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Vocational Training of Young Farmers: The Case of Students of the American Farm School Vocational Training Institute

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Abstract

The purpose of this research is to investigate the views of young farmers regarding individual dimensions of vocational training as applied to students of the Vocational Training Institute (VTI) of the American Farm School. Processed data arriving from specially formulated Likert-level questions revealed that young farmer students find it absolutely necessary to participate in training programs governed by experiential learning methodologies, while recognizing that these processes are linked to their knowledge and skill improvement for developing a firm future professional consignment in the agrifood sector. To that extent, experiential learning applications would subsequently assist program participants to cultivate and grow a better understanding for innovation, which undoubtedly affect the path of agribusiness investment sustainability. Although current national sectoral progress has taken significant steps ahead, still not being enough satisfactory in terms of competitiveness. However, there has to be always tension to gradually organize and execute professional experiential learning methodologies from specialized educational organizations to concretely reach out higher levels of improvement in rural development alongside with other eminent and specialized important factors.

Keywords: individual dimensions, young farmers, experiential learning, sustainability

1. Introduction

1.1 The Significance of Vocational Training for Young Farmers

In contemporary times, the rapid socio-economic and technological developments taking place internationally have greatly affected the performance of the agrifood sector, and consequently, those individuals and organizations who are actively involved to its progress and development. Thus, in an ever changing environment in the developed countries, farmers are faced with ever increasing challenges connected to technology, financial crisis, new consumer patterns and demands, climate change, needs and issues of environmental preservation, food security issues, growth of agrifood multinational businesses, and the intriguing influx of cheaper agrifood products from developing countries (European Parliament, 2017). These developments inevitably affect the sustainability of the agrifood sector in Greece, which is called upon to operate in a fluid and unstable environment with challenges and opportunities where knowledge, information, experiential Lifelong Learning and vocational training are dominant tendencies.

Given that humans play a crucial key role in agricultural primary production, followed by processing and product marketing, it becomes evident that vocational training of human resources can become a multiplier of power in the direction of quality upgrading (Kirui & Kozicka, 2018; Wals, Lans, & Kupper, 2012). Hence, meeting today's compulsion demands, young farmers need to update their knowledge, upgrade their skills, and thus, increase their productive efficiency (Jentsch, 2017). To that effect, vocational training is highly important for the adoption and systematic implementation of innovation in the agrifood sector, as young farmers are de facto more receptive to the introduction and use of innovative agricultural production optimization practices (European Parliament, 2017). As a result, young people's participation in vocational training processes can serve as a good investment for the future, both for themselves and the sector, in general (Münchhausen & Haering, 2012). This fact has been highlighted internationally by several scientific studies that in recent years have enriched the relevant literature recording the increasing importance of vocational training of young farmers

(Kirui & Kozicka, 2018; Jentsch, 2017; Jones, 2014; Swanson, 2008). In addition, young farmers are an important parameter of the social capital and development prospects of Greek countryside (Koutsou, Partalidou, & Ragkos, 2014) and in this context, their vocational training can act as a multiplier to rural development efforts. Young farmers by nature, have a youthful drive, passion and will to be actively involved in the agrofood sector and to develop their agricultural holdings. Therefore, the continuous education and training of young farmers can have a catalytic effect on the upgrading of the entire agrofood sector.

1.2 The Vocational Training Institute of the American Farm School

Under this framework, the American Farm School (AFS) launched in October 2018 the operation of a Vocational Training Institute (VTI), aiming to provide specialized knowledge and skills initially to 4 majors: Technician of Horticulture and Alternative Tree Crops, Organic Farming Technician, Agricultural Standardization, Processing and Marketing Business Officer, and Farm Manager. The courses of the above specialties are offered to participants with experiential learning methods at the AFS campus facilities, in order for trainees to acquire contemporary scientific knowledge and specialized skills capable to ensure competitiveness in their future professional career.

The two-year course per major provides a certified Level 5 degree by examination from the Ministry of Education and in accordance with the National Qualifications Framework (NQF), which developed a specific system of description, evaluation and classification of qualifications in the country. Thus, according to NQF, the certificates issued by VTI connect to post-secondary initial vocational training. Entitled of enrolment are graduates from either senior high schools, and/or the two year professional schools.

The educational process includes separate mandatory theoretical and practical class work, as well as a mix of both, while the prerequisite for awarding final degrees is the successful participation in the national certification examination. Besides, internship is compulsory for the successful completion of the degree. It includes six months supervised industrial work exclusively related to the field of studies and it counts as a prerequisite to getting licensed for practicing the profession. This is an ideal opportunity for students to acquire a variety of initial professional skills. To that effect, particular emphasis is given by the AFS VTI in the practical dimension of training, engaging in the equation its educational farm, so, trainees to become exposed to real production conditions, beyond the classroom and laboratory environments. The educational campus farm, or the so called "Living Laboratory", operates under certified quality assurance systems, and includes entrepreneurial type of primary plant and animal production units, food processing and waste management units, and a retail outlet run by the students. Final products are distributed daily to domestic boutique food stores.

2. Method

To cover the needs of this study, a mix of qualitative and quantitative methods was used. Firstly, qualitative research was carried out focusing on a thorough study of the main parameters of the issue, aiming to clarify variables used at the quantitative stage of the research (Richie & Lewis, 2003). Thus, eight qualitative semi structured interviews took place aiming at uncovering opinions, recording participants' viewpoints and highlighting key points. In addition, interviews contributed to forming the conceptual axes of the questionnaire to be applicable later in the phase of quantitative research. The interviews were tape recorded and had an average duration of 30 minutes.

Next, questionnaire research was conducted in sequence to common methods for collecting primary data. The research units consisted of 46 AFS VTI students of the academic year 2018-19. The design of the questionnaire was accomplished by taking into account available valid relevant international literature (Robson, 2011) as well as specific objectives of the research. Further, the questionnaire attempted to be rather comprehensive than complex for the audiences. Thus, through specially formulated Likert-level questions designed specifically for the occasion, the questionnaire attempted to capture the views of trainees on a number of issues concerning the importance of vocational experiential training addressed to young farmers. The research was conducted in March 2020 through google forms platform and a total of 46 questionnaires were collected, elevating response rate up to 100%, since all participants responded to it. Statistical analysis was carried out using the Statistical Package for Social Sciences (SPSS v.17).

3. Results

The interviews which took place in the qualitative phase of the research indicated that there is a clear concern among young farmers about the current situation in the country's agri-food sector. This concern became even more obvious with the rise Covid-19 pandemic, which had tremendous economic and social impact. Furthermore, in this volatile situation, young farmers praised the importance of continuing vocational training recognizing its

importance as a compensatory factor. It should be noted that all participants who were interviewed, expressed the opinion that the situation in the agrofood sector can be improved in the future, through vocational training and farmers' life long learning. Finally, another factor highlighted in the qualitative findings of this study, is some participants' suggestion that many of the problems they face as young farmers could be solved through vocational training and lifelong learning.

As far as results from the quantitative research are concerned, initially in Table 1 outlining the gender of AFS VTI, the majority of student young farmers are males (91.3%), confirming literature's findings for those operating in the agricultural field in this country (Siavelis, 2019; Petrou & Koutsou, 2014). Regarding age range of respondents, the vast majority of 84.8% are between 18-24 years old, 13.1% are between 25-40 years old and only one student (2.1%) is between 41-65 years old. It is worth noting that a very large proportion of the participants (84.5%) are professionally engaged with family's farm business, which is a distinguished characteristic in consistence in Greek agriculture's profile (Kasimis & Papadopoulos, 2013). Of these, 84.5% deal with vegetable production and only 15.4% with animal production, confirming the uneven distribution share between plant and animal production in the country.

Table 1. Profile of AFS VTI young farmer students

Gender	Male: 42 (91.3%)
	Female: 4 (8.7%)
Age range	18-24: 39 (84.8%)
	25-40: 6 (13.1%)
	41-65: 1 (2.1%)
Family farm holders	Yes: 39 (84.5%)
	No: 7 (15.5%)
Farm profile	Plant Production: 39 (84.5%)
	Animal Production: 7 (15.5%)

The geographical origin of the respondents in Table 2 shows dispersion over Greece. More specifically, 34.9% come from Central Macedonia, the Region where the largest percentage of young farmers is found in the country (Siavelis, 2019). Moreover, 6.5% from Western Macedonia, 15.2% from Eastern Macedonia and Thrace, 17.4% of the respondents come from the Midlands, 8.7% from Western Greece, another 6.5% from Thessaly, 4.3% from north Aegean islands, another 4.3% from the Peloponnese, and 2.2% from the island of Crete. That is to say, geographical distribution of respondents provides a relatively representative sample to supporting validity and reliability of research results.

Table 2. Geographical distribution of young farmer students at AFS VTI

Region	Students (%)
Central Macedonia	16 (34.9)
Greek Midlands	8 (17.4)
Eastern Macedonia and Thrace	7 (15.2)
Western Greece	4 (8.7)
Thessaly	3 (6.5)
Western Macedonia	3 (6.5)
Northern Aegean	2 (4.3)
Peloponnese	2 (4.3)
Crete	1 (2.2)
Total	46

Subsequently, all students were asked if participated to any other vocational training programs over the last two years, and their response recorded in the following graph where 56.50% of the respondents did not have any other participation relevant to agricultural professional training.

Unfortunately, in priority appears the obvious were a significant proportion of young farmers still not to actively participate in vocational training for either optimizing, and/or updating their agricultural knowledge and skills. This finding confirms other similar research results (Lioutas, Tzimitra-Kalogianni, & Charatsari, 2010; Zarbou, 2012) and brings to the surface the chronic inability to have running an integrated system of vocational training for the farming population in the country. Consequently, it is observed that the primary production sector employees mainly possess empirical knowledge in contrast to basic theoretical knowledge where they show to have significant deficiencies in their performance (Gargalakos, 2017). This in itself is a good opportunity to qualitatively attempt sectorial upgrade through the application of firmly organized professional training programs. This view is supported by many other researchers as being an important progressive factor for the ag industry (Münchhausen & Haering, 2012; Kirui & Kozicka, 2018). It is noteworthy that jointly 93.5% of the respondents consider participation in vocational training important and very important, while only 6.5% consider it as moderate important (Table 4).

Table 4. The importance of participation in vocational training programs

Not important	0
Little important	0
Moderately important	3 (6.5%)
Important	11 (23.9%)
Very important	32 (69.6%)
Total	46 (100%)

In this pace, participants were then asked to express how much vocational training processes could potentially support the development of the agrifood sector in Greece. Results shown in table 5 a joint 93.5% of the trainees considering these processes to be important and very important and only 6.5% embrace the opinion of being little to moderate important. Thus, the assessment of student young farmers confirms the high importance of vocational training in today's era of knowledge and information to agriculture's progress (European Parliament, 2017).

Table 5. The contribution vocational training processes in the development of the agrifood sector in Greece

Not important	0
Little important	1 (2.2%)
Moderately important	2 (4.3%)
Important	13 (28.3%)
Very important	30 (65.2%)
Total	46 (100%)

Trainees were also asked to describe the current general situation of the agrifood sector in Greece. As it is shown in Table 6, 50% of the respondents rated the situation as moderately satisfactory, while 30.4% rated as slightly satisfactory and 19.6% as not. Nevertheless, it was typical none of the respondents describing the agrifood industry's situation as solely satisfactory, or very satisfactory.

Table 6. Characterization of the current general situation of the agrifood sector in Greece

Not satisfactory	9 (19.6%)
Little satisfactory	14 (30.4%)
Moderately satisfactory	23 (50.0%)
Satisfactory	0
Very satisfactory	0
Total	46 (100%)

Finally, another important research parameter coincided with the future expectations of young farmers, given that they are a crucial motivation factor for employment (Koutsoukos & Iakovidou, 2013). Thus, the research participants were asked to express opinion and beliefs for next decade's future of the agrifood sector in Greece. It is noteworthy in table 7 that jointly 76.0% of trainees see a better or much better future and 24.0% have the opinion of becoming standstill, if not getting worse.

Table 7. The future of the agrifood sector in Greece over a 10 year period

Much worse	0
Worst	4 (8.8%)
Same	7 (15.2%)
Better	30 (65.2%)
Much better	5 (10.8%)
Total	46 (100%)

This finding demonstrates a general inherent optimism of young farmers' willingness to lead the future. It also reflects to the perception that vocational training can practically assist future progress of improvement of the national agrifood sector. According to student young farmers, the application of experiential methodologies in professional training would provide them the opportunity to successfully interpret innovation fundamental parameters and consequently investments to become sustainable.

4. Discussion

Current times are conquered by rich flows of knowledge and information affecting lifelong learning and vocational training position to becoming catalysts for quality upgrade of the agrifood sector. The young farmers considered being the prime link in the agrifood system chain, and to that extend, it becomes increasingly important of investing in their vocational training by executing well designed practical programs. Realizing the kind of commitment specialized educational organizations should have, the AFS VTI began operating in fall of 2018 relevant programs focusing on the experiential dimension of vocational training for young people, who are actively involved in the agrifood sector's production processes. At completion of its first year of operation, this research explored the views of those young farmers participated in the offered programs taking into consideration the pedagogical impact teaching methods of the offered programs may have in terms of contemporary knowledge enhancement and skill improvement. At first, it was revealed that a significant proportion of those participants had no other opportunity of participating into vocational training, and/or other retraining processes prior to their enrolment, which to our knowledge and experience; it is potentially an obstacle to update and optimize contemporary knowledge and skills in today's agricultural profession. Although some progress has been recorded last few years on the subject of individual level training, an infrequent participation in the majority of young farmers still exists (Siavellis, 2019; Lioutas, Tzimitra-Kalogianni & Charatsari, 2010) and to that effect, the factors contributing to the occurrence of this phenomenon perhaps become a major subject of further research in order to investigate this issue in detail. Perhaps the non-satisfactory path of the current general situation of the agrifood sector in Greece connects to the low young farmer training opportunities they have at their disposal. However, the present research showed evidence of optimism for the future, under the condition that there will be opportunities of vocational experiential learning addressed to young farmers, who can become a multiplayer force and the spearhead for rural development, since they will be educated, de facto more adaptable to changes, and more receptive to new technologies, innovative practices and investment actions. To that end, the vehicle of theory-practice connection becomes particularly important, as practical skills developed daily in the pilot plants and in relevant other facilities complement provided theoretical knowledge. Thus, student young farmers taking advantage of experiential learning opportunities enable themselves not to only get acquainted with the theory, but also to put into practice innovative and good agricultural production optimization practices while developing environmental awareness. As a result, their daily contact with their study subject absolutely connects to the "real world" of their subsequent future career. In addition, they emerge having to play an important role of social acting (Petrou & Koutsou, 2014) when the emphasis is given to establish agrifood sector's improvement qualities, which are partially crucial for the development of rural areas. In this context, exploring student young farmer views on the issue of vocational training is particularly important and can provide useful feedback. Thus, this research provides a starting point of reference in "preparing the ground" for further investigation.

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