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Non formal education and its relationship with bread wheat production

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Abstract

The purpose of this study was to examine the relationship between participation of farmers in non formal education (NFE) and wheat production (BWP). The sample consisted of 170 male farmers randomly in Torbat Heydarieh, Iran. The instrument of data collection was questionnaire and reliability with Cronbach’s coefficient alpha was 0.98. The results showed a positive correlation between NFE and BWP. In addition, there was a significant relationship between NFE and age group. Findings of the study can be used to make some changes in the agricultural educational process. It also helps to improve farmer’s participation for increasing the NFE and BWP.

Keywords: Wheat production, non formal education, participation

1. Introduction

The notion of non formal education (NFE) has been a significant feature of policy debates around education. It has drawn attention to the importance and potential of education, learning and training that takes place outside recognized educational institutions. It has been defined as any intentional and systematic educational enterprise in which content is adapted to the unique needs of the students in order to maximize learning and minimize other elements which often occupy formal school teachers (Kleis, 1973; Etllng, 1993).

Non formal education impacts on both human development and national development. In addition, it is a fundamental requirement for democracy because NFE provides people with the tools and knowledge they need to understand and participate in today’s world. It also helps to sustain the human values that contribute to individual and collective well-being, using the concept of lifelong learning. With respect to democracy, this kind of education inspires confidence and provides the skills needed to participate in public debates (UNESCO, 2004). Furthermore, participation has been long acknowledged as an essential ingredient in the quest for better NFE. In characterizing successful education, researchers emphasize on participation (Joyce, 1991; Marzano, 2003).

Participatory management (PM) is better suited for today’s AEE. It empowers farmers to better decision. Extension agents today are more educated, motivated, responsible, and capable of doing their jobs and they are willing to implement participatory management in AEE. Participatory management is a process where EA shares significant degree of decision making power with their farmers. PM is something more than putting individuals in groups. The improvement of the individuals’ skills is also taken into consideration in addition to getting them

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involved in the group activities. Participation is dependent of the mental involvement of the individuals and not their physical presence. It is clear that is the EA manages to form groups with farmers of different potentials; the result will be much more profitable. The AEE is relating to improved seeds, fertilisers, pesticides, improved cultural practices, dairying, etc. Therefore, it has known as a practical application of useful knowledge to farm and at last, to improve all faces of the life of the rural people within the framework of the national (Muhs, 1982; Glosser, 2001; Ming, 2004).

1.1. Concept of participation in non formal education (NFE)

Participation in NFE and farmers' empowerment is critical components of the new strategy (Sweetland and Hoy, 2000; Matthews et al., 2003). Moving toward participation in NFE is seen as a way to build key capabilities essential for success in the complicated and dynamic environment (Case, 1998). Farmers' satisfaction, motivation, morale and self-esteem are affected positively by involvement in NFE and implementation (Gamage and Pang, 2003). Hence, participation emphasizes farmers' development. Simmons (1999) and Wood et al (2004) reported that increased participation will better align us with an enlightened vision of freedom and democracy, helping to create a genuine democracy that nurtures human progress.

Generally, all types of education provide powerful learning opportunities. Responsibility for learning is shared among educators and learners. The differences are more a matter of degree in each of these types of education. In this case, extension education is a NFE with only a few exceptions. Although extension agents may take advantage of learning opportunities which arise serendipitously, to call extension work “informal education” is inaccurate (Etlling, 1993). Even less structured is informal education which deals with everyday experiences which are not planned or organized. When these experiences are interpreted or explained by elders or peers they constitute informal education (Kleis, 1973).

Education is given high priority in Iran. Currently the literacy rate in Iranian farmers is not high. However, it has increased by graduating and occupying of the new agricultural students in the agricultural farms. The Agricultural Research, Education and Extension Organization (AREEO) in the Islamic Republic of Iran has determined for implementing many reforms. It brings about innovations in order to improve the development and operation of the NFE for different farmers around the country. In addition, with increasing of general understanding about the importance of the NFE for national development, farmers are willing to take part in NFE at their own condition via a judicious use of the participation. The farmers also may make sound decisions by drawing upon the collective experience, and wisdom. It is anticipated that a higher quality of NFE among the farmers in Iran.

In the 21st century, farmers will be the key to Production. Faille (2000) believes that farmers want opportunities for growth and development via NFE. Therefore, application of the participation in the NFE is inevitable because the capacity for participation is widespread and it is increasingly growing. In addition, it is an element of ethically good behaviour (Webler, 1995).

1.2. Concept of bread wheat production (BWP)

Wheat is the dominant crop in temperate countries being used for human food and livestock feed. It is a widely adapted crop which is grown in temperate, irrigated to dry and high rain-fall areas and in warm, humid to dry and cold environments. Undoubtedly, this wide adaptation has been possible due to the complex nature of the plant's genome, which provides great adjustability to the crop (Acevedo et al., 2002; Shewry, 2009). It is the staple food for more than 35% of the world's population and has accompanied humans since ancient times in their evolution and development, evolving itself from its primitive form (emmer wheat) into the presently cultivated species. As the most internationally traded food crop, wheat is the single largest food import in developing countries and a major commodity in emergency food aid (Dixon et al., 2009).

The most important modern wheat species now are the hexaploid bread wheat and the tetraploid durum wheat, which are distinctive based on their genomic number, grain composition and food end-use quality attributes. Except for the very warm tropics, high humidity, wheat adapts to all diverse climatic conditions prevailing in agricultural lands and is harvested in the world all year around. Its wide adaptation to diverse environmental conditions, along
with its unique characteristic of possessing a viscous elastic storage protein complex called gluten, makes wheat one of the most important food crops in the world (Pena, 2002; Shao et al., 2006).

Wheat is counted among the ‘big three’ cereal crops, with over 600 million tons (m tons) being harvested annually. The total world harvest in 2007 was about 607 m tons compared with 652 m tons of rice and 785 m tons of maize. Approximately 90 to 95 percent of the wheat produced in the world is bread wheat (USDA, 2005; Dixon et al., 2009; Shewry, 2009).

2. Methodology

2.1. Research questions

A research question connected with the aim is developed and tested:

Research questions 1: What is the extent of the relationships between NFE and BWP?

2.2. Purpose and sample of the research

The main objective of the study is to determine the extent of the relationships between NFE and BWP. The sample consisted of 170 male farmers randomly in Torbat Heydarieh, Iran. Reliability of Questionnaire with Cronbach’s coefficient alpha was 0.98.

2.3. Research Methodology

Descriptive and correlation are utilized in this study. Accordingly, Pearson’s product moment correlation is used in data analysis.

3. Findings

There were significant liner correlations between NFE and BWP (r = 0.86) in Torbat Heydarieh, Iran. This correlation was statistically significant at the .05 level (2-tailed).

Table 1: Frequencies and Percentages of farmers’ age groups

<table>
<thead>
<tr>
<th>Age group</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>41 years or more</td>
<td>90.0</td>
<td>52.9</td>
<td>52.9</td>
</tr>
<tr>
<td>40 years or less</td>
<td>80.0</td>
<td>47.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>170.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 shows the frequency distribution of two different age groups of farmers in Torbat Heydarieh. 52.9% of the farmers (n = 90) were 41 years or more, and 47.1% (n = 80) were below 40. Therefore, the farmers 41 years or more were the bigger group.

Table 2: Overall results mean value and t-test value related farmers’ age groups

<table>
<thead>
<tr>
<th>Age group</th>
<th>Mean</th>
<th>SD</th>
<th>t-test</th>
<th>df</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>41 years or more</td>
<td>95.9</td>
<td>12.0</td>
<td>3.667</td>
<td>168</td>
<td>0.000</td>
</tr>
<tr>
<td>40 years or less</td>
<td>97.0</td>
<td>9.85</td>
<td></td>
<td></td>
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Based on the results in Table 2, overall mean score for age group 41 years or more (from the maximum score 100) was 95.9 and the standard deviation value was 12.0. Additionally, overall mean score for age group 40 years or
less was 97.0 and the standard deviation value was 9.85. The t-test was 3.667. This means that there were significant differences between NFE and age group.

**Figure 1**

4. Conclusion and Recommendation

This study suggests the application of the non formal education for increasing the agricultural production. In addition the finding helps to improve farmers' performance, quality of education and finally developing the human resources. The findings of this study have expanded the understanding on factors which could affect farmers’ productivity and hence has created a need for continued research in this area. Future study should be conducted to include female farmers and different levels of the NFE in the various regions of the country.

References


