

An Analysis of the Competencies Needed by Extension Workers in the Southern Province of Saudi Arabia

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Abstract. The main objectives of this study were: 1) to identify the main characteristics of extension workers; 2) to determine the competencies needed pertaining to six areas of the extension work, i.e. philosophy, organization and administration of extension; teaching and learning process; human development and social knowledge, communication; program planning and development, research and evaluation; 3) to identify the nature of the relationship between extension workers, characteristics and their needs for additional training.

The empirical inquiry covered 114 extension workers representing the total extension workers in the Southern Province. The data were collected by means of personal interview.

The results of the study revealed that: 1) most of extension workers were relatively young, unspecialized in extension; 2) the extension workers needed training in all the studied areas particularly in the following areas: research and evaluation in extension; teaching and learning process. There were significant relationships between some of the extension workers' characteristics and their need for training.

Among the important recommendations of the study are: the urgent need to establish agricultural extension specialization in the College of Agriculture in the Kingdom, and to plan and implement a training program to raise the competencies of the extension workers.

Introduction

According to Lawrence [1], the cooperative extension service is a dynamic educational system oriented to the development of educational programs designed to meet the changing needs of diverse publics. Extension service is also responsible for the design and implementation of staff training programs which have the following general objectives as mentioned by Malone [2].

1. To strengthen technical subject matter competence.
2. To strengthen those educational process skills that aid in the delivery of programs to appropriate audience.

The effectiveness of the extension programs depends mainly on the abilities and skills of its workers. Oakley and Garforth [3], concluded that the whole extension process is dependent upon the extension agent, who is the critical element in all extension activities, they added that the effectiveness of the extension agent can often determine the success or failure of an extension program.

Savile [4] and Boyle [5] pointed out that the extension worker must have sufficient knowledge of a wide range of subjects to enable him to advise and help people in solving their day to day problems.

Maunder [6] added that economic and social growth among people in any nation depends on the ability to build on a dignified staff of properly trained, professional people to manage the development enterprise.

Swanson [7] stressed that all men and women who work with the extension service whether as specialists, administrators, supervisors or field-level workers should have basic skills in and understanding of the following topics:

1. Extension service organization and operation, including its overall purpose, mission, policies and procedures.
2. Human resource development, including the participatory processes of involving people in program planning and development, staff-client relationships, and personnel management.
3. Program development process, from problem identification and needs assessment to program design, implementation and appraisal.
4. Communication strategies not only for program delivery but also for groups and feeding this information to research and other appropriate agencies and groups.
5. Evaluation techniques for the purpose of determining the effectiveness and value of extension programs to users.

It has been pointed out by Al-Nassar [8] that the need for upgrading of personnel and improving their ability to serve fast-changing needs of rural people is very important. He added that scientific research is necessary to identify and describe the training needs of agricultural extension personnel in Saudi Arabia.

Several studies have been done concerning the training needed by extension workers whether in Saudi Arabia or abroad [8-14]. They all concluded that extension workers who work as field workers needed training to raise their competencies.

No study of this regard has been done in the Southern Province of Saudi Arabia, therefore the main purpose of the current study was to ascertain if there is a need for

providing a training program for extension workers in the Southern Province. This can be obtained through the study of the competencies needed by the extension workers in relation to the following areas: 1) extension philosophy, organization, and administration; 2) teaching and learning process; 3) human development and social knowledge; 4) communication; 5) program planning and development; and 6) research and evaluation.

Objectives of the study

The main purpose of the study can be achieved through the following objectives:

1. To describe some demographic characteristics of extension workers in the Southern Province.
2. To determine the competencies needed by extension workers in relation to the areas of training.
3. To identify the order of importance of the training items as perceived by workers in each area of training.
4. To identify the order of importance of the training areas as perceived by workers.
5. To investigate the relationship between the perceived amount of training and the demographic characteristics of the extension workers.

Methodology

The primary data needed for the study were generated through the use of an interview schedule. The study covered all the 114 extension workers in the Southern Province.

The interview schedule was a two-part questionnaire. Part I of the questionnaire was composed of questions pertaining to personal data concerning age, tenure, ... etc... Part II of the questionnaire was designed to identify and describe the competencies needed by the extension workers. A five point Likert scale was used to help the respondents to rate each statement. The response to each statement ranged from very little and little in one half, much and very much in the other half. The central point was some. The scale ranged from 1 to 5.

Data were analyzed using frequencies, measures of central tendencies, and measures of relationships. Rank order, mean weighted scores and standard deviations for each item within each area and for each area of training were calculated. Spearman rank-order and Pearson product correlation coefficients were utilized to determine the relationship between workers characteristics and their need for training. An alpha level of .05 was utilized to test the significance of all associations.

Results and Discussion

1. Personal characteristics of the extension workers

Table 1 reveals that 68% of the extension workers were less than 40 years old, with a mean of 35 years and 69% of the workers had tenure of 10 years or less. The tenure mean was 8.5 years. In relation to the educational level about 53.5% of the respondents completed secondary agricultural high school and 46.5% completed Bachelor's degree in agriculture.

2. Level of competencies needed by extension workers in relation to the six areas of training

The training needs for the extension workers were investigated in relation to six areas of training related to the job of the workers in extension as follows:

a. Training needs in the area of extension philosophy, organization and administration

Data in Table 2 reveal that the grand mean weight score was 2.96. It means that the extension workers need "some" training in order to increase their competencies in the area of extension philosophy, organization, and administration.

The three highest needs for additional training were for the following competencies:

- Understanding the relationship between extension service and other organizations related to agriculture, "much" training is needed.
- Knowledge of the extension organization at the central level, "much" training is needed.
- Knowledge and understanding of extension policies in Saudi Arabia, "some" training is needed.

b. Training needs in the area of teaching learning process

Data in Table 3 show that the three highest mean weight scores were for the following statements:

- Ability to motivate farmers with mean score of 4.20, "much" training is needed.
- Knowledge of problem-solving approach in extension with mean score of 4.00, "much" training is needed.

Table 2. The extension workers' training needs in the area of extension philosophy, organization, and administration.

| Training statements | Mean wt. scores | S.D. | Rank |
|--|-----------------|------|------|
| Knowledge and understanding of extension policies in Saudi Arabia | 3.35 | .98 | 3 |
| Knowledge of the extension organization at the central level | 3.65 | 1.02 | 2 |
| Understanding the objectives of extension service in Saudi Arabia | 3.22 | .88 | 4 |
| Understanding the relationship between extension and other organization related to agriculture | 3.87 | .83 | 1 |
| Understanding extension history in Saudi Arabia | 2.25 | .95 | 9 |
| Knowledge of office management | 2.26 | .97 | 8 |
| Understanding the extension workers' role at the regional level | 2.31 | .86 | 7 |
| Knowledge of the organization of extension at the regional level | 3.00 | 1.01 | 5 |
| Understanding the role of extension in the development of people | 2.96 | 1.01 | 6 |

$X = 2.96$

S.D. = .95

Table 3. The extension workers' training needs in the area of teaching learning process

| Training statements | Mean wt. scores | S.D. | Rank |
|--|-----------------|------|------|
| Understanding the principles of teaching and learning | 3.95 | 1.01 | 3 |
| Knowledge of the different teaching methods | 3.75 | .66 | 4 |
| Knowledge of principles and procedure of teaching adults | 3.00 | .93 | 5 |
| Knowledge of the problem solving approach | 4.00 | .88 | 2 |
| Ability to motivate farmers | 4.20 | .93 | 1 |

$X = 3.77$

S.D. = .92

- Understanding the principles of teaching and learning with mean score of 3.95, "much" training is needed.

The grand weighted score was 3.77.

c. Training needs in th area of human develolpment and social knowledge

Data in Table 4 indicate that the mean weight score for the training needs in the area of human development and social knowledge was 3.3. The three highest training needs were for the following statements:

Table 4. The extension workers' training needs in the area of human development and social knowledge

| Training statements | Mean wt. scores | S.D. | Rank |
|--|-----------------|------|------|
| Knowledge of factors affecting the way of living and family relation | 3.50 | .92 | 7 |
| Knowledge of factors that contribute to rural migration and its consequences | 2.95 | .95 | 10 |
| Knowledge of identifying local and informal leadership | 3.10 | .87 | 8 |
| Understanding the influence of technology on farm families | 3.65 | 1.02 | 6 |
| Understanding why people join groups and organization | 2.40 | .88 | 12 |
| Understanding the influences of mass communication on society | 3.97 | .96 | 1 |
| Social consequences in changing the type of farming | 3.91 | .91 | 4 |
| Ability to use local leadership | 2.33 | 1.01 | 13 |
| Understanding community development needs | 3.00 | 1.02 | 9 |
| Ability to identify the problems of the community | 2.50 | .91 | 11 |
| Knowledge on the different kinds of adopters in the community | 3.94 | .99 | 3 |
| Knowledge of the stages of adoption process | 3.95 | .94 | 2 |
| Knowledge of the factor affecting adoption | 3.70 | .88 | 5 |

X = 3.30

S.D. = .94

- Understanding the influence of mass communication on society with mean score of 3.97, “much” training is needed.
- Knowledge of the stages of the adoption process with mean score of 3.95, “much” training is needed.
- Knowledge of the different kinds of adopters in the community with mean score of 3.94, “much” training is needed.

d. Training needs in the area of program planning and development

Data presented in Table 5 indicate that the grand mean weight score for the training needs in the area of program planning was 3.36. The three highest mean scores were:

- Ability to develop short and long range programs in extension with mean score of 4.25, “much” training is needed.
- Ability to use the data of census and other resources with mean score of 4.00, “much” training is needed.
- Skill and ability to develop the plan of action with mean score of 3.95, “much” training is needed.

Table 5. The extension workers' training needs in the area of program planning and development

| Training statements | Mean wt. scores | S.D. | Rank |
|---|-----------------|------|------|
| Ability to identify the specific and general objectives | 3.75 | .85 | 5 |
| Ability to develop short and long range programs in extension | 4.25 | .96 | 1 |
| Skill and ability to develop the plan of action | 3.95 | 1.01 | 3 |
| Ability to analyze the current situation | 3.60 | .66 | 66 |
| Ability to use data of census and other resources | 4.00 | 1.02 | 2 |
| Organizing and working with program planning committee | 2.45 | .90 | 9 |
| Identifying people's need, interest and priorities | 3.87 | .93 | 4 |
| Getting the participation of the lay leaders and professional group in program planning | 3.25 | .86 | 7 |
| Knowledge of involving people in program planning process | 3.00 | .90 | 8 |
| Using resources personnel in program planning and extension programs | 2.40 | .88 | 10 |
| Giving people satisfaction from the extension programs | 2.12 | .91 | 11 |

X = 3.36

S.D. = .92

e. Training needs in the area of research and evaluation

Data presented in Table 6 show that the grand mean weight score was 3.85. The three highest mean scores were for the following training competencies.

Table 6. The extension workers' training needs in the area of research and evaluation

| Training statements | Mean wt. scores | S.D. | Rank |
|--|-----------------|------|------|
| Ability to evaluate extension programs | 4.35 | .94 | 1 |
| Knowledge of the research area in extension | 4.26 | .97 | 3 |
| Understanding research terminology | 4.30 | .87 | 2 |
| Understanding ways of designing evaluation projects | 3.80 | .92 | 4 |
| Ability to use research publications | 3.70 | .88 | 5 |
| Ability to devise and conduct survey | 3.65 | .91 | 6 |
| Knowledge of criteria for evaluating the work of extension personnel | 2.95 | .93 | 7 |

X = 3.86

S.D. = .92

- Ability to evaluate extension programs with mean score of 4.35, “much” training is needed.
- Understanding research terminology with mean score of 4.30, “much” training is needed.
- Knowledge of the research in extension with mean score of 4.26, “much” training is needed.

f. Training needs in the area of communication

Data presented in Table 7 show that the mean score was 3.58. The three highest means were for the following competencies:

Table 7. The extension workers' training needs in the area of communications

| Training statements | Mean wt. scores | S.D. | Rank |
|--|--------------------|------|------|
| Making public speaking more effective | 3.50 | .91 | 5 |
| Ability to use exhibits, slides, pictures in extension | 3.22 | .86 | 6 |
| Ability and skill to organize tours, field trips, farm and home visits | 3.11 | .82 | 7 |
| Understanding the basic principles of communication | 4.26 | 1.01 | 1 |
| Ability to present radio or television programs related to agriculture | 3.85 | .79 | 4 |
| Skills and ability to use visual aids | 3.86 | .88 | 3 |
| Ability to lead meeting and discussion | 2.92 | .95 | 8 |
| Ability and skill to demonstration | 3.96 | .97 | 2 |

X = 3.28

S.D. = .90

- Understanding the basic principles of communication with a mean score of 4.20, “much” training is needed.
- Ability and skills to give demonstration with a mean score of 3.96, “much” training is needed.
- Skills and ability to use visual aids with a means score of 3.86, “much” training is needed.

Table 8 indicates that the grand weight score of the training needs of all areas was 3.46. Research and evaluation, teaching and learning, and communication were the three highest areas concerning the needs for additional training as perceived by workers.

Table 8. Order of importance of the training areas

| Area of training | Mean wt. scores | S.D. | Rank |
|---|-----------------|------|------|
| Research and evaluation | 3.86 | .92 | 1 |
| Teaching and learning process | 3.77 | .92 | 2 |
| Communication | 3.58 | .90 | 3 |
| Program planning and development | 3.36 | .92 | 4 |
| Human development and social knowledge | 3.30 | .94 | 5 |
| Extension philosophy, organization and administration | 2.90 | .95 | 6 |

X = 3.46

S.D. = .93

3. The relationships between variables

Table 9 shows the relationships between selected demographic characteristics of extension workers and their perceptions of the training needs. There is a negative significant relationship between the age of the respondents and their need for additional training in the area of extension philosophy, organization and administration. On the contrary, there are positive relationships between the age of the respondents and their need for more training in the following areas:

- Communication
- Research and evaluation
- Program planning
- Teaching and learning process

Table 9. Relationship between the training needed by extension workers in specific area of training and their demographic characteristic

| Area of training | Demographic characteristics | | | |
|---|-----------------------------|--------|------|---------|
| | Age | Tenure | Dege | Major** |
| Extension philosophy, organization and administration | .37* | .01 | .13 | .02 |
| Communication | .29* | .15 | .12 | .08 |
| Human development and social knowledge | .10 | .03 | .56 | .03 |
| Research and evaluation | .42* | .31* | .02 | .09 |
| Program planning | .21* | .18 | .01 | .07 |
| Teaching and learning | .35* | .49* | .09 | .11 |

* Significant at $\alpha = .05$

** Pearson product moment correlation coefficient.

Similarly, positive significant relationships have been found between tenure and the worker's need for more training in the areas of research and evaluation, and teaching and learning process. No significant relationships were however, found between the rest of the demographic characteristics and the training needs of the workers in the six areas of training.

Recommendations

1. The study revealed that the extension workers need additional training to improve their competencies pertaining to the six areas of training. Therefore, a training program needs to be planned and implemented to improve the competencies of the extension workers in the Southern Province giving priority to the following areas: research and evaluation, teaching and learning process, and communication.
2. The positive significant relationship between the age and tenure on one hand and the level of the training needs in some areas on the other hand, must be taken into consideration when implementing the training program by giving more attention to old workers and those with long tenure. These areas are: research and evaluation, program planning and development, teaching and learning process, and communication.
3. Agricultural extension must be taught as an independent major in the Colleges of Agriculture in the Kingdom in order to have specialized extension workers, to improve the professional competency, and to increase the ability of the workers in performing their role proficiently.

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دراسة تحليلية لبعض المتطلبات التدريبية للمرشدين الزراعيين بالمنطقة الجنوبية من المملكة العربية السعودية

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ملخص البحث . استهدف هذا البحث التعرف على بعض خصائص المرشدين الزراعيين كذلك تحديد متطلباتهم في الموضوعات المتعلقة بست مجالات إرشادية زراعية رئيسة وهي: أهداف وفلسفة الإرشاد الزراعي، مبادئ التدريس والتعليم، تطوير الإنسان والمعارف الاجتماعية، الاتصال، بناء وتخطيط برامج الإرشاد، البحث والتقويم في الإرشاد الزراعي . كذلك دراسة العلاقة بين هذه الخصائص وتلك المتطلبات التدريبية .

وقد أجرى هذا البحث على ١١٤ مرشدًا زراعيًا يمثلون جميع المرشدين العاملين في المنطقة الجنوبية بالمملكة . تم جمع البيانات عن طريق المقابلة الشخصية بواسطة استمارة استبيان أعدت خصيصًا لتحقيق أهداف الدراسة . تتلخص أهم نتائج هذا البحث في أن غالبية المرشدين الزراعيين من الشباب غير متخصصين في مجال الإرشاد الزراعي . أظهر المرشدون الزراعيون حاجة إلى تدريب إضافي في جميع المجالات، وقد كانت الحاجة أكبر في المجالات التالية . البحث والتقويم في الإرشاد، مبادئ التدريس والتعليم والاتصال . هناك علاقة معنوية بين بعض خصائص المرشدين الزراعيين واحتياجاتهم التدريبية . أوصت الدراسة بأهمية عقد دورات تدريبية لرفع كفاءة المرشدين الزراعيين وكذلك ضرورة استحداث تخصص الإرشاد الزراعي في كليات الزراعة بالمملكة .

