



## ORIGINAL ARTICLE

# Identifying the role of Agriculture Voc-tech schools in knowledge, insight and skill of Trainees associated with Sustainable Development of Agriculture in Shoushtar city-Khouzestan

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### ABSTRACT

*The main objective of this research is identifying the role of agriculture voc-tech schools in knowledge, insight and skill of trainees associated with sustainable development of agriculture in Shoushtar city-Khouzestan. It is a pure-applied research and its methodology is descriptive-correlation with survey method. Statistical population of this research is all trainees in Bahonar agricultural voc-tech school in Shoushtar, Khouzestan (360 trainees). Among them 193 trainees are selected via simple random sampling as statistical samples. To determine reliability of research tool scout test was performed and Cronbach's alpha coefficient was calculated for different parts of the questionnaire using SPSS software; it was more than 0.7. The obtained results revealed that last year students have more knowledge, insight and skills regarding sustainable management of agriculture demonstrating effectiveness of the voc-tech school. According to the results of regression analysis, among independent variables which have significant impact on dependent variable (agricultural sustainable management), experience and age were two prominent factors. They determine 30.2% of dependent variable variations interactively.*

*Keywords: Agriculture vocational technical school, Sustainable development management, Shoushtar city*

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### INTRODUCTION

Development of agriculture and its products plays a crucial role in human life. Research on sustainable development in all environments requires systematic, coordinated and multi-dimensional attitude towards economic, social and ecological parameters (6). There is a considerable difference between sustainable agriculture and commercial agriculture which uses agricultural production factors intensively. The former aims at long-term constant performance with minimum effect on the environment; whereas, the latter focuses on short-term objectives and maximum performance. As a consequence of anomalies in commercial-industrial agricultural system, living soil ecology based sustainable agriculture movement has formed. The global events illustrate that this movement is spreading and these variations are visible mostly in developed countries (4). Agriculture voc-tech schools play a significant role in formal training of agricultural sciences as a part of agriculture education system. The main objective of such schools is training skilful people equipped with up to date knowledge which, in turn, results in spread of sustainable agriculture and proposing novel agricultural techniques; thus, in the research at hand, the role of agricultural voc-tech schools in development of sustainable agriculture and its components in Shoushtar city is investigated.

### METHODOLOGY

This study might be categorized as applied research. Considering its objective it is a descriptive research and according to data collection nature it would be descriptive-survey. Library studies and field methods are utilized for data collection. The questionnaire includes three sections. The first one consists of knowledge level of trainees about agriculture sustainable development management. The second one is composed of insight of trainees regarding this field while the third part deals with skills of trainees associated with this area. To determine validity of questionnaire panel of expert's method is exploited. To determine reliability, panel of expert's method was utilized and validity is estimated to be more than 0.7 via SPSS software and Cronbach's alpha test (1).

## RESULTS AND DISCUSSION

To classify people from sustainable development management knowledge, responses were rated from 1 to 5.

Table1. Frequency distribution of second and third year trainees in terms of knowledge about sustainable agricultural development management

third year		second year		knowledge
percentage	frequency	percentage	frequency	
1/1	1	7/9	8	low
16/3	15	10/9	11	medium
37	34	65/3	66	high
45/7	42	15/8	16	very high
100	92	100	101	<b>total</b>

According to the above table among second year trainees of studied population 7.9% are categorized as low, 10.9% as medium, 65.3% as high and 15.8% as very high. While in third year trainees 1.1% were categorized as low, 16.3% as medium, 37% as high and 45.7% as very high. Therefore, the difference between these two groups could be observed. The insight of trainees was assessed using 15 items. In the undergoing table the opinion of trainees about resources conservation for next generations was asked. The results were as follows. Among second year trainees almost 41% do not consider this as a necessity and 33% has not mentioned any opinions regarding this topic. Among the trainees only 28% believed in intergeneration resource conservation. In contrast, the condition for third year students is very different. Among them merely 8% were against this theory and 82% were in favor of this statement. In the above table the trainees' opinion about irreversibility of nature in case of irrational utilization of natural resources is investigated. The results demonstrate that almost both groups agree with the theory. The number of trainees who agree with the theory was 49 and 79 in first and second group, respectively. To classify people from sustainable development management insight perspective, answers were rated from 1 to 5. As a result, among second year trainees, 5.9% might be categorized as low, 58.4% as medium, 33.7% as high and 2% as very high. However, among third year trainees the frequency distribution of low and very low groups is zero; 10.9% are categorized as medium, 30.4% as high and 58.7% as very high. This table represents the difference between insights of two groups.

Table2. Frequency distribution of second and third year trainees in terms of sustainable development insight

third year		second year		knowledge
percentage	frequency	percentage	frequency	
0	0	5/9	6	low
10/9	10	58/4	59	medium
30/4	28	33/7	34	high
58/7	54	2	2	very high
100	92	100	101	<b>total</b>

In this study, 16 items are exploited to evaluate skills of trainees. According to the results 32% of second year trainees had low or very low comments regarding the topic; while, this percentage reduces to 16% in third year. High and very high comments constitute 76 and 17 percent of second and first group, respectively. It illustrates that taking part in educational classes has reinforced this opinion between trainees.

Table3. Frequency distribution of second and third year trainees in terms of external performance of agricultural voc-tech school associated with sustainable development management

third year		second year		skill
percentage	frequency	percentage	frequency	
0	0	17/8	18	low
2/2	2	75/2	76	medium

41/3	38	6/9	7	high
56/5	52	0	0	very high
100	92	100	101	total

To examine the relation between independent variable and dependent variables of the research (including knowledge, insight and skill of trainees) the correlation coefficient was calculated between them and their significance level was investigated.

Table4. Correlation between knowledge level of second and third year trainees and independent variables

third year		second year		variable
significance level	correlation coefficient	significance level	correlation coefficient	
0/215	-0/130	0/723	0/216	age
0/12*	-0/109	0/03*	0/036	experience
0/322	-0/104	0/139	-0/148	birth place

Based on correlation coefficient and significance level presented in the above table, the positive relation between knowledge level of second year trainees and their experience is confirmed and other relations are not significant. Moreover, to examine the relation between trainees' age, experience and birth place and their insight to agricultural sustainable development, correlation coefficient is employed (2).

Table5. Correlation between insight of second and third year trainees and independent variables

third year		second year		variable
significance level	correlation coefficient	significance level	correlation coefficient	
0/508	0/07	0/53	0/063	age
0/336	-0/10	0/164	-0/139	experience
0/627	0/051	0/08	0/175	birth place

According to the correlation coefficient and significance level derived in the above table, there is not a significant relation between insight and independent variables. In the next table it is investigated how age, experience and birth place of trainees are related to their skills.

Table6. Correlation between skills of second and third year trainees and independent variables

third year		second year		variable
significance level	Spearman's correlation coefficient	significance level	Spearman's correlation coefficient	
0/99	0/001	0/254	0/115	age
0/907	0/012	0/02*	0/226	experience
0/323	0/104	0/021*	0/23	birth place

Based on the presented results there is a positive relation between second year trainees' skills and their experience and birth place (3). To compare average of knowledge about sustainable development among second and third year trainees, t test is exploited. The results of comparisons might be found in table 7.

Table7: Comparing trainees' knowledge about agriculture sustainable development management

Sig.	T	average	number	variable
0/001	-3/44*	3/89	101	Second year trainees' knowledge about agriculture sustainable development management
		4/27	92	Third year trainees' knowledge about agriculture sustainable development management

Considering the obtained statistic  $t$  (3.44) and significance level (0.001), the difference between average knowledge of these groups of trainees is proved. Since the average knowledge of third year trainees is higher, it could be concluded that agriculture voc-tech schools have improved knowledge level of trainees regarding sustainable management in agriculture (5). Besides  $T$  test is utilized to compare the insight of these two groups of students. The results are included in table 14.

Table8. The comparison between trainees' insight about sustainable development management in agriculture

Sig.	T	average	number	variable
0/000	-14/62*	3/31	101	<b>Second year trainees' insight to agriculture sustainable development management</b>
		4/54	92	<b>Third year trainees' insight to agriculture sustainable development management</b>

Considering the obtained statistic  $T$  (-14.62) and significance level (0.00), the difference between insight of these groups of trainees is proved. Since the average insight of third year trainees is higher, it could be concluded that agriculture voc-tech schools have improved insight level of trainees regarding sustainable management in agriculture. To compare average skills associated with sustainable development among second and third year trainees,  $T$  test is deployed. The results of comparisons are provided in table 15.

Table 9. Comparison between trainees' skills regarding sustainable development in agriculture

Sig.	T	average	number	variable
0/00	-18/34	2/89	101	<b>Second year trainees' skill associated with agriculture sustainable development management</b>
		4/47	92	<b>Third year trainees' skill associated with agriculture sustainable development management</b>

Considering the obtained statistic  $T$  (-18.34) and significance level (0.000), the difference between skills of these groups of trainees is proved. Since the skills level of third year trainees is higher, it could be concluded that agriculture voc-tech schools have improved skills of trainees regarding sustainable management in agriculture (7).

To sum up, as a result of  $T$  test significance, agriculture voc-tech schools are successful in transferring knowledge, insight and skills to trainees.

#### SUGGESTIONS:

1. Encouraging trainees to cooperate with knowledge-based companies and to provide technical consultant services in agriculture
2. Preparing required plans and governmental supports to provide appropriate conditions in each region to increase knowledge, insight and skills in accordance with agriculture sustainable development.
3. Providing educational and cultural programs in voc-tech schools to change the trainees' attitude toward agriculture sustainable development management.
4. Using the media and state TV to introduce academic majors related to agriculture
5. Upgrading quality of voc-tech schools while estimating required quantity for corresponding majors
6. Developing modern skills in agriculture voc-tech schools
7. As voc-tech schools have positive effect on knowledge, insight and skills of trainees, there must be a mutual and reasonable interaction between educational system, agriculture Jihad organization and the Department of Environment to train teenagers living in villages. Moreover, these organizations must provide job opportunities for villagers.
8. Most of girls in villages continue their education till the end of guidance school due to cultural and economic problems. Thus, establishing voc-tech schools for girls provides the situation for their education. Furthermore it leads to more healthy agricultural products and environment conservation.

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