

Procedures

Animal science is a year-long course for the traditional seven period day schedules or the new four-by-four semester block schedule. This course is designed for students 9-12 in North Carolina Public Schools. Essential elements for this course and units and topics of instruction are listed. The curriculum committee recommended a primary textbook to be used for this course. There are also secondary references. All essential elements will be met by using designated references from both primary and secondary sources.

A course blueprint provides information regarding the recommended hours of instruction for each unit title/competency and objective statement as well as information indicating the percentage of weight each objective statement has in relation to both the course and the unit of instruction. Type of outcome behavior is identified as either "cognitive 1,2,3," "psychomotor," or "affective" for each competency and objective statement. Additionally, related skills were identified for arts, communications health/safety, math, science, and social studies, as well as vocational or JPTA skills. The blueprint is designed to provide 108 hours of teaching content. Twenty-seven additional hours of teaching time remain for local adaptation by the teacher if the course is offered on a block four 135 hour unit, and 72 additional hours of teaching time remains for local adaptation by the teacher if the course is offered on a traditional 180 hour unit.

Outcomes

The project has proven to be very successful. Many agricultural education programs have either added animal science or substituted the traditional agricultural production for animal science. In less than two years, North Carolina went from 0 to > 200 animal science programs. Student numbers are up with a more diverse class make up. Equine science continues to attract a large number of females and bright students. Parents are very supportive and have elected to make numerous donations of animals, equipment and personal time to these programs. Many programs are beginning to get science credit and are co-teaching with science teachers. New teachers and student teachers are utilizing technology by teaching with Power Point and Web-based materials such as Oklahoma State Animal Science Department's Breeds of Livestock. Finally, the agribusiness industry has been a tremendous support providing classroom resources, lab equipment and job opportunities for the students in North Carolina. The additional of animal science to the North Carolina Agricultural Education Program of Study has improved our positioning to meet the needs of students preparing for careers in the twenty-first century.

Reference

National Research Council. (1988). *Understanding agriculture: New direction for education*. Washington, DC: National Academy Press.

WHOSE REALITY COUNTS? PROFESSIONAL DEVELOPMENT NEEDS OF STATE EXTENSION SPECIALISTS

Matt Baker
Tina Allen
Olanda Bata
Heisel Villalobos
Carl Pomeroy
University of Florida

Introduction

Professional development is a planned experience designed to change behavior and result in professional and/or personal growth that enhances organizational effectiveness (Bryan & Schwartz, 1998). University of Florida Extension (UFE) state specialists have numerous responsibilities including the charge to remain current with research in their particular field and contribute to statewide extension programming. Specialists are educated in a technical discipline and are employed after the attainment of a Ph.D. Most UFE specialists hold joint appointments between extension and either academic programs or research. However, conflicts exist between promotion and tenure pressures (which often overemphasizes research publications) and the need to support extension programming. Once employed, specialists have professional development opportunities through UFE, as well as their involvement in technical professional associations. Since few studies have been conducted in relation to the professional development needs of state specialists, this study will supply foundational information to staff development professionals, extension administrators, and graduate student advisors who counsel future state specialists.

Methodology

The purpose of this descriptive, multiphase study was to identify professional development needs of state specialists based upon the perceptions of specialists, county directors, and county faculty. Phase I involved a census survey of

67 county directors regarding their perceptions of professional development needs of specialists. Phase II assessed professional development needs of specialists as perceived by county faculty (N=222, n=110). In Phase III, specialists were asked to identify their professional development needs (N=220, n=118).

The instrument was modified slightly as it went through each study phase. Generally acceptable instrumentation procedures in agricultural and extension education were used in establishing content and face validity, and instrument reliability. The instrument measured three constructs areas: (1) research generation and synthesis, (2) extension programming, and (3) communication and presentation. Critical needs were determined based upon the use of a matrix analysis as recommended by Witkin (1984). Means of attribute importance and the degree to which state specialists possessed the attribute were calculated for each construct. The attribute means were then used to construct a XY graph, plotting the degree of possession of each attribute on the “X” axis and the overall importance of each attribute on the “Y” axis. After plotting both grand means, four quadrants emerged. This allowed the researchers to plot individual attribute scores based upon a mean score of importance and a mean score of possession. As a result, each attribute in the construct fell into a critical need quadrant, a low-level need quadrant, a high-level successful ability quadrant, or a low level successful ability quadrant.

Results/Implications

For the sake of conserving space in this text, only the critical needs will be reported for each phase (Phase I – perceptions of county directors, Phase II – perceptions of county faculty, and Phase III – perceptions of state specialists). In the research generation and synthesis construct, respondents in Phase I indicated that specialists should collaborate with county faculty in conducting result demonstrations. Respondents in Phase II agreed with the critical need identified by Phase I respondents, and felt that specialists needed to do a better job in communicating client problems to researchers. Respondents in Phase III indicated a critical need regarding difficulties in remaining current with research findings in their discipline. In terms of extension programming, respondents in Phases I and II agreed upon the following critical needs: (1) produce educational programming material; (2) deliver appropriate inservice training to county faculty; and (3) evaluate state major programs. In addition, respondents in Phase I indicated a need for specialists to better understand their clients. However, respondents in Phase III felt that specialists had a critical need to identify funding sources for program development. In terms of communication and presentation, respondents in Phase I revealed a critical need related to more frequent travel of specialists to county offices. Respondents in Phase II indicated that specialists had a critical need regarding their ability to listen and to respond to technical questions in a timely manner. However, respondents in Phase III had a critical need for learning to incorporate instructional techniques into their presentations.

Future Plans

The results reveal that the critical needs identified by specialists differed in all three construct areas, when compared to those identified by county faculty and county directors. It is also interesting to note that county faculty and county directors were relatively consistent regarding their expectations of specialists. The next UFE step is to take this information, enrich it with focus group interviews with all three audiences and extension administrators, and develop a Position Analysis Tool (PAT) for specialists that can be used for individual assessment and improvement.

Costs/Resources Needed

It is anticipated that with a modest operating budget and a one-third time doctoral-level graduate assistantship, the faculty member responsible can complete the development of the PAT for specialists and beta test it's performance within a one-year period of time.

References

- Bryan, W. & Schwartz, R. (1998). *Strategies for staff development: Personal and professional education in the 21st Century*. San Francisco: Jossey-Bass, Inc., Publishers.
- Witkin, B.R. (1984). *Assessing needs in education and social programs* (1st Ed.). San Francisco, CA: Jossey-Bass, Inc