Western Region AAAE Research Sessions
April 2002, Spokane, WA.

8:30 - 10:00 am

Session A- Shoreline B
Chair: Billye Foster
Facilitator: Marty Frick
Discussant: Greg Thompson

A Comparison of Minority and Non-Minority Student Perceptions of Agriculture in Arizona.
Edward A. Franklin, University of Arizona.

Abstract

Students enrolled in agriculture programs in Arizona were surveyed to determine factors that influenced their enrollment in agricultural education programs. Responses were received from 1,060 students in 23 secondary programs in rural and urban areas as well as those located on American Indian reservations using a five-part survey questionnaire. Comparisons were made by ethnicity. Significant differences were discovered between minority and non-minority student groups in several areas including demographics, perceptions of agriculture, barriers to enrollment and career occupations in agriculture.

Students’ Perceptions of Knowledge Bases and Contextual Applications in Agricultural Education. Gregory A. Cummings, Traci E. Tooley & Gary J. Wingenbach, Texas A&M University.

Abstract

Undergraduate students (N=163) enrolled in Topics in Agricultural Education and Leadership during fall 2001 reported their perceptions for five knowledge bases and six contextual applications encompassing the model for agricultural education at Texas A&M University. Respondents tended to agree with the knowledge bases and contextual applications, suggesting congruence between students’ perceptions and the department’s theoretical framework for guiding the teaching, research, and outreach responsibilities of the professoriate.

Most students identified their future career path as an occupation involving Leadership Education (n=69) and least with careers in Distance Education (n=1). Significant differences existed in selected knowledge bases and contextual applications when compared by gender and race. Female students rated the knowledge base, Evaluation and Accountability, and the contextual applications, Extension Education and Agriculture Science Teacher, significantly higher than did males. African American students rated the contextual application, Leadership Education, significantly lower than did Hispanic American or Caucasian students. The results of this study will help agricultural educators at Texas A&M University in designing, teaching, and evaluating
courses based on an accepted model for agricultural education. Additional research using other students’ and/or faculty members’ perceptions of the theoretical frameworks undergirding agricultural education at other universities increases our collective understanding of the principles that guide our profession.


Abstract

The purpose of this follow-up study was to determine perceptions among New Mexico State University pre-service agricultural education program graduates (Bachelor of Science in Agriculture degree completers) from 1990 to 2001 who are currently teaching agriculture on their attainment of teacher competencies and professional development activities influencing their growth on these teacher competencies since graduation. Data were gathered using a researcher-developed questionnaire.

The questionnaire contained three parts. Part one measured participants’ perceived teacher competency abilities at graduation and at the present time. The 28 teacher competencies were derived from State Board of Education (New Mexico State Board of Education, 1986, 1988, & 1998) teacher competency lists, Rosenshine and Furst (1971) teacher behaviors related to student achievement, Hedge’s (2000) essential teacher competencies needed by a master teacher, and seven keys to success in agricultural education from the Guide to Local Program Success (National Council for Agricultural Education, 2000). Part two of the questionnaire measured participants’ perception of the influence professional development activities had on competency growth during their time as a secondary agricultural education teacher. The third part of the questionnaire was designed to gather demographic data.

Participants perceived their at-graduation teacher competency abilities as satisfactory on average. On average, participants perceived their current teacher competency abilities to be between satisfactory and very good. For each of the 28 teacher competency statements, participants perceived growth from the time of graduation to their current abilities. The biggest improvement was on participants’ ability to keep students on task. The least improvement was on their enthusiasm toward all facets of the educational program, however this teacher competency statement was rated highest at graduation and maintained a high ranking as a current ability. Given a list of professional development activities, participants perceived on-the-job experience has having the highest level of influence on their teacher competency ability growth from the time of graduation to the present. Within inservice professional development activities, participants perceived state level professional organization and NMSU sponsored activities as the most influential on growth of their teacher competency abilities. Recommendations for program improvement and further research are offered.
Abstract

Agricultural education programs offer many unique hands-on opportunities to develop both valuable academic and vocational skills for its students. A variety of laboratories provide opportunities for students to actively and experientially engage in scientific inquiry and agricultural applications. In the course of skill development, evidence has suggested students will be more safety conscious if teachers also follow proper safety practices, demonstrate accurate safety knowledge, provide a safe laboratory environment, convey a positive safety attitude, and relay safety expectations to students (Harper, 1984). Positive safety attitudes, beliefs and practices of agricultural science teachers are crucial for insuring students’ educational opportunities are not hampered. This unique study assessed general safety and health perceptions, beliefs, and practices of teachers in Texas agricultural education by means of a Personal Belief Safety Scale (PBSS) score based on common safety and health practices used in agricultural settings.

Data were collected from 302, self-selected Texas agriculture teachers, or approximately 20% of all Texas' agriculture teachers in 1999. Results indicated these self-selected Texas agriculture teachers displayed positive agreements toward common measures that exhibit safety consciousness. It was also found that age and years of teaching experience might effect a teacher’s belief or attitude towards agricultural education program safety consciousness. First year teachers and teachers with limited experience appeared more approachable to safety concerns in their programs with female teachers exhibiting a higher conviction towards common safety practices than their male counterparts. Although it was also found that mean PBSS scores by Texas FFA area were significantly different (F=2.13), neither size of school nor the number or students in the agricultural education program had an effect upon teachers’ PBSS scores.

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An Examination Of A High School Horticulture Curriculum Process Designed For Diverse Student Learning Styles.  Melanie Overstreet, Sandy, Utah & Gary S. Straquadine, Utah State University.

**Abstract**

Educators have been confronted with the problem of presenting subject matter to students with varied learning styles, abilities, interests and goals. A study of related literature revealed a widespread indication of student diversity. Upon closer examination, it was determined that student diversity also existed in Utah secondary horticulture classes. A research project was conducted that explored the answer to the question of whether these students would benefit by expanding the curriculum to accommodate those differences. As part of the research project, a plant science curriculum that addresses student diversity was developed and implemented. The objective was to test whether the students had an increased motivation to learn as they accessed the curriculum according to their preferred learning modalities and individual interests. Qualitative analysis was accomplished through the use of pre-testing, surveys of both student participants and professional educators, and case studies. Student choice in course content teaching methodologies used was found to be a positive motivational factor in learning.

Evaluation Of An Educational Program To Address Excessive Adult Involvement In Youth Livestock Projects.  Jeff Goodwin, University of Idaho, Tim Murphy & Christy Wieser, Texas A&M University.

**Abstract**

The issue of excessive adult involvement in the preparation of youth livestock projects has long been a sensitive topic. If an agriculture education teacher or county Extension agent raises this issue at the local level, that individual is often cast in the role of policeman or “enforcer” of any subsequent “restriction of assistance” rules developed to manage adult involvement. This role places the agricultural educator in a precarious and uncomfortable position.

The purposes of this study were a) to describe current perceptions of excessive adult involvement in youth livestock project shows, b) to assess the effectiveness of an educational program designed to raise this issue in an entertaining and memorable manner, and c) to ascertain the participants’ perceptions of the appropriate roles of adults in youth livestock shows. The educational program described in this paper provides a non-threatening environment for the supervisors of 4-H & FFA livestock projects to raise this issue without becoming enforcers of “restriction of assistance” rules. The authors believe this enforcement role is most appropriately located among the youth themselves. The data from these respondents suggests that incidents of excessive adult involvement at youth livestock shows are commonplace, and that this is an issue that needs to be addressed. Providing advice and encouragement were deemed acceptable and appropriate roles for adults in youth livestock shows, while direct assistance, whether supplied or purchased, was generally perceived as unacceptable.
Faculty Philosophical Position Towards Distance Education: Competency, Value, and Educational Technology Support. Edmund T. Jones, James R. Lindner, Tim H. Murphy, & Kim E. Dooley, Texas A&M University.

Abstract

As higher education attempts to meet the growing demand for courses delivered at a distance, identification of potential barriers to faculty acceptance and adoption are needed. The purpose of the study was to describe faculty perceptions with respect to distance education competence, value, and information technology support by philosophical position towards distance education. Of the three constructs, only value was found to be significantly related to the philosophical position towards distance education. Teachers not philosophically opposed had a higher perceived value of distance education. Efficient communication of the increasing value of distance education is needed. This information can help administrators, faculty, and institutions remain competitive and make decisions on strategic plans regarding distance education.

Texas Agri-Science Teachers’ Attitude Toward And Stages Of Adoption Of Information Technology. Steve Fraze, Davin Fraze, Lance Keith & Matt Baker, Texas Tech University.

Abstract

The purpose of this study was to assess Texas Agri-Science teachers’ attitudes toward and stages of adoption of information technologies such as computers for professional productivity, computers for classroom use, electronic mail and the Internet. The study also determined what relationships, if any, existed between demographic and program variables with teachers’ attitudes and stage of adoption. Rogers’ (1995) Diffusion of Innovations Theory was used to guide the study.

Texas Agri-Science teachers had favorable attitudes toward all forms of information technology with the highest attitude toward the Internet. They also perceived themselves in advanced stages of adoption of information technologies. Texas Agri-Science teachers also supported on-line activities such as FFA contest registration and award applications. High correlations were discovered between computer anxiety, computer importance, computer use outside the classroom and home access with attitudes and adoption.

The adoption of computer, electronic mail and the Internet has reached critical mass among Texas Agri-Science teachers. Results of the study have implications for the education, implementation of on-line activities and communication with Texas Agri-Science teachers for stakeholders in the field.
Utah agricultural education teachers were surveyed to determine their attitude towards computers and computer technologies. The study utilized the Utah Agricultural Education Teachers’ Attitude Towards Computers survey developed by researchers at Utah State University. Questions for this instrument were modeled from previous work completed by the College of Education at the University of North Texas (Christensen & Knezek, 1999). Responses were received from 63 out of 82 agricultural education teachers who taught in Utah during the 2000-2001 academic school year.

Using a Likert scale of 1 to 5 the Utah agricultural education teachers were asked to indicate their feelings on a 51-item statement concerning attitudes towards computers. The range of the Likert scale from 1 up to 5, with 1 being strongly disagree, 2 disagree, 3 undecided, 4 agree, and 5 strongly agree. Analysis of individual survey items revealed that the top three most “strongly agreed” items were: “Knowing how to use a computer is a worthwhile skill,” “It is very important for me to learn how to use a computer,” and “Learning about computers is worthwhile.” The statements receiving the lowest means and indicated that the respondents “disagreed” with the statement were: “I do as little work as possible using a computer,” “I do not enjoy talking with others about computers,” and “I don’t understand how some people can spend so much time working with computers and seem to enjoy it.”

Utah agricultural education teachers indicated a positive attitude towards computers and computer technologies. Teachers also indicated that most of them had access to a computer in their department or in their classroom. However, the teachers indicated that they rarely accessed computers and computer technologies in their occupations. All of the agricultural education teachers indicated that they never required students to complete homework assignments on a daily or weekly basis. Utah agricultural education teachers indicated that equipment shortages and monetary reasons were the two most limiting factors in allowing them to integrate technology into the classroom. Utah agricultural education teachers may not be using computers and computer technology more frequently may be due to old computers, old software and/or outdated computer skills.
10:30 - 12:00 am

Session D- Shoreline B
Chair: Vern Luft
Facilitator: Dan Hubert
Discussant: James Christiansen

Profiling Women in Agricultural and Extension Education. Brenda Seevers, New Mexico State University & Billye B. Foster, University of Arizona.

Abstract

Women in agricultural education at the secondary level are significantly under-represented, comprising only 14.6 percent of the total population. The evolution of women in the field of agricultural and extension education is not well documented. Knowledge about women who have pioneered positions in agricultural education provides valuable information for upcoming generations of female educators. The purpose of this descriptive study was to create a profile of women involved in agricultural and extension education at the post-secondary level. A questionnaire was sent to a census of women with teaching responsibilities listed in the 2001 AAAE directory. In establishing a profile, women in this study possess similar characteristics as their male counterparts in relation to job satisfaction, personal demographics and types of subjects taught. However, few women reported that other women served as their role models or that they, themselves, were serving as mentors to young female faculty members. Additionally, although women indicated a high level of satisfaction with their current job, more than two-thirds felt they had experienced barriers related to gender. Most common barriers cited were: lack of acceptance from peers and students; inequity related to status and benefits, balancing work and family, and a lack of strong role models who accept both males and females.

Breaking the Mold and Paying the Price Women in Agricultural and Extension Education. Billye B. Foster, University of Arizona & Brenda Seevers, New Mexico State University.

Abstract

As agricultural and extension education at the university level revamps its image for the new millennium, it may be wise to recognize its growing diversity and seek more compatible options for women in the workforce. The purpose of this study was to describe the unique challenges regarding personal lives, barriers unique to women in the field, and mentoring and support systems available to women involved in agricultural and extension education at the university level. “Changes in education and societal thinking are key components in encouraging young women in non-traditional fields” (Johnson, A. G., 1997). The three themes reported in this study reflected a broad view of the issues facing women entering the profession of agricultural and extension education at the university level. 1.) Women in the field who feel encouraged seem to be happy and have a strong commitment to their role in the profession. 2.) Mentoring networks and support
systems are too few and do not meet the needs of the women in the field. 3.) Barriers to women in the profession are real and need to be addressed. The barriers perceived by women in agricultural and extension education may be far more real than we would like to think. This study gives insight into the experiences of women in the field of agricultural and extension education.

Session E- Northridge
Chair: Bill Kellogg
Facilitator: Greg Cummings
Discussant: Carl Igo


Abstract

Staying current with the ever-changing landscape of technology and industry needs have been traditional challenges for all agricultural disciplines, and agricultural systems management is no exception. Where will we go next and whom do we ask for direction? The purpose of this study is to assist us in answering such questions. The purpose of this study was to determine the skill and knowledge areas that were most valuable to managers entering an agricultural systems-related business. Agricultural systems management-related practitioners identified specific skills and knowledge areas that were important to beginning managers, and disclosed trends in general course areas that evolved from multiple skills and knowledge areas in selected course areas. Findings indicate what prior research has suggested in agricultural disciplines, current managers believe that a broad based general education is more important than an over specific and specialized degree. Also, the authors suggest that departments of agricultural mechanization, agricultural systems management, agricultural engineering, and agricultural education focus their efforts on the inclusion of scientific and mathematic principles in their curricula that can be readily transferred across the agricultural industry by students who are seeking employment.

Assessing the Overall Ethical Condition of the Competitive FFA Program as Perceived by Pre-Service Agricultural Science Teachers. Jon A. Hogg, Lance Keith, Matt Baker, Jacqui Lockaby, Steve Fraze, Texas Tech University.

Abstract

The major responsibility of FFA is education; however, the focus of competition has recently become very important to society. There is a tremendous advantage associated with competition when it results in the acquisition of knowledge and negative when it detracts from learning (Billings, 1980). The effect of competition on youth and the unethical practices involved with competitive events have become very controversial.
Recent studies have shown both positive and negative effects of competition on children; however, there does not appear to be a significant amount of research regarding ethical and unethical practices in FFA competitive events based on the perceptions of pre-service agricultural science teachers.

The purpose of this study was to examine perceptions of pre-service agricultural science teachers concerning competitive FFA events. The purpose accomplished by examining three open-ended questions. This study was the result of a larger study where data were collected using a questionnaire. The following results were found: (1) respondents perceived leadership, teamwork, character skills, responsibility, and life skills to be benefits of competitive FFA activities; (2) respondents indicated the need for more positive publicity and public education, the need to monitor the activities more closely, and the need to focus more on learning from the events to improve bad perceptions; and (3) almost one-fourth of the total group found no concerns with the overall ethical condition of the competitive FFA program; however, others thought competition overshadowed other programs, advisors were bad examples, and a win-at-all cost attitude existed.


Abstract

A clear driving force of the FFA program involves student growth and development by ethical participation in competitive events. There is a tremendous advantage associated with competition when it results in the acquisition of knowledge and negative when it detracts from learning (Billings, 1980). The effect of competition on youth and the unethical practices involved with competitive events have become very controversial. However, there does not appear to be a significant amount of research regarding ethical and unethical practices in FFA competitive events based on the perceptions of major stakeholders of the programs.

The purpose of this study was to examine perceptions of agricultural education faculty and pre-service agricultural science teachers concerning competitive FFA events. The purpose was accomplished by examining: (1) the overall ethical condition of competitive FFA activities; (2) the commonality of questionable practices; and (3) the commonality of the adherence to guidelines. Data were collected from a researcher-developed questionnaire for this descriptive-correlational study. The following results were found: (1) respondents who perceived questionable practices to be more common were more concerned with the overall ethical condition of the program; (2) respondents that participated in greater numbers of extra curricular activities tended to be more concerned with the overall ethical condition of FFA, at the same time, those respondents who participated in FFA were more aware of the adherence to guidelines; (3) differences were found in geographic location and the perception of the commonality of questionable practices; and (4) pre-service agricultural science teachers perceived questionable practices to be more common than agricultural education faculty.
A Comparison between Career and Technical Education and Other Students on a High Stakes Test. Jack Elliot & Augusta Zimmerman, University of Arizona.

Abstract
The question should actually be, “Is a raw score comparison a fair and accurate measure between the two groups?” The answer is “No, Career and Technical Education (CTE) students scored lower than other students on a recent high stakes test in Arizona.” Yet, when other influences were controlled for the following factors were found to have a significant influence on the score: All five “Special Population” areas (handicapped, limited English proficiency, economically disadvantaged, academically disadvantaged and being a single parent) were significantly associated with lower test scores and were predominantly found in the CTE population. Higher Visual Learner (learn by seeing) and Auditory Learner (learn by hearing) scores were significantly associated with higher test scores and were predominantly found with other students. Higher Kinesthetic Learner scores were significantly associated with lower test scores and were predominantly found with CTE students. Black, Hispanic or other males were associated with lower test scores. Hispanic females were associated with lower test scores.

Therefore, after controlling for the other influences (extraneous variables), no difference was found between the two groups. That means that they are just different groups of people and a raw score comparison is not an appropriate comparison.

Does grouping students according to their special population status affect the comparison? Yes, because there was a higher proportion of CTE students who received special population services and because special population categories were associated with lower test scores.

The conclusions are simple: Career and technical education students, for the most part, will always do worse on raw score comparisons. When the appropriate extraneous variables are built into the equation and controlled for, there usually is no difference between CTE and other students on standardized test scores. The raw score comparisons are inappropriate because the groups are different. The differences in scores can be attributed to the effects of the extraneous variables and not because of curriculum choice.

The implications for educators are important. If extraneous effects are not understood and controlled for, than career and technical education will not have a very positive future.

Therefore the recommendations are: CTE Administrators and Teachers must understand the problems associated with raw score comparisons on standardized tests. CTE state leaders must utilize this type of information in CTE promotional campaigns.
Assessing the Importance and Inclusion of Emotional Intelligence in Agricultural Education. Cindy Akers, Keri Miller, Steve Fraze, & Jacqui Lockaby, Texas Tech University.

Abstract

The purpose of this study was to explore the importance and inclusion of emotional intelligence by agricultural education instructors. Although much research has been conducted about the importance of emotional intelligence in the realm of education, research in the area of emotional intelligence in the agricultural education program is limited. The concept of incorporating emotional intelligence into the agri-science curriculum is not a new idea. The very philosophy of agricultural education lends itself to the development of emotional intelligence.

The teachers recognized eight out of the twenty constructs identified through the review of literature as high level success abilities. This means that agricultural education instructors believe these components are important and they are actually including them in their curriculum.

Eleven of the twenty emotional intelligence constructs were identified as low level needs. This indicates that teachers do not believe these constructs are important, and therefore do not need to be included in their programs. Only one construct, conflict resolution, was identified as being a critical need. This indicates that teachers believe conflict resolution is important, but they are not including it into their program curriculum.

The Relationship between Individual Talents and College Success Factors. Todd Brashears & Matt Baker, Texas Tech University.

Abstract

Forty-one students in the College of Agricultural Sciences and Natural Resources at Texas Tech University completed the Gallup StrengthsFinder to determine cognitive and affective “talents.” Data from this instrument were correlated with commonly used academic success indicators: First Semester GPA and Cumulative GPA. The relationship between talents and traditional predictors of SAT, ACT, High School GPA and High School Percentile Rank was also analyzed using a correlational design method. The four talent themes (Striving, Impacting, Relating and Thinking) failed to provide a very strong correlation with college success indicators, however, the Thinking theme proved to have a very strong relationship with the SAT score and a moderate relationship with High School GPA. Also noteworthy were the negative moderate relationships between the Relating and Striving themes and SAT scores.