A STUDY OF WORK ENVIRONMENT AND COMPETENCIES NECESSARY FOR AGRICULTURAL EXTENSION IN EGYPT USING DELPHI TECHNIQUE

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ABSTRACT

This study aimed to: determine the issues in extension, as identified by central level extension employees that are related to the attraction and motivation of extension staff within the next ten years, and identify the competencies entry–level extension staff will need within the next ten years from the viewpoint of central level extension employees. Questionnaire forms were used for data collection through three rounds of Delphi technique. All three rounds were performed in 2013; Round 1 was conducted during January & February, round 2 in May, and round 3 in September. 98, 81 and 75 employees are responded to round one, two and three respectively. The most important fifteen extension work environment issues (financial, technological, psychological, and managerial environment) needed to attracting and motivating extension staff were identified as well as thirteen work competencies (extension program development, interpersonal skills, technicality, educational, and homogeneity competencies) needed in entry–level extension staff were identified.
Keywords: Agricultural Extension, Work Environment, Work Competencies, Delphi Technique, Egypt

INTRODUCTION AND PROBLEM STATEMENT

One of the basic principles taught to managers is that an organization functions most efficiently when there is an appropriate use of its physical, financial, and human resources. The smart use of financial, physical, and information resources, and the productivity of the organization as a whole, highly depends upon the effective and efficient functioning of human resources within an organization. Nevertheless, human resources have been neglected to a large extent by many agricultural extension and education services throughout the world (Karbasioun *et al.*, 2007: 14). It is a well-known fact that extension agents play a critical role in any extension service (Tladi, 2004: 34). According to Oakley and Garforth (1985), the success or failure of any extension programs is dependent on effective performance by extension agents.

The current agricultural trends such as those related to population, gender and environmental issues are placing diverse and often very complex demands on extension staff. Agricultural extension staffs are central to facilitating the changes associated with these trends. Future extension agents need to be more skillful to serve the needs of diverse audience. To be a successful extension agent today, one must be competent not only in

technical matters, but also in areas such as management, programming, communication, human relations and leadership (Okwoche *et al.*, 2011: 121).

The competency approach to human resource management enables organizations to develop their capacity through the identification of knowledge, skills, and abilities essential to success (Vakola *et al.*, 2007: 260). Previous studies have identified various competencies needed by extension workers in technical areas and human development areas as well. It was found that these competencies should be possessed by extension workers in order to effectively perform their role (Tiraieyari *et al.*, 2010: 1379). Benge *et al.* (2011) reported that identifying competencies needed by extension agents is a determining factor for adequate education curricula, training, and retention. Understanding and developing the competencies of the organization and its employees are essential for having and maintaining a competitive advantage.

While the work activities and the competencies necessary to perform these activities are critical elements in defining a job, no job is performed in a vacuum. Every job is performed within a work environment and thus the characteristics of that work environment are critical elements to be identified in defining and understanding that job (Prien *et al.*, 2009: 53). The benefit of having a positive work environment is receiving increased attention both from scholarly and popular perspectives. It makes sense that organizational benefits will occur if employees believe their organizations are making decisions that create attractive work environments (Kroth and Peutz, 2011: 1).

The total number of agricultural extension staff in Egypt is 7121; 4692 of them are more than 50 years old, which indicated that Egyptian extension organization needs to replace about two-thirds (65.9%) of its staff within the next 10 years (Central Administration for Agricultural Extension, 2013).

Objectives

Based on the importance of the positive work environment and the extension agents' competencies for agricultural extension, this study aimed to:

1) Determine the issues in extension, as identified by central level extension employees that are related to the attraction and motivation of extension staff within the next ten years.
2) Identify the competencies entry–level extension staff will need within the next ten years from the viewpoint of central level extension employees.

Literature Review

Work Environment

Work environment is summatively used in literature to reference the social and psychological context of organizations (Fouts, 2004: 14). During early days of the development of industrial psychology, only physical environment was given importance and was considered as a predominant determinant of employees' productivity (Srivastava, 2008: 47).

Work environment within organization develop from many psychological and social stimuli emanating from observable facets such as policies, activities, personality needs of the members, interactions that enable the organization

and members to achieve their separate goals, and a multitude of ambiguous patterns of implied or expressed behavior expectations (Fouts, 2004: 17).

There are four organizational environment, they are: human relations environment (concerns morale, solidarity and human resource development), internal processes environment (refers to information, communications, stability and management), reasonable goals environment (refers to the organization's outward orientations and focus on productivity and program planning), and open system environment (refers to growth, resource acquisition and external support) (Ardakani *et al.*, 2012: 8131).

The work environment plays a crucial role for the employees; it becomes a critical factor for accepting and/or keeping the jobs. The quality of work environment may simply determine the level of employee's motivation, subsequent performance and productivity (Leblebici, 2012: 38). It has a strong influence on a company's ability to recruit and retain talented people. Some factors in work environment may be considered keys affecting employee's engagement, productivity, morale, comfort level etc. People working under inconvenient conditions may end up with low performance, absenteeism and turnover. The work environment is perhaps a key root causing employee's engagement or disengagement (Mokaya *et al.*, 2013: 80).

Work Competencies

The effectiveness of an extension organization is determined by the ability of its extension staff to design, deliver, and evaluate effective educational programs, because they are directly serving the needs of the people. Their level to performing extension tasks is a function of a host of competencies. In this era of globalization, knowledgeable and skilled staff members can play vital roles in the success of an organization. Future extension professionals need to be more skillful and futuristic to serve the needs of diverse audiences (Lakai, 2010: 5).

A competency is a collection of related knowledge, skills and abilities (KSAs) needed to perform a specific task (Cochran, 2009: 8; Cheng *et al.*, 2011: 1318; Cooper and Graham, 2001). Competencies in organizations can be broadly classified as employee level and organizational-level. Since organizational-level competencies are embedded in employee-level competencies, the identification of the latter is important for organizations interested in using competencies to achieve competitive advantage (Cardy and Selvarajan, 2006: 235).

Agricultural extension agents need to acquire certain competencies to perform well in doing their jobs. Competencies both had intellectual as well as practical dimensions that were served as the bases of the agents' professional expertise, especially in promoting their clientele well being. As knowledge, technology and work environment changed, the Agricultural agents should also adjust their competencies (Kurniawan and Jahi, 2005: 1).

The importance of competencies to organizations cannot be overestimated; in fact, they can be the key to competitive advantage. In order for an organization to succeed in its mission, organizational competencies must match strategic intent. Without the needed competencies, even well-

conceptualized and well-stated strategies cannot be successfully implemented and realized. It is competencies that allow the concept of strategic intent to be operationalized (Cardy and Selvarajan, 2006: 235). Competencies are factors that contribute to high levels of individual and organizational performance. On the other hand, by developing a set of competencies for extension workers and incorporating those competencies into training, the capacity of an extension organization to better serve its clients can be improved. This definitely can increase the rate of adoption of new technologies by clients (Tiraieyari *et al.*, 2010: 1379).

Delphi Technique

Delphi technique (sometimes referred to as the Delphi) was named after the ancient Greek oracle at Delphi from which prophecies were given. Delphi technique was developed in the early 1950s by Olaf Helmer and his associates at the Rand Corporation in California when they were working on defense research (Yousuf, 2007: 1). It was designed to elicit expert opinion in a systematic manner. Delphi's initial application was in the area of technological forecasting. The subsequent two decades saw the use of Delphi expand into investigations of the fields of business, science, medicine, and education (Martin and Frick, 1998: 73).

The Delphi itself is supposed to enhance creative thinking. It is one of the best known methods for dealing with open-ended and creative aspects of a problem because it motivates independent thought and gradual formation of group solutions (Nowack *et al.*, 2011: 1603). It is a popular technique for forecasting and an aid in decision making based on the opinions of experts (Landeta, 2006: 467). Since its first application, Delphi has become a widely accepted and frequently used research method, especially for futuristic oriented research. The conventional Delphi can be defined as a method that aims at a consensus on a particular topic among a group of experts, while the procedure follows an anonymous, multistage communication process based on several survey rounds (Gnatzy *et al.*, 2011: 1681).

Delphi technique is an inexpensive research methodology involving experts without physically bringing them together. The validity and reliability of findings of Delphi studies come from combining expert judgments. In addition, the anonymity of Delphi participants allows them to interact, rethink, and compare their thoughts in a "non-threatening forum" without being influenced by each other's opinion (Ali, 2005: 718).

The basic steps or rounds of Delphi technique are: 1. The first questionnaire which is sent to the participants may ask for a list of opinion on a specific topic, such as experiences, judgments, recommended activities or predictions about the future. 2. On the second round, a copy of the collective list is sent to each expert and the expert is asked to rate or evaluate each item by some criterion of importance. 3. The third questionnaire includes the list and the ratings indicated and the experts are asked to revise their opinions (Yousuf, 2007: 2).

Methodology

The Delphi technique was used to obtain opinions from central level extension employees work for Central Administration for Agricultural Extension (CAAE) about work environment and competencies issues that are necessary for the agricultural extension in Egypt within the next ten years. The steps in this study were as follows:

1. Round 1: to generate the broadest initial list of responses, a questionnaire form, (includes two questions: 1. Please list what you believe will be the most important issues over the next ten years related to extension work environment? and 2. Please list what you believe will be the most important issues over the next ten years related to extension personnel competencies?), was distributed among staff of CAAE (156 employees) during the period from January to February 2013. The process of their completion was followed up. Ninety eight (98) individuals are responded with 590 statements for work environment and 585 statements for work competencies. Any responses that directly overlapped or were clearly the same statement were combined. The final lists include 16 issues for work environment and 14 issues for competencies were used for round 2.

2. Round 2: during May 2013, the 98 participants were asked to provide their opinions on statements of round 1. A five-point Likert scale was used for participants to rate these issues (Scale: not important, of little importance, moderately important, important, and highly important). Participants again were asked to list additional issues they thought should be added to the list. The additional issues that were added by participants are 2 for both work environment and competencies. Eighty one staff members are responded to this round of the study. At least two–thirds (66.66%) of the respondents had to rate an item as "important" or "highly important" in order for it to progress from round 2 to round 3.

3. Round 3: during September 2013, the 81 participants were asked again to review and re-rate round 2 statements according to their level of importance using the same five-point Likart scale. Only 75 are responded to this final round of the study.

The findings have been presented in percentages of the last two rounds, and judgments and discussions are based on the final one (round 3). Selected responses (important and highly important) were used for findings presentation.

RESULTS AND DISCUSSION

Agricultural extension work environment

Table 1 shows the work environment issues identified by the respondents. Of 16 work environment issues entered round 2, there were 14 issues that reached the level of agreement necessary to move to round 3. The two extension work environment issues dropped from round 2 were: independency of extension work and training, accommodation and transport allowances for field duties should be made prior to activities not after. There were two new responses added in round 2 namely: supporting one-crop

village and supporting role of cooperatives. There were 15 work environment issues that achieved the level of agreement necessary for consensus in round 3. The work environment issue that was dropped from round 3 was supporting one-crop village.

Out of the 15 work environment issues, there were four key grouping among these issues (figure 1). Three issues are related to financial environment: adequate financial resources, competitive salaries, insurance & pensions and realistic regulations of training, accommodation and transport allowances. Two of the issues are technological environment: convenient transportation means for staff and availability of technological infrastructure. One is related to psychological environment: enhancing farmers' views about and attitudes towards extension personnel. The remaining nine issues are related to managerial environment: continuance trainings for staff, clarifying linkages with research, linking theses and researches with extension, clarifying work plan for extension, job security, clarifying job description, activating job hierarchy, supporting crop rotation, and supporting the role of cooperatives.

Table 1: Percentages of rounds 2 and 3 responses about work environment issues identified by the respondents

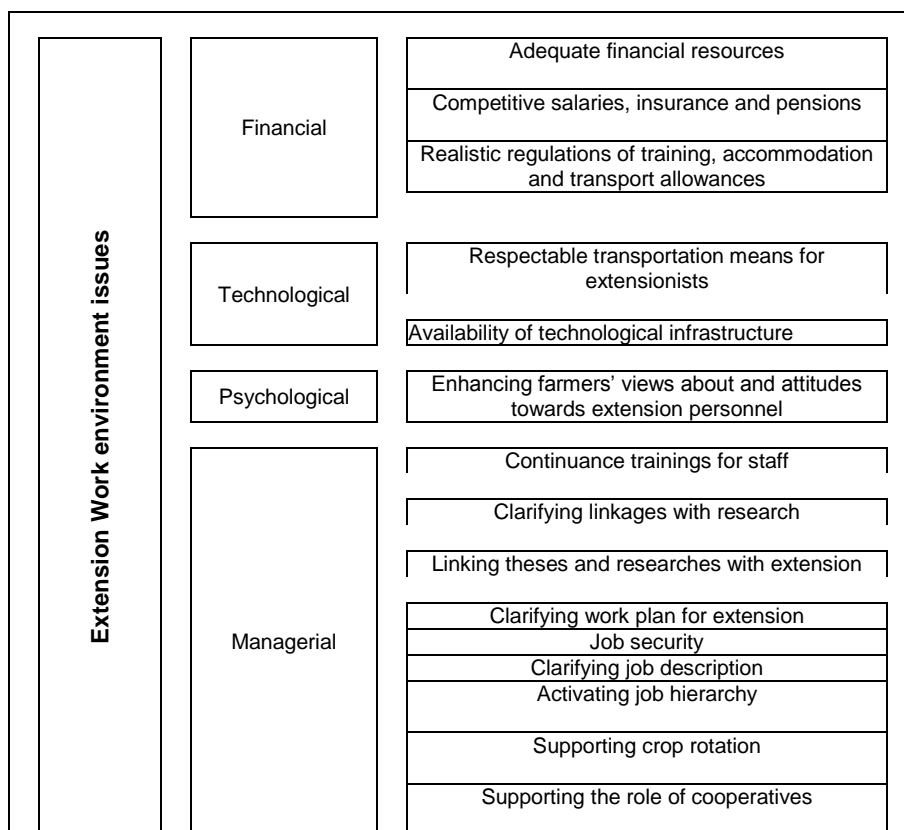| No. | Work environment issues | Response Options (%) | | | |
| | | Round 2 (n=81) | | Round 3 (n=75) | |
		Important	Highly Important	Important	Highly Important
1.	Independency of extension work	23.46	27.16	-	-
2.	Adequate financial resources	7.41	92.59	8.00	92.00
3.	Competitive salaries, insurance and pensions	12.35	87.65	13.33	86.67
4.	Enhancing farmers' views about and attitudes towards extension personnel	49.38	46.91	29.33	53.33
5.	Continuance internal and external training for staff	30.86	64.20	52.00	42.67
6.	Convenient transportation means for staff	37.04	55.56	40.00	60.00
7.	Clear linking mechanisms with research	35.80	43.21	33.33	54.67
8.	Linking MSc & PhD theses and researches with extension work	27.16	61.73	25.33	53.33
9.	Availability of technological infrastructure	18.52	75.31	33.33	66.67
10.	Changing regulations of training, accommodation and transport allowances to be more realistic	23.46	74.07	20.00	80.00
11.	Training, accommodation and transport allowances should be made prior to activities not after	22.22	43.21	-	-
12.	Clear and specified work plan for extension	32.10	60.49	37.33	57.33
13.	Job security including field missions	27.16	48.15	26.67	61.33
14.	Clear job description	20.99	76.54	26.67	73.33
15.	Activating job hierarchy	25.93	45.68	29.33	44.00
16.	Return to crop rotation	34.57	23.46	32.00	53.33
17.	Supporting one-crop village	New Response		29.33	32.00
18.	Supporting the role of cooperatives	New Response		44.00	32.00

Source: The questionnaire form.

Figure 1: Extension work environment issues over the next ten years as reported by the respondents

5.2. Agricultural extension work competencies

In addition to the new two responses; there were 14 competency issues in round 2 that reached the level of agreement necessary to move to Round 3. The two extension work competencies issues that were dropped from round 2 were: specialization in one field of agriculture and competent to gather and analyze data. The two new responses added in round 2 were: belonging to the extension organization and having MSc or PhD in agriculture especially in extension (see table 2). There were 13 competency issues that achieved the level of agreement necessary for consensus in round 3. The dropped issue from round 3 was belonging to the extension organization.

Figure 2 shows the thirteen extension work competencies identified by the respondents, which can be grouped in five key groups (figure 2). The first group relates to the extension program development and includes: program planning, implementation and evaluation. Secondly, there was strong emphasis on core interpersonal skills including: communication skills (speak, listen, understand, & write), leadership skills (Self confidence, teamwork, persuasion, powerful personality, and encourage farmers) and problem

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diagnosing and solving. Additionally, the third group belongs to the technicality of employees, consisting of using different learning methods, and dealing with computer and internet. The fourth group related to educational competencies and includes: having enough knowledge in all agricultural fields, having BSc in agriculture, and having MSc or PhD in agriculture or extension. The remaining group is related to homogeneity and includes: rural origin and analogous with farmers.

Table 2: Percentages of rounds 2 and 3 responses about work competencies identified by the respondents

| No.	Work competencies	Response Options (%)			
		Round 2 (n=81)		Round 3 (n=75)	
		Import ant	Highly Important	Important	Highly Important
1.	Specialized in one field of agriculture	27.16	17.28	-	-
2.	Having enough knowledge in all agricultural fields	40.74	29.63	38.67	46.67
3.	Rural origin	61.73	38.27	49.33	44.00
4.	Analogous with farmers	51.85	34.57	40.00	56.00
5.	Having a bachelor of agricultural sciences	48.15	28.40	26.67	66.67
6.	Good communication skills (speak, listen, understand, & write)	13.58	86.42	5.33	94.67
7.	Good leadership skills (Self confidence, teamwork, persuasion, powerful personality, encourage farmers)	27.16	72.84	12.00	88.00
8.	Competent to gather and analyze data	30.86	17.28	-	-
9.	Competent to diagnose problems and suggest solutions	24.69	49.38	37.33	38.67
10.	Competent to use different learning methods and aids	30.86	41.98	37.33	50.67
11.	Competent to deal with computer and the internet	40.74	54.32	53.33	41.33
12.	Competent to plan programs	49.38	18.52	50.67	40.00
13.	Competent to implement programs	46.91	20.99	50.67	38.67
14.	Competent to evaluate programs	58.02	11.11	53.33	33.33
15.	Belonging to the extension organization	New Response		26.67	12.00
16.	Having MSc or PhD in agriculture especially in extension	New Response		33.33	33.33

Source: The questionnaire form.

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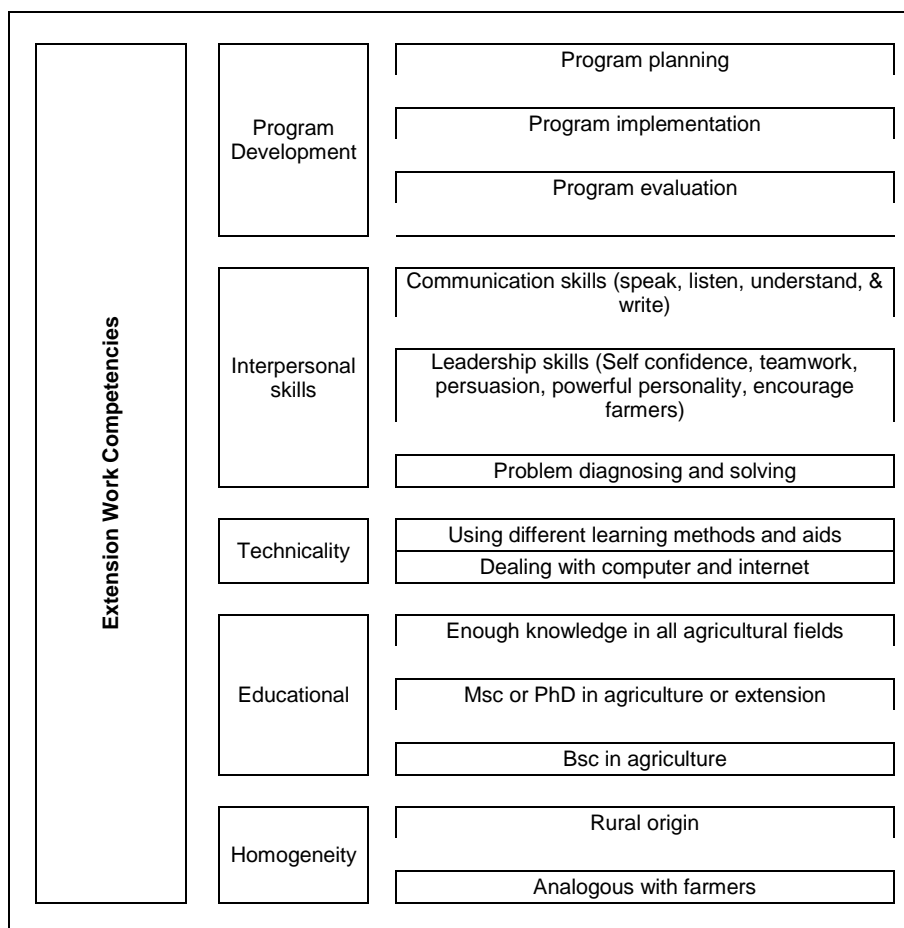
Figure 2: Extension work competencies over the next ten years as reported by the respondents

CONCLUSION

The aforementioned work environment issues were identified as the most important for extension work over the next 10 year. The enabling environment should address the determined 15 work environment issues. Furthermore, 13 extension work competencies were determined. Highly effective extensionists must exhibit highly interpersonal skills. They must understand and practice the program development process from needs identification to evaluation. Other areas of emphasis include the effective use of computer and internet.

In order to be successful in the future; organizations must plan now, not later, so the agricultural extension organization in Egypt should critically establish its enabling environment guided by the determined 15 work environment issues and assess its staff development activities and hiring practices as guided by the 13 core competencies necessary for successful agricultural extension over the next 10 years.

In practical terms, the knowledge gained from this study could be used in the attracting, selecting, placement, development and reward of the Egyptian agricultural extension staff. This study should be viewed as a step towards making a positive contribution to the retention of valuable staff in the agricultural extension field.

REFERENCES

Ali, A. (2005). Using the Delphi technique to search for empirical measures of local planning agency power, The Qualitative Report, 10 (4): 718-744. Available at: http://www.nova.edu/ssss/QR/ QR10-4/ali.pdf

Ardakani, A., Jowkar, B., Mooghali, A. (2012). The effect of organizational environment on performance and job satisfaction (Case Study of Shiraz University), Journal of Basic and Applied Scientific Research, 2(8): 8130-8139, 2012. Available at: http://www.textroad.com/ pdf/JBASR/J.%20Basic.%20Appl.%20Sci.%20Res.,%202(8)8130-8139,%202012.pdf

Benge, M., Harder, A., Carter, H. (2011). Necessary pre-entry competencies as perceived by Florida extension agents, Journal of Extension, 49 (5). Available at: http://www.joe.org/joe/2011 october/a2.php

Central Administration for Agricultural Extension (2013). Extension personnel in Egypt. The Technical office (In Arabic).

Cardy, R., Selvarajan,T.(2006). Competencies: alternative frameworks for competitive advantage, Business Horizons,49 (3):235-245.Available at: http://www.sciencedirect.com/science/article/pii/S0007681305001333

Cheng, B., Wang, M., Yang, S., Peng, K. (2011). Acceptance of competency-based workplace e-learning systems: Effects of individual and peer learning support, Computers & Education, 57(1): 1317–1333. Available at: http://hub.hku.hk/bitstream/10722/135599/1/content. pdf?accept=1

Cochran, G. (2009). Ohio state university extension competency study: developing a competency model for a 21st century extension organization, PhD Dissertation, The Ohio State University. Available at: http://etd.ohiolink.edu/sendpdf.cgi/Cochran%20Graham%20R.pdf?osu 1243620503

Cooper, A., Graham, D. (2001). Competencies needed to be successful county agents and county supervisors, journal of extension, 39 (1). Available at: http://www.joe.org/joe/2001february /rb3.php

Fouts, H. (2004). Organizational climate of North Carolina cooperative extension, PhD dissertation, North Carolina State University, 2004. Availableat:
http://repository.lib.ncsu.edu/ir/bitstream/1840.16/3811/1/etd.pdf

Gnatzy, T., Warth, J., von der Gracht, H., Darkow, I. (2011). Validating an innovative real-time Delphi approach - a methodological comparison between real-time and conventional Delphi studies, Technological Forecasting & Social Change, 78 (9): 1681–1694. Available at: http://www.sciencedirect.com/science/article/ pii/S0040162511000813

Karbasioun, M., Mulder, M., Biemans, H. (2007). Towards a job competency profile for agricultural extension instructors – a survey of views of experts. Human Resource Development International, 10 (2): 137-152. Available at:
http://www.researchgate.net/publication /236593369_Towards_a_job_competency_profile_for_agricultural_exte nsion_instructors_A_survey_of_views_of_experts/file/9c960515e820fa 2b90.pdf

Kroth, M., Peutz, J. (2011). Workplace issues in extension—a Delphi study of extension educators, Journal of Extension, 49 (1): 1-10. Available at: http://www.joe.org/joe/2011february/pdf /JOE_v49_1rb1.pdf

Kurniawan, R., Jahi, A. (2005). The Competencies of agricultural extension agents working in seven sub-districts in the district of Bekasi, West Java, Journal Penyuluhan, 1(1): 1-6. Available at: http://repository.ipb.ac.id/bitstream/handle/123456789/42815/Ridwan% 20Kurniawan.pdf?sequence=1

Lakai, D. (2010). Identification of competencies needed by the extension agents in North Carolina cooperative extension, Master Thesis, North Carolina State University. Available at: http://repository.lib.ncsu.edu/ir/bitstream/1840.16/ 6495/1/etd.pdf

Landeta, J. (2006). Current validity of the Delphi method in social sciences, Technological Forecasting & Social Change, 73 (5): 467–482. Available at:
http://www.sciencedirect.com/ science/article/pii/S0040162505001381

Leblebici, D. (2012). Impact of workplace quality on employee's productivity: case study of a bank in Turkey, Journal of Business, Economics & Finance, 1 (1): 38-49. Available at:
http://www.jbef.org/archive/pdf/volume1/4-Demet%20 Leblebici.pdf

Martin, A., Frick, M. (1998). The Delphi technique: an informal history of its use in agricultural education research since 1984, Journal of Agricultural Education, 39 (1): 73-79. Available at: http://www.jae-online.org/attachments/article/512 /39-01-73.pdf

Mokaya, S., Musau, J., Wagoki, J., Karanja, K. (2013). Effects of organizational work conditions on employee job satisfaction in the hotel industry in Kenya, International Journal of Arts and Commerce, 2 (2): 79-90. Available at: http://www.ijac.org.uk/images/frontImages/gallery/ Vol._2_No._2/9.pdf

Nowack, M., Endrikat, J., Guenther, E. (2011). Review of Delphi-based scenario studies: quality and design considerations, Technological Forecasting & Social Change, 78(9): 1603–1615. Available at: http://www.sciencedirect.com/ science/article/pii/S0040162511000576

Oakley, P., Garforth, C. (1985). Guide to extension training, FAO, Rome. Available at: http://www.fao.org/docrep/t0060e/t0060e00.htm

Okwoche, V., Ejembi, E., Obinne, C. (2011). Professional competencies perceived to be important and needed by female and male agricultural extension agents: a study from Nigeria, Journal of Agriculture Science, 2(2): 121-126. Available at:
http://www.krepublishers.com/02-Journals/JAS/JAS-02-0-000-11-Web/JAS-02-2000-11-Abst-PDF/JAS-02-2-121-11-039-Okwoche-V-A/JAS-02-2-121-11-039-Okwoche-V-A-Tt.pdf

Prien, E., Goodstein, L., Goodstein, J., Gamble, L. (2009). A practical guide to job analysis, Pfeiffer, San Francisco.

Srivastava, A. (2008). Effect of perceived work environment on employees' job behavior and organizational effectiveness, Journal of the Indian Academy of Applied Psychology, 34 (1): 47-55. Available at:
http://medind.nic.in/jak/t08/ i1/jakt08i1p47.pdf

Tiraieyari, N., Idris, K., Uli, J., Hamzah, A. (2010). Competencies influencing extension workers' job performance in relation to the good agricultural practices in Malaysia, American Journal of Applied Sciences, 7 (10): 1379-1386. Available at:
 http://thescipub.com/pdf/10.3844/ ajassp.2010.1379.1386

Tladi, F. (2004). Job content and training needs of agricultural extension agents in South-Central Botswana, Journal of International Agricultural and Extension Education, 11 (3): 33-39. Available at:
 https://www.aiaee.org/attachments/ article/212/Tladi%2011.3-4.pdf

Vakola, M., Soderquist, K., Prastacos, G. (2007). Competency management in support of organisational change, International Journal of Manpower, 28(3/4),260–275.Availableat:
http://www.emeraldinsight.com/journals.htm?articleid =1615927&show=html

Yousuf, M. (2007). Using experts' opinions through Delphi technique, Practical Assessment, Research & Evaluation, 12 (4): 1-8. Available at:
http://pareonline.net/pdf/v12n4.pdf

دراسـة لبيئـة وقدرات العمل اللازمـة للإرشـاد الزراعي في مصر بإستخدام أسلوب دلفي

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يهدف البحث إلى إستخدام أسلوب دلفي في التعرف على وجهة نظر العاملين بالإرشاد على مستوى الإدارة المركزية للإرشاد الزراعي في أهم خصائص بيئة العمل اللازمة لجذب وتحفيز العاملين بالإرشاد، وكذلك تحديد قدرات العمل المطلوبة في العاملين بالإرشاد في مصر خلال العشر سنوات المقبلة. تم جمع البيانات علي ثلاث جولات خلال عام ٢٠١٣ بإستخدام ثلاث إستمارات إستبيان، حيث أجريت الجولة الأولى خلال شهري يناير وفبراير على ٩٨ مبحوثاً، بينما أجريت الجولة الثانية في شهر مايو على ٨١ مبحوثاً، في حين أجريت الجولة الثالثة والأخيرة في شهر سبتمبر على ٧٥ مبحوثاً. وإنتهت الدراسة إلى تحديد ١٥ خاصية من خصائص بيئة العمل (المادية، والتكنولوجية، والنفسية، والإدارية) اللازمة لجذب وتحفيز العاملين بالإرشاد، بالإضافة إلى ١٣ قدرة من قدرات العمل (مهارات تطوير البرامج الإرشادية، والمهارات الشخصية، والتكنولوجية، والتعليمية، والتجانسية) المطلوبة في العاملين بالإرشاد في مصر خلال العشر سنوات المقبلة.
الكلمات الدالة: الإرشاد الزراعي، بيئة العمل، قدرات العمل، أسلوب دلفي، مصر