

NEED ASSESSMENT OF AGRICULTURAL EDUCATION AT ELEMENTARY LEVEL IN THE CONCEPTION OF AGRICULTURE GRADUATES

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ABSTRACT: *The aim of this study was to explore the need of Agricultural Education at Elementary Level. First objective of the study was to assess the need of Agricultural Education. Second objective to suggest guidelines for the development of agricultural curriculum at elementary level. 70% people in our country directly based on agriculture field. As education change the behavior of people so it is the best way to mold the students' attitude at elementary level. Agricultural Education is necessary at elementary grade for the betterment in agricultural production. Agriculture is the backbone of our economy and the education of agriculture is also very necessary to aware the young ones regarding the cultivation and for the best yielding of crops. Agricultural Education is also necessity of those who are living in backward areas and can not get the best yielding due to improper ways of cultivation. Data was collected from fresh graduate of PMAS Arid Agriculture University. Simple random sampling was used. Self structured questionnaire was used to collect data. By Findings shows that agriculture education has a positive effect on students learning either they are leaving the education after elementary level or continuing the education. Descriptive analysis was use to analyze the data.*

Key words: Need Assessment, Agricultural Education, Elementary Level,

INTRODUCTION

Agriculture is an economic, social and cultural process. The process of preparing professionals in the agricultural sciences is called agricultural education.

Agriculture is one of the most important sectors of Pakistan. It contributes about 24 percent of the country's GDP. Agriculture is the backbone of Pakistan. It provides living and earning to the most of Pakistan's population.

Frick, Roberts and Dyer quoted that the programs of agricultural education are projected to continue to develop across the country. Agricultural education at school level is still new for them. As a result, little focused has been given on the requirement of agricultural education programs and teachers [1, 2].

Rudd and Hillison said that the need of knowledge experienced by elementary school teachers assisted different program coordinators and managers in giving relevant opportunities that will help them to become more successful in the class. In United States, development of elementary school programs in the education of agriculture and their teachers is very important for the professional agricultural education and for the analysis of efforts at elementary school level to improve the programs. Giving variety of agricultural education to teachers at elementary school level, more devotion is needed to the characteristics of attitude, expectations and knowledge to understand differences controlled by elementary school education trainers [3].

Moore said that in public school all over the country agricultural education should be taught. Curriculum of agriculture should be introduced and implement. Rules for implementation should be introduced. Students who wants to be agriculturalists in future should be taught in a well equipped laboratory atmosphere that the they may able to know about it practically. Only written curriculum is not enough for the practice and knowingness practical work is also necessary[4].

According to Anderman and Maehr in middle class level it is easy to impart the knowledge in students. Students can

choose their livelihood in middle class level and they can decide which field they have to select [5].

Merenbloom said that Middle schools are unique entities that must be recognized independently from secondary and elementary schools because of the nature of their students [6].

Rayfield and Croom stated that In fact, the authors were only able to find one article that dealt solely with the needs of middle school agricultural education instructors [7]

Rosetti, Padilla and McCaslin suggested in their few studies that there should be provided an opportunity to the students to be enrolled in agricultural education programs at middle level of education nation wide[8].

Garton and Chung specifically indicate little need for planning and conducting student field trips, planning banquets, and conducting parent/teacher conferences. Several classroom procedure tasks such as utilizing seating charts and rotational plans for special grouping and maintaining progress charts as low need levels as perceived by teachers [9].

Mawby, was the first one, who found some issues of greater importance to the world than adequate food supplies, proper food use, and knowledge about the components of the agricultural industry means to know about these issues and find out the remedies of these issues through agricultural education [10].

Objectives of the study

1. To assess the need of Agricultural education at elementary level.
2. To suggest guidelines for the development of agricultural curriculum at elementary level.

METHODS AND MATERIALS

Research Design

A quantitative descriptive survey approach was developed to collect and analyze the data to find out the need of agricultural education at elementary level. The questionnaire was demonstrated that was constructed by the researcher. Questionnaire was used to measure the need of agricultural education.

Population

Fresh graduate students of Agriculture Department, PMAS Arid Agricultural Education University Rawalpindi were the population of study.

Sampling Procedure

From the above population, sixty boys and sixty girls were selected as sample to collect data.

Instrument of the Study

Close ended questionnaire was used as the instrument of the study. Questionnaire was divided into twenty statements. Five point likert scale was used to measure the need of agricultural education at elementary level.

Data Collection

Data was collected through self constructed questionnaire by the students of PMAS Arid Agriculture University Rawalpindi. Researcher visited the sample personally from 60 girls and 60 boys.

DATA ANALYSIS

SPSS (Statistical Package for Social Sciences), version 16 was used. Descriptive and chi-square analysis was used to analyze the data.

RESULTS

Data was collected and analyze to assess the need of agricultural education at elementary level and graduates were asked to define needs of the agricultural education system and given curriculum of study area.

Table 1: Need Assessment of Agricultural Education at Elementary Level

Sr.	Statements	Mean	Std. Deviation	df	Chi-Square	Sig.
1	Compulsion of agriculture subject	2.87	.40	2	1.73	.000
2	Importance of agriculture subject	2.95	.25	2	2.11	.000
3	Usefulness at secondary level	1.95	.20	1	1.00	.000
4	Generates knowledge	1.98	.12	1	1.12	.000
5	Awareness of agriculture	4.85	.43	2	1.68	.000
6	Knowledge improvement	4.66	.74	4	2.67	.000
7	Changes innovative technology	4.81	.50	2	1.53	.000
8	Improvement in production	4.89	.40	2	1.89	.000
9	Awareness of agriculture practices	4.65	.70	3	1.74	.000
10	Awareness of market accessibility	4.80	.50	2	1.49	.000
11	Knowledge of sowing crops	4.73	.61	2	1.30	.000
12	knowingness of cultivation time	4.75	.64	3	2.31	.000
13	Knowledge of Irrigation time	4.78	.52	2	1.35	.000

14	Use of pesticide/insecticide	4.77	.55	2	1.39	.000
15	Use of fertilizers	4.64	.73	4	2.42	.000
16	Awareness of harvesting timing	4.50	.68	2	48.35	.000
17	Knowingness of Organic farming	4.36	.75	4	1.32	.000
18	Knowledge Off season vegetation	4.48	.77	2	57.05	.000
19	Awareness of kitchen gardening	4.30	.79	4	1.10	.000
20	Awareness regarding food security	4.33	.82	3	72.46	.000

N=120

From the above table all the variables are significant as $P > .05$. the value of χ^2 chi-square is .000 which is less than the value of .05 that shows certain problems are laying in agriculture education.

1st statement shows that the value of Chi-Square χ^2 (df=2) = 1.73 at p=0.000. this value of Chi-Square χ^2 is much higher than the critical value 10.597(df=2) at p=0.005. This means that this statement "compulsion of agricultural subject" is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction. it illustrates the compulsion of agricultural subject is higher.

2nd statement shows that the value of Chi-Square χ^2 (df=2) = 2.11 at 0.000. this value of Chi-Square χ^2 is much higher than the critical value 10.597(df=2) at p=0.005. This means that this statement "Importance of agriculture subject" is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction. it illustrates the importance of agricultural subject is higher.

3rd statement shows that the value of Chi-Square χ^2 (df=1) = 1.00 at 0.000. this value of Chi-Square χ^2 is much higher than the critical value 7.879(df=1) at p=0.005. This means that this statement "Usefulness at secondary level" is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction. it illustrates usefulness of agriculture subject at secondary level is higher.

4th statement shows that the value of Chi-Square χ^2 (df=1) = 1.12 at 0.000. this value of Chi-Square χ^2 is much higher than the critical value 7.879(df=1) at p=0.005. This means that this statement "Generates knowledge" is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction. it illustrates that generates knowledge for higher study.

5th statement shows that the value of Chi-Square χ^2 (df=2) = 1.68 at 0.000. this value of Chi-Square χ^2 is much higher than the critical value 10.597(df=2) at p=0.005. This means that this statement "Awareness of agriculture" is highly accepted. Mean with standard deviation shows that it

is more than the midpoint of distribution and towards the right direction.it illustrates the awareness of agricultural subject is higher.

6th statement shows that the value of Chi-Square χ^2 (df=4) = at p= 2.67 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 14.860 (df=4) at p=0.005.This means that this statement” Knowledge improvement” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.it illustrates that agricultural education helpful in knowledge improvement is higher.

7th statement shows that the value of Chi-Square χ^2 (df=2) = at p= 1.53 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 10.597 (df=2) at p=0.005.This means that this statement” Changes innovative technology” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

8th statement shows that the value of Chi-Square χ^2 (df=2) = at p= 1.87 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 10.597 (df=2) at p=0.005.This means that this statement” Improvement in production” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

9th statement shows that the value of Chi-Square χ^2 (df=3) = at p= 1.74 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 12.838 (df=3) at p=0.005.This means that this statement” Awareness of agriculture practices” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.it illustrates the compulsion of agricultural subject is higher.

10th statement shows that the value of Chi-Square χ^2 (df=2) = at p= 1.49 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 10.597 (df=2) at p=0.005.This means that this statement” Awareness of agriculture practices” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

11th statement shows that the value of Chi-Square χ^2 (df=2) = at p= 1.30 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 10.597 (df=2) at p=0.005.This means that this statement” Knowledge of sowing crops” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

12th statement shows that the value of Chi-Square χ^2 (df=3) = at p= 2.31 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 12.838 (df=3) at p=0.005.This means that this statement” knowingness of cultivation time” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.it illustrates the compulsion of agricultural subject is higher.

13th statement shows that the value of Chi-Square χ^2 (df=2) = at p= 1.35 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 10.597 (df=2) at p=0.005.This means that this statement” Knowledge of Irrigation time” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.it illustrates the compulsion of agricultural subject is higher.

14th statement shows that the value of Chi-Square χ^2 (df=2) = at p= 1.39 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 10.597 (df=2) at p=0.005.This means that this statement” Use of pesticide/insecticide” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

15th statement shows that the value of Chi-Square χ^2 (df=4) = at p= 2.42 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 14.860 (df=4) at p=0.005.This means that this statement” Use of fertilizers” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

16th statement shows that the value of Chi-Square χ^2 (df=2) = at p= 48.35 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 10.597 (df=2) at p=0.005.This means that this statement” Awareness of harvesting timing” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

17th statement shows that the value of Chi-Square χ^2 (df=4) = at p= 1.32 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 14.860 (df=4) at p=0.005.This means that this statement” Knowingness of Organic farming” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

18th statement shows that the value of Chi-Square χ^2 (df=2) = at p= 57.50 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 10.597 (df=2) at p=0.005.This means that this statement” Knowledge Off season vegetation” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

19th statement shows that the value of Chi-Square χ^2 (df=4) = at p= 1.10 at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 14.860 (df=4) at p=0.005.This means that this statement” Awareness of kitchen gardening” is highly accepted. Mean with standard deviation shows that it is more than the midpoint of distribution and towards the right direction.

20th statement shows that the value of Chi-Square χ^2 (df=3) = at p= 72.46at 0.000.this value of Chi-Square χ^2 is much higher than the critical value 12.838 (df=3) at p=0.005.This means that this statement” Awareness regarding food security” is highly accepted. Mean with standard deviation

shows that it is more than the midpoint of distribution and towards the right direction.

FINDINGS

Agriculture is the major factor of our economy, so the agricultural education must be started from elementary level. Through the research instrument the research has, found that the subject of agricultural should be taught as major subject. And it is very useful for those students who want to go in agricultural field for further education and also for those who did not get further education and join agriculture as profession.it improve knowledge regarding agriculture. Through agricultural education we can use innovation technology in a better way to get production in agriculture field; it helps to aware people about the accessibility of market. They get proper knowledge regarding best season of sowing crops in all seasons, time of irrigation and the timing of cultivation. Agricultural education tells that how, when and where we should use insecticides, timing of harvesting and fertilizers to get high production, if they have proper knowledge they can get high product from small land by using limited sources in proper way.

CONCLUSION

Agricultural education must be compulsory at elementary level. Curriculum should be introduced and implemented regarding agriculture at elementary level. Teacher's trainings are also necessary at this level. Science teacher should take the agriculture subject at elementary level. Teacher should guide the students regarding crops season, using of seeds, use of fertilizers and how to get the marginal rate of returns with the little effort. Allah blessed our country with the agricultural land. Guidance must be for girls as well as for boys. They may utilize the dairy and other products that they gain from agriculture as compare to those girls who do not get the agricultural education. Government should take steps regarding this issue. Policies should be introduced and implemented at elementary level for the development of agricultural education.

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