student presentation supplies and materials ($2200), travel and fieldtrips ($5000), parent/student reception ($3000), and group enrichment activities ($800). A 4-day, all inclusive program with all the aforementioned costs included would cost approximately $700 per student for a group of 20 students if hosted at a hotel near campus to have access to a classroom.

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Connecting Pre-Service Agriculture Teachers to Real World Applications with Skype^{tm}

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Connecting Pre-Service Agriculture Teachers to Real World Applications with Skype[tm]

Introduction

The "Planning Agricultural Education Programs" course at [state] university is required of all pre-service agriculture teachers and is normally taken the semester before student teaching. The course focuses on curriculum development and the teacher's roles and responsibilities related to FFA and SAE. Overall the course is consistent with the framework for such courses that was proposed by Wilson, Camp, and Balschweid (2006). In the program planning course, experiential learning (Kolb, 1984) is emphasized for its application to teaching and learning in the classroom, through FFA and through SAE. I have historically engaged [state] agriculture teachers in demonstrating how experiential learning can be implemented. However, time, distance, and cost have limited the extent to which this could be done. Because of advances in online communications, I decided to determine if a desktop videoconferencing tool (Skype[tm]) would allow more and higher quality interaction with practicing teachers and other experts.

How It Works

At the beginning of the semester, I sent an e-mail to all agriculture teachers in the state asking for their assistance in teaching lessons related to implementation of SAE and FFA. We wanted to know how practicing teachers made SAE and FFA work for their students. Several teachers responded to the request and offered advice and assistance. Four [state] teachers and one out-of-state professor participated in our class live through Skype[tm]. The teachers, their schools, and the focus of their contributions were as follows:

Teacher	School	Focus
Brandi Boyd	Clarke High School	Roles and responsibilities related to SAE
Tom Murray	North Linn High School	SAE's for today's students
Tim Murphy	Texas A&M University	Agriculture Experience Tracker
Scott Smalley	Oelwein High School	Developing a program of activities
Scott Johnson	East Sac High School	Roles and responsibilities related to FFA
		Preparing for career development events

In preparation for the video conferences, I advised teachers on installing Skype[tm] and we conducted test conferences. Handouts and PowerPoints were distributed to pre-service teachers through our class WebCT site.

Results to Date

All six videoconferences were implemented according to plan with no technical difficulties. Figures 1 and 2 show what our classroom setup looked like for the Skype[tm] conferences. The quality of

audio and video were excellent. Pre-service teachers were able to interact with the teachers in a very conversational manner. Push to talk was not needed. When specific pre-service teachers were interacting with the agriculture teacher, the web camera was moved manually to focus on that particular pre-service teacher.

Figure 1. View from front of classroom.

Figure 2. View from rear of classroom.

We were able to do some interesting things with Skype[tm]. Tom Murray engaged pre-service teachers with a discussion of high school demographics, what motivates students, and how this knowledge could be used to implement SAE. Because Tom was using a wireless Internet connection, he decided to take us on a tour of the greenhouse. His high school students carried the laptop computer and camera. We were able to interact with Tom's students and observe several innovative SAEs including an alligator project. Tim Murphy created a chapter account for us to use the Agricultural Experience Tracker (AET). Pre-service teachers were asked to create a profile, make entries from the "Student Teacher Example Entries Workbook", explore other program features, and prepare questions for Dr. Murphy. Tim was able to review our profiles and entries before class and he called upon specific pre-service teachers during our videoconference to discuss their records. The Skype[tm] conference was on the laptop computer. We were logged into the AET on the classroom computer. To facilitate Tim's demonstration of specific aspects of the AET, I switched the projector to the classroom computer, and focused our video camera on the screen. This allowed Tim to see exactly what we were seeing in the AET and he could direct us where to go next as he discussed specific program features. Comments about Skype[tm] on the final course evaluation were positive. One student wrote "I really liked the use of Skype[tm] to bring in guest speakers." Another student in response to what was most helpful about the course wrote "Speaking with [state] Ag instructors!" It can be implied from this experience that today's desktop videoconferencing technologies can be effectively and reliably used to achieve a variety of educational goals.

Future Plans

I plan to continue using Skype[tm] to connect our pre-service teachers with master teachers, their students, and their innovations in agricultural education programming. I encourage others to try desktop videoconferencing. Today's technology is simple to use and has many potential applications to teaching and learning.

Costs/Resources

All participants had computers, microphones, speakers, and web cameras. No additional equipment was required. Skype[tm] software and Internet calls are free. To learn more about Skype, determine system requirements, and to get the software go to: http://www.skype.com/intl/en-us/home.

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Developing and Building Community Connections: Utilizing Grant Funding to Support Student Teachers, Cooperating Centers and Communities

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Developing and Building Community Connections: Utilizing Grant Funding to Support Student Teachers, Cooperating Centers and Communities

Introduction/need for innovation or idea

Agricultural education at the secondary school level faces a critical teacher shortage (Kantrovich, 2007). The problem is exasperated by teachers leaving the profession early-on in their career. Engaging stakeholders to assist in delivery of the total agricultural program can be helpful in preventing teacher burnout (National FFA, n.d.). As the trend of increasing job responsibilities in agricultural education is well documented in the literature (Delnero & Montgomery, 2001; Torres, Lambert, & Lawver, 2008), teacher candidates' ability to expand the resources available, from human resources to monetary resources, and productively engaging those resources is a critical skill set.

One of the many ways to expand both the relationships in the community and the capacity for student leadership is service-learning. Service-learning is a practical way to connect the content of a secondary agricultural education program to leadership skills developed in a career and technical student organization to apply in real world experiences, thus improving student motivation (Newcomb, McCracken, Warmbrod, & Whittington, 2004). Pugh and Bergin (2006) reported studies that addressed *motivation to learn* and *transfer of learning,* and found *motivation to learn* was positively related to *transfer*. Through service learning experiences, participants learn by doing. Unlike extracurricular voluntary service, service learning is a course based service experience that produces the best outcomes when meaningful service activities are related to course material through reflection activities such as directed writings, small group discussions and class presentations (Bringle & Hatcher, 1996).

In addition to engaging partners, having teachers learn to utilize each other as a support system would be helpful. Beyond enhancing teacher candidates' abilities to examine, discuss and reflect pedagogical decisions, teacher education programs could investigate the Japanese approach of lesson study, where a group of teachers work together in designing and implementing lessons (Fernandez, 2002) as a way to instill this strong sense of cohort for support specific instructional areas. One particular technical area that teacher candidates have identified a lack of confidence in instructing and agricultural education professionals have identified as need for further development is agricultural mechanics (McKim, Saucier, Reynolds, 2010; Saucier, Tummons, Terry, Jr., & Schumacher, 2010). As many secondary agriculture teachers rely on the agricultural mechanics laboratory to offer students unique hands-on opportunities to develop valuable academic and vocational skills (Hubert, Ullrich, Lindner, & Murphy, 2003), it is critical that our teacher candidates have carefully designed professional development experiences in the area of agricultural mechanics.

The project engaged a series of stakeholders along an experiential and pedagogically sound continuum that began with an academic project spanning six undergraduate pre-service courses and ended with a cohort of teacher candidates prepared to teach secondary agricultural education curriculum, engage an active, community-centered agricultural education program and lead FFA members/agricultural education students in service-learning activities. Three teacher educators and one high school agricultural education instructor secured grant funding through the university's College of Agricultural Sciences to support this project.

How it works/methodology/program phases/steps

Upon securing funds through an internal grant process, instruction was integrated across six Agricultural and Extension Education courses taught in the fall and spring of the senior year: AEE 311- Developing Youth Leadership through Organization and Program Structure (Fall); AEE 313 - School-Based Program Planning and Instructional Development (Spring); AEE 350- Teaching Methods for Agricultural and Environmental Laboratories (Fall); AEE 412 -Methods of Teaching Agriculture and Environmental Science (Fall); AEE 413 - Program Planning and Instructional Development (Fall); and AEE 495 - Internship in Agricultural and Extension Education (Spring). Each course had specific instructional responsibilities from hands-on construction of an example [planter boxes in this case] for the student teacher, design of curriculum for project through group lesson composition, grant writing by the student teacher, implementation of the unit of instruction at their student teaching site, and ultimately engaging key stakeholders for placement of the planter boxes in the community, providing a service-learning opportunity to the secondary students in the local communities by the agricultural education program. Upon beginning their field placement/internship for student teaching, candidates were asked to complete a grant application process for funding of project. Thus, the student teachers received practice in: designing curriculum as a team, building the planter boxes, grant writing, helping their own students learn the mechanical skills necessary to build the planter boxes, and experience in completing community service. Projects such as these are valuable in building connections between agricultural education programs and the communities in which they operate. This project evidences successfully partnership between secondary and post-secondary institutions in developing opportunities for secondary student experiential learning.

Results to date/implications

Ten student teachers engaged over 33 unique community stakeholders/partners in placing 47 planter boxes through the work of over 79 secondary students. Teacher candidate reflective response was positive indicating excellent secondary student engagement and appreciation for application of grant acquisition/implementation skill sets. Cooperating teacher response was positive, but expressed desire to be more actively involved in project selection. Planning is underway for the second year of implementation.

Future plans/advice to others

The integration of this project across courses and curriculum will continue in the near future. In order to improve implementation at the cooperating center location in the spring, cooperating teachers will be involved in the future to select the hands-on construction project to utilize. In addition, potential partnership with strategic partners in private industry should be investigated to perhaps offset future materials expenses. Additionally, avenues to provide a peer review and feedback experience are being investigated.

Costs/resources needed

For this pilot program, internal university grant funding was secured in the amount of $2,500. The total amount was equally divided and distributed to student teacher candidates who completed application for funds. Future years will come from supply budgets and/or external strategic partners. Total cost would be dependent upon nature of project selected by cooperating teachers in future years.

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Effective Classroom Assessment Course for Agricultural Education Teachers

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Effective Classroom Assessment Course for Agricultural Education Teachers

Introduction

The ability to construct a classroom that is conducive to learning for all of the students that comprise the class is a task that many teachers today are faced with. Today's classrooms are filled with learners of various levels and teachers have to find a way to make learning possible for everyone, while maintaining the students' interests. It is important to know what level the students are performing at when the teacher begins instruction. We must realize and "buy in" to the need for accommodating the many differences in learning styles by structuring our lessons so that instruction is differentiated and meets the needs if all students (Breaux, 2009).

The assessment of students is critical to measure many different domains. Diagnostic assessment will help the teacher understand the knowledge and skills that the student currently possesses. Determining what your students know at the beginning of the year and at the beginning of a new unit allows teachers to design lessons that meet their needs (Green, & Johnson, 2010). Formative assessment is used to monitor the student's growth and progress throughout the student's time in the classroom. Summative assessment is used to assess the students overall knowledge gained when exiting the program. Summative assessment can also be used to show how effective the teacher was at delivering the lessons to the students. The West Virginia Department of Education requires schools and school systems offering career and technical education to be held accountable for meeting the technical skills assessment requirements for Perkins IV accountability (Paine, 2009).

In West Virginia, agricultural education students that are enrolled in an agricultural class for three year and have a supervised agricultural experience program are required to take a summative assessment before graduation from high school. These assessments are designed to integrate the performances of writing, speaking, and applying knowledge and skills into a culminating evaluation for each concentration (Paine, 2009). The students that pass the assessment are then referred to as "program completers."

With the amount of emphasis that is placed on the completer assessments, it is important that agricultural teachers understand the proper techniques that they can use to assess their students learning. It is also important that teachers understand the best techniques that they can use to monitor their students' progress. Additionally they should use assessment as a teaching tool for the advancement of the student to maintain a healthy learning environment.

Purpose

The purpose of this poster is to share the process and procedures in developing and implementing a course in effective classroom assessment techniques for agricultural education teachers. The course presented ways that various measurement and assessment tools and practices could be developed and used in agricultural education classrooms to assess student learning.

Procedures

- The course objectives/goals were identified and a syllabus was constructed.
- The objectives of the course were (1) to expose the teachers to the importance of assessing student knowledge at various levels (diagnostic, formative and summative assessment) during their secondary education and (2) to identify the proper tools/techniques that should be used to assess student learning.

- The course was taught for the first time in the summer of 2010.
- Each student participated in constructing an effective assessment tool that included selected response formats that could be used in their classroom.
- In small groups, the participants constructed grading rubrics that were comprised of short answer, essay, or performance assessment techniques. The rubrics were shared with all of the class members so they could be used later in an actual classroom setting.

Results

- Twenty students participated in the class during the summer of 2010.
- The teachers were able to explain the importance of assessment.
- The teachers were able to write effective learning goals.
- The teachers could explain the six keys of formative assessment
- The teachers could describe the guidelines for assessment construction
- The teachers had a better understanding of progress monitoring
- The teachers were able to create scoring guides that they shared with each other that comprised the following topics: Public speaking, welding, research projects, record books, greenhouse work, group projects, and supervised agriculture experience visitations.

Future Plans

We plan to offer the course during the spring semesters of 2011 to preservice teachers. Each semester we will create new assessment tools and rubrics to assess student learning.

Resources Needed

The students were required to provide their own materials while constructing their rubrics. Internet access was provided by West Virginia University and the web-site RubiStar (http://rubistar.4teachers.org) was used to create and share the rubrics.

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Encouraging Synthesis of Early Field Experiences Through Student Showcase Presentations

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Encouraging Synthesis of Early Field Experiences Through Student Showcase Presentations

Introduction/Need

An important element of all teacher education programs comes in the form of field experience. According to Edgar, Roberts, and Murphy (2008), both early field experience and student teaching can influence a student's decision to pursue a career in agricultural education. Myers and Dyer (2004) cited the importance of early field experience, stating such experiences not only impact pre-service teachers' decisions to enter the profession, but may also alter students' beliefs about the profession.

However, in many teacher education programs, a critical piece of early field experience may be missing, or at least, inadvertently downplayed. While the "doing" involved in early field experience is important, the "thinking about doing" is even more valuable to our students. According to Danielson (1996), "Beginning teachers need to cultivate the skill of accurate reflection". Further, she suggests that with experience, teachers become skilled at reflection and are able to more adequately assess themselves and their experiences.

With undergraduate students concerned with checklists, rubrics, and semester grades, how can teacher educators encourage greater processing of early field experiences and contribute to the development of skills needed to become reflective practitioners? Fritz and Miller (2003) suggest that student teachers "reflect on their daily concerns and receive feedback... communicate with other student teachers and supervisors" (p. 51). NCATE standards (2008) support similar reflection among pre-service teachers and suggest that feedback is obtained from college faculty, cooperating teachers, and peers. To encourage heightened levels of student reflection, instructors of a course involving early field experience at one Midwest land-grant university designed an opportunity for reflection, communication, and feedback.

How It Works

Students enrolled in CTE 295 (Practicum in Career & Technical Education) are required to complete a total of 20 hours of observation/participation during the fall academic semester as a component of their early field experience. The required hours consist of various experiences, including: classroom observations, assisting with instruction, planning and teaching part of a lesson, assisting with evaluation and assessment, assisting or working with a school-related student organizations, assisting in maintenance and management roles of the teacher, and attending a professional meeting which CTE teachers attend.

Generally, to encourage reflection and processing of the various experiences, students were required to complete observation/participation reports. To discourage procrastination on the part of the students, which would lead to all hours being completed in the final weeks of the semester, one-third of the reports were due at three separate times throughout the semester. However, in effort to encourage even greater synthesis of the field experience, course instructors decided to incorporate an additional reflective component in Fall 2009: student showcase presentations.

Students could choose the format of their showcase; PowerPoint presentations, poster board displays, or other creative means were all acceptable methods of sharing information. Regardless of the format, the

following criteria were provided to guide students in the development of their displays. The display should: 1) Provide a description of a minimum of THREE activities/areas experienced while working with your mentor teacher. Share what you learned about the role of a teacher in each of the areas. 2) Identify 4 characteristics essential to becoming an effective Career & Technical Education teacher in FACS Ed or Ag Ed and explain the importance of each. 3) Include photos and be personalized! A basic rubric was provided to students, outlining the 75 points possible – a portion of which came from the display itself, the remainder was based upon the presentation. Clarity, creativity and professionalism were cited as key characteristics of evaluation.

Results to Date/Implications

In Fall 2009, a total of 23 students (11 FCS Education and 12 Ag Education) were enrolled in the course. Seventeen students created poster displays to present their information, while six created PowerPoint presentations. One class period (50 minutes) was allotted for the presentations. The format for presentations was similar to that utilized for research and innovative idea posters at professional conferences; each student was provided a table and easel or outlet (if needed). Course instructors and guest evaluators met individually with each student, listening to their presentation and asking questions for clarification.

Course evaluations indicated that students enjoyed the student showcase, though they would have liked additional time to view what classmates/peers had developed. Some students noted that the assignment "forced them to think about" all they had done at their field experience sites. Many guests who attended commented that they were impressed with the overall quality of presentations, students' ability to articulate thoughts, and reflection evident in the materials displayed. It was clear that the assignment required students to "think about doing" with regard to their experiences.

Future Plans/Advice to Others

The student showcase presentations will be continued this fall, with the following modifications. 1) Two days will be allocated for presentations to allow students to engage with one another as well as faculty members and guests. 2) A peer evaluation component will be incorporated. 3) Greater clarity will be provided at the start of the semester regarding the expectations for the assignment. Course instructors now have a better grasp on how to assess the tangible products produced by students, as well as the showcase presentation. 4) All students majoring in FCS Ed and Ag Ed (particularly underclassmen) will be invited to the showcase.

Cost/Resources Needed

Limited cost is associated with this activity because students provided their own display boards and/or presentation materials. In addition to class time, which must be allotted for the presentations, adequate table space, easels, and power strips/extension cords are necessary. Course instructors provided refreshments for students and guests. Support from the department and/or college is important as well. Special guests, including the Interim Dean of the College, Department Head, and other faculty members were invited and served as guest evaluators.

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Engaging communities in sustainability through service-learning

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Engaging communities in sustainability through service-learning

Introduction

Through the use of experiential learning pedagogy, environmental communications students informally educated a community on water conservation benefits and provided 300 rain harvesting barrels to reduce treated water consumption. Water is one of the most valuable resources in the nation. Maintaining educational programming to ensure clean and abundant water supplies is a high priority for community leadership and many federal agencies. University students, the future leadership of the state, are another resource worthy of attention. Providing opportunities for students to apply theoretical course concepts to a real-world problem enhances practical learning, and increases knowledge of civic, cultural, and social issues (Brown, Heaton, & Wall, 2007; Furco, 1996).

Need for Innovation

During summer months nearly 40 percent of household water is used for lawn and garden maintenance. Utilizing rainwater can reduce water utility bills, improve the quality of water entering water bodies through stormdrains, and improve the quality of water used on lawns and plants. Many are unaware of the environmental implications of stormwater leaving their private property. Rain barrels assist in preventing rain from flowing over hard surfaces such as roads and driveways, picking up pollutants, and flooding and eroding watersheds.

The local county has seen a 14 percent population increase in the last eight years. With more residents and new homes, the amount of impervious surface also increases, which leads to runoff. Excessive runoff has been found to increase flooding areas.

Providing students with opportunity to engage community residents in critical issues impacting natural resources through service-learning supports the National Research Agenda (NRA): Agricultural Education and Communications, 2007-2010 theme seeking to identify non-formal educational delivery systems are most likely to promote learning.

Service-learning reinforces course objectives by extending learning beyond the classroom. It benefits both the student and community. Students gain personal, social and intellectual growth, as well as a sense of citizenship and workforce preparation. Communities benefit from the technical expertise and the increased manpower a college or university has to offer. They also benefit from new funding opportunities, training assistance, skill building, and the opportunity to collaboratively work on pressing community issues (Scheibel, Bowley, & Jones, 2005).

Methodology

In the spring 2010 semester, a group of 6 students enrolled in AGCOM712 Environmental Communications undertook a service-learning project to plan a half-day water conservation workshop in the local community. Students researched community needs related to water conservation and provided educational activities, public relations materials and complimentary rain barrels to participating citizens. The students produced a strategic communications plan to guide awareness and

marketing efforts. The plan included strategies to market the workshop through community newspapers, radio, and public television. Promotional postcards were developed and distributed to university and city leadership. A partnership was formed with EPA Region 7 to provide water education materials to fill a sustainable canvas grocery bag.

In total, 300 rain barrels were constructed and distributed to interested community stakeholders. The feedback from the community was very positive. Many were unaware of strategies to reduce water consumption, and appreciative of student efforts.

The water conservation project followed the traditional service-learning model of plan, act, reflect, and evaluate (PARE). Students were involved in project planning, as well as the development of marketing materials and workshop curriculum. Students completed digital confessionals, via Flip handheld cameras, three times during the course of project. These confessionals provided the opportunity to reflect on challenges and successes. The confessional has been popularized in reality television programs, so students were familiar with it.

Research component/results to date

Workshop participants completed a short survey to assess current knowledge and behaviors related to water conservation. A post-survey will be sent to all participants after 6 months to evaluate the rain barrel and workshop efficacy, and further assess water consumption behaviors and participant willingness-to-pay for water conservation Best Management Practices (BMPs).

Cost

Funding for the activity was provided through a State Farm Youth Advisory Board Environmental Stewardship grant. The grant was approved for $28,936.00; however forging a partnership with local home improvement retailer and utilizing pre-used barrels greatly reduced cost for supplies needed for rain barrel construction. Total cost for the service-learning project was $12,407.00. Indirect costs for the project included substantial faculty time investment in building relationships with project partners and traveling to acquire barrels. Students devoted approximately 35 total hours for barrel construction.

Advice to Others

Developing opportunities for students to apply classroom-learning objectives to real-world problems increases critical thinking and conflict resolution skills, as well as awareness of how lessons learned can result in positive behavioral change in a community. Building community relationships and being flexible to unanticipated problems is necessary in completing a successful community-based service-learning project. Research shows that common barriers to diffusing sustainable innovations have been 1) lack of sufficient information; 2) high initial costs; 3) high operation/maintenance costs; 4) uncertainty of benefit; and 5) maintenance problems (Reddy & Painuly, 2004).

Allowing students to intensively research conservation BMPs and adopter characteristics assisted in overcoming these barriers. Everett Rogers offered effective strategies to follow when attempting to diffuse conservation innovations. These include developing messages that answer questions of

compatibility, complexity, relative advantage, observability, and trialability (Rogers, 2003). In planning for an effective service-learning opportunity, especially when attempting to diffuse conservation practices, Roger's adoption theory should be considered.

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Minnesota Teacher Induction Program: Building a Community of Learners Through Monthly Web Conference Meetings

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Minnesota Teacher Induction Program: Building a Community of Learners Through Monthly Web Conference Meetings

Introduction

The exodus of beginning teachers ranks as one of the most significant issues facing education and this challenge has been portrayed as a national crisis (National Commission on Teaching and America's Future, 2003). Previous research reported that almost half of new teachers leave within the first five years of entry into the occupation (Ingersoll & Smith, 2003). In response, Ingersoll (2003) argued that teacher induction programs and effective mentoring can lead to lower teacher attrition rates. He contended that the key solution to the teacher shortage phenomenon was to retain high quality teachers by changing their circumstances through proactive assistance, timely interventions, and appropriate professional development. In addition, Davis and Field-Waite (2006) suggested that induction programs should offer support in multiple ways being sure to facilitate new teacher discussion of challenges as they arise.

The [State] Teacher Induction Program (TIP) began during the 1999-2000 school year. The usual practice was to have four seminars during the year; new agriculture teachers from across the state traveled to a central location for each meeting. The TIP seminars were typically held in conjunction with another professional development activity or FFA event so that multiple objectives were accomplished during the trip. However, it is not possible to have new teachers travel to a monthly seminar due to the travel costs and time required to be away from school. In answer to this problem, web conferencing was added to the TIP in 2008-09 so that new teachers could participate in professional development each month of the school year. The goal of the monthly web conference meeting was to provide assistance to new teachers on a *just-in-time* basis.

How It Works

Agriculture teachers involved in the TIP are asked to indicate which days they are available to participate in monthly web conference meetings. Consensus regarding the optimal monthly meeting date is determined by use of doodle, an online scheduling tool. Since the activities of a new agriculture teacher vary each month, this consensus process is used each month. Regardless of the monthly meeting date, the TIP web conference meeting was always held from 3:45-5:00 pm. New teachers were sent a reminder email the day of the meeting.

Each web conference meeting follows the same agenda. The meeting begins with each new teacher sharing a success they have recently experienced. Next a guest speaker (e.g., experienced agriculture teacher, State FFA Advisor) is invited to share content-pedagogy strategies, information about an upcoming activity, or strategies pertaining to challenges faced by the new teachers. For example, past TIP speakers have discussed how to engage students in the FFA, time management strategies, National FFA Week, National Teach Ag Day, FFA chapter banquet, landscaping and gardening content-pedagogy, and summer programs. Following the guest speaker, new teachers share a challenge they are experiencing. Strategies to over come the challenge are discussed by the new teachers and mentors

participating in the meeting. The meeting concludes with announcements of upcoming events and an online instructional resource is highlighted.

Results and Implications

At the end of the 2009-10 school year, new teachers were asked to share why they chose to participate in the monthly web conference meetings. The two most common responses were to connect with other teachers who were going through the same experience and to gain knowledge about content areas and get new ideas. When asked to explain barriers to their participation in the meetings, new teachers shared they did not have enough time, had other commitments, and were too tired at the end of the school day.

As a result of feedback from the new teachers, the TIP made some changes for the 2009-10 school year. To allow for even greater community building among new teachers, TIP staff sign-off at the conclusion of the meeting and new teachers then have the opportunity for informal discussion among themselves. New teachers receive a reminder email a day or two before the meeting and they receive a phone call the day of the web conference meeting.

So that new teachers are aware of the potential offered by web conferencing, this technology has been utilized in teacher licensure courses at the University of [state] and during the four drive-in TIP seminars.

Future Plans

To increase new teacher ownership in the web conference meetings, TIP participants will be divided into groups for 2010-11. Each group will be responsible for choosing a topic and finding a speaker for one meeting during the year. The new teachers will serve as hosts and hostesses of the meeting.

A graduate of the University of [State] will be a new teacher in a neighboring state for the 2010-11 school year. The new teacher has been asked to be part of the monthly web conference meetings as part of the TIP. If this pilot goes well, future plans are to deliver professional development for new agriculture teachers on a regional level. Web conference meetings might be one of the ways to share resources and assistance with more new teachers.

Costs & Resources Needed

The web conference monthly meetings require leadership from TIP personnel. Currently a faculty member at the University of [State] serves as the TIP Director and a graduate student is the TIP Coordinator. Each new teacher, mentor, guest speaker, and TIP personnel who participate in the meeting needs a high-speed Internet connection and a webcam or microphone for their computer. A webcam can be purchased for approximately forty dollars; many computers now come with a webcam that is part of the monitor. The final resource needed is a program to host the meeting. The University of [State] is a

partner of the TIP and has a subscription to Adobe® Acrobat® Connect™ Pro Meeting. This program has worked well for the monthly web conference meetings and no fee is charged to participants..

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Innovative

Teacher Professional Development through Winter Technical Institutes: Meat Processing and Evaluation

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Teacher Professional Development through Winter Technical Institutes: Meat Processing and Evaluation

Introduction

According to Phipps and Osborne (1988), a total secondary agricultural education program consists of three essential and interdependent components. Specifically, these components are: classroom and laboratory instruction; independent experiential learning, commonly known as Supervised Agricultural Experience (SAE); and participation in the student leadership organization, typically the National FFA Organization.

In the field of agricultural education, laboratories are essential educational tools for student development. Johnson and Schumacher (1989) stated a great amount of the instruction of the agriculture curriculum takes place in a laboratory setting. Shinn (1987) reported that the amount of time devoted to laboratory instruction may comprise one-third to two-thirds of the total instructional time in many agricultural programs. Furthermore, no one will dispute the fact that the use of a laboratory setting, where students can learn by doing, is a basic tenant of agricultural education programs (Sutphin, 1984).

Agricultural educators of today are faced with the growing challenge of providing a positive learning environment for students and preparing them for productive lives in a fast-paced world (Layfield & Dobbins, 2002). To maintain up to date knowledge and skills, school-based agriculture teachers require professional development that reflects the current trends in education or new developments in the agriculture, food, fiber, and natural resource industry (Washburn, King, Garton, & Harbstreit, 2001). One of the many areas for agriculture teacher professional development is preparing students for participation in Career Development Events (CDE)--- this includes the Meat Evaluation CDE(Edwards & Brier, 1999; Pieter, Terry, & Cartmell, 2003). Career Development Events offer the student curriculum experience in a competitive, real-world setting (Beekly & Moody, 2002) and represent the natural extension and application of classroom knowledge in an authentic environment (National FFA, 2010) However, teachers tend to plan instructional activities in terms of their own knowledge and comfort level with the content to be taught (Ball, Knobloch, & Hoop, 2007), and technical competency in all areas of agriculture is a major stressor for new professionals (Anderson, 2010).

Methodology

As a result of a statewide agricultural education professional development study ([AUTHOR], [AUTHOR], Terry, & Schumacher, 2010), the Meat Processing and Evaluation Winter Technical Institute was designed and implemented by the professional development staff of the [STATE] [Department of Education]to provide [STATE] agricultural teachers professional development education in the area of meat processing and evaluation. During this winter technical institute approximately 32 teachers received professional development education. Among the objectives of the winter technical institute were processing retail cuts of meat and evaluating these cuts for quality. Additionally, participants learned about meat processing safety, meat curing techniques, and preparing a Meat Evaluation CDE team. This activity and others provided the participants with the opportunity to learn, demonstrate, and ultimately develop meat processing and evaluation curriculum to further educate secondary, agricultural education students. At the

conclusion of this winter technical institute, teachers received curriculum, scoring guides, formulation problems, and presentations.

Results to Date

At the conclusion of the meat processing and evaluation winter technical institute, participants were asked about the benefits they received from the course. Specific comments from the participants included:

- "I feel like practicing judging the wholesale & carcasses, was very beneficial."
- "The hands-on judging of the classes was extremely helpful; the session about the formulation problem was also very helpful."
- "Teaching strategies for the classroom & hands-on experiences."
- "Retail identification of meat cuts, processing whole carcasses to see muscle patterns & bones."

Participants also provided comments for improvement of the workshop in the future:

- "More hands-on breaking activities with instruction so we could teach our students."
- "More opportunities for practice/application."
- "Better facility to do PowerPoint for beef carcasses, otherwise very good, would enjoy follow-up summer institute, would enjoy something on judging country cured hams."
- "Thought it was very good – offer this again."

Future Plans

The Winter Technical Institutes will continue to be an integral part of the professional development plan for [STATE] agricultural education. The timing of these winter technical institutes will be designed to meet the specific needs of [STATE] agricultural educators: after the conclusion of the National FFA Convention, before the end of the fall semester, and before the beginning of the preparation of career development event teams. The content for future winter technical institutes will be prioritized based on empirical professional development research concerning [STATE] agricultural educators and the availability of facilities and content experts.

Costs/ Resources Needed

The costs for these winter technical institutes vary depending upon the content provided. For the meat processing and evaluation winter technical institute, the administration costs and supplies were $100 per person. To adequately instruct this institute, the instructors required a meat processing laboratory with work tables, a variety of meat processing hand and power tools, personal safety equipment, and a computer with projector. Handouts and consumable supplies such as carcasses, retail cuts of meat, etc. were needed as well.

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Teacher Professional Development through Winter Technical Institutes: Meat Processing and Evaluation

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Agricultural educators of today are faced with the growing challenge of providing a positive learning environment for students and preparing them for productive lives in a fast-paced world (Layfield & Dobbins, 2002). To maintain up to date knowledge and skills, school-based agriculture teachers require professional development that reflects the current trends in education or new developments in the agriculture, food, fiber, and natural resource industry (Washburn, King, Garton, & Harbstreit, 2001). One of the many areas for agriculture teacher professional development is preparing students for participation in Career Development Events (CDE)--- this includes the Meat Evaluation CDE(Edwards & Brier, 1999; Pieter, Terry, & Cartmell, 2003). Career Development Events offer the student curriculum experience in a competitive, real-world setting (Beekly & Moody, 2002) and represent the natural extension and application of classroom knowledge in an authentic environment (National FFA, 2010) However, teachers tend to plan instructional activities in terms of their own knowledge and comfort level with the content to be taught (Ball, Knobloch, & Hoop, 2007), and technical competency in all areas of agriculture is a major stressor for new professionals (Anderson, 2010).

Methodology

As a result of a statewide agricultural education professional development study ([AUTHOR], [AUTHOR], Terry, & Schumacher, 2010), the Meat Processing and Evaluation Winter Technical Institute was designed and implemented by the professional development staff of the [STATE] [Department of Education]to provide [STATE] agricultural teachers professional development education in the area of meat processing and evaluation. During this winter technical institute approximately 32 teachers received professional development education. Among the objectives of the winter technical institute were processing retail cuts of meat and evaluating these cuts for quality. Additionally, participants learned about meat processing safety, meat curing techniques, and preparing a Meat Evaluation CDE team. This activity and others provided the participants with the opportunity to learn, demonstrate, and ultimately develop meat processing and evaluation curriculum to further educate secondary, agricultural education students. At the conclusion of this winter technical institute, teachers received curriculum, scoring guides, formulation problems, and presentations.

Results to Date

At the conclusion of the meat processing and evaluation winter technical institute, participants were asked about the benefits they received from the course. Specific comments from the participants included:

- "I feel like practicing judging the wholesale & carcasses, was very beneficial."
- "The hands-on judging of the classes was extremely helpful; the session about the formulation problem was also very helpful."
- "Teaching strategies for the classroom & hands-on experiences."
- "Retail identification of meat cuts, processing whole carcasses to see muscle patterns & bones."

Participants also provided comments for improvement of the workshop in the future:

- "More hands-on breaking activities with instruction so we could teach our students."
- "More opportunities for practice/application."
- "Better facility to do PowerPoint for beef carcasses, otherwise very good, would enjoy follow-up summer institute, would enjoy something on judging country cured hams."
- "Thought it was very good – offer this again."

Future Plans

The Winter Technical Institutes will continue to be an integral part of the professional development plan for [STATE] agricultural education. The timing of these winter technical institutes will be designed to meet the specific needs of [STATE] agricultural educators: after the conclusion of the National FFA Convention, before the end of the fall semester, and before the beginning of the preparation of career development event teams. The content for future winter technical institutes will be prioritized based on empirical professional development research concerning [STATE] agricultural educators and the availability of facilities and content experts.

Costs/ Resources Needed

The costs for these winter technical institutes vary depending upon the content provided. For the meat processing and evaluation winter technical institute, the administration costs and supplies were $100 per person. To adequately instruct this institute, the instructors required a meat processing laboratory with work tables, a variety of meat processing hand and power tools, personal safety equipment, and a computer with projector. Handouts and consumable supplies such as carcasses, retail cuts of meat, etc. were needed as well.

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Innovative Idea

Using a Team-Based Approach to Encourage Agricultural Literacy

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Using a Team-Based Approach to Encourage Agricultural Literacy

Introduction/Need for innovation or idea

Agricultural literacy has been defined as "possessing knowledge and understanding of our food and fiber system" (Frick, 1991, p. 52). The concept of agricultural literacy is often connected with educational efforts aimed at K-6 or K-12 students, but there remains a need to encourage improved agricultural literacy among students in higher education. This assertion is recognized in the *Research Agenda for Agricultural Education & Communication's* research priority area of "developing agricultural workforces for a knowledge-based society" (Osborne, n.d., p.11). One of the most common sources of information is the news media, but consumption among college-aged individuals is low. The Pew Research Center for the People and the Press (2008) found that 22% of those considered "disengaged" due to minimal interest in news or news consumption are young adults ages 18-24. Cannon and Lamm (2010) found that college students spend very little time each day with news media, which has serious implications with their overall awareness of current issues. "In order to grow future leaders in agricultural and natural resources, it is imperative that colleges of agriculture make efforts to increase the news consumption habits of their students" (Cannon & Lamm, p. 464).

In preparing college students for future careers, it is important to include teamwork activities because U.S. companies are expanding their emphasis on teamwork (Levi, 2007). Cohen and Bailey (1997) said "85% of companies with 100 or more employees use some type of work teams" (p. 14). At a southwest university, one class (Team Leadership Development) focuses on helping students learn the skills to work efficiently and effectively on a team. This course explores strategies and techniques for successful teamwork with emphasis on self-assessment, team-building skills, and experiential activities. In order to meet the learning objectives of the course and improve students' agricultural literacy, the instructor designed a team-based assignment that follows the National FFA Organization (2006) Agricultural Issues Forum Career Development Event.

How it Works/Steps

The assignment addressed several expected learning outcomes including: 1) Apply team-building skills, knowledge, and intervention through experiential activities; 2) Formulate a plan for handling conflict; 3) Recognize and demonstrate the role of the facilitator and team leader; and 4) Select methods of evaluating and rewarding team performance. Eight teams of five students worked to successfully research, prepare, and present an agricultural issue. The following steps outline the assignment process:

1. **Formation of Teams** – The instructor assigned students to teams based on their participation and academic success. Teams were then asked to select one member to serve as the leader for the assignment. Teams were given an overview of the assignment and rubrics before they started.
2. **Select Topic** – Teams were allowed to select their own agricultural issue that was both current and significant enough to have supporting literature. The teams then submitted their top five issues to the instructor for approval. This guaranteed the issues met the guidelines and prevented duplication among teams.
3. **Research** – Teams were given six weeks to meet and research their topic. The research was done outside of the normal class period. Student questions were handled before and

after the class period in order to share that information with the rest of the class. Reminders of the due dates were provided.

4. **Portfolio** – Teams submitted a six-page portfolio that included a summary of their topic, list of references, and five questions with answers about their topic. The questions and answers helped prepare the teams for the final presentation.
5. **Presentation** – Teams presented their issue to the class in a pro/con format. Each presentation lasted about eight minutes and all team members had to participate. Other students in the class then had five minutes to ask the team members questions about their topic.

Results to Date/Implications

Overall, the students did well both researching and presenting their agricultural issues as well as working well on a team. Students completed a self-evaluation and although most team members received positive evaluations, it was evident some team members did not contribute fully to the project. Students shared the following comments about the assignments:

- "It was challenging, a little confusing at times, but I eventually worked through it."
- "The assignment was quite easy. Once we, as a group, figured out what we were going to do, we were able to find plentiful information."
- "We didn't have a big problem with communication, but sometimes we didn't receive e-mails or someone would show up a little late, but for the most part we worked together fine."
- "I really enjoyed being able to collaborate with my group to create a unique and interesting project that was really fun to present."

Some students had difficulty determining what was a current agricultural issue was while others commented during the presentations that they were unknowledgeable about a certain topic. Overall, students learned a great from the assignment and listening to other groups present:

- "I really learned a lot from our topic of the Humane Society vs. Agriculture. The more I researched, the more I felt this desire to share my knowledge with everyone and let agriculture's side of the story be heard! I also really enjoyed listening to everyone else's presentations and I think the whole class benefited from it a lot by being able to ask so many questions."
- "I thought it was a really fun assignment and very useful as well. I know that I learned a lot about a topic that I hadn't really even heard of before and it really opened my eyes to some of the important issues that are facing the agriculture industry right now."

Future Plans/Advice to Others

This project will be repeated again with more emphasis on the presentation component of the assignment in order to increase the length of the presentations and the amount of content the students convey during the presentation. Also, the written component of the assignment will be expanded to include additional items such as a fact sheet, news release, or backgrounder. This will encourage students to more fully research the topics. When using this type of assignment, it is recommended to give students several weeks to work together in teams.

Costs/Resources Needed

Resources include access to agricultural topics and information, which can be obtained from Internet or library sources. Students incurred minor expenses to submit the assignment in a binder.

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Using student feedback to evaluate and improve Web design course curricula

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Using student feedback to evaluate and improve Web design course curricula

Introduction

Technical courses in agricultural communications must equip students with the skills and knowledge necessary to be professionals in an increasingly technology-based work environment. One course vital to this mission that is taught in multiple agricultural communications programs across the country is Web design. In a Web design course, students may be exposed to a range of content, including HTML, cascading style sheets, design principles, site maintenance, and working with clients, depending on the expertise of the instructors, available technology, and overall focus of the academic program. In developing courses that fit these parameters, instructors must constantly assess and compare students' perceptions of courses with instructional goals and industry requirements. In this project, students' perceptions of Web design courses at two universities were used to evaluate and improve course curricula.

Methodology

Similar curricula were used in three-hour, semester-long Web design courses at two universities to facilitate examination of the usefulness of assignments and activities intended to increase student retention of Web design skills and concepts. Students' perceptions of the usefulness of Web design course assignments and activities were gathered using two online questionnaires. The target populations included 16 students enrolled in an upper-level Web design course at University A and 32 students enrolled in an upper-level Web design course at University B. The students enrolled in the courses were predominantly agricultural communications majors, although three students were agricultural education or agricultural leadership majors. The online questionnaires were based on questionnaires used in a previous study of agricultural communications curricula (Naile, Robertson, & Sitton, 2009) and the Web design course curricula. Students were asked to rate the usefulness of course assignments and activities using a five-point Likert scale, with 1 indicating very low, 3 indicating neutral, and 5 indicating very high. Students also were asked to respond to two open-ended questions about what they liked and disliked about the course. Validity and reliability of the scaled items were established by Naile et al. (2009). One questionnaire included assignments and activities completed up to week 9 of the semester, and one questionnaire included all assignments and activities completed during the entire semester. Students were given opportunities to complete the questionnaire at approximately week 9 of the semester and at the end of the course semester. Each survey was conducted for two weeks, with a reminder e-mail sent at the end of the first week. Descriptive data were used to interpret and describe students' responses, including means, modes, and frequencies.

Results

Response rates for the mid-semester survey were 43.8% and 71.9% for University A and University B, respectively. Response rates for the end-of-semester survey were 37.5% and 53.1% for University A and University B, respectively. In the mid-term survey, the average ratings of the usefulness of assignments and activities were consistent across universities. Students reported a low level of usefulness for quizzes and neutral levels of usefulness for Web critique 1, Web critique 2, exploring websites activity, and lab assignments about using Adobe Creative Suite programs, cascading style sheets, and project predesigns. Students also reported a neutral rating for the midterm exam. Assignments rated highly useful included the digital résumé/HTML lab and portfolio website. In the final survey, students across University A and University B again rated assignments and activities consistently, except for Web critique 1 and Web critique 2. In addition, the average ratings for nearly all assignments and activities also increased across both universities. Quizzes were rated as low in usefulness, with neutral levels of usefulness reported for the exploring websites activity, Adobe Creative Suite lab, client site proposal, client site presentation,

and final exam. Assignments rated highly useful included the digital résumé/HTML lab, CSS lab, portfolio predesign lab, portfolio site, midterm exam, and client site. For Web critique 1 and Web critique 2, the average rating was consistent for University A but decreased for University B. Overall, more applied assignments and activities such as digital résumés, portfolio sites, the midterm practicum, and client sites received higher ratings than assignments and activities focused on basic content knowledge. The students' ratings of the assignments and activities as well as their comments provided invaluable feedback in determining which assignments and activities should be modified, added, and removed from the curricula.

Future Plans and Advice

The results suggest that students perceive practical assignments in Web design to be more beneficial in learning how to creating websites, which supports the instructors' approaches to planning curricula to include lower-order and higher-order levels of thinking. A course in website creation should be experiential and involve assignments and projects that can be a foundation for expanding knowledge about Web design. Practical assignments can be a way of enabling the creative side of the student that "provides a way to develop their professional communication and literacy skills" (Armstrong, Tucker, & Massad, 2009). In addition, group interaction offers increases learning opportunities for students (Armstrong et al., 2009). Examination of Web design course curricula will continue at University A and University B with the goal of maximizing students' preparedness to enter the workforce as professional communicators and educators. In examining course curricula, instructors must balance professional needs identified through position announcements and interactions with industry professionals with students' willingness and capabilities to capitalize on course experiences. In addition, instructors should facilitate students' understanding of why assignments and activities are necessary steps in skill and knowledge development by providing examples of real-world applications of course content, particularly in Web design courses that include abstract and highly technical material. Obtaining student feedback consistently and constantly provides checkpoints for instructors to ensure they are reaching students as effectively as intended and provides opportunities for instructors to make adjustments to course curricula that reflect students' perceptions of the course.

Resources Needed

The primary cost associated with offering cutting edge content in a Web design course is industry-standard software, which can cost up to $1,800. The software already was available at University A and University B, so direct costs for restructuring course content in this project were minimal. Indirect costs, however, included course preparation time for instructors and teaching assistants before and during the semester. In this project, preparation time was not quantified by the instructors, although the instructors devoted approximately the same amount of time to their Web design courses as to other three-hour courses they have led. Future work on Web design curriculum development will include additional consideration of this cost.

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Innovative Idea

USING THREADED DISCUSSIONS FOR ENHANCEMENT OF STUDENT PARTICIPATION AND LEARNING IN AN ONLINE AGRICULTURAL EDUCATION COURSE

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USING THREADED DISCUSSIONS FOR ENHANCEMENT OF STUDENT PARTICIPATION AND LEARNING IN AN ONLINE AGRICULTURAL EDUCATION COURSE

Need for the Idea

Many U.S. universities deliver distance education courses, and a few departments of Agricultural Education are no exceptions (Roberts & Dyer, 2005). Instructors offering online courses are coming up with newer ways or using existing ones in newer ways to enhance student learning. A threaded discussion is one such tool. Threaded discussions are online postings pertaining to a specific topic and a group of such messages is considered a thread (Middlesex Community College, n.d.). Threaded discussions offer many advantages like improving higher-order thinking (Meyer, 2003), meeting the constructivist curricular objectives (Weasonforth & Meloni, 2002), helping students become participatory citizens (Larson & Keiper,2002), building online learning communities (Edelstein & Edwards, 2002) that enhance student learning, and improving students' writing skills (Jordan, 2001).

Despite the many advantages of using threaded discussions, it is often a challenge to design them in such a way that useful and course-related discussions are carried out. It has been our personal experience that some students lose focus and deviate from the posted assignment requirements and lead the discussion completely off track. Meyer (2003) categorized such responses as "social." The goal is to keep students focused on the topics and engage them in a reflective and constructive discussion. We structured a threaded discussion assignment for an online agricultural education course offered in Spring 2010 in a particular way that helped students focus on the topic of the discussion and minimize deviations. The purpose of this poster is to share the model that was developed from this experience.

How the Idea Works

The first author taught the course: "Introduction to Learning Theory in Agricultural Education" during the Spring 2010 at University. Fifteen case studies, each based on a learning theory taught in the class were designed using threaded discussions and the students were required to participate in the discussions. Clear directions were given to help focus the discussion and minimize deviations from the topic. Also, duly following the suggestions of Larson and Keiper (2002), the students were required to post only a specific number of postings. Requiring students to post only a specific number of times helped students focus on the case.

The assignment was broken into two stages. Before starting the stage-one discussion, students were required to review the case and read the provided literature, and post their first responses based on their own experiences, the literature they read, and their overall perceptions of the situation. The anticipated learning outcomes from this stage were critical thinking, linking theory to practice, new idea generation and problem solving. In stage two, students were required to review a provided expert opinion on the case, review their peers' first posts and re-consider their own first posts before articulating their second posts. The anticipated learning outcomes from this stage were developing new perspectives, gaining new knowledge and adopting new strategies to solve similar problems, or simply confirming that their first strategies were sound. This assignment structure was developed into a model (Figure 1) that could be used by instructors using threaded discussions in their courses. Further, this model identifies four

components (input, process, output and outcome) under both stages providing a road map for online discussion design.

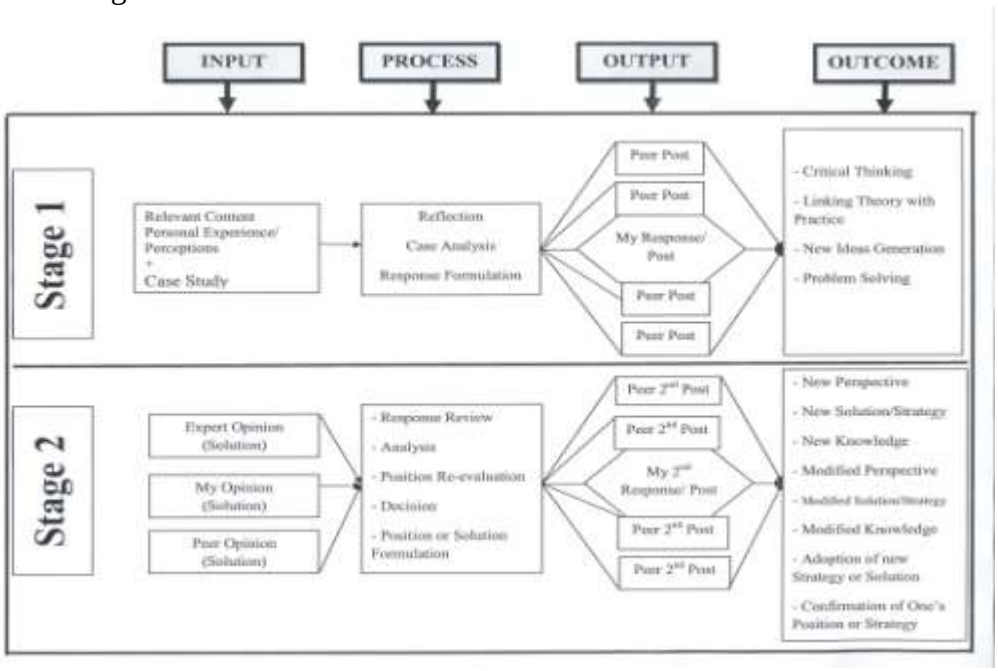

Figure 1. 2-Stage Model for Threaded Discussions in Online Agricultural Education Courses

Results

All 17 students enrolled in the class participated in all the case discussions and completed the two required postings. There were no personal discussions that were completely out of the scope of the topics that were discussed. The second postings, after going through the expert and peer views, indicated that the students understood what their peers wrote and responded accordingly. The students also indicated why they chose to/not to change their original responses, which indicated that they reflected on what was asked of them, and reflection has been found to lead to higher-order thinking.

Future Plans

This course was considered as a pilot test. The researchers intend to test it once more in the Fall 2010 semester and validate the results from this study. However, the initial results indicated the utility of this 2-Stage Model in teaching online agricultural education courses. The results will be shared with the faculty in the department of Agricultural Education and Studies at the university, and with the broader community through a publication.

Costs/Resources Needed

The costs/resources involved are minimal. The instructors would need access to WebCt/Blackboard software and would require a teaching assistant (TA) versed with designing courses on WebCt/Blackboard. If there is no TA for the course, then the instructors would need to undergo a short training on designing courses on WebCt/ Blackboard.

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USING TRACKING IN WEBCT: AN INNOVATIVE APPROACH TO ANALYZE STUDENTS PARTICIPATION IN ONLINE DISCUSSIONS

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USING TRACKING IN WEBCT: AN INNOVATIVE APPROACH TO ANALYZE STUDENTS PARTICIPATION IN ONLINE DISCUSSIONS

Need for the Idea

Online distance technologies such as WebCT has been gaining popularity due to its various course management tools including course content searches, discussion board, chat room, private e-mail and calendar (Marsha, Price and McFadden, 2000). These tools can facilitate a variety of interactions among students, the instructor and content (Bonk, 1999). Learner interactions need to be measured by the instructor (O' Neil 2006). In the virtual world students and the instructor are in a geographically separated area and thus neither observes them nor supervise directly student learning (O' Neil, 2006). It is the instructor's responsibility to watch students' progress, monitor their various activities, evaluate them, and coach them so that they learn as effectively as possible.

WebCT collects data on students' interactions with content, with other learners and the instructor. These interactions can be extracted by using the WebCT "student tracking" tool. Instructors can track students' progress to see whether they have studied the appropriate learning resources, practiced the online exercises, collaborated with their colleagues about their projects, or read the announcements for a course (Goldberg, 1996). Tracking student online activity can provide early warning indicators of student performance in the course (Wang and Newlin 2002) which is particularly important because nonverbal cues such as eye contact and facial expressions are not visible to the instructor (Sutton, 2001). For instance, various research studies found that students who visited content pages more frequently showed greater academic performance than students who visited less frequently (Heffiner & Stanley, 2005; Miller, 2008). Wang and Newlin (2002) found that the total number of a student's home page visits during the first week of a course can be predictive of his/her ultimate academic achievement in that course.

The authors activated the WebCT tracking tool in an online agricultural education class during the Spring semester of 2010. The tracking tool provided useful information on students' participation in online threaded discussions. The first author used tracking information to provide timely feedback to students. The purpose of this poster is to share an online tracking tool application and its use to improve student engagement in the learning process.

How the Idea Works

An online Agricultural Education course was delivered during the Spring semester of 2010 at a State University. Every week the course instructor posted a problem in the form of a case study. These cases were placed in the discussion section. Students were required to evaluate and analyze each case critically and respond to the case by posting their responses. Each student was required to post two responses for each case. To monitor students' performance, the instructor used the WebCT tracking tool. WebCT tracking is assumed to be a reliable tool for recording students' interaction patterns based on the number of hits on specific areas/pages of the course website. The instructor used tracking information to monitor the time students' spent on the

following activities: reading and analyzing posted case, posting individual responses, reading and analyzing peer posts, responding to peer posts, and logging in and out.

Results

The instructor (the first author) used the weekly tracking data to give feedback to students on their online course activities; to confirm that all students were on the right path and engaged in the discussion as instructed; to verify that students read peers posts before making the second posts; and to grade the assignment. Early in the semester, there were a few students who were reading only a few peers' posts or reading none at all, and/or making only one post, or posting at the last minute and so denying their peers opportunities to incorporate those perspectives into their own reflections. The instructor's timely feedback made students aware that the instructor was engaged in the teaching and learning process and monitoring student participation in case discussions. After a couple of feedbacks, the later-stage tracking data showed that students followed instructions and read peer posts, completed discussions on schedule, and made relevant and reflective contributions, thereby enhancing learning through discussion interactions.

Implications

Using tracking data for measuring student performance is still a relatively new and underexplored area. The instructor used tracking information only for assessing students' activities and providing feedback in the discussion section. Generally the WebCT tracking tool records and stores students' every movement as they navigate through the course such as content pages, web-links, chat page, mail page, calendar and grade pages etc. McKnight and Demers' (2003) research showed that a given student's online behavior can be predicted and that student tracking can be used to achieve both teaching and learning goals. Instructors can consider tracking data as one of the sources to assess over all student performance and behavior in online courses.

Costs/Resources Needed

The costs/ resources required for this activity are minimal. The primary requirements are to have an access to WebCT and to enable the tracking option for the instructor. The instructor should have thorough knowledge of extracting and understanding tracking information. With some training, instructors should be able to use the tracking tool in their online classes. .

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POSTER SELECTION PROCESS

Twenty-eight abstracts were received for the 2010 poster presentations. The abstracts were reviewed using blind-review procedures. Each abstract was blind-reviewed by two or three agricultural and extension educators from institutions in other states. The poster session chair received the recommendations to accept or reject from the reviewers. Twenty-three poster abstracts were accepted for presentation.

Poster Abstract Reviewers for 2010

Dormody, Tom	New Mexico State University
Edgar, Don	University of Arkansas
Jones, Wash	Prairie View A&M University
Kistler, Mark	North Carolina State University
Layfield, Dale	Clemson
McCann, Brian	Mississippi State University
Parr, Brian	Auburn University
Rosencrans, Carlos	New Mexico State University
Swan, Ben	University of Idaho
Talbert, Allen	Purdue University
Westrom, Lyle	University of Minnesota
Williams, Robert	TAMU-Commerce

Poster Presentation Chair

Tim Buttles, University of Wisconsin – River Falls

2010 North Central AAAE Poster Session

Contact: Tim Buttles timothy.j.buttles@uwrf.edu

Call for Innovative & Research Posters

Deadline for abstract submissions: Wednesday, July 28, 2010 – 11:59 pm (EDT)

Two poster categories will be accepted: Innovative Idea and Research. Innovative Idea posters must be a new idea or the creative modification of an existing idea. Research posters must be related to a problem, demonstrate a need for research, and implement the research process. **The innovative idea or research must be implemented prior to submission.**

Poster abstracts in each category must be of potential regional or national significance focusing in the areas of teaching, communications, extension, and/or leadership. A peer review evaluation process will use the established evaluation forms to accept posters.

Once accepted to the North Central Region AAAE, posters will be presented in Manhattan, Kansas. Abstracts will be published in the proceedings as submitted. Awards will be presented in both categories. Evaluation will be based upon the poster abstract, design and display, presentation, communication of presenter, significance to the profession, and innovation of idea or related to research poster session.

Poster abstracts must follow the format outlined in the AAAE Poster Session Guidelines. Each abstract will have four pages: a cover page, two narrative pages, and a reference page. Poster abstracts not conforming to the required submission guidelines or format may be rejected prior to the review process.

Submission Process:

- Submissions are completely online.

- Abstracts must be submitted before **July 28, 2010 – 11:59 p.m**. (EDT).
- One author must be a paid member of AAAE.

- Microsoft Word and rich text format files will be accepted.
- To facilitate a blind review, the author's name or other significant identifying information should not appear in the two page narrative or reference page.
- Identifying information should also be removed from the document "properties".

Narrative Headings: The poster abstract narrative should have the following heading/sections when

appropriate:

INNOVATIVE IDEA

1. Introduction/need for innovation or idea
2. How it works/methodology/program phases/steps
3. Results to date/implications
4. Future plans/advice to others
5. Costs/resources needed
6. References

RESEARCH

1. Introduction/need for research
2. Conceptual or theoretical framework
3. Methodology
4. Results/findings
5. Conclusions
6. Implications/recommendations/ impact on profession
7. References

Narrative Format: The proposal narrative is limited to two (2) pages, single spaced with double-spacing between paragraphs. The two-page limit includes all tables and figures. All margins should be 1". The font should be Times Roman, 12 point, or equivalent..

Style: Use the *Publication Manual of the American Psychological Association,* (6th ed.) except as modified above. Italicize the names of journals, statistical symbols, titles of tables, etc. per *APA* requirements. Do not use the underline feature in the areas listed above.

Contact Information: Tim Buttles, University of Wisconsin - River Falls, (715) 425-3555, timothy.j.buttles@uwrf.edu