THIRD WORLD AGRICULTURAL EXTENSION ORGANIZATIONS=OBLIGATIONS TOWARD THE EDUCATIONAL NEEDS OF RURAL PEOPLE: A NATIONAL SURVEY

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Abstract

This study documented perceptions of extension educators and international graduate students of extension education in the United States toward what agricultural extension organizations in the Third World should fulfill from among the educational needs of rural people. Data were solicited from 96 extension educators and 128 international graduate students of extension education at 33 universities using a mailed questionnaire. Reliability, frequencies, t-tests, Spearman correlation coefficients, factor analysis, and analysis of variance were employed to analyze the data. Results indicated that both extension educators and international graduate students of extension education in the United States agreed that the agricultural extension organizations in the Third World should commit their resources to satisfy the educational needs of rural people regarding: (1) application of new inputs, varieties, and improved farm practices, (2) application of new and improved practices related to livestock production, (3) food storage, processing, and preservation, (4) knowledge and skills for family improvement, (5) civic skills, (6) supplementary skills for farm maintenance, and (7) farm business management.

Introduction

Extension work is education for change. It consists of fostering change in what people know (knowledge), change in what people understand (attitudes), and change in what people can do (skills) (Raman, 1992). Although rural people engaged in farming already have considerable knowledge about their environment and farming systems, extension educators provide them other knowledge and information, which they do not have, and facilitate their education for development (Blankenburg, 1984; Oakley & Garforth, 1985).

Oakley and Garforth (1985) viewed extension as a collective term that brings together all agricultural and nonagricultural activities including working with rural people, supporting them, and preparing them to confront their problems. Ekpere (1984) identified the following among the learning needs of rural people directly engaged in agriculture:

1. Farm planning and management, rational decision-making, record keeping, and the use of credit.

2. Application of new inputs, varieties, and improved farm practices.

3. Storage, processing, and preserving food.

4. Skills for farm maintenance.

5. Knowledge of government policies, programs, and services.

Critics of orthodox extension, like Paulo Freire, stressed that the technology transfer approach of extension embodied a "banking" concept of knowledge. People must become the subjects of their own history, rather than the objects of external analysis. Freire's 1970's "dialogical extension" is thus more akin to empowerment than to conventional technology transfer. As a form of adult education, extension has contended with widespread adult illiteracy (Bhola, 1989). But what has been technologically possible has not been ideologically acceptable (Freire, 1973). In bypassing literacy, not only are messages changed, but also dependent communication and therefore, dependent community relationships are perpetuated (Freire, 1970; 1972;1973). The new ideology of adult education insists on adult education with adult literacy (Bhola, 1989). In this context, the agricultural extension organization is seen as a way of conceptualizing the content of its educational role, selecting what assists its users (farmers) in making nature and society transparent to themselves, and acquiring both "social" and "scientific" consciousness (Freire, 1973).

The idea of extension agencies with largely educational functions has come to receive great recognition and importance in most countries of the world. It has taken on even greater importance in the Third World because of the narrow base of education, the widespread illiteracy, recent famines experienced by many of these nations, and the importance of the agricultural sector for development (Mellor & Gavian, 1987). However, extension organizations in many Third World nations in their present form and capacity can provide only very limited help to most farmers in their basic enterprise (Mohamed, 1994). Today, there is an urgent need to investigate and identify what needs the agricultural extension organizations in the Third World ought to fulfill from among the many educational needs of rural people. This will not only help revitalize the organizations in the region, but also will free them of their extraneous responsibilities so that they can play their rightful role.

Purpose

This study focused on extension education in Africa, Asia, and Latin America as perceived by extension educators and international graduate students of extension education in the United States. Specifically, the study described characteristics of the two groups and documented their perceptions toward what educational needs of rural people an extension organization ought to fulfill. In addition, the study focused on possible differences in perceptions and relationships between characteristics and perceptions.

Procedures

The framework of this study consisted of 33 universities in the United States that offered graduate programs in extension education in the fall of 1992. The 33 schools reported a total of 96 extension educators and 128 international graduate students of extension education in the fall of 1992.

Data collection

The survey instrument used to collect data was developed based on an extensive literature review. The scaled part of the survey instrument included eight items that were directly related to the educational needs of rural people. Subjects were asked to respond to each item by using a scale (1 to 5): 1=strongly disagree; 2=disagree; 3=undecided; 4=agree; and 5=strongly agree.

The instrument was tested for its validity and reliability at Iowa State University. A panel of five experts from Departments of Agricultural Education and Studies, Education, Journalism and Mass Communication (Technology and Social Change), and Statistics at Iowa State University validated the instrument. The instrument was pilot tested at Iowa State University with 12 randomly selected graduate students in the Department of Agricultural Education and Studies who were not part of the study. The analysis of the pilot test yielded a Cronbach's Alpha reliability of .77. The first mailing of the instrument resulted in 73
completed questionnaires from extension educators (76%) and 68 from international graduate students (53.1%). The total response from both groups in the first mailing was 141 (62.9%). The follow-up mailing resulted in an additional ten completed surveys from extension educators and eight from international graduate students for a total response of 159 completed surveys (70.9%). There were no differences between nonrespondents and respondents.

Data Analysis

Cronbach's Alpha coefficient was used to examine the level of internal consistency and stability of the grouped items. Data were treated as interval. The mean score and standard deviation for each of the eight items were computed, and the t-test procedure was employed to compare the groups' mean scores on each item. Factor analysis and analysis of variance were used to detect possible relationships between perceptions and demographic characteristics.

Results and Discussion

Cronbach's Alpha Coefficient for the eight items in the scaled part was .76. Findings of the study indicated that the typical extension educator respondent was 48 years of age, a male, a full professor, and had about 25 years of work experience. The typical respondent had 16 years of extension work experience, taught extension courses for about 9 years, and had acquired some kind of international work experience. He was likely to be teaching in a school in the Southern Region of the United States.

The study also showed that the typical international graduate student of extension education studying in the United States was a 35-year-old male, African, doctoral student, with about 5 years of extension work experience. The typical student had received a bachelor's degree in a home country, a master's in the United States, and had spent three years studying in the United States. He was likely to be studying in a school in the North Central Region of the United States.

Table 1 shows the perceptions of extension educator and international graduate student respondents toward the educational needs of rural people. Mean scores ranged between 3.18 to 4.57 and 3.16 to 4.43 for extension educator and international graduate student respondents, respectively. The data indicated that both extension educators and international graduate students agreed that the agricultural extension organizations in Africa, Asia, and Latin America ought to fulfill rural people's educational needs regarding: (1) application of new inputs, varieties, and improved farm practices, (2) application of new and improved practices related to livestock, (3) food storage, processing, and preservation, (4) family improvement skills and knowledge (e.g., health care and nutrition), (5) civic skills (e.g. how cooperatives work), (6) farm maintenance skills, and (7) farm business management. The data in Table 1 also show that both groups were undecided about whether the organization ought to fulfill the basic educational needs of rural people (e.g., reading and writing). T-test results indicated that there were no significant differences between the perceptions of educators and graduate students toward what needs the agricultural extension organizations ought to fulfill from among the educational needs of rural people in the Third World.

To examine relationships between respondents' perceptions and their demographic characteristics, factor analysis was used to simplify the dependent variables (Table 2). The two factor indices identified were then included as a set of dependent variables in the analysis of variance. Results of the MANOVA indicated that no significant relationships existed between respondents' perceptions and their demographic characteristics collected in this study.
### Table 1

**Means, Standard Deviations and T-test for the Educational Needs of Rural People as Reported by Extension Educators and International Graduate Students**

<table>
<thead>
<tr>
<th>Educational needs of rural people</th>
<th>Extension educators (n=83) Mean</th>
<th>International students (n=76) Mean</th>
<th>t-value</th>
<th>α-tail probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>General or basic education (e.g., reading, writing)</td>
<td>3.18 3.16</td>
<td>-0.09 .926</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application of new inputs: varieties, improved farm practices, etc.</td>
<td>4.45 4.43</td>
<td>-0.12 .906</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applications of new and improved practices related to livestock</td>
<td>4.42 4.35</td>
<td>-0.59 .559</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food storage, processing and preservation</td>
<td>4.53 4.42</td>
<td>-1.08 .283</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge and skills for family improvement (e.g., health care, nutrition, home economics, child care, family planning)</td>
<td>4.57 4.35</td>
<td>-1.76 .080</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civic skills (e.g., knowledge of how cooperatives, local governments, and national governments function)</td>
<td>0.55 0.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplementary skills for farm maintenance and improvement</td>
<td>4.27 4.35</td>
<td>0.86 .391</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm business management</td>
<td>4.46 4.43</td>
<td>-0.26 .793</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^aNot significant at α = 0.05 and 0.001.

**HH** Separate variance estimate.

**Table 2**

Factors Identified by Factor Analysis of Right Items Related to the Educational Needs of the Rural People

<table>
<thead>
<tr>
<th>Variables</th>
<th>Item number</th>
<th>Factor loadings</th>
<th>Cronbach's alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1 (Knowledge to acquire scientific consciousness)</strong></td>
<td></td>
<td></td>
<td>.85</td>
</tr>
<tr>
<td>Application of new and improved practices related to livestock</td>
<td>3</td>
<td>.88300</td>
<td></td>
</tr>
<tr>
<td>Application of new inputs, varieties and improved farm practices</td>
<td>2</td>
<td>.84774</td>
<td></td>
</tr>
<tr>
<td>Supplementary skills for farm maintenance and farm improvement</td>
<td>7</td>
<td>.72559</td>
<td></td>
</tr>
<tr>
<td>Farm business management</td>
<td>8</td>
<td>.72366</td>
<td></td>
</tr>
<tr>
<td>Food storage, processing and presentation</td>
<td>4</td>
<td>.64932</td>
<td></td>
</tr>
<tr>
<td><strong>Factor 2 (Knowledge to acquire social and political consciousness)</strong></td>
<td></td>
<td></td>
<td>.56</td>
</tr>
<tr>
<td>Knowledge and skills for family improvement (health care, nutrition, etc.)</td>
<td>5</td>
<td>.75028</td>
<td></td>
</tr>
<tr>
<td>General or basic education (reading, writing, etc.)</td>
<td>1</td>
<td>.72145</td>
<td></td>
</tr>
<tr>
<td>Civic skills (how cooperatives, national/local government function)</td>
<td>6</td>
<td>.67326</td>
<td></td>
</tr>
</tbody>
</table>

**Conclusions and Recommendations**

Extension educators and international graduate students of extension education in the United States agreed that the agricultural extension organizations in the Third World should take the responsibility of satisfying rural people's educational needs on knowledge that could help them acquire scientific consciousness, increase their productivity, and gain freedom in decision-making. However, both groups remained undecided about whether the organization should be involved in satisfying the basic educational needs of rural people such as reading and writing. Based on the findings of this study, it is recommended that the agricultural extension organizations in the Third World commit their resources and efforts to satisfy the needs of rural people for knowledge that would help them acquire scientific consciousness, improve their living, and gain freedom in decision-making. This could be achieved through teaching rural people how to cope with the many effects of the agricultural technology on the quality of life and enable them to put this technological change comprehensively within their cultural context.

**Educational Importance**

The results of the study indicated that there are seven areas of knowledge, which could help rural people acquire scientific consciousness. These seven areas were highly supported by both the extension educators and the international graduate students. Studies have shown that both extension educators and international graduate students of extension education in the United States were supportive to concepts that called for the agricultural extension organizations in the Third World to adopt an educational philosophy, mission, and focus on empowering the rural people (Mohamed, 1994; Mohamed et al., 1994). However, both groups in this present study were undecided about whether the agricultural extension organization should fulfill the basic educational needs of the rural people (such as reading and writing). Although there are some who persist in the view that adult and extension education can and even should be delivered without adult literacy, the same idea was strongly rejected by some other scholars (Freire, 1973; Bhola, 1989). The two authors suggested that adult literacy not be taught first and adult and extension education later, but that literacy must become conceptually and programmatically central to the adult and extension education. It is only through such integration that rural people will become truly
independent and be able to read the world around them.

In many of the Third World nations, where education is backward, it seems that there is no need to wait until rural masses can read before embarking on an effective agricultural extension program. However, while basic education (such as reading and writing) is not an absolute necessity, it does enable rural people to become independent and capable of educating themselves. It allows them to widen and deepen their knowledge and to share in great cultural movements which are mainly disseminated through written text.

References


