

Identifying the needs of agricultural students on professional competencies and its relationship with the social structure of education based on the Borich's model

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The main objective of this research was to identify the needs of agricultural students on professional competencies and its relationship with the social structure of education based on the Borich's model. The statistical population of this study consisted both senior undergraduate and postgraduate students on different agricultural fields at both Bu Ali Sina University of Hamedan and Razi University of Kermanshah (N = 850). Of those, 385 students were selected as samples by using Cochran's formula and a simple random sampling method. The main tool for data gathering in this research was a questionnaire whose questions were designed in three sections: professional competencies, social structure of education, academic motivation. The validity of the questionnaire was calculated using a panel of experts and its reliability was calculated by Cronbach's alpha test and it was 0.88. The results of the research showed that from the viewpoint of the agricultural students about professional competencies, 8 items need to be learned by the students and integrated into students' curriculum. These were: 1. Practical skills, 2. English skills, 3. Agricultural experience, 4. Ability to implement various agricultural projects, 5. Ability to implement research project; 6. Agricultural and environmental technical knowledge; 7. Information and communication technology skills; and 8. Creativity and innovation. The results of structural equation analysis also showed the direct effect of professional competencies on two variables of academic motivation (0.78) and social structure of education (0.63), and they were significant at the level of 0.001. The results also showed that academic motivation had a direct effect on the social structure of education with a path coefficient (0.82).

Identify and prioritize professional competencies with high priority scores

	Professional competence	Average importance	Average performance	Priority score
1	Acquisition of practical skills in the field of study	4.26	2.56	6.24
2	Dating or English language	4.25	2.76	6.18
3	Having an agricultural work experience	4.61	3.44	4.42
4	Ability to implement and carry out various agricultural projects in the field of specialty	4.22	3.01	4.31
5	The ability to carry out a research project	4.52	3.48	4.22
6	Agricultural and Environmental Technical Awareness	4.23	3.18	4.21
7	Knowledge of ICT	4.42	3.34	4.17
8	Having creativity and innovation in the field of study	4.26	3.63	4.14

Identify and prioritize professional competencies with low priority score

	Professional competence	Average importance	Average performance	Priority score
1	The ability to lead and manage	4.39	3.84	1.97
2	Having a comprehensive view of the issues of work in the field of study	4.34	3.81	1.89
3	The amount of desire and participation in the progress of the work	3.59	2.95	1.87
4	Ability to diagnose problems in the field of study	4.36	3.90	1.66
5	Honesty in doing things	4.23	3.80	1.50
6	Trust and honesty	4.14	3.81	1.11
7	The amount of perseverance during the study	3.27	2.86	1.09
8	Conscientiousness during study	4.29	4.07	0.77
9	Studying while studying	4.18	3.96	0.75
10	Student personality and work	4.08	3.94	0.46

Based on this, the findings from the Borich's model showed that the priority score of eight professional competencies is higher than 4, and these are the needs with the highest educational priority. These competencies are as follows: 1. Acquisition of practical skills in the field of study, 2. Knowledge or English language 3. Having an agricultural work experience -4 The amount of ability to perform and carry out various agricultural projects in the field of specialization -5 Capacity Implementation of a research project -6 Agricultural and Environmental Technical Awareness -7 Knowledge of ICT and -8. Creativity and Innovation in the Field of Education. The score of 17 professional competencies was between 2 and 3, which indicated that these competencies were not training needs but needed to be strengthened. Some of these competencies include: the amount of knowledge and information about the field of study, the amount of information and Knowledge about new technology in the field of specialization is the ability to communicate in rural and agricultural environments. And the 10-point professional merit score was less than 2, which indicates that these competencies do not require training, some of which are: ability to lead and manage, have a comprehensive view of the issues and problems in the field of study, and the amount