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THE IMPORTANCE OF SELECTED INSTRUCTIONAL AREAS IN THE PRESENT AND FUTURE SECONDARY AGRICULTURAL EDUCATION CURRICULUM AS PERCEIVED BY TEACHERS, PRINCIPALS, AND SUPERINTENDENTS IN NEBRASKA

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Abstract

The purpose of this study was to determine how agricultural education instructors and their administrators viewed the importance of the current and future instructional areas as part of the agricultural education curriculum in Nebraska. The population of the study included all agricultural teachers, principals, and superintendents of secondary schools in Nebraska which offered agricultural education during the 1989-1990 school year (n=381). A random sample of forty schools were selected from the population. The respondents were asked to rate the importance of topics in both the current and future agricultural education curriculum. No instructional topics were identified as either very important or of little importance in either the current or future Nebraska curriculum. Instructional topics identified by all groups as important in the current curriculum were agricultural economics and marketing and computer technology. In the future curriculum, all groups identified leadership and personal development, agricultural business management, natural resources and the environment, in addition to agricultural economics and marketing and computer technology. The findings of the study support the position that local educators take a cautious and low risk attitude toward educational reform. Of the three respondent groups, principals were the most inclined toward curriculum change.

A description of the current state of instructional content in the agricultural education curriculum of secondary schools in Nebraska can best be described by paraphrasing the conclusion of Megatrends by Naisbitt (1982). "We are living in the time of the parenthesis, the time between eras. It is as though we have bracketed off the present from both the past and future. We have not quite left behind the past, but neither have we embraced the future. We have done the human thing. We are clinging to the known past in fear of the unknown future."

In the National Research Council (NRC) report, *Understanding Agriculture: New Directions for Education* (1988), principle findings were that the focus and content of many vocational agriculture programs were outdated, and the subject matter of instruction about agriculture must be broadened. Additionally, the success of reform in vocational agriculture relies on innovative programmatic leadership at the state and national levels.

During the same year as the release of the NRC report, a study conducted by Selection Research Incorporated (1988) reported that agricultural educators and business leaders in

Nebraska perceived secondary agricultural education programs as providing current and relevant instruction for agribusiness needs. This study also revealed educators were significantly ($p = .05$) more familiar with the secondary agricultural education programs than business leaders. Such contrasts of understanding may affect the perceived quality of content within the agricultural education program by creating differences in expectations among students, community residents, administrators, business leaders, and the agriculture instructor.

In his book, *The Politics of Curriculum Decision-Making - Issues in Centralizing the Curriculum* (1991), Klein reasons the lack of change caused by the reform movements of the 1980s can be attributed to the proliferation of rules. These rules transform the facilitators of change into a bureaucrat administering rules made elsewhere. Klein further stated that professionally-oriented teachers opposed external mandates pertaining to classroom functions, for their culture holds that they are the educational experts who ultimately cause the realization of educational goals.

These mandates threaten locally-oriented administrators by holding them responsible for results based on the work of others. This causes them to be cautious and displays a low-risk attitude toward reform. Klein suggested neither top-down nor bottom-up development of curriculum policies was appropriate at this time. Centralized decision makers often fail to adequately consult with teachers, and total teacher responsibility demands too much based upon traditional teacher training and the inherent teaching culture.

The development of curriculum must take a middle ground with teachers, principals, and superintendents working in partnership. Administrators and teachers can adjust curriculum mandates to local conditions, and package them so that they are more credible to other teachers and the community. The value of this cooperative group process in facilitating curriculum change has been cited by Shane (1977). His findings include improved public understanding and public relations; improvement in the morale of those participating; the achievement of a more complete inventory of possible approaches through desirable innovations; a clearer understanding of proposed policies; and, greater initiative and sympathy by those parties involved. In a review of literature addressing school effectiveness, Stedman (cited in Klein, 1991) found that shared governance between teachers, administrators, and in some cases parents, was a common occurrence in highly effective schools.

Purpose and Objectives

The purpose of this study was to determine how agricultural education instructors and their administrators viewed the importance of the current and future instructional areas as part of the agricultural education curriculum in Nebraska.

Specific objectives of the study were to:

1. determine the perceptions of instructors, principals, and superintendents regarding the importance of selected instructional areas within the present secondary agricultural education curriculum in Nebraska;

2. determine the perceptions of instructors, principals, and superintendents regarding the importance of selected instructional areas within the future secondary agricultural education curriculum in Nebraska; and,

3. determine changing instructional curriculum trends as perceived by instructors, principals, and superintendents charged with implementing secondary agricultural education programs.

Methodology

<u>Population and Sample</u>

The population of this study included all agriculture teachers, principals, and superintendents of secondary schools in Nebraska which offered agricultural education programs during the 1989-90 school year (n=381). The list of schools offering agricultural education programs was obtained from the Nebraska State Department of Education (Ward, 1990).

The respondents selected for this study were drawn from the total population by using a random sample of 40 schools in Nebraska offering agricultural education programs. Each schools' agriculture instructor, principal, and superintendent were mailed a separate survey instrument.

Instrumentation

Instructional topics included in the survey came primarily from those contained in the *Nebraska Agricultural Education Scope and Sequence and Program Management Guide* (Foster, 1989). The respondents were asked to rate the importance of the topics in both the current and future agricultural education curriculum. A jury of agricultural teacher educators provided an initial review of the instrument. The revised surveys were pilot tested with two sets of administrators and teachers from school districts not included in the random sample. Cronbach's alpha for the questionnaire was .97.

The scale used for determining "importance within the current and future curriculum" was a 1 to 9 Likert-type scale with 5 descriptors on the scale. A scale value of "1" indicated the item was not important; a value of "3" indicated the item was of little importance; a value of "5" indicated the item was of average importance; a value of "7" indicated the item was important; and a value of "9" indicated an item was very important.

Data Collection

The survey instrument and cover letter were mailed to 40 Nebraska agriculture instructors, 40 principals, and 40 superintendents. The response rate was 85 percent for instructors, 55 percent for principals, and 65 percent for superintendents, resulting in an overall response rate of 69 percent. A t-test ($p<.05$) comparing early and late respondents for each group was used to determine non-response error in the data collection process. All items of the survey were used as the basis for determination of the non-response error. No error was noted.

Data Analysis

All data were used in the final analysis of the study. Means, standard deviations, and frequencies were calculated for all survey data including a demographic description of the respondent groups.

To compare the mean scores of current importance to future importance of each curriculum topic within each respondent group, coefficients of correlation were calculated using a Pearson's product-moment correlation. Significance of correlation was determined through the use of a dependent two-tailed t-test. To minimize the likelihood of Type I error the level of significance was set at .01.

Correlation coefficients were interpreted and expressed in relational terms based on the following criterion: .00-.20, negligible; .20-.40, low; .40-.60, moderate; .60-.80, substantial; and, .80-1.00, high to very high (Best, 1981).

Results

All respondent groups were experienced in their current teaching or administrative position. Teachers had an average of 9.6 years of teaching experience. Because of this experience base, it was accepted that the respondents were qualified to speak about the present and future agricultural education program curriculum needs.

Based upon average mean ratings of the groups, no instructional topics were identified as

either very important or of little importance in either the current or future Nebraska agricultural education curriculum. Instructional topics identified by all groups as important (mean rating of at least 7) in the current curriculum were agricultural economics and marketing and computer technology.

By contrast, in the future curriculum, all groups identified leadership and personal development, agricultural business management, and natural resources and the environment, in addition to agricultural economics and marketing and computer technology, as important.

Based upon coefficient of correlation scores reported in Table 1, instructors, principals, and superintendents reported, respectively, a significant correlation in the degree of importance for 100%, 84%, and 96% of the instructional topics included in the current curriculum as compared to their inclusion in the future curriculum.

Principals did not see a significant correlation between the current and future importance of the following instructional topics: leadership and personal development, horticulture, small animal care, and power and machinery. In each case, they reported a greater importance in the future curriculum than in the current curriculum.

Superintendents did not see a significant correlation in the importance of agricultural mechanics in the future curriculum as compared to the current curriculum. They reported less importance.

Conclusions and Recommendations

The findings of this study appear to support the position of Klein that local educators take a cautious and low risk attitude toward educational reform. Even though the NRC report, *Understanding Agriculture: New Directions for Education*, stated that the focus of agricultural education must change, the respondent groups in this study perceived a significant correlation of at least 84% between the content of the current curriculum and that of the future curriculum.

However, the findings of this study do indicate a gradual shift toward a more diverse agricultural education curriculum in Nebraska. In Table 1, topics rated as important (mean rating of at least 7) in the future curriculum, by at least one of the respondent groups, represents more diversity of content relating both to production agriculture and associated industries in agribusiness. These topics include natural resources and the environment, entrepreneurship education, horticulture, biotechnology, and food science and processing.

Of the three respondent groups included in this study, principals seem the most inclined toward curriculum change. As Klein suggested, total curriculum responsibility is beyond the parameters of the teaching culture and traditional teacher training. A role of the principal is to manage the overall school curriculum. Superintendents, by role definition, are responsible to the local public causing them to be cautious regarding external curriculum reform.

The program of agricultural education in Nebraska is in transition from a defined past to a future more difficult to design. To make this transition, based upon the findings and conclusions of this study, the following recommendations are made:

Table l. Correlation Coefficients for Instructors, Principals, and Superintendents

Instructional Topic	Instructors n = 34					Principals n = 22					Superintendents n = 27				
	Mean		Std. Dev.		r	Mean		Std. Dev.		r	Mean		Std. Dev.		r
	Cur	Fut	Cur	Fut		Cur	Fut	Cur	Fut		Cur	Fut	Cur	Fut	
Biotechnology	5.58	7.47	2.09	1.54	.68	5.81	7.09	1.99	1.87	.75	5.85	6.59	1.79	1.59	.82
Animal Science	7.20	7.29	1.27	1.33	.79	7.00	7.63	1.34	1.04	.57	6.59	6.59	1.30	1.71	.66
Entrepreneur	6.26	7.26	2.07	1.44	.73	5.77	7.22	1.65	1.19	.60	5.40	6.29	1.80	1.85	.72
Soil Science	6.76	7.02	1.41	1.62	.78	7.09	7.09	1.44	1.41	.71	6.66	6.74	1.27	1.45	.84
Ag Economics	7.55	8.23	1.15	0.85	.62	7.22	7.68	1.26	1.04	.70	7.14	7.81	1.06	0.83	.72
Ag Mechanics	6.20	5.58	1.57	1.65	.81	6.90	6.86	1.26	1.45	.76	6.51	6.22	1.39	1.73	.42
Food Sci/Pro	5.32	6.26	2.14	2.06	.65	6.27	7.00	1.57	1.27	.78	6.14	6.77	1.29	1.45	.71
Int'l Agriculture	5.08	6.91	2.36	1.97	.51	5.68	6.72	1.39	1.38	.64	6.07	6.96	1.75	1.72	.81
Leadership Dev	7.47	7.67	1.81	1.55	.82	6.90	7.45	1.34	0.80	.43	6.44	7.14	1.55	1.61	.84
Horticulture	5.58	6.61	2.32	1.98	.78	6.45	7.22	1.73	0.97	.52	6.25	6.70	1.55	1.61	.81
Sm Animal Care	4.88	5.58	2.25	2.25	.93	5.54	6.72	1.73	1.16	.38	5.62	5.85	1.88	2.03	.78
Landscape/Nury	5.14	6.00	2.36	2.00	.86	5.13	6.45	1.67	1.43	.60	5.66	6.22	1.68	1.78	.80
Flor/Grnhs Mgt	4.73	5.29	2.57	2.57	.91	4.72	5.68	1.57	1.80	.73	5.55	6.22	1.64	1.67	.84
Wildlife Mgt	5.82	6.44	2.12	1.56	.74	5.50	6.13	1.73	1.28	.77	5.96	6.48	1.53	1.47	.84

(Table 1 continues)

Table 1 (continued)

Ag Bus Mgt	7.26	7.70	1.58	1.33	.62	7.09	7.59	1.06	1.05	.75	6.85	7.29	1.09	1.20	.70
Woods/Cons	4.73	4.23	2.16	1.90	.84	4.72	4.72	1.80	1.88	.70	5.37	5.11	1.59	1.94	.83
Natural Res	6.35	7.05	2.41	2.30	.86	6.95	7.68	1.32	1.08	.65	6.59	7.40	1.62	1.15	.77
Robotics	3.94	4.64	2.65	2.94	.86	5.00	6.36	2.00	191	.68	5.77	6.59	1.94	1.96	.76
Career Exp	7.29	7.76	1.88	1.28	.64	6.54	7.50	1.22	1.22	.63	6.29	6.92	1.40	1.38	.76
Power/ Mach	5.88	6.17	1.88	2.09	.68	6.63	6.90	1.13	1.41	.48	6.62	6.48	1.33	1.62	.81
Crop Sci/Agro	6.58	6.85	1.67	1.39	.83	7.36	7.40	0.90	1.09	.75	6.77	7.03	1.31	1.15	.76
Metals/Welding	6.17	6.32	1.44	2.59	.60	6.95	6.63	1.13	1.73	.67	6.51	6.48	1.42	1.45	.78
Livestock Prod	7.05	6.79	1.07	1.51	.83	7.27	7.18	1.03	1.53	.72	6.81	6.44	1.17	1.64	.59
Crop Prod	6.64	6.55	1.53	1.48	.79	7.27	7.00	1.07	2.07	.68	6.92	6.81	1.26	1.64	.75

Note. Means based on a scale of 1 to 9 in which 1 = "not important"; 3 = "of little importance"; 5 = "somewhat important"; 7 = "important"; and, 9 = "very important".

1. Priority technical inservice education for agricultural educators in Nebraska should be given to the topic areas of agricultural economics, leadership development, agricultural business management, natural resources, and computer technology.

2. Where substantial contrast (.30 difference in correlation) in current and future curriculum topics exist between groups (i.e., agricultural mechanics, international agriculture, leadership development, small animal care, and power and machinery) state leadership should initiate dialogue to clarify group positions to facilitate effective long term planning.

3. The findings of this study agree with the earlier reported position of Klein (1991). He stated that "...total teacher responsibility demands too much based upon traditional teacher training and the inherent teaching culture." The agricultural education teaching culture has become much less prescriptive and much more dynamic. The findings of this study would indicate teachers are uncertain of appropriate curriculum changes in this new culture (i.e. 100% correlation of the current to the future). Therefore, curriculum development inservice needs to be provided which addresses the areas of: defining present audiences served; desired audience to be served; function of the program within the secondary curriculum; and, instructional abilities of the present and future instructor.

4. Acknowledging the dynamic nature of the agricultural education curriculum and the unbiased curriculum management responsibility of the secondary principal, involve them at all levels of curriculum discussions and program development regarding agricultural education.

5. In order to provide data to facilitate Klein's (1991) recommendation of middle ground curriculum planning (teacher, principal, and superintendent teams), this study should be replicated at the regional level every three years. This data could provide curriculum trends in agricultural education upon which to base local decisions.

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