AN ASSESSMENT OF EXTENSION EDUCATION CURRICULUM AT LAND GRANT UNIVERSITIES

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Abstract

A critical assessment of extension education is needed to ensure there are adequate opportunities for students to study extension education and that the curriculum is relevant to today's Cooperative Extension Service. This descriptive study was conducted to assess extension education curriculum by identifying and comparing the courses being taught at land grant universities with the competency areas in the Ohio State model of extension education. Courses related to extension knowledge, leadership, and management; theories of human development and learning; program planning, implementation, and evaluation; and applied research were most commonly included in the curriculum. The lack of balance in the curriculum and the discrepancies between the Ohio State model and current practice indicate a need for continued discussion about the types of courses that should be included in extension education curriculum.

Introduction

Cooperative Extension is a dynamic organization that seeks to meet the needs of a constantly changing society. Its ability to be successful in this mission is largely dependent on the professional abilities of the extension agents interfacing with clientele (Stone & Coppernoll, 2004). Enrolling in an undergraduate or graduate degree program in extension education is a common way agents prepare themselves for employment, yet research has often favored topics such as inservice training and professional development (e.g., Conklin, Hook, Kelbaugh, & Nieto, 2002; Gamon, Mohamed, & Trede, 1989; Waters & Haskell, 1988) rather than academic preparation.

The lack of research directed toward extension education curriculum may be because the need for such a program is misunderstood. The written position descriptions for open Extension positions frequently describe a desire for applicants with degrees in programmatic fields *other* than extension education; rarely is a degree in extension education specifically identified as desirable (National Job Bank, 2008). Yet extension agents need to improve their skills in job-related areas beyond their specific programmatic expertise and the scope of primary and secondary classroom management. Adult education and volunteer management are two such skill areas closely associated with employment in Cooperative Extension (Franz, 2007; Schmeising & Safrit, 2007).

According to Scheer, Ferrari, Earnest, and Connors (2006), ~~"~~developing and revising academic programs must be an ongoing process" (Implications and Conclusions, ¶ 1). Extension education should not be exempt from such scrutiny. However, Scheer et al.'s review of extension education at The Ohio State University was the first published article to focus exclusively on extension education in recent years. Studies addressing the academic preparation of extension agents are largely absent from the major journals of the profession (e.g., *Journal of Extension, Journal of Agricultural Education, Journal of International Agricultural and Extension Education*). This stands in contrast to peers within agricultural teacher education, who

have re-examined their coursework and program focus at regular intervals (Barrick, 1993; McLean & Camp, 2000; Myers & Dyer, 2004). Given the challenge of keeping extension education curriculum relevant (Acker & Grieshop, 2004), it is past time for a critical assessment of extension education throughout the country.

Review of Literature and Theoretical/Conceptual Framework

Historically, extension education has focused on topics typically associated with being an extension agent, such as program planning and evaluation. Legacy and Wells (1987) found experienced agents identified program planning, evaluation, and the development of media presentations as the three most important instructional items for extension education. The most important topics for internship preparation were considered to be program planning and maintenance, committee involvement, and personal visits.

Acker and Grieshop (2004) examined the types of undergraduate and graduate courses offered in the broader area of agricultural and extension education. Most common at the undergraduate level were topics such as communication, personal and professional leadership, and teaching methods. Graduate coursework focused on research, advanced teaching methods, and leadership development. Program planning and development courses were common at both academic levels, but the frequency of their occurrence was not indicative of the importance found by Legacy and Wells (1987).

Formal extension education programs can play an integral role in developing students' job skills by providing a curriculum uniquely tailored to the competencies required of extension professionals. According to Kelly (2004), curriculum is ~~–t~~he overall rationale for any educational programme" (p. 4). Taba's (1962) theory of curriculum development proposed a sequential approach to designing curriculum based on the scientific analysis of society, culture, the learner, and the nature of knowledge. Seven steps were included in Taba's model: (a) diagnosis of needs, (b) formulation of objectives, (c) selection of content, (d) organization of content, (e) selection of learning experiences, (f) organization of learning experiences, and (g) determination of what to evaluate and how to do so. Taba's model illustrates the theory that content can be organized so as to achieve educational objectives. Therefore, selection of the appropriate content is a critical step towards achieving a program's educational objectives.

Scheer et al. (2006) developed a conceptual model known as the Ohio State model to organize extension education; it is the only one known to have been published and thus provides a starting point for curriculum research. Tyler (1949) argued,

> Since the real purpose of education is not to have the instructor perform certain activities but to bring about significant changes in the students' pattern of behavior, it becomes important to recognize that any statements of objectives … should be a statement of changes to take place in the students. (p. 44)

Although in recent years some universities have expanded their view of extension education to include a variety of nonformal education careers, the broad objective of the Ohio State model is to teach students the knowledge, skills, and behaviors necessary for eventual employment in Cooperative Extension (Scheer et al., 2006).

The Ohio State model has 10 core competency areas (see Figure 1) necessary for success in Cooperative Extension and, consequently, essential for inclusion in extension education curriculum. The competency areas were identified using selected portions of the work of Cooper and Graham (2001), Levine (as cited in Scheer et al., 2006), and common requirements for employment in Cooperative Extension (Scheer et al.). Cooper and Graham found that extension agents and supervisors considered seven competency areas to be important. In order of greatest to least importance, they were: (a) faculty/staff relations; (b) public relations; (c) work

habits; (d) program planning, implementation, and evaluation; (e) personal skills, (f) management responsibilities, and (g) personal and professional development. Similarly, Levine identified 10 core competencies: (a) program planning and development; (b) program implementation and delivery; (c) evaluation, applied research, and scholarship; (d) communication skills; (e) educational and information technology; (f) facilitative leadership (g) diversity and multiculturalism; (h) marketing and quality service; (i) external linkages; and (j) professionalism and career development (Michigan State University Extension, 2008).

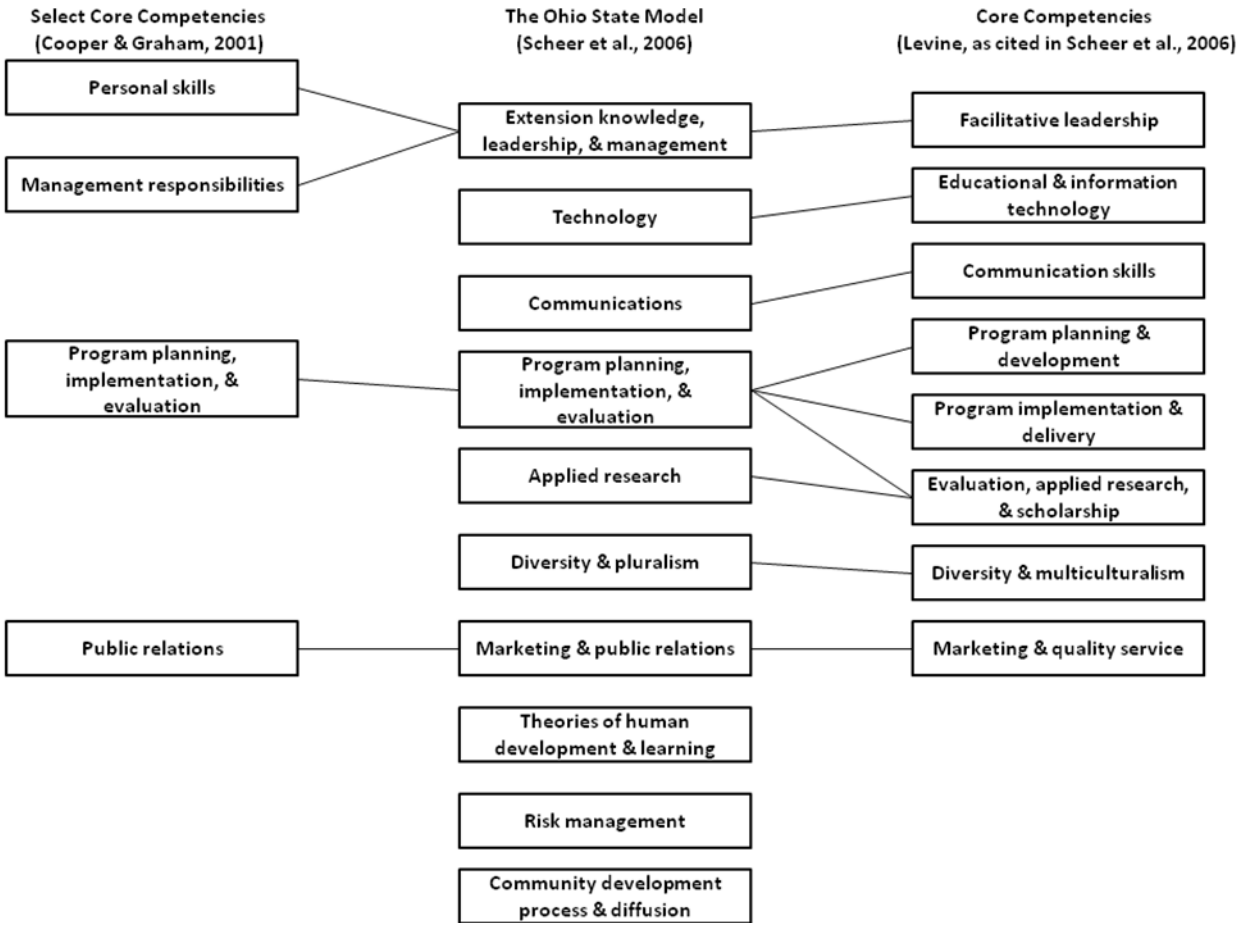

Figure 1. Foundations of The Ohio State model of extension education.

Scheer et al. (2006) linked the identified competencies to the theoretical foundations of extension education. Each competency area identified from the research was grounded in theory. For example, the adult learning competency area was theoretically supported by the work of Brookfield (1988), Knowles (1990), and Knowles, Holton, and Swanson (1998). Because of space constraints, an exhaustive listing of the thirty supporting theoretical references has not been included in this article.

Scheer et al. (2006) used the Ohio State model to evaluate the undergraduate and graduate extension education curriculum at The Ohio State University and to determine where improvement might be needed. Their use of the model to evaluate the curriculum led to the identification of gaps and the subsequent addition of a course to the

curriculum. A similar process, based on the Ohio State model, was used in this study to identify gaps in extension education curriculum at the national level.

Purpose

The purpose of this study was to assess the content included in extension education curriculum at land grant universities with formal extension education majors, minors, or graduate specializations. Specifically, the objectives were to:

1. Identify the courses included in extension education curriculum at the undergraduate and graduate levels.
2. Compare the courses included in extension curriculum at the undergraduate and graduate levels with the competency areas in the Ohio State model of extension education.

Methods/Procedures

This descriptive study used a quantitative approach to content analysis (Gall, Gall, & Borg, 2007) to gather data from the Web sites of universities and tribal colleges within the land-grant system. A quantitative approach to content analysis differs from a qualitative approach in that frequencies are used to derive meaning from the data, whereas a qualitative approach emphasizes the researcher's own interpretation (Gall et al.). In the context of this study, a quantitative approach to content analysis literally meant counting the number and the types of courses offered by land grant universities. A census of the 1862, 1890, and 1994 land grant universities and tribal colleges (collectively abbreviated as LGUs) was conducted in September 2007. The population for the study was restricted to the primary campus of each LGU (N = 108).

Courses within extension education were identified by reviewing each LGU's Web site. Only LGUs which *clearly* designated an extension education undergraduate major and/or minor (n = 11) or graduate specialization (n = 21) had their courses included in the study. Courses listed as departmental requirements and/or approved electives for extension education were included in the data analysis. Graduate courses were defined as courses designated at the 500/5000 level or above. Undergraduate courses were defined as courses designated at the 400/4000 level or below. To the extent possible, general university requirements for undergraduates were not included in the data analysis. Examples of courses considered to be general university requirements included basic mathematics courses and freshman orientation seminars.

Gall et al. (2007) said "the use of standard coding categories permits comparison with other studies that have used the same system" (p. 289). Given the stated objective to compare courses included in extension education curriculum at the undergraduate and graduate levels with the competency areas in the Ohio State model, the competency areas within that model were used to code the data. The competency areas were: (a) extension knowledge, leadership, and management; (b) technology; (c) communications; (d) program planning, implementation, and evaluation; (e) applied research; (f) diversity and pluralism; (g) marketing and public relations; (h) theories of human development and learning; (i) risk management; and (j) community development process and diffusion. The placement of a course into a competency area was primarily based on the course title. Course catalog descriptions were used to aid in the coding process when course titles were perceived to be ambiguous. Frequencies and percentages were reported for the types of courses available at the undergraduate and graduate levels.

Where the Ohio State model failed to capture certain courses, the researchers clustered those courses into categories based on course titles and catalog descriptions. Revisions were conducted until consensus was reached among the researchers with regard to the placement of courses into categories. The use of the terminology "category" to describe clusters of courses not captured in the Ohio State model versus "competency area" should be noted because

the categories were developed to describe what *was* being taught without a value judgment determining if those courses *should* be taught.

This study has limitations. First, it is limited by the collection of online data. The researchers acknowledge departments may have made changes to their curriculum that were not reflected in their online materials. Second, several universities offered a combined agricultural and extension education major. The broader focus of a combined major may have skewed the data to include topics focused on teacher preparation. Third, the coding of courses was based on the course title and catalog description, which may not comprehensively reflect the true content of a course. The researchers attempted to minimize the study's limitations by using multiple sources of information, including departmental Web sites and course catalogs. LGUs were contacted directly when the Web site and course catalogs failed to provide clarity.

Results/Findings

Objective 1: Course Identification

At the undergraduate level, the researchers found 126 courses for extension education majors or minors (Table 1).

Table 1
Undergraduate Level Courses in Extension Education (N = 126)

Course category	*f*	%
Extension knowledge, leadership, and management	37	29.37
Theories of human development and learning	20	15.87
Program planning, implementation, and evaluation	16	12.70
Communications	13	10.32
Internship and practicum	11	8.73
Special topics	7	5.56
Technology	6	4.76
Community development process and diffusion	3	2.38
Directed and independent studies	3	2.38
Natural resources	3	2.38
Applied research	2	1.59
Diversity and pluralism	2	1.59
Marketing and public relations	2	1.59
Miscellaneous	1	0.79
Risk management	0	0.00

Five categories were developed to supplement the Ohio State model: (a) internship and practicum, (b) special topics, (c) directed and independent studies, (d) natural resources, and (e) miscellaneous. The most frequently offered courses were in three competency areas: extension knowledge, leadership, and management (n = 37); theories of human development and learning (n = 20); and program planning, implementation, and evaluation (n = 16). The competency areas with the fewest courses were miscellaneous (n = 1) and risk management (n = 0).

There were 249 graduate courses listed for extension education (Table 2).

Table 2
Graduate Level Courses in Extension Educaiton (N = 249)

Course category	*f*	%
Applied research	57	22.89
Theories of human development and learning	45	18.07
Extension knowledge, leadership, and management	36	14.46
Program planning, implementation, and evaluation	36	14.46
Special topics	23	9.23
Directed and independent studies	13	5.22
Internship and practicum	10	4.02
Technology	7	2.81
Diversity and pluralism	6	2.41
Natural resources	6	2.41
Community development and diffusion	5	2.01
Miscellaneous	3	1.20
Communications	1	0.40
Marketing and public relations	1	0.40
Risk management	0	0.00

The same five categories developed to supplement the Ohio State model at the undergraduate level were needed to describe courses at the graduate level. The most frequently offered courses were clustered into the competency areas of applied research (n = 57) and theories of human development and learning (n = 45). The competency areas with the fewest courses were communications (n = 1), marketing and public relations (n = 1), and risk management (n = 0).

Objective 2: Comparison with Ohio State Model

Each of the competency areas from the Ohio State model was represented by at least one course at one or more LGUs, with the exception of risk management (Table 3).

Table 3
Extension Course Frequencies by Undergraduate (UG) and Graduate (G) Level

Course category	UG[a] Courses (*f*)	G[b] Courses (*f*)
Extension knowledge, leadership, and management	37	36
Theories of human development and learning	20	45
Program planning, implementation, and evaluation	16	36
Communications	13	1
Technology	6	7
Community development process and diffusion	3	5
Applied research	2	57
Diversity and pluralism	2	6
Marketing and public relations	2	1
Risk management	0	0

[a]Number of undergraduate programs = 11.
[b]Number of graduate programs = 21.

The frequency of undergraduate courses in the competency areas of extension knowledge, leadership, and management; theories of human development and learning; program planning, implementation, and evaluation; and communications exceeded the number of LGUs that had an extension major and/or minor. The frequency of undergraduate courses in the competency areas of technology, community development process and diffusion, applied research, diversity and pluralism, marketing and public relations, and risk management was fewer than the number of LGUs that had an extension major and/or minor. At the graduate level, the frequency of courses in the competency areas of applied research; theories of human development and learning; extension knowledge, leadership, and management; and program planning, implementation, and evaluation exceeded the number of LGUs with a graduate specialization. The frequency of graduate courses in the competency areas of technology, diversity and pluralism, community development process and diffusion, communications, marketing and public relations, and risk management was fewer than the number of LGUs with a graduate specialization.

Implications

The high number of courses within a small number of competency areas implies some competency areas are perceived to be more important in the academic preparation of extension agents than others. Seventy percent of all undergraduate and graduate courses were clustered into only 4 of the 10 competency areas. The emphasis on program planning, implementation, and evaluation at both levels of curriculum supports Legacy and Wells' (1987) identification of programming competencies as important for extension education curriculum. According to Cooper and Graham (2001), ~~"~~the ability to plan, implement, and evaluate a local program is the basis of all county work" (Objective Three, ¶ 2). The high frequency of applied research graduate courses was consistent with Acker and Grieshop's (2004) findings. The focus on applied research at the graduate level may be linked to the need to develop competence in program evaluation. If the frequency with which a course is

offered does correlate to importance, some differentiation between essential competencies (e.g., program planning, implementation, and evaluation) and supporting competencies (e.g., diversity and pluralism) may need to be added to the Ohio State model to increase clarity.

Alternatively, departments may be doing a poor job of covering potentially important competency areas in their curriculum. The curriculum provided to extension education students was not balanced across the competency areas. Some LGUs failed to teach any courses in six competency areas (technology, community development process and diffusion, applied research, diversity and pluralism, marketing and public relations, risk management) at the undergraduate level and six competency areas (communications, technology, community development process and diffusion, diversity and pluralism, marketing and public relations, risk management) at the graduate level. If the missing competency areas are important as Scheer et al. (2006) suggested, their absence from the curriculum is cause for concern.

Only one course was offered in communications at the graduate level. Three courses were offered in marketing and public relations at the undergraduate and graduate levels combined. Levine (as cited in Scheer et al., 2006) found communications skills were important for extension educators. Similarly, marketing and public relations skills were considered a core competency area (Cooper & Graham, 2001; Levine, as cited in Scheer et al.). The lack of coursework covering community development process and diffusion is equally troublesome, given Extension's role as an organization that promotes change. According to Rogers (1963), "Since its inception, the main purpose of the Cooperative Extension Service has been to change human behavior by teaching people how to apply the results of scientific research" (p. 16). Students may be inadequately prepared for extension careers if no effort is made to increase the number of courses offered in the underrepresented competency areas.

The findings from this study indicated a deviation in practice from the framework proposed by Scheer et al. (2006). The appropriateness of the Ohio State model as a guide for the development of extension education curriculum is therefore uncertain. Rather than reflecting poorly on practice, the observed underrepresentation of some competency areas in extension education curriculum may indicate those areas are not appropriately included in the Ohio State model. Two of the underrepresented areas—risk management, and community development process and diffusion—were unsupported by the research studies from which the Ohio State model's conceptual framework was developed. This observation strengthens Taba's (1962) theory that curriculum development should be based on scientific analysis.

Some components of the Ohio State model were confirmed by the findings. Practitioners of extension education, based on the curriculum they offer, appear to agree with the inclusion of extension knowledge, leadership, and management; theories of human development and learning; program planning, implementation, and evaluation; and applied research as competency areas in extension education curriculum. The confirmation of components within the Ohio State model provides a basis for its continued development and refinement.

Conclusions and Recommendations

This study sought to identify the courses included in extension education curriculum at the undergraduate and graduate levels and compare the identified courses with the Ohio State model of extension education. One hundred twenty-six undergraduate courses and 249 graduate courses, clustered into 15 competency areas and categories, were included in extension education. The majority of the courses were included in 4 of the 15 competency areas/categories: applied research; theories of human development and learning; extension knowledge, leadership, and management; and program planning, implementation, and evaluation. Further research should be conducted to determine the appropriate balance of topics in extension education curriculum.

Courses included in extension education

at the undergraduate and graduate levels were not fully explained using the Ohio State model. The researchers found it necessary to create additional categories to capture courses that did not appear to have a natural fit within the Ohio State model. The created categories were: (a) special topics, (b) directed and independent studies, (c) internship and practicum, (d) natural resources, and (e) miscellaneous. The additional categories were used to classify courses at the undergraduate and graduate levels. Research regarding the additional categories would be appropriate to determine if they should be added as official competency areas in the Ohio State model.

Similarly, this study examined what content (courses) *was* included in extension education curriculum, not what content *should* have been included in the curriculum. Differences were identified between the competency areas that Scheer et al. (2006) proposed and the courses actually being taught. Research is needed to ensure the curriculum reflects the contemporary needs of student learners, as recommended by Taba (1962).

The researchers recommend modifications to two competency areas in the Ohio State model based on apparent differences between courses within the same area. A course on the development of Cooperative Extension differs from one covering organizational leadership, yet both were categorized as extension knowledge, leadership, and management. The researchers found courses offered naturally fit into competency areas labeled as (a) organizational knowledge, (b) leadership development, and (c) program management. The same problem existed with courses included in the theories of human development and learning competency area. A course on teaching methods has a different focus than one about the phases of youth development. The researchers recommend splitting theories of human development and learning into separate competency areas identified as teaching and learning, and human development.

Although this study took a critical look at extension education, the intent of this study was not to be a criticism of the land grant university system or the Ohio State model of extension education. Rather, it is intended to continue the discussion which was initiated by Scheer et al. (2006) when they published the Ohio State model. Questions have been posed which warrant consideration by all LGUs, not just those offering extension education. The researchers encourage the continuation of this discussion in the hope that it will help to strengthen the quality and availability of extension education and, ultimately, the quality of extension educators and agents.

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