Use of Managerial Proficiencies in Agricultural and Extension Education: An Assessment of Virginia Cooperative Extension

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Abstract
The purpose of this study was to determine the relative strengths and weaknesses of Virginia Cooperative Extension (VCE) professionals in 12 proficiencies. The Southern Extension Leadership Development (SELD) Consortium (1999-2000) identified the proficiencies as important for Extension professionals. Using the Managerial Assessment Proficiency (MAP) test battery participants were assessed in four proficiency areas: (a) Job management; (b) Relating to others; (c) Team building; and (d) Thinking clearly. VCE professionals (n = 133) were assessed during a two-day in-service training session in terms of their managerial proficiency. The highest percentile ranking for the VCE professionals was found to be planning and scheduling work (68th percentile), followed by making decisions and weighing risks (63rd percentile), followed by giving clear information (62nd percentile) and appraising people (62nd percentile) and identifying and solving problems (62nd percentile). The highest proficiency composite ranking was supervision (61st percentile) followed by administrative (58th percentile). Comparisons between VCE and SELD participants (n = 1157) found higher percentile rankings for VCE participants in all but three of the proficiency areas.

Keywords: Proficiency, Competency, Extension, Training, Workshop, Curriculum

Introduction and Theoretical Framework
Professional competencies or proficiencies are essential for all educators in order to perform their job effectively. Extension Agents must be proficient in a number of educational competencies or proficiencies that include capabilities, knowledge, and skills that are required to effectively perform their job. As early as 1959, the National Committee on Extension Administrators noted nine competencies that are critical for effective Extension educators (McCormick, 1959). There were 12 different competencies examined in this study. These competencies include (a) understanding the complexity of social systems; (b) knowledge of program planning and development; (c) understanding the nature of human development; (d) knowledge of CES system, including organization and administration; (e) educational process; (f) effective communication; (g) understanding cognitive processes; (h) program research and evaluation; and (i) possession of specialization knowledge. These competencies have remained the foundation of research for over 40 years when studying in-service needs of Extension agents (Cooper & Graham, 2001; Smith & Bigler, 1985; Gibson & Hillson, 1994; Mincemoyer & Kelsey, 1999; Gibson & Brown, 2002).

While competencies/proficiencies can be defined as those tasks, skills, attitudes and values, and appreciation that are deemed critical to a successful life (Finch & Crunkilton, 1999),
The roles and challenges of today’s new environment is requiring different roles and competencies (Stephen, 2000). During 1999-2000, the Southern Regional Extension Leadership (SELD) Consortium (i.e., Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virginia Islands, and Virginia) identified four major areas of proficiencies that were believed to be important for being an effective Extension professional. These four areas include: (a) time management and prioritizing, setting goals and standards, and planning and scheduling work; (b) relating to others - listening and organizing, giving clear information, and getting unbiased information; (c) training, coaching, and delegating, appraising people and performance, and disciplining and counseling; and (d) thinking clearly - identifying and solving problems, making decisions, weighing risk, and thinking clearly and analytically. Virginia Cooperative Extension (VCE) has taken a pro-active role in assessing its unit coordinators, campus-based administrators, 4-H center directors, and agricultural research education center directors.

Assessment is the beginning of the professional development process for VCE professionals.

There have been many studies over the years, which support the needs for core competencies. Gibson & Hillison (1992) identified eight core competencies that area specialized Extension agents, subject matter specialists and administrators deemed necessary for effective Extension work in North Carolina (Appendix A). Previously, McCormick (1959) identified eight core competencies and technical competencies that Extension professionals needed in order to be effective. Likewise, studies conducted by Price (1960), Ussery (1964), and Hubbard (1971) all identified the same eight core competencies in Arkansas, Tennessee, and South Carolina. It is imperative that Extension professionals are not only well educated and capable of specialized tasks, but also are prepared to meet the challenges of the profession (Gibson & Hillison, 1994).

There is an increased emphasis placed on project performance and outcomes by government, donor agencies, and universities engaged in international agricultural development (Radhakrishna, 2001). Colleges and universities provide the basic training and education to enter into the field of Extension work; however, the substance gained from an undergraduate educational program is limited (Cross, 1987; Oglesby & Krueger, 1989). Fast changes in society, technological developments, complex roles and responsibilities of professionals require continuing education, lifelong learning, in-service training and, in most cases, graduate education (Merriam & Caffarella, 1991). Darkenwald and Merriam (1982) emphasized the importance of staff development to stimulate intellect, to increase knowledge, to keep abreast of new advances and developments and for organizational effectiveness. It is important to fully take advantage of opportunities to attend workshops, take courses and staying up-to-date takes time and energy. Covey (1989) emphasized that if we do not “keep our saw sharpened” in today’s society we will be left behind. Peters (1991) told us that we must explore ourselves and how we make an impact on others.

Purpose

The purpose of this study was to determine the relative strengths and weaknesses of VCE professionals in four major managerial competency areas of (1) determined the relative strengths and weaknesses of VCE professional with the major competency Job management, (2) Relative strengths and weaknesses of VCE professionals with the major competency Relating to others, (3) Relative strengths and weaknesses of VCE professionals with the major competency Team building, (4) Relative strengths and weaknesses of VCE professionals with the major competency Thinking clearly. A secondary purpose was to compare the strengths and weaknesses between VCE and SELD Extension professionals with respect to the four competency areas above.

Methods

Sample. The Virginia Cooperative Extension (VCE) managers participating in the study consisted of unit coordinators, 4-H center directors, agricultural research and Extension center directors, and campus-based administrators. A total of 138 VCE professionals were assessed using the Managerial Assessment of Proficiency (MAP) battery. In this study, proficiencies and competencies are used synonymously. Five individuals did not
complete the assessment, resulting in a total of 133 (96.7%) usable individual MAP profiles.

A second group of managers used in the study were Southern Extension Leadership Development (SELD) participants who had previously been assessed with the MAP. These were vice-presidents, directors of Cooperative Extension and experiment stations, deans, center directors, department heads, district county directors, county Extension agents, and faculty from 13 southern states and Delaware. There were a total of 1157 SELD participants with individual MAP profiles.

**Instrument.** The instrument used in assessing participants’ management proficiency was the *Managerial Assessment of Proficiencies* (MAP) Training House (1995). The MAP employs a procedure, which asks participants to watch case studies presented in the week in the life of a manager and four supervisors who report to them. After each episode, the participant records what they do and do not like about the behavior of the manager(s) that was just seen on the video. Participants are asked to select their responses to the questions from multiple-choice statements. There are four major proficiency competency areas in the assessment battery with three proficiencies within each area plus a competency area composite.

The separate proficiencies (and their respective composite) by competency area include: (a) Managing your job - time management and prioritizing, setting goals and standards, planning and scheduling work and an administrative composite; (b) Relating to others - listening and organizing, giving clear information, getting unbiased information, and an communication composite; (c) Building the team - training, coaching, and delegating, appraising people and performance, disciplining and counseling, and supervisory composite; and (d) Thinking clearly - identifying and solving problems, making decisions, weighing risk, thinking clearly and analytically, and an cognitive composite. The normative group that MAP uses in calculating its percentile ranking consists of 5,000 managers thought to be representative of managers across the country (e.g., from banking, retail, healthcare, government, etc.).

**Validity and Reliability.** All of the instruments used in the MAP assessment battery were evaluated for their respective validity (predictive, construct, and face) and reliability (test-retest and split-half) with satisfactory coefficients reported. Authorization was not acquired from the instrument’s developers to publish the exact coefficients prior to this writing. Face validity was determined using an expert panel of Extension educators. These included the Texas Agricultural Extension Service, Georgia Cooperative Extension, and the Mississippi Cooperative Service.

The individual profile aggregate reports from the MAP for the VCE participant group were reviewed and ranked according to proficiency and composite proficiency percentile rankings. Also, proficiency percentile rankings of VCE leaders and Southern Extension Leadership Development (SELD) program participants were compared across the 12 proficiency and corresponding composite scores.

**Results**

**Managing your job** – The highest percentile ranking of VCE professionals was in *Planning and scheduling work* (68th percentile) followed by the *Administrative composite* (58th percentile). Percentile rankings for *Time management & prioritizing* and *Setting goals and standards* were at the 51st and 55th percentiles, respectively. Comparisons between VCE and SELD participants found higher percentile rankings for VCE participants in *Setting goals and standards, Planning and scheduling work*, and for the *Administrative composite. Time management & prioritizing* was slightly lower for the VCE group.

**Relating to others** – The highest percentile ranking of VCE professionals for the category was in *Give clear information*, (67th percentile) followed by *Getting unbiased information* (55th percentile) which was followed by the *Communication composite* (54th percentile). However, *Listening & organizing* was at the 45th percentile. Comparisons between VCE and SELD participants found higher percentile rankings for VCE participants for three percentile rankings – *Giving clear information, Communication composite, and Getting unbiased information. Listening and organizing* was slightly lower for the VCE group.

**Building the team** – The highest percentile ranking for VCE professionals was *Appraising people and performance*, which was at the 62nd percentile. This was followed by *Disciplining and counseling*, the Supervisory
composite (both at the 61st percentile), and Training, coaching, and delegating, (59th percentile). Comparisons between VCE and SELD participants found higher percentile rankings for VCE participants for all four percentile rankings: Appraising people and performance, Disciplining and counseling, the Supervisory composite, and Training, coaching, and delegating.

Thinking clearly – The highest percentile ranking for VCE professionals was Making decisions weighing risks (63rd percentile) followed by Identifying and solving problems (62nd percentile) followed by the Cognate composite (55th percentile). The lowest percentile ranking was for Thinking clearly and analytically (39th percentile). Comparisons between VCE and SELD participants found higher percentile rankings for VCE participants for three percentile rankings: Making decisions, Identifying and solving problems, and the Cognate composite (55th percentile). Thinking clearly and analytically was lower than the SELD group.

Conclusions

The findings of this study have strong implications for the staff development for Extension professionals. It supports the earlier work conducted by McCormick (1959) through Cooper & Graham, (2001). Individuals are hired into Extension with a variety of technical degrees ranging from animal science, horticulture, crop science, psychology, child development, to biochemistry. This creates a real challenge for Extension staff development specialists to develop effective training programs and curricula. To be successful in Extension programming requires education, training, and skill in both the process area as well as the subject matter area. This study has yielded data that supports previous studies that have shown the general education competencies/proficiencies necessary for effective Extension work.

The strongest competencies VCE professionals exhibited as a group were planning and scheduling work (68th percentile), followed by making decisions and weighing risks (63rd percentile), followed by giving clear information (62nd percentile) and appraising people (62nd percentile) and identifying and solving problems (62nd percentile). The highest proficiency composite ranking was supervision (61st percentile) followed by administrative (58th percentile) and cognitive (55th percentile). Comparisons between VCE and SELD participants (n = 1157) found higher percentile rankings for VCE participants in all but three of the proficiencies. The proficiencies, time management and prioritizing, listening and organizing, and thinking clearly and analytically were VCE’s weakest areas with percentiles of 51 percentile, 45 percentile, and 39 percentile, respectively.

The results presented here show that Extension needs to build a curriculum that encompasses time management and prioritizing, listening and organizing, and thinking clearly and analytically. Because Extension programming is a vital importance, future research should be conducted in this area.

Educational Importance

This study offers valuable information for the training and development of Extension professionals nationally and internationally. Seevers, et.al (1997) stated "some of the problems faced by Extension are the same the world over." The baseline data from this study provide a foundation for both the content and level of proficiencies to be taught at any location. Collecting similar baseline data before providing training is crucial for effective training. This study could be used as a model for those providing in-service instruction on the international level.

This study points out the strongest proficiencies that VCE professionals possess in VCE. And, also, reveals the weakest proficiencies and discusses the implications for training needs within VCE and SELD. It certainly has implications at the international level. The comparison between VCE and SELD participants is important in many ways. Not only does it allow the reader to see the difference in the United States, but it also begins to cause one to think how this would be in other countries. It sets a framework for developing curricula that may include minimal proficiency levels for Extension professionals for specific Extension positions. This paper points out the research in the area of competency-based education that should be continued. Educators must be prepared to engage in this kind of research at the state, regional, national, and international level. Virginia Cooperative Extension is utilizing this
We express our sincere gratitude to Dr. Franklin (Lex) Bruce, Extension Evaluation Specialists with Virginia Cooperative Extension for assistance with data processing and general assistance with this study.

References
Appendix A.

### Need and Importance Rankings of Competency Training by State

<table>
<thead>
<tr>
<th>Competency</th>
<th>Ohio&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Arkansas&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Tennessee&lt;sup&gt;c&lt;/sup&gt;</th>
<th>South Carolina&lt;sup&gt;d&lt;/sup&gt;</th>
<th>North Carolina&lt;sup&gt;e&lt;/sup&gt;</th>
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<tr>
<td>Educational process</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>6.5</td>
<td>1</td>
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<tr>
<td>Effective thinking</td>
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<td>6</td>
<td>6</td>
<td>4</td>
<td>6</td>
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<tr>
<td>Extension organization &amp; administration</td>
<td>9</td>
<td>4</td>
<td>9</td>
<td>6.5</td>
<td>7</td>
</tr>
<tr>
<td>Program planning &amp; development</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2.5</td>
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<tr>
<td>Research &amp; evaluation</td>
<td>6</td>
<td>9</td>
<td>5</td>
<td>8</td>
<td>5</td>
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<tr>
<td>Technical knowledge</td>
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<td>1</td>
<td>3</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Understanding human development</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>2.5</td>
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<tr>
<td>Understanding social systems</td>
<td>8</td>
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<td>8</td>
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</tbody>
</table>

**Note.** Readers may contact the authors for additional information found in Appendix B.

<sup>1</sup> Ranking scale: 1 = most needed, 2 = next most needed, 3 = next most needed, etc.

<sup>2</sup> Ranking scale: 1 = most important, 2 = next most important, 3 = next important, etc.


