UNDER PEER REVIEW

The knowledge level of agricultural employees/ Nineveh province towards the tasks of agricultural extension

ABSTRACT

This research aims to identify the knowledge level of agricultural employees/Nineveh provincetowards the tasks of agricultural extension in general, identify the knowledge level of agricultural employees in tasks of agricultural extension in each item of tasks of agricultural extension and identify a correlation between the employees' knowledge and independent variables in this study.

In order to obtain the research data, it has been used questionnaire form. The questionnaire consisted of two parts: Part one included information's about the personal, social, economic variables which related to the respondents, namely (Age, the scientific certificate, the number of years of agricultural employee service, Specialization in the field of agricultural, career title). The second part included (30) item. In order to measure the knowledge of employees agricultural in the tasks extension, it wasput in front of each item (3) alternatives are (I agree - I agree something - I don't agree) and it was gave it the numeric values (3- 2-1) which respectively. This study included all agricultural employees in the Directorate of Agriculture Nineveh and in all disciplines and they were distributed on the agricultural sections. The total sample of this studywas 165employees from deferent sections of Agriculture Nineveh.

The results showed that the knowledge level of agricultural employees/Nineveh province in tasks agricultural extension in general is medium tends to high degree. Also, the results showed that the items which came in the first three ranks according to the mean and respectively, are (Help farmers to identify the main problems they face in the rural community, help farmers to identify opportunities available to them to solve their problems and the development of educational goals in the Action Plan. The results also showed there are a positive correlation between the employee's knowledge towards the tasks of agricultural extensionand the independent variables (age and career title), and there is no correlation between the employee's knowledge towards the tasks of agricultural extension and the independent variables (the scientific certificate, the number of years of agricultural employee service, specialization in the field of agricultural).The Author concludes from this study: the knowledge of employees need to development and increase in these topics (giving the leading

UNDER PEER REVIEW

role of the groups participating in the extension programs, clarifying the role of extension in the advancement of rural life and Assess progress in meeting the educational needs of growers).

Key words: Agricultural employees, tasks of agricultural extension, knowledge.

1. INTRODUCTION

Agricultural extension is defined as an ongoing process of getting useful information to farmers and assisting them to acquire the knowledge, skills and attitudes to use effectively the information and technology to increase productivity (Rahim 2008, Altalb 2010).

Extension services are the different projects and programs. Agricultural extension services encompasses all aspects of rural development. It includes the provision of timely knowledge and information to local people and linking them with sources of information. Extension staff must be participate in all activities (planning and implementation of agricultural extension programs (Anaeto 2003, FAO2005, Al-Rimawi et al. 2016).

The whole extension process is dependent upon the extension agent, who is the critical element in all extension activities. The effectiveness of the extension agent can often determine the success or failure on an extension programs (Oakley and Garforth, 1985). The success of extension services depends on the role of extension officers to transfer of agriculture technologies to farmers to develop farmers and increase their productivity (Rahim 2008, Mirza et al. 2009).Agricultural extension is an educational process informally to the farmers in order to transfer the informations and agricultural technology to farmers to adopt and use these techniques on their farms, because farmers need those modern technologies to increase agricultural production in quantities and qualities [Altalb 2010, Asfaw et al. 2011, Alex et al. 2002].

The effectiveness of extension work highly dependent on the ability of extension agents who are qualified. In some countries extension programs serve to transmit national directives to rural areas (Rahim 2008, Nigussie et al. 2016). Agricultural Extension plays importance role in agricultural development, which requires the cooperation of efforts to bring about development in all human and material resources in order to achieving the objectives of agricultural development. Human element located upon himself to process most of the material resources available to take advantage, for this reason should the human element be well coached in order to be able to implement his role well.

Developing countries works to increasing and development the agricultural employees in general, and agents of change in particular, because of their importance in raising the rates of

UNDER PEER REVIEW

development, and maintain those rates, thereby increasing the per capita income, and that the knowledge of the employee perform his duties designate by agricultural enterprise which where the employee works in this case the employee will be able to choose the jobs that are commensurate with his abilities and inclinations. (Bakri 2004, Muneer 2014, Baig and, Aldosari 2013, Pramila and Patnam 2014).

In was, General body for guide the agricultural cooperation in Iraq) is seeking to raise the performance of the employees and increase their knowledge and their knowledge about their job. The performance and success of agricultural employees of the factors that relate to: their rehabilitation and training, experience and age and the nature of their business and their willingness to continue in their job. (Rimawi 1996, Al-Shayaa et el. 2012). For all these reasons, the author wanted to study the knowledge of agricultural employees towards the tasks of agricultural extension in Nineveh province. The research aim to:

1. Identify the knowledge level of agricultural employees/Nineveh provincetowards the tasks of agricultural extension in general,
2. identify the knowledge level of agricultural employees in tasks of agricultural extension in each item of tasks of agricultural extension,
3. Identify a correlation between the employees' knowledge and independent variables in this study.

2. RESEARCH METHODOLOGY

This research included all agricultural employees in the Directorate of Agriculture Nineveh and in all disciplines and they distributed on the agricultural sections, the number of total employees 557(*), was chosen as a simple random sample of them amounted to (165) employees (25%).

The preparation of the questionnaire

In order to obtain the necessary research data, it has been used questionnaire form. The questionnaire consisted of two parts:-

- Part one:-

This part includes information's about the personal variables which related to the respondents, namely (age, the scientific certificate, number of years of agricultural employee service, specialization in the field of agricultural extension, career title).

(*)Directorate of Agriculture Nineveh / Planning Department

- The second part:-

UNDER PEER REVIEW

This part includes (30) items to measure the knowledge of employees agricultural in the tasks extension.

It was put in frontof each item 3 alternatives are: (I agree, I agree something, I don't agree) and It gave them the numeric values (3, 2, 1) respectively.

After completed the questionnaire, it displayed on the specialists in agricultural and specialists on the fields of agricultural to make sure the each item from the scientific side, based on observations specialists been reworded some paragraphs to become appropriate to achieve the desired objectives.

After completing the questionnaire in final form, was performed (initial test) for questionnaire, it was been taken 30 employees from outside the sample of search. Half split method was used to find out the reliability of thescalethrough used thePearson correlation coefficient to find out a correlation between the odd and even items of the scale, which represent the reliability of the half of scale and then used the Equation of Spearman-Brown to find out the reliability for whole the scale. The reliability value of scale was (0.82) and then it has been found the correction factor through (root for reliability value)and the result was (0.90).

The data of research has been collected during the period (July and August 2013) from the agriculturaldepartments in regions of the Nineveh Province.

Measurement of independent variables

The independent variables was measured as follows:

Age: It wasmeasured through the age of employee during the time of data collection.

The scientific certificate: It has been measured according to four levels:

(Graduate of Agricultural secondary, graduate of an agricultural institute, a graduate of faculty of Agriculture, High certificates) these levels was given the following numbers (4, 3, 2, 1) respectively.

The number of years of agricultural employee service: It wasmeasured through the number of years of employee service.

Specialization in the field of agricultural: It was measured according to the two levels (specialist, non-specialist) and has been given following numbers (2.1) and, respectively.

Career Title: It has been measured throughfour categories: (Agricultural observer**,** an agricultural advisor**,** Agricultural engineer**,** Prime agricultural mentors. It has been givenfollowing degree (4-3-2-1) for each category.

UNDER PEER REVIEW

Through the collection the answers of agricultural employees about the items, the author will get the final degree about the knowledge of agricultural employees towards tasks agricultural extension. The (Pearson correlation coefficient, Equation of Spearman-Brown) were used to find if there is a correlation between knowledge of agricultural employees and independent variables in this study.

It has been used the method (range and category length) to divide the independent and dependent variables to the (3 categories), these variables (age, the scientific certificate, specialization in the field of agricultural, number of years of agricultural employee service) and to divide the categories of dependent variable also, as following:

Range = $Y_{max} - Y_{min}$ (max value – min value)

$$\text{Category Length} \quad \frac{\text{Range}}{\text{Number of categories}}$$

Also, thestatistical methods(Percentage, Mean, Pearson correlation coefficient and Spearman Brown coefficient) were used to analysis the data.

3. THE RESULTS AND DISCUSSION

1. Identify the knowledge level of agricultural employees /Nineveh provincetowards the tasks of agricultural extension ingeneral.

The results showed that the highest numeric values that could be obtain by employees is 90 and lowest numeric value is 30.This represented the employee's knowledge towards the tasks of agricultural extension in general.Employees were distributed into three categories according to the employee's knowledge towards the tasks of agricultural extension, as shown in table 1.

Table 1. The distribution of agricultural employees according to their knowledge towards the tasks of agricultural extension in general.

Categories	Frequency	Percentage %
Low (30 – 50)	31	18.79
Medium (51 – 71)	99	60
High (72 – 92)	35	21.21
Sum	165	100

UNDER PEER REVIEW

Mean of knowledge (67 year).

The table 1 shows that the highest proportion of employees was in the medium category, which accounted 60%. This means that the employee's knowledge towards the tasks of agricultural extension is medium tends to high degree. This due to the employees have medium knowledge towards the tasks of agricultural extension especially in the role of extension in the helping farmers to identify the main problems they face in the rural community.

2. Identify the knowledge level of agricultural employees in tasks of agricultural extension in each item of tasks of agricultural extension:

Table 2. Ranks of items according to the meanof the items.

No.	The tasks	Mean	Rank
1	Help farmers to identify the main problems they face in the rural community.	2.80	1
2	Help farmers to identify opportunities available to them to solve their problems.	2.60	2
3	The development of educational goals in the Action Plan.	2.40	3
4	Help farmers to arrange their problems according to priority.	2.20	4
5	Identify knowledge and training needs of farmers in different fields.	2.10	5
6	Organize indicative committees that contribute to the planning and implementation of extension programs.	1.90	6
7	Preparation of educational experiences and submit them to farmers in order to satisfy their needs.	1.85	7
8	Determine the physical and human resources that can be used to solve problems.	1.60	8
9	Monitor the implementation of the Action Plan seasonal.	1.55	9
10	Publish guidance recommendations among farmers.	1.50	10
11	Teach farmers how to use agricultural techniques.	1.45	11
12	Preparation and writing of monthly and seasonal reports of activities indicative.	1.40	12
13	Planning and implementation of meetings with farmers to identify their problems and needs.	1.30	13
14	A review of the sources of modern agricultural information.	1.28	14
15	Promote and support the idea of the agricultural sector development in the rural community.	1.25	15
16	Informed of farmers about the important of agricultural extension programs.	1.20	16

UNDER PEER REVIEW

17	Work on the involvement of farmers' leaders in the planning and implementation of extension programs.	1.15	17
18	Use some simple educational materials in order to facilitate the learning process.	1.12	18
19	Agriculture leaders training.	1.08	19
20	Working with guiding committees selected from the rural community in the preparation of the action plan seasonal.	1.07	20
21	The preparation and use of audio-visual equipment in the educational process.	1.04	21
22	Planning and implementation guidance trips.	1.02	22
23	Planning and implementation of agricultural fairs.	1.01	23
24	Evaluate the indicative results of the programs on the basis of the objectives set.	0.99	24
25	Evaluating the efficiency of different teaching methods used in the extension work.	0.98	25
26	Identify the factors that hinder the extension programs to achieve its objectives.	0.96	26
27	The use of information obtained from the evaluation of the development and improvement of extension work operations.	0.93	27
28	Assess progress in meeting the educational needs of growers.	0.85	28
29	Clarifying the role of extension in the advancement of rural life.	0.80	29
30	Giving the leading role of the groups participating in the extension programs.	0.75	30

The table 2 shows that the items which took the first three ranks according to the mean of items, are (Help farmers to identify the main problems they face in the rural community, Help farmers to identify opportunities available to them to solve their problems and the development of educational goals in the action Plan). This result means that employees have moreknowledge about these topics.

The items that took the last three ranks according to the mean of items and respectively, are (Giving the leading role of the groups participating in the extension programs, clarifying the role of extension in the advancement of rural life and assess progress in meeting the educational needs of growers). This mean that means that employees have low information in these topics.

3.

UNDER PEER REVIEW

4. Identify a correlation between the employees' knowledge and independent variables in this research:

- **The age:**

The result shows that the highest age of employees' is 55 year, and the lowest age was 30 year, and the mean of 55 year. The employees' were distributed to categories according to the age of employees. The results shows that the medium category has higher percentage of 42.42 %. The results found a positive correlation between the employees' knowledge towards the tasks of agricultural extension and age of employees. The value of Pearson correlation coefficient was 0.2121 and it is significant p-value =0.0003**.As shown in table 3, which means that the employees' knowledge towards the tasks of agricultural extensiondepend on age of employees. This mean that the employee who has more age, in this case he should have more knowledge about the tasks of agricultural extension in the agriculture sector because the experience through years of age in his formal work in agriculture sector.

- **The scientific certificate:**

The employees' were distributed to categories according to the scientific certificate of employees. The result shows that the category of a graduate of an agricultural institute has got the higher percentage 54.54%. The results shows there is no correlation between the employee's knowledge towards the tasks of agricultural extension and scientific certificate of employees. The value of spearman correlation coefficient was 0.4321 and it is notsignificant p-value = 0.3532. As showing in table 3. Which means that the employees' knowledge towards the tasks of agricultural extensiondon't not depend on scientific certificate of employees.

- **The number of years of agriculturalemployee service:**

The employees' were distributed to categories according to thenumber of years of agricultural employee service of employees. The result shows that the medium categoryhas got the higher percentage 48.49%. The results shows there is no correlation between the employee's knowledge towards the tasks of agricultural extension and thenumber of years of agricultural employee service. The value of Pearson correlation coefficient was 0.3040 and it is not significant (p-value = 0.1643). As showing in table 3. Which means that the employees' knowledge towards the tasks of agricultural extension don't not depend on number of years of employee service of employees.

UNDER PEER REVIEW

- **Specialization in the field of agricultural:**

The employees' were distributed to categories according to thespecialization in the field of agricultural of employee service of employees. The result shows that the category of non-specialist has got the higher percentage 75.76%. The results shows there is no correlation between the employee's knowledge towards the tasks of agricultural extension and thespecialization in the field of agricultural. The value of spearman correlation coefficient was0.5127and it is not significant (p-value = 0.1601). As showing in table 3. Which means that the employees' knowledge towards the tasks of agricultural extension don't not depend on specialization in the field of agricultural of employees.

- **Career title:**

The employees' were distributed to categories according to thecareer title of employee service of employees. The results showing that the category of agricultural engineer has got the higher percentage 66.66%. The results found a positive correlation between the employee's knowledge towards the tasks of agricultural extension and thecareer title. The value of spearman correlation coefficient was0.5131 and it is significant p-value = 0.0040**. As showing in table 3. Which means that the employees' knowledge towards the tasks of agricultural extension depend on career titleof employees. This mean when the employee be has the high degree of career title, in this case the employee will try to get more information and knowledge about the tasks of agricultural extension in the agriculture sector.

Table 3. The distribution of agricultural employees to categories according to the independent variables and its correlation with employees' knowledge.

Independent variables	Frequency	Percentage %	Person correlation		Spearman correlation	
			Pearson correlation coefficient	p-value	Spearman correlation coefficient	p-value
Age (year)						
30- 38	30	18.18	0.2121	0.0003**		
39 - 47	70	42.42				

UNDER PEER REVIEW

48- 56	65	39.40				
Sum	165	100%				
The scientific certificate						
graduate of Agricultural secondary	30	18.18			0.4321	0.3532
a graduate of an agricultural institute	90	54.54				
a graduate of Faculty of Agriculture	25	15.15				
High certificates	20	12. 13				
Sum	165	100%				
The number of years of employee service						
4-12 Low	60	36.36	0.3040	0.1643		
13- 21 Medium	80	48.49				
22- 30 High	25	15.15				
Sum	165	100%				
Specialization in the field of agricultural						
specialized	40	24.24			0.5127	0.1601
Non-specialist	125	75.76				
Sum	165	100%				
Career title						
Agricultural observer	13	7.88			0.5131	0.0040**
An agricultural advisor	30	18.18				
Agricultural engineer	110	66.66				
Prime agricultural mentors	12	7.28				
Sum	165	100%				

(**) Significant at the level (0.01)

4. CONCLUSIONS

The Author concludes from this study:

UNDER PEER REVIEW

- The employees have information towards the tasks of agricultural extension, especially in subjects (Help farmers to identify the main problems they face in the rural community, Help farmers to identify opportunities available to them to solve their problems.The development of educational goals in the Action plan).
- These independent variables have important role in development employee's knowledge towards the tasks of agricultural extension(age and career title).
- These independent variables don't have role in development employee's knowledge towards the tasks of agricultural extension in agriculture(the scientific certificate, the number of years of agricultural employee service, specialization in the field of agricultural).
- The knowledge of employees need to development and increase in these topics (Giving the leading role of the groups participating in the extension programs, clarifying the role of extension in the advancement of rural life and assess progress in meeting the educational needs of growers).

5.

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UNDER PEER REVIEW

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