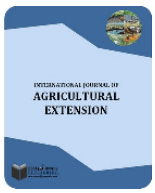

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PERCEPTION OF AGRICULTURAL ADVISORY COMPANIES' EDUCATORS REGARDING THE IMPORTANCE OF PROFESSIONAL COMPETENCIES IN TRAINING PROCESS IN IRAN

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A B S T R A C T

The purpose of this study was to assess perceptions of educators of agricultural advisory services regarding the importance of necessary professional competencies in education process. This descriptive correlational study utilized a survey research method. The statistical population consisted of agricultural educators of advisory services in two western provinces of Iran, Illam and Kermanshah (N=1853). Sample size was determined by using Krejcie and Morgan's (1970) Table. Proportional stratified random sampling method was used to select 317 educators as the sample of the study (with return rate of 0.94 percent). Data were collected through questionnaire; its content validity was confirmed by using a panel of agricultural extension and education experts and the reliability of different parts were calculated in 0.70 - 0.90 range resulting from a pilot test. Comparing different competencies, the educators perceived the importance of teaching and learning methods at the first and delivery strategy at the last ranks. The results of Friedman test ($P \leq 0.01$ & $Chi^2=48.802$) showed that there was meaningful difference among the respondents' perceptions on the importance of professional competencies in education processes. Based on the mean ranks of each statement in four competencies the professional competency development model for agricultural extension educators of agricultural advisory services was designed.

Keywords: Preception, educator, professional competencies, education process, consultancy services company.

INTRODUCTION

In Public sector extension in the decades of 1970 and 80 was heavily criticized by politicians and economists in developed countries that their focus was on costs and financial problems of public sector extension (Ebrahimi, 2003). Rivera *et al.* (2001) has proposed four diversified strategies for world extension systems reforms such as decentralization, commercialization of innovation, cost recovery, and privatization for conventional extension. Agricultural extension privatization is one of the solutions that various countries such as Germany, Holland, France, England and Chile have implemented as an accepted remedial measure that may counteract against related shortcomings and weaknesses of governmental extension (Hanchinal *et al*., 2001; Saravanan, 2001).

In Iran, despite lack of sufficient managers' competency to make optimized decisions, lack of a relationship between educational contents and audience needs, staff's role intervention and the withdrawal of qualitative personals have been the reasons for the criticism on public sector extension (Todehrosta, 2003). However, the trend of change has started as country has been gradually moving toward privatization of agricultural extension activities since 2002 through formation of consultancy services companies, which aims at reducing government authority piloted in some provinces such as Kermanshah, Hamadan and Zanjan; and since 2007 it was formally implemented nationwide. Until now 2653 companies have been formed in different provinces of the country in which 23151 agriculture graduates facilitate target groups. In Ilam and Kermanshah, two pioneer provinces, as reported, there were about 188 companies with 1853 members by the end of 2013.

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The functions and duties of these companies are education and extension consultancy services, plant protection, agricultural mechanization, provision and distribution of agricultural inputs, marketing and establishing sales' centers (Ahmadpor *et al.,* 2011; Rezaei *et al.,* 2013; Ministry of Jihad-e- Keshavarzi, 2013). Hoseini &Khodabande (2010) unveiled that young agricultural graduates as members of consultancy companies don't have required professional experiences and competencies to carry out educational courses. Educators' perception of required professional competencies has been reflected in numerous researchers' studies (Radhakrishna, 2001; Farrell, 2005).

Coats (1998) stated perception as a process, including individuals' feelings and abilities to get the facts about the environment; while, Morse *et al.* (2006) stated that the changing needs of educators is related to the client changing needs.

Audiences' needs are changed by social, economic and environmental conditions changes of the community. According to Morse *et al.* (2006) there is a gap between educators' current knowledge and a level of required knowledge to solve the problems.

Based on the theory of social perception, social knowledge it can be noted that person acquires automatically through the understanding of normal periods affects his behaviour undesirably (Ferguson & Bargh, 2004).

Thus, it can be commented here that when educators of consultancy services companies in the process of education understand lack of required skills and competencies for effective transfer of educational programs to the target groups, their behaviour will be getting changed and inclined towards acquiring the abilities and skills.

Definitions and uses of the word professional competencies vary from an organization to another based on desired goals and objectives (Lee, 2006). But on the whole, professional competency is considered as an integral part of employees' performance and reflect areas of knowledge, attitude and skill of a person that enable her/him to act effectively in her/his career (Zorzi *et al.,* 2002).

The process of education is a set of activities that include need assessment, teaching and learning methods, delivery strategies and evaluation systems (Martin, 1991).

Regarding required professional competencies of educators several studies have been conducted. Haji-Mirrahimi & Hoseini (2002) in their study ranked the importance of educators' professional competencies as education and teaching, curriculum planning, research, and management, respectively and introduced university education as the best time to learn mentioned competencies. Alizadeh & Sadighi (2011) in their study divided effective agricultural educator characteristics in rural areas into three categories of communication skills, individuals' professional behaviour and personality characteristics. The study results showed that most of the characteristics identified by the panel of experts were in individuals' professional behaviour and personality characteristics categories that can be a necessary condition for effective activities of an agricultural educator. Rajabi *et al*. (2012) in a study entitled investigating competencies and skills required for agricultural high schools' educators in Kermanshah, classified competencies and skills which were identified into three general categories and six subcategories, professional competencies (educational, managerial and planning), personal competencies (personal and social) and specialized skills (scientific and practical).

Azizi-Khalkhili & Zamani (2012) in a study by meta-analysis of available research in the period of 1981 to 2010 determined the required agricultural change agents' competencies. According to the results of this study, a total of 13 general competencies were identified. Among them, good communication with the audiences and colleagues and suitable use of communication technologies in 19 cases have been most emphasized. Irani *et al.* (2003) in a study Identified importance and possession of adult education competencies among county extension faculty. Hodges and Burchell (2003) in a study showed that a significant difference is found between the importance of education required competencies of graduates and their performance.

Roberts & Dyer (2004) have classified efficient agricultural educators' competencies to educational competencies, having proper social relationships, professional competencies, ability to management and planning, and personal competencies. Okwoche *et al.* (2011) in their study investigated the importance of professional competencies required of extension educators. According to their findings, the most important competencies from the perspective of male extension educators include the ability to motivate

farmers, the ability to communicate and develop educational materials and from the viewpoint of female educators include the ability to motivate farmers, work management, planning and organizing activities. Sorensen *et al*. (2010) in their study on the importance of agriculture educators' required professional competencies in Utah introduced the most important competencies as the use of consultation committees, utilizing experiences of farmers, curriculum, teaching and learning principles and educational evaluation. Ghimire (2010) in a study entitled relative importance of professional competencies of education process for extension educators in north-central United States of America identified the competencies in four areas of need assessment, teaching and learning principles, delivery strategies and evaluation systems, and introduced on the job training as the best opportunity to learn the competencies.

Despite the importance of research conducted, this study has been conducted due to lack of a comprehensive internal study in the area of required professional competencies for educators of consultancy services companies, as new actors in the structure of Iran agricultural extension system. This study carried out to modelling educators' professional competencies development in consultancy services companies with an emphasis on four parts of the education process (need assessment, methods of teaching and learning, delivery strategies and evaluation systems). In order to fulfill the research objectives, four main questions have been developed as follow:

- How importance are the need assessment competencies in training process as perceived by the respondents.
- How importance are the teaching and learning competencies as perceived by the respondents.
- How importance are the delivery strategies competencies as perceived by the respondents.
- How importance are the evaluation competencies as perceived by the respondents.

According to the studies reviewed, a conceptual framework was drawn adapted from Ghimire & Martin's (2011) four professional competencies development model. It is worth noting that professional competencies of education process consisted of four areas of need assessment (8 items), teaching and learning methods (9 items), delivery strategies (8 items) and evaluation methods (8 items). Need assessment competencies mean the ability of educators in designing education and extension programs based on needs, interests and problems of farmers. Teaching and learning methods competencies mean a set of principles to facilitate learning experiences for farmers. Delivery strategies competencies indicate the ability of educators in utilizing educational methods properly with the aim to optimize learning experiences for farmers. Evaluation methods competencies also refer to the ability of educators in collection, analysis and interpretation of information to determine strengths and weaknesses of an educational program (Figure1).

MATERIALS AND METHODS

This study is a kind of descriptive and correlation research that has been conducted through a survey. The statistical population of the study consisted of all agricultural extension educators of agricultural advisory services in two western provinces of Iran (namely the province of Ilam and Kermanshah; N=1853). Sample size was determined by Krejcie & Morgan's (1970) Table and 317 educators were selected using proportional stratified random sampling technique. A questionnaire with four parts, needs assessment (8 items), teaching and learning methods (9 items), delivery strategies (8 items), and evaluation methods (8 items), was developed by the authors as the instrument to collect data. The content validity of the instrument was achieved by a panel of agricultural extension education experts. A pilot study was conducted to determine the reliability of the questionnaire and Cronbach's alpha calculated in ranging from 0.70 to 0.90. The respondents' perception on the importance of competencies assessed using a five-point Likert-type scale (0 = none, 1= low, 2 = moderate, 3 = high and 4 = very high). The data was analyzed using SPSSwin18 software.

RESULTS AND DISCUSSION

Personal Characteristics: The results of descriptive statistics showed that about two-thirds of respondents (67.2%) were men and others (32.8%) were women. The mean age of respondents was 31.40 years. The youngest educator was 22 and the oldest was 40 years old. In terms of field of study, 16.3% of respondents were graduated of agricultural extension and education and the remaining (83.7%) were graduated of other agricultural fields. In terms of education level, 64% had a bachelor degree, 34 percent had a master and 1% had a doctoral degree. The average of educators' membership history in consultancy services companies was 5.26

years. The average experiences of educators' educational activity were 4.83 years, with a minimum of one and maximum of 15 years. In terms of participation in "on the job training" courses, 56.6% of respondents had participated in "on the job training courses" regarding familiarization with an educator's competencies. The average number of "on the job training" courses passed was 2.80 (Table 1).

Table 1. Respondent's individual and professional characteristics (n= 297).

Variable	Variable Level	Frequency	Percentage	Mean	SD	Minimum	Maximum
Gender	Male	193	67.2				
	Female	94	32.8				
Total	-	287	100				
Age (year)	22-27	42	14.3				
	28-33	171	58.4	31.40	3.66	22	40
	34 and high	80	27.3				
Major	Extension education	48	16.3				
	Other	246	83.70				
Total		294	100				
Education level	Associate degree	3	1				
	B.Sc.	186	64				
	M.Sc.	99	34				
	Ph.D.	3	1				
Total		291	100				
Membership in company (year)	1-3	57	23.6				
	4-6	115	47.5	5.26	2.35	1	15
	7 and high	70	28.9				
Total		242	100				
Educational experience (year)	1-3	129	43.9				
	4-7	83	28.2	4.83	3.15	1	15
	7 and high	82	27.9				
Total		294	100				
On-service training	Yes	158	56.6				
	No	121	43.4				
Total		279	100				
Number of courses passed	2 and lower	78	49				
	3-4	39	24.9	2.80	1.65	1	8
	5 and high	41	26.1				
Total		158	100				

Measuring educators' perception of the importance levels of required professional competencies in education process:

Needs assessment competencies: According to the findings, total average of the importance level of need assessment competency was 3.17 with SD of 0.88, indicating high to very high importance of the competency for educators in education process.

Teaching and learning methods competencies: With regard to the second competency, teaching and learning methods, the rating of the nine items was 3.21 in importance level, indicating high-to-very high perception of this competency by the educators in education process. As shown in Table 2, the item "match learning to practical application" is in the first rank in level.

Delivery strategies competencies: For the third competency, delivery strategy competencies, although the educators perceived high the importance level of this competency in education process (Mean= 3.03), but they perceived the highest and lowest mean value was for items conduct field trip (Mean= 3.15) and use questioning techniques in teaching (Mean= 2.86) in importance situation, respectively.

Table 2. Perceptions of the educators on professional competencies statement related to need assessment.

Need assessment Competencies	Perceived importance		
	Mean*	SD	Rank
Identify problems to be addressed	3.49	0.77	1
Determine program goals	3.26	0.84	2
Prepare a long range program of work	3.20	0.93	3
Determine program priorities	3.16	0.90	4
Use advisory committee in planning	3.11	0.90	5
Identify gaps between what is and what could be	3.09	0.92	6
Develop an annual plan of work	3.06	0.94	7
Identify expected outcomes for the program	3.01	0.89	8
Total	3.17	0.88	

*The competency statements were rated on a Likert-type scale of 0 to 4, where 0= none; 1= low; 2= moderate; 3= high and 4= very high.

Table 3. Perceptions of the educators on professional competencies statement related to teaching and learning methods.

Teaching and learning methods competencies	Perceived importance		
	Mean*	SD	Rank
Match learning to practical application	3.44	0.76	1
Use principles of learning	3.36	0.83	2
Identify factors that influence learning	3.31	0.84	3
Recognize learning styles of clientele	3.22	0.80	4
Match learning objectives to individual learning needs	3.22	0.88	5
Use group learning techniques	3.17	0.89	6
Create a motivating learning environment	3.15	0.83	7
Use techniques that facilitate self-discovery	3.01	0.87	8
Use a learner cantered approach	3.0	0.96	9
Total	3.21	0.85	

*Competency statements rated on a Likert-type scale of 0 to 4, where 0= none; 1= low; 2= moderate; 3= high and 4= very high.

Table 4. Mean perceptions of the educators on professional competencies statement related to delivery strategies.

Delivery strategy competencies	Perceived importance		
	Mean*	SD	Rank
Conduct field trips	3.15	0.91	1
Present a concept through demonstration	3.13	0.87	2
Conduct group discussions	3.12	0.86	3
Use problem solving approach in teaching	3.10	0.90	4
Use appropriate technologies to enhance oral presentations	3.01	0.88	5
Design educational exhibits	3.0	1.01	6
Construct a well-organized presentation	2.88	0.93	7
Use questioning techniques in teaching	2.86	0.93	8
Total	3.03	0.91	

*Competency statements rated on a Likert-type scale of 0 to 4, where 0= none; 1= low; 2= moderate; 3= high and 4= very high.

Evaluation methods' competencies: For the evaluation methods' competency, there were eight items. The mean values, standard deviations and ranks for educator's responses are presented in Table 4. The overall mean score for all items was 3.05 in importance level, indicating high perceiving of importance the competency in the education process. Comparing different competencies, the educators perceived the importance of teaching and learning methods (M=2,68) at first and delivery strategy (M=2, 23) at the last ranks. The results of Friedman test ($P \leq 0.01$ & $Chi^2=48.802$) show that there is a meaningful difference among the respondents' perceptions on the importance of professional competencies in education processes (Table 6).

Table 5. Mean perceptions of the educators on professional competencies statement related to evaluation systems.

Evaluation systems competencies	Perceived importance		
	Mean*	SD	Rank
Use techniques to assess learner's reaction to learning experience	3.17	0.82	1
Identify problems requiring additional research	3.15	0.90	2
Evaluate your performance as an educator	3.11	0.90	3
Assess learning outcomes	3.08	0.88	4
Using impact data for planning	3.07	0.94	5
Assess client expectations	3.05	0.96	6
Interpret results of surveys	2.94	0.98	7
Develop survey instruments	2.85	0.92	8
Total	3.05	0.91	

*The competency statements were rated on a Likert-type scale of 0 to 4, where 0= none; 1= low; 2= moderate; 3= high and 4= very high.

Table 6. Comparing different competencies.

Professional competency development areas	Mean rank	Chi^2	df.	Sig.
Teaching and learning methods	2,86			
Need assessment	2,63	48,802	3	.000
Evaluation systems	2,29			
Delivery strategies	2,23			

$P \leq 0.01$

CONCLUSION

According to the results, the educators perceived high importance level of required professional competencies in education process. Based on previous studies, positive perceptions reinforce positive attitude and behaviours. Therefore, in this research, the respondents' high perceptions toward the importance of professional competencies implied the educators' positive motivations. This thought provoking in two aspects. First, the educators have shown their own tendencies for increasing the efficiency by improving their current status of competencies in training process and second, they announced their own readiness to improve these competencies when opportunity allows. Based on the findings as the agricultural graduated students are the main educators of the advisory services companies, the agricultural colleges programs should focus on four areas of professional competencies for improving these competencies in the students. Meanwhile, the educators should continuously improve their professional competencies by participating in in-service and on-the-job training programs. Therefore, according to the research findings, development model of consultancy services companies' educator's professional competencies in education process is recommended as Figure 1. According to the model, four professional competencies are key elements of an education process, which lack of any of them will affect the effectiveness of educators 'educational activities in counselling services companies. So that the educators by participating in professional development programs at the appropriate opportunity, and receiving suitable feedback in educational activities, continuously promote their professional competencies.

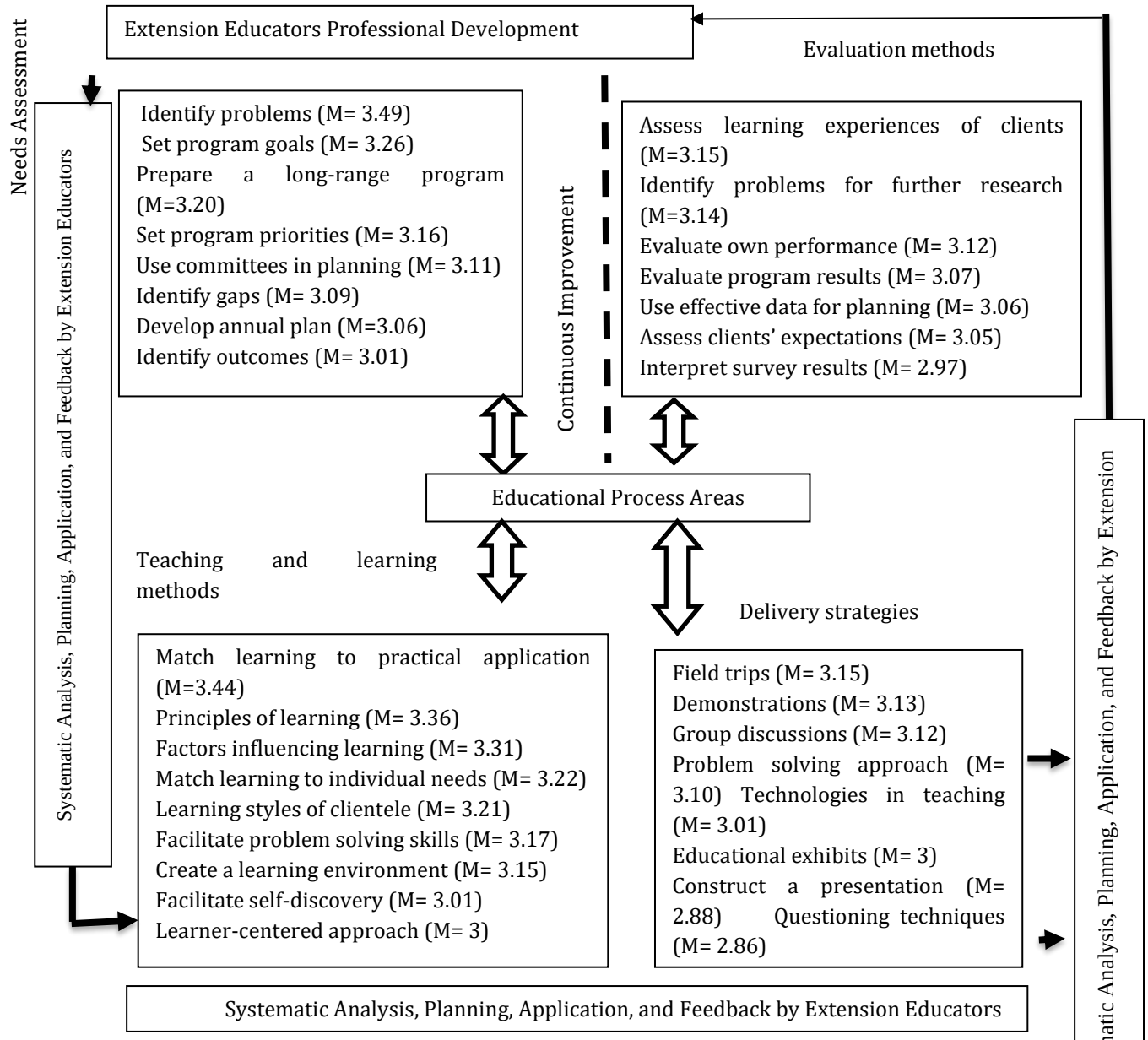

Figure1. The professional competency development importance model of extension educators of agricultural advisory services

(Adaptive from Ghimire & Martin's, 2011)

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