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COMPETENCIES POSSESSED BY THE TRAINING PROFESSIONALS OF AGRICULTURAL TRAINING INSTITUTES IN PUNJAB, PAKISTAN

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ABSTRACT

Professional competencies are considered key to performing job responsibilities. Training professionals of Agricultural Training Institutes (ATIs) are engaged in imparting various skills and expertise to extension field staff in the form of training so that they would perform their tasks and responsibilities in a better way to disseminate advanced agricultural knowledge. In this scenario, the present study was designed to investigate various competencies possessed by the training professionals of ATIs in the Punjab province of Pakistan. For this purpose, data were collected from all training professionals working in all ATIs of Punjab Province in Pakistan. A well-structured questionnaire was developed as an instrument of the study. Descriptive statistics including frequencies, means and standard deviations were applied through Statistical Packages for Social Sciences. Results reveal that training professionals of ATIs possess computer skills especially MS word and email skills. Motivational skills, lecture delivery skills and communication skills were ranked at the top, which is being possessed by training professionals. Moreover, the results recommend that the government should launch capacity building programs to develop professional competencies of training professionals on regular basis.

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INTRODUCTION

Competency is the group of expertise, abilities, and skills possessed by an individual required for efficient performance during the job (Chouhan and Srivastava, 2014). The competency level of the training professionals helps to accomplish any training. Additionally, the assessment of training needs also assists to evaluate the efficiency of the competency levels (Layfield and Dobbins, 2003). In the same way, Lindner and Baker (2003) compared the master trainers and demonstrated the different levels of competencies in agricultural education, and compared learners' levels of competencies. Elbert and Baggett (2003) argued that

there are different perceptions concerning the competencies of training professionals. Firstly, the planning competence to gain completion of the task is considered as high-level competency. Furthermore, the ability to apply legal infrastructure in the training program improves the efficiency of the program. The other considerations include the accomplishment of personal plans and applying the learned practices in different circumstances. The establishment of the disparities in the trainer's efficacy and its impacts on their professional careers depicts a positive correlation and the self-efficacy was determined by the commitment and enthusiasm of the trainer. Such was demonstrated

by the ability to impact the learners' skills. In the same way, different trainers in different environments posed discrepancies (Knobloch and Whittington, 2003). The most effective agriculture trainers were characterized by effective communication skills as well as good interpersonal skills. In addition, the ability to interact freely with the community, learners as well as farmers improve their competency and make them effective (Roberts and Dyer, 2004).

Pre-service learning improves the efficiency of future professional trainers and advising in different ways in which the learners can apply their knowledge. Competency could be raised by the integration of competencies-based elements (Ricketts *et al.*, 2005). Farmers that received extension services and training on agricultural aspects from proficient Extension Field Staff (EFS) possess a higher level of skills and their demand for education improved the efficiency in the implementation of knowledge obtained in the training (Karbasioun *et al.*, 2006).

The status of competence is considered crucial as it helps to ascertain the different ways in which teaching processes could be improved (Butler, 2006). Lack of training has lowered the availability of qualified trainers in the agriculture sector. Through such aspects, institutions have resulted to recruit untrained staff in agriculture resulting in a decline in self-competence among trainers. Over time, underqualified trainers in agriculture have raised flags on the quality and effectiveness of the training programs (Rocca and Washburn, 2006).

The assessment of trainers' competence would need to verse them with the ability to provide reliable guidelines to the learners on the application of agricultural skills in the field (Karbasioun *et al.*, 2006). The trainers would also acquire a higher level of competence through additional training. Such additional skills would be crucial in the determination of the efficacy and application of technology in the agriculture sector. In addition, the need for training has been provoked by the need to incorporate science in the development of agricultural education (Duncan *et al.*, 2006). The support from the ministries responsible for unexpected changes in agriculture and extension work has been limited to the constraints of resources and manpower. Such has been the reason to notice a decline in self-efficacy and competency among agricultural training experts and extension field staff (Karbasioun *et al.*, 2007).

The professional trainers working in ATIs should be trained and motivated to produce competent extension field staff. They don't use advanced teaching methodologies and lacking in the use of maps, charts, models and the internet in teaching which affects their competencies (Iqbal *et al.*, 2007). Opportunities for capacity building of training professionals need some additional training to improve their levels of self-efficacy and competency (Duncan and Ricketts, 2008). Higher levels of competence have been identified as the main source of self-efficacy and extension field staff depicting such character demonstrates a higher level of efficiency (Khan *et al.*, 2009). Competencies demonstrate the ability to deliver services and impact positively on learners' skills on a course and the ways learners think and benefit from the skill development programs. Notably, such parameters are crucial variables as they are characterized as competency levels (Ambika, 2009). The appraisal of competencies of extension staff improved the understanding of the farmers about farming practices and the integration of advanced technologies (Wasihun, 2010). Inquiry-Based learning has a better chance of improving the competency of the learners (Washburn and Myers, 2010). The commitment between the training professional and learners would promote learning (Barrick *et al.*, 2011).

The distribution of successful practices would be an effective strategy in fostering the competence of farmers' trainers. In this way, the approaches that have been proved effective such as the integration of science and technology in the process would be effective in facilitating farmers' training (Lukuyu *et al.*, 2012). The kind of certification in the training process determined the competence of the training professional, as well as the ability to impact on the learner's knowledge and recommendations, have been made to standardize certification to improve certainty on the level of acquired skills among trainers (Robinson and Edwards, 2012). The different levels of competence among the training professionals are characterized by the output observed among the professional trainers and learners' farmers (Okeowo, 2015). The competency-based approach requires that trainers must follow structures that are focused on improving the delivery of the learning activities. In this way, professionals recommended the mixing of competence-based learning approaches to improve the efficacy levels (Aboko and Obeng, 2015). The competence of the professional

trainers may be described as a facilitative approach in the training sessions. Additionally, the influence of the institutional curriculum has a significant impact on productive change among the farming community (Suvedi and Ghimire, 2015). The Extension Field Staff (EFS) provide training to the farming community whereas they are learners for training professionals working in agricultural training institutes. These professional trainers remain engaged in the conduction of pre-service and in-service training for EFS; therefore, the training professionals of these ATIs should be competent enough to conduct this training for efficient delivery of agricultural information to the end-users the “farmers”. Keeping this scenario in view the present study was conducted to assess competencies of training professionals of ATIs in Punjab, Pakistan.

METHODOLOGY

The current study was conducted in 2018 in the Punjab province of Pakistan. There are four Agricultural Training Institutes (ATIs) in Punjab, namely In-Service Agricultural Training Institute, Rahim Yar Khan, In-Service Agricultural Training Institute, Sargodha, Barani Agricultural Training Institute, Rawalpindi and Agricultural Training Institute, Karor, Layyah. These

institutes are providing in-service training for the EFS of Directorate General Agriculture (Extension & Adoptive Research) and pre-service training in the form of Diploma in Agricultural Sciences (DAS), which is regarded as a Field Assistant diploma.

All the professional trainers (Directors, Deputy Directors, Senior Instructors, and Instructors) working in the ATIs were considered as respondents for this study and data were collected from all of them. Due to the limited number of respondents, all the population was regarded as a sample of this study because this was a census study. A well-structured, Likert scale-based questionnaire was designed as an instrument of this study. The questionnaire was composed of different sections with close-ended questions designed keeping in mind the objectives of the current research. A panel of experts (extension experts from the field & academia) checked the validity of the questionnaire. The data was collected from all the instructional staff working in ATIs of Punjab. The reliability of the questionnaire was also checked through SPSS by measuring Cronbach’s alpha and its value was 0.879 (87.9%). Descriptive statistics were used to measure frequencies, means and standard deviations etc. using Statistical Packages for Social Sciences (SPSS) for analysis of results.

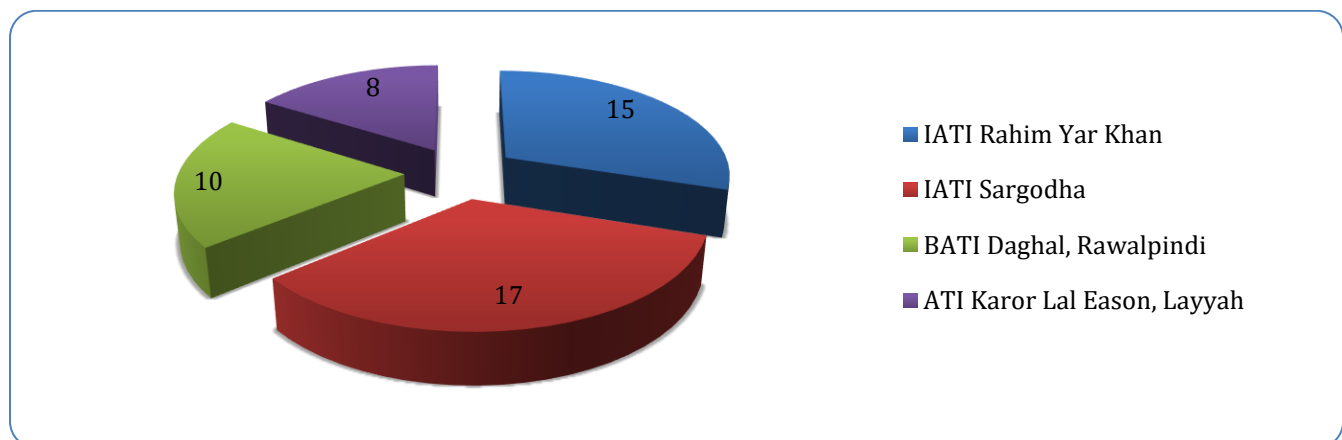


Figure 1. Sample size from each institute.

RESULTS AND DISCUSSION

Different factors relating to instructional methods, instructional tools, computer skills, interpersonal skills and training conduction skills used by training professionals of ATIs were assessed to depict various competencies possessed by the professionals.

Table 1 reveals the data regarding teaching methodologies used by the training professionals for

pre-service and in-service training, about pre-service training, the lecture was ranked at 1st with a mean value of 4.76 while the question and answer were ranked at 2nd with a mean value of 4.02. The discussion teaching methodology used by the instructional staff was ranked 3rd with a mean value of 4.00 whereas demonstration was at 4th rank with a mean value of 3.76. This implies that both techniques were often in practice.

Table 1. Instructional methods used by training professionals (N=50).

| Instructional methods | Pre-service training | | | In-service training | | |
|-----------------------|----------------------|-------|------|---------------------|-------|------|
| | Mean | SD | Rank | Mean | SD | Rank |
| Lecture | 4.76 | 0.476 | 1 | 4.62 | 0.667 | 1 |
| Question & answer | 4.02 | 0.958 | 2 | 3.82 | 0.983 | 3 |
| Discussion | 4.00 | 0.728 | 3 | 3.90 | 0.839 | 2 |
| Demonstration | 3.76 | 0.938 | 4 | 3.64 | 1.025 | 4 |
| Brainstorming | 3.54 | 0.952 | 5 | 3.22 | 1.055 | 5 |
| Quiz | 3.40 | 0.926 | 6 | 2.78 | 1.112 | 6 |
| Role playing | 2.58 | 1.326 | 7 | 2.42 | 1.401 | 7 |
| Case studies | 2.22 | 1.075 | 8 | 2.38 | 1.193 | 8 |

(1=Never use, 2=Rarely use, 3= Sometimes use, 4=Often use, 5=Mostly use)

The mean value for brainstorming was 3.54 and it was ranked at 5th whilst the mean value of quiz was 3.40 and it was ranked at 6th and the role-playing and case study were ranked at 7th and 8th with mean values 2.58 and 2.22 respectively. Similarly, the table shows that during in-service training the lecture was ranked 1st with a mean value of 4.62 while the mean value of discussion was 3.90 and it was ranked at 2nd, while the question and answer were ranked at 3rd with a mean value of 3.82 and demonstration was ranked at 4th with a mean value of 3.64. The brainstorming methodology had a mean value

of 3.22 and ranked at 5th whereas the quiz had a mean value of 2.78 and was ranked at 6th position. Role-playing and case study instructional methodologies had mean values 2.42 and 2.38 and they were ranked at 7th and 8th respectively. This infers that training professionals at the training institutes were using lecture and questions & answer as instructional methods more frequently for pre-service training, whereas in the case of in-service training the professionals were using lecture and discussion as more frequently used instructional methods.

Table 2. Instructional tools used by training professionals (N=50).

| Instructional tools | Pre-service training | | | In-service training | | |
|------------------------|----------------------|-------|------|---------------------|-------|------|
| | Mean | SD | Rank | Mean | SD | Rank |
| Whiteboard/blackboard | 4.68 | 0.713 | 1 | 4.20 | 1.125 | 1 |
| Assignments | 3.62 | 1.028 | 2 | 2.50 | 1.216 | 3 |
| Multimedia | 3.02 | 1.237 | 3 | 3.74 | 1.291 | 2 |
| Models | 2.52 | 1.199 | 4 | 2.24 | 0.981 | 6 |
| Charts | 2.40 | 1.050 | 5 | 2.26 | 0.965 | 4 |
| Audio visual recording | 2.14 | 1.125 | 6 | 2.24 | 1.170 | 5 |
| Overhead projector | 2.04 | 1.212 | 7 | 1.94 | 1.096 | 8 |
| Flip board | 1.84 | 0.934 | 8 | 2.06 | 1.096 | 7 |

(1=Never use, 2=Rarely use, 3= Sometimes use, 4=Often use, 5=Mostly use)

Table 2 illustrates the use of instructional tools used by training professionals during pre-service training and in-service training. Data indicates that during pre-service training the use of whiteboard/blackboard was ranked at 1st with a mean value of 4.68 while the assignments were ranked at 2nd with a mean value of 3.62. The use of multimedia as an instructional tool in pre-service training was ranked at 3rd with a mean value of 3.02 while the use of models was ranked at 4th with a mean value of 2.52. It can also be noted that the use of charts as an instructional tool was ranked at 5th with a mean value of 2.40 and audio-visual recording was ranked at

6th with a mean value of 2.14. Use of overhead projector and flip board was ranked at 7th and 8th with mean value 2.04 and 1.84 respectively. The use of instructional tools used by the training professionals during in-service training and it can be seen that the use of whiteboard/blackboard is ranked at 1st with a mean value 4.20 while the use of multimedia was ranked 2nd with a mean value of 3.74. The use of assignment as an instructional technique was ranked at 3rd with a mean value of 2.50, whereas the use of charts was ranked at 4th with a mean of 2.26. It can also be observed that the use of audio-visual recording and use of models both were

ranked at 5th and 6th respectively with a mean value of 2.24 each. The flip board and overhead projector were ranked at 7th and 8th with a mean of 2.06 and 1.94 respectively. The results as depicted in Table 2, further reveal that the training professionals of ATIs were

commonly using whiteboard/ blackboard and assignments as an instructional technique for the pre-service training, whereas whiteboard/ blackboard and multimedia were the commonly used techniques for in-service training.

Table 3. Computer skills of the training professionals.

| Computer skills | Mean | SD | Rank |
|-----------------------------|------|-------|------|
| MS word skills | 3.22 | 1.298 | 1 |
| E-mail | 3.22 | 1.234 | 2 |
| MS PowerPoint skills | 3.02 | 1.301 | 3 |
| Web browsing | 2.98 | 1.270 | 4 |
| Printing | 2.84 | 1.167 | 5 |
| MS excel skills | 2.82 | 1.273 | 6 |
| Scanning | 2.60 | 1.178 | 7 |
| Software application skills | 2.38 | 1.159 | 8 |
| Computer-based analysis | 2.12 | 1.081 | 9 |
| Urdu in-page | 1.86 | 0.904 | 10 |

(1=Poor, 2=Fair, 3= Good, 4=Very good, 5=Excellent)

Computer skills mean knowledge about different computer applications and expertise in using these applications. The computer skills of the training professional are discussed in Table 3. This demonstrates that MS word skills and e-mail skills were ranked at 1st and 2nd respectively with a mean value of 3.22. The MS PowerPoint skills were ranked at 3rd with a mean value of 3.02 while the web browsing skills ranked at 4th with a mean value of 2.98. The printing skills were ranked at 5th with a mean value of 2.84 while the MS excel skills

were ranked at 6th with a mean value of 2.82. The scanning skills were ranked at 7th with a mean value of 2.60 whereas the software application skills were ranked at 8th having a mean value of 2.38. The computer-based analysis and Urdu in-page were ranked at 9th and 10th with mean values 2.12 and 1.86 respectively. Training professionals of ATIs were using MS word, E-mail and MS PowerPoint above good level. While other computer skills were fairly or poorly used by the training professionals.

Table 4. Interpersonal skills of the training professionals.

| Interpersonal skills | Mean | SD | Rank |
|--------------------------|------|-------|------|
| Motivational skills | 3.66 | 0.823 | 1 |
| Lecture delivery skills | 3.60 | 0.700 | 2 |
| Communication skills | 3.56 | 0.705 | 3 |
| Class management skills | 3.56 | 0.704 | 4 |
| Lecture planning skills | 3.52 | 0.762 | 5 |
| Decision making skills | 3.48 | 0.814 | 6 |
| Leadership skills | 3.48 | 0.646 | 7 |
| Problem solving skills | 3.38 | 0.753 | 8 |
| Time management skills | 3.36 | 0.776 | 9 |
| Office management skills | 3.36 | 0.722 | 10 |
| Stress management skills | 3.36 | 0.631 | 11 |
| Collaborative skills | 3.34 | 0.658 | 12 |

(1=Poor, 2=Fair, 3= Good, 4=Very good, 5=Excellent)

Interpersonal skills are the skills which any individual may use every day while communicating with other people both in groups and individually. People with strong interpersonal skills get succeed in social and

personal life. The interpersonal skills of the training professionals in ATIs have been discussed in Table 4. Data indicate that the motivational skills were ranked at 1st with a mean value of 3.66 and the lecture delivery

skills were ranked at 2nd with a mean value of 3.60. The common skills and class management skills and both were ranked at 3rd and 4th having a mean value of 3.56. The lecture planning skills were ranked at 5th having a mean value of 3.52 while both the decision-making skills and leadership skills were ranked 6th and 7th with a

mean value of 3.48. Problem-solving skills were ranked 8th having a mean value of 3.38 while time managed skills, office management skills and stress management skills were ranked at 9th, 10th and 11th respectively having a mean value of 3.36 and collaborative skills were ranked 12th having a mean value of 3.34.

Table 5. Training conduction skills of the training professionals.

| Training skills | Mean | SD | Rank |
|--------------------------------|------|-------|------|
| Training need assessment | 3.48 | 0.707 | 1 |
| Specifying time for training | 3.42 | 0.785 | 2 |
| Developing training contents | 3.30 | 0.763 | 3 |
| Evaluating training program | 3.26 | 0.828 | 4 |
| Communication for training | 3.26 | 0.777 | 5 |
| Designing training method | 3.22 | 0.815 | 6 |
| Setting training objectives | 3.22 | 0.648 | 7 |
| Consideration for participants | 3.16 | 0.817 | 8 |
| Budgeting for training | 2.96 | 0.947 | 9 |

(1=Poor, 2=Fair, 3= Good, 4=Very good, 5=Excellent)

The professionals working in different ATIs were engaged in conducting pre-service as well as in-service training especially for the capacity building of extension field staff (EFS). Thus, the data regarding the training imparting skills of the professionals is presented in Table 5. Data reveals the training skills of the training professionals and shows that training need assessment was ranked 1st with a mean value of 3.48. Specifying time for training was ranked 2nd with a mean value of 3.42 and developing training contents was ranked 3rd with a mean value of 3.30.

Evaluating training program and communication for training both were ranked 4th and 5th with mean value 3.26 whereas designing training methodologies and setting training objectives were ranked at 6th and 7th respectively with mean value 3.22. Consideration of participants was ranked at 8th having a mean value of 3.16 while the budgeting for training was ranked 9th having a mean value of 2.96.

CONCLUSION AND RECOMMENDATIONS

The professionals of different ATIs were using traditional instructional methods more commonly as compared to modern instructional methods. The training professionals of ATIs were using lecture and question & answer as teaching methods for pre-service training, while lecture and discussion were used as a teaching method for in-service training. As for as instructional tools are concerned, training professionals

were using whiteboard/ blackboard and assignments as a tool for pre-service training, similarly, whiteboard/ blackboard and multimedia were used as a tool for in-service training. Training professionals possess good skills in the use of MS Word, E-mail and MS PowerPoint as well as interpersonal skills. Similarly, training professionals possess good skills for the conduction of training. Inline to study findings, the following recommendations are devised to improve the competencies of agriculture training professionals and improve their working efficiency:

- The government of Punjab should make a policy to provide training to the training professionals working in ATIs so that they can enhance their knowledge and skills.
- Training professionals should also focus on the use of instructional methods i.e., case studies, role-playing, and brainstorming for both pre-service and in-service training.
- In this modern era still, whiteboard/blackboard is in practice by training professionals for pre-service and in-service training. It should be replaced with participatory methods like assignments, multimedia, interactive learning and other audio-video tools to improve learning during training.
- The training professional should be provided training in different areas after assessing their training needs so that they could impart training to extension field staff for their capacity building as a

result EFS will further enhance the skills of the farming community with the ultimate objective to ensure agriculture productivity.

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