

An analysis of Emotional Intelligence as a component of Competency Mapping for the Extensionists of Krishi Vigyan Kendra in India

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Received : June 2017 ; Revised Accepted: November 2017

ABSTRACT

The nature of job of the Extensionists requires them to be in contact with the farmers and other stakeholders involved in the agriculture. Emotional Intelligence plays an important role in providing effective and efficient extension services. Therefore, the present study was conducted to understand the emotional intelligence as the component of competency mapping of the extensionists. The zones of ICAR-Krishi Vigyan Kendra (KVK) were selected using simple random sampling without replacement method. 20 KVK from each zone was selected randomly and 3 Extensionists from each KVK were selected by using simple random sampling technique. The total sample size was 240. The study revealed that majority of the extensionists were having average level of emotional intelligence. Kruskal Wallis test found significant difference among the different zones of extensionists of KVKs. Mann whitney U test showed that there was no significant difference between the extensionists based on the gender in terms of their emotional intelligence.

Key words: Competency mapping, emotional intelligence, extensionists, Krishi Vigyan Kendra, Friedman ANOVA, Kruskal Wallis, Mann Whitney U.

Human resource is an important asset for an organization. The role of human factor even assumes greater stature in agricultural extension. The role of extension today goes beyond technology transfer to facilitation; beyond training to learning, and includes mobilization of farmers, dealing with marketing issues, addressing public interest issues in rural areas such as resource conservation, health, monitoring of food and additional food security and agricultural production, food safety, nutrition, family education, and youth development and partnering with a broad range of service

providers and other agencies (USAID, 2002). The ability of extension professionals to design, develop, deliver and evaluate extension programmes determines the effectiveness of an extension organization as they are directly responsible to the people. Their ability to perform extension tasks is generally said to be a function of their job competencies. Swanson (1996) suggested that great emphasis should be placed on the core competencies in business, industry and agriculture, mainly referring to their knowledge and expertise in these fields. Extension professionals with the latest knowledge are able to make informed decisions about the agricultural system and possess the skill necessary for adaptation and facilitation which will make a major contribution to the extension services and ultimately to the agricultural development (Hoffman, 2014). For

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an extension professional to be successful, they must not only be competent in technical matters but also in management, programming, communication, human relation and leadership (Graham, 2009; Stone and Coppernoll, 2004).

Extension professionals are continuously working with a diverse and complex set of personalities and backgrounds both at the field and administrative levels. It is important that they must be able to develop and apply their emotional and social skills. Emotional Intelligence has been recognised as a factor affecting the job performance of the employee. Emotional intelligence is "the ability to monitor one's own and other's emotions, to discriminate among them, and to use the information to guide one's thinking and actions" (Salovey & Mayer, 1990). Competency mapping is a process through which one assesses and determines one's strengths as an individual worker and in some cases, as part of an organization. It generally examines two areas: emotional intelligence or emotional quotient (EQ), and strengths of the individual in areas like team structure, leadership, and decision-making. Due to the nature of the job of the extension professionals, it becomes pertinent to study Emotional Intelligence as a component of competency mapping.

METHODOLOGY

The study was conducted in four ICAR - Krishi Vigyan Kendra (KVK) Zones in India namely Zone I, Zone II, Zone IV and Zone VII. Recognizing the potential of KVK in extension system, the number of KVKs has been increasing every year. KVK are involved in all type of extension work right from demonstration to training. So, KVK was selected purposively for the study. These zones were selected by using simple random sampling without replacement procedure. The respondents of the present study consisted of Extensionists working in ICAR-KVKs in these Zones. From each Zone, 20 ICAR-KVKs were selected randomly. Three Extensionists from each KVK was selected following simple random sampling technique. Hence, the total sample size was 240.

An "Extensionist", for the present study, was operationalized as an Extension professional having acquired a specialised degree in agricultural sciences or allied sciences, working in Krishi Vigyan Kendras and directly in contact with the clientele/farmers. Extensionists can be synonymously used for subject matter specialist in Krishi Vigyan Kendra. Competency mapping for the present study, is operationalized as the extent to which the Emotional Intelligence and various competencies related to a job are possessed by an Extensionists.

Emotional Intelligence (EI) is a set of qualities and competencies that captures a broad collection of individual skills and dispositions, usually referred to as soft skills or inter and intra-personal skills, that are outside the traditional areas of specific knowledge, general intelligence, and technical or professional skills. EI, for the present study, has been operationalized as the ability of the extension professionals to understand the feeling of oneself and of others, to empathize, maintain and develop inter-personal relationship and understand one's own motivation. Emotional Intelligence Scale (EIS) developed by Hyde, *et al.*, (2001) was modified for the study and was administered to the Extensionists. The scale is self-administering, consisting of 34 items and measuring emotional intelligence through 10 factors-self-awareness, empathy, self-motivation, emotional stability, managing relation, integrity, self-development, value orientation, commitment and altruistic behaviour.

The reliability of the original scale was determined by calculating reliability coefficient on a Sample of 200 managers. The split-half reliability co-efficient was found to be 0.88. Besides face validity, as all items were related to the variable under focus, the scale has high content validity. The responses were recorded, on a 5 point continuum *i.e.* Strongly Agree, Agree, Uncertain, Disagree and Strongly Disagree. High total score on the scale showed high emotional intelligence, while low total score represented low emotional intelligence. The 'Cronbach's Coefficient alpha' (α) of the scale for the present study was 0.884

RESULTS AND DISCUSSIONS

Personal profile of the Extensionists

The personal profile of the Extensionists revealed that nearly 62 per cent of the respondents were between 35 to 50 years of age. Respondents in age group of less than 35 were about 18 per cent while in the age group of above 50 were 20 per cent. Adesope *et. al.* (2007), in these study on "Effect of personal characteristics of extension managers and supervisors on information technology needs in the Niger Delta area of Nigeria" showed that majority (about 60 per cent) of the extension personnel were between the age group of 45 to 50 years of age. As far as experience of the Extensionists were concerned, about 39 per cent had 11 to 21 years of experience whereas 27 per cent had more than 21 years of experience. The Extensionists were having vast experience in their field of specialisation. Sixty nine per cent of the Extensionists were having Ph.D. as their highest degree, while 31 per cent were having masters as their highest degree. It is clearly evident from the results that the Extensionists had attained adequate technical knowledge in their area of specialisation. Among the respondents, majority (65 per cent) were male Extensionists, as against 35 per cent being the female Extensionists. Extension system has witnessed this gender gap. In the category of type of KVK, majority of the KVK in the study were under State Agricultural University.

Mapping of Emotional Intelligence

The result in the table 2 shows that the Emotional Intelligence category of the Extensionists based on their Emotional Intelligence score. It was evident from the table 2 that the highest number of Extensionists was lying in the "Average" Emotional Intelligence category (103). It was also reported by Villard *et al.* (2006) that nearly eighty one per cent of the responding county had a total EQ-i score in the average or above level score. This result was supported by the study of Jha and Singh (2012). They also found that the teachers had high Emotional Intelligence on Emotional Intelligence Scale (EIS) (Hyde, *et al.*, 2001). As the Extensionists had average Emotional Intelligence score, it will lead them to be more effective in their job. Their job requires them to be in regular contact with the farmers; hence, Emotional Intelligence will be quite helpful in performing their job better. Likewise, Zumwalt & Craig (2005) stated that for teachers and trainers, intellectual standard and subject expertise are important there are undoubtedly other qualities as well, that predict future effectiveness, which requires a mix of intellectual and personal attributes. In the "Low" category of Emotional Intelligence, seventy seven Extensionists were found, whereas forty one respondents were in "High" category of EI. The category "Very High" and "Very Low" had eight and eleven Extensionists respectively.

Table 1. Personal profile of the Extensionists**n=240**

Sl. no.	Variables	Category	Frequency	Percent
1	Age	<35	48	17.5
		35-50	150	62.5
		>50	52	20
2	Gender	Male	157	65.4
		Female	83	34.6
3	Experience	1-10 years	81	33.8
		11-21 years	93	38.8
		> 21 years	66	27.5
4	Education	Post-graduation	75	31.3
		Ph.D.	165	68.7
5	Position	Subject matter specialists	177	73.8
		Programme coordinator	63	26.3
6	Type of KVK	ICAR	69	28.8
		SAU	129	53.8
		NGO	42	17.5

Table 2. Categories of Extensionists based on Emotional Intelligence score.

Emotional Intelligence Category	Number of respondents n=240
Very Low	11
Low	77
Average	103
High	41
Very High	8

Mean and standard deviation was computed for the total respondents and for each Zones separately (Table 3). The total mean of Emotional Intelligence score for all the respondents is 113.7 with standard deviation of 8.99. This showed that most of the Extensionists were in the average category of Emotional Intelligence. Zone wise analysis depicted that Extensionists of Zone I (mean score 116.4), Zone IV (mean score 103.5) and Zone VII (115.9) were in the "Average" category. Whereas, Extensionists of Zone II were found in the "Low" category on Emotional Intelligence.

A comparison among the four selected Zones of KVK was also carried out to know whether any significant difference exists in the Emotional Intelligence among the Extensionists of these Zones. Kruskal-Wallis test (Chi-square = 27.028, df = 3, $p < 0.01$) was used for the comparison among the selected KVK Zones. Since the p value was found to less than 0.01, it can be inferred that there exists difference among the Extensionists of selected Zones. This result was comparable with result shown by Jha and Singh (2012) in which there exists significant difference between the different faculties of teachers. Sabitha (2011) found significant difference among the managers of five different industrial states. It is evident that though all the

Table 4. Kruskal Wallis test statistics for Emotional Intelligence of Extensionists (n=240)

Category	Value
Chi-Square	27.028
df	3
Asymp. Sig.	<.01

Table 5. Comparison of Emotional Intelligence of Extensionists among the selected Zones of KVKs based on mean ranks as per Kruskal Wallis test.

Zones	n	Mean rank
Zone I	60	139.43
Zone II	60	82.37
Zone IV	60	120.85
Zone VII	60	139.35
Total	240	

selected Zone of KVK had high Emotional Intelligence but they significantly differed from one another. Zone I had the highest mean rank of 139.43 while Zone VII has the second highest mean rank of 139.35 followed by Zone IV having mean rank of 120.45. Zone II has the lowest mean rank of 82.37 among the selected Zones (table 4 and 5).

In order to explore the difference between EI on the basis of gender and current position of the Extensionists, Mann-Whitney U test was worked out. The result of the test is depicted in the table 6. In case of analysis of gender, the mean rank of male on EI is 123.46 while for female it is 115. It can be inferred from the table 4.1.1.8 that there is no significant difference between male and female on the basis of gender ($U = 6090$, $p = 0.367$) as the computed the p-value was found to be greater than 0.05. In general, considering the overall ratings for men and women, the

Table 3. Mean and Standard Deviation of Extensionists on Emotional Intelligence (Zone wise).

Respondents	n	Emotional Intelligence		Categories
		Mean	Std deviation	
Zone I	60	116.4	9.76	Average
Zone II	60	108.8	8.87	Low
Zone IV	60	103.5	8.35	Average
Zone VII	60	115.9	6.98	Average
Total respondents	240	113.7	8.99	Average

Table 6. Comparison of Emotional Intelligence of the Extensionists on the basis on gender and current position using Mann Whitney U test.

Variable	Group	Parameters	n	Mean ranks	u	z	Sig.
Emotional Intelligence	Gender	Male	157	123.46	6090	-.901	0.367
		Female	83	115.00			
	Current position	SMS ^a	177	109.49	3626	-4.123	< 0.01
		PC ^b	63	151.44			

* a = Subject Matter Specialists; b = Programme Coordinator

strength and weakness average out and both men and women seem to have same Emotional Quotient (Simmons, 2001). Goleman (1998) and Petrides and Furnham (2006) also argued that there is no difference in overall EI scores among men and women. While, the analysis of EI with respect to current position showed that there was significant difference between the Emotional Intelligence of the Subject Matter Specialists and Programme Coordinator as the p-value was found to be less than 0.05. The mean rank of Programme Coordinator (151.44) was higher than the mean rank of Subject Matter Specialist (109.49).

Factors affecting Emotional Intelligence were compared using Friedman's two-way ANOVA and the computed p-value was found to be less than the p-value at one per cent significant level ($p < 0.01$); therefore, it is inferred that the level of influence of different factors affecting EI is significantly different among Extensionists (Table 7).

Among the Extensionists of Zone I, test for difference analysis (Friedman's ANOVA statistic, Chi-Square = 234.869, $df = 33$, $p < 0.01$) for EI showed that there was a significant difference in influence of various factors. From the table 7, it is apparent that the two most important influencing factor of EI for the Extensionists in Zone I were building rapport and maintaining personal friendships with work associates (mean rank 23.54) and the ability to stay focussed under pressure (mean rank 22.73).

Likewise, with respect to the Extensionists of Zone II (Friedman's ANOVA statistic, Chi-Square = 139.192, $df = 33$, $p < 0.01$), it was found that (Table 6, 7) the Emotional Intelligence of Extensionists were not dependent on others for

encouragement to do their job well (mean rank 21.58) and they stay focussed even under pressure (mean rank 21.57). These factors were followed by their being organized and careful in their work (mean rank 21.39), ability to build rapport and to make and maintain personal friendships with work associates (mean rank 21.06) and thinking that feelings should be managed (mean rank 20.75).

In case of Zone IV, the mean rank for Emotional Intelligence factors (Friedman's ANOVA statistic, Chi-Square = 139.071, $df = 33$, $p < 0.01$) was highest for building rapport and making and maintaining personal friendships with work associates (mean rank 21.1) which was followed by being organized and careful in their work (mean rank 20.51).

The Emotional Intelligence of Extensionists of Zone VII (Friedman's ANOVA statistic, Chi-Square=365.909, $df=33$, $p < 0.01$) were influenced building by rapport and making and maintaining personal friendships with work associates (mean rank 25.64) and by staying focused under pressure (mean rank 26.42). Similarly, EI of the Extensionists in Zone VII were also influenced by ability to make intelligent decisions using a healthy balance of emotions and reason (mean rank 23.16), feeling that they must develop themselves even when their job did not demand it (mean rank 22.45) and ability to listen to someone without the urge to say something (mean rank 22.11). Villard *et al.* (2006), also reported that seventy three per cent of the county extension agents scored high on the interpersonal relationship on the composite score of Emotional Intelligence. For the Extensionists of Zone I, Zone II and Zone VII, the ability to stay focussed under pressure was another influencing factor of Emotional Intelligence. While, for Extensionists

Table 7. Emotional Intelligence of Extensionists in the selected Zones of Krishi Vigyan Kendras based on mean ranks as per Friedman's test

Sl. No.	Statement	Zone I (n= 60)		Zone II (n= 60)		Zone IV (n= 60)		Zone VII (n= 60)	
		Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank	Mean Rank	Rank
1.	I can encourage others to work even when things are not favorable	16.63	XXIII	16.78	XXI	16.1	XXIX	15.58	XXIV
2.	People tell me that I am an inspiration for them	18.07	XII	17.87	XVI	18.18	XVII	17.26	XVIII
3.	I am able to encourage people to take initiative	21.78	V	17.98	XIV	18.91	X	16.25	XXII
4.	I am able to make intelligent decisions using a healthy balance of emotions and reason	18.38	IX	17.7	XVII	17.93	XVIII	23.16	III
5.	I do not depend on others encouragement to do my work well	21.85	IV	21.58	I	16.48	XXVII	21.19	VI
6.	I can continue to do what I believe in even under severe criticism	12.75	XXXII	14.43	XXXI	12.55	XXXIII	14.46	XXIX
7.	I can concentrate on the task at hand in spite of disturbances	17.3	XVIII	15.6	XXVIII	19.08	VII	17.86	XIV
8.	I am able to assess the situation and then behave	14.55	XXX	15.48	XXIX	16.33	XXVIII	12.77	XXXI
9.	I pay attention to the worries and concerns of others	13.6	XXXI	15.69	XXVII	17.52	XX	12.28	XXXII
10.	I can listen to someone without the urge to say something	18.3	X	19.69	VII	14.52	XXX	22.11	V
11.	I am perceived as friendly and outgoing	17.42	XVI	15.25	XXX	17.82	XIX	16.65	XX
12.	I have my priorities clear	17.38	XVII	16.93	XXI	17.23	XXII	19.09	IX
13.	I can handle conflicts around me	17.85	XIV	17.56	XVIII	18.43	XIII	17.03	XIX
14.	I do not mix unnecessary emotions with issues at hand	16.44	XXIV	15.92	XXV	17.33	XXI	14.59	XXXVII
15.	I try to see the other person's point of view	17.58	XV	17.26	XXIX	18.23	XVI	17.41	XVI
16.	I can stand up for my beliefs	17.02	XXI	17.92	XV	18.55	XI	19.04	X
17.	I can see the brighter side of any situation	15.09	XXIX	16.95	XX	17.17	XXIII	16.63	XXI
18.	I believe in myself	17.92	XIII	19.76	VI	19.11	VI	19.22	VIII
19.	I am able to stay composed in both good and bad situations	16	XXXVI	18.49	IX	16.68	XXVI	17.4	XVII
20.	I can stay focused under pressure	22.73	II	21.57	II	17.01	XXIV	26.42	II
21.	I am able to maintain the standards of honesty and integrity	11.91	XXXIII	13.32	XXXIV	11.84	XXXIV	10.83	XXXIV
22.	I am able to confront unethical actions in others	17.13	XX	18.02	XIII	18.24	XV	15.41	XXV
23.	I am able to meet commitments and keep promises	18.16	XXI	18.13	XXI	19.72	V	18.55	XII
24.	I am organized and careful in my work	21.98	III	21.39	III	20.51	II	19.37	VII
25.	I am able to handle multiple demands	16.96	XXII	16.59	XXIII	18.35	XIV	14.44	XXX
26.	I am comfortable and open to novel ideas and new information	11.66	XXXIV	13.86	XXXII	12.68	XXXII	11.3	XXXIII
27.	I pursue goals beyond what is required of me	16.05	XXV	16.57	XXIV	18.92	IX	14.53	XXVII

Conted...

28.	I am persistent in pursuing goals despite obstacles and setbacks	19	VII	19.14	VIII	20.07	IV	17.43	XV
29.	I have built rapport and made and maintained personal friendships with work associates	23.54	I	21.06	IV	21.1	I	25.64	I
30.	I am able to identify and separate my emotions	15.91	XXVII	13.59	XXXIII	13.94	XXXI	15.13	XXVI
31.	I think feelings should be managed	20.74	VII	20.75	V	20.14	III	19	XI
32.	I am aware of my weaknesses	17.2	XIX	18.1	XII	18.54	XII	16.06	III
33.	I feel that I must develop myself even when my job does not demand it	20.98	VI	18.24	X	16.75	XXV	22.45	IV
34.	I believe that happiness is an attitude.	15.18	XXVIII	15.85	XXVI	19.08	VII	18.5	XIII
Freidman test statics									
1	Chi- Square	234.869		139.192		139.071		365.909	
2	Df	33		33		33		33	
3	Asymp. Sig. (p)	P< .01		P< .01		P< .01		P< .01	

of Zone II, the most influencing factor was not depending on others for encouragement in doing their jobs better. Extensionists of Zone IV showed being organized and careful in their work as their second most important factor of Emotional Intelligence. Totuka and Naaz (2014), in their study on Emotional Intelligence of government and private sector employees pointed out that the government employees were able to manage relation in better way. Importance of EI competencies like self-awareness, managing relations, self-motivation, integrity, commitment and self-development in enhancing teacher effectiveness was also shown by Jha and Singh (2012). The result of the factors influencing Emotional Intelligence revealed that the EI of the Extensionists was mostly influenced by the dimension self-awareness and empathy. Rathi and Rastogi (2009) also indicated in their study that self-awareness and empathy accounted for

24 percent of the explained variance in occupational self-efficacy. *Krishi Vigyan Kendras*, as an organization not only deal with agricultural technology back-stopping but also deal with various stakeholders.

CONCLUSION

The application of Emotional Intelligence is relatively new in the field of agricultural extension but it has a profound influence on the job performance of the extensionists. Adequate attention and importance should be given to emotional intelligence while studying the other competencies of the Extensionists. Thus, the extension education institutions should plan their program to give self awareness in their professional competencies and arrange emotional coaching programs to develop emotional stability among Extensionists.

REFERENCES

- Abdul-Baki A.A. and Anderson J.D. 1973. Vigor determination in soybean by multiple criteria. *Crop Science* **13**: 630-633.
- Adesope O., Asiabaka C.C. and Agumagu A.C. 2007. Effect of personal characteristics of extension managers and supervisors on information technology needs in the Niger Delta area of Nigeria. *International Journal of Education and Development Using ICT*, **3**(2).
- Goleman D. 1998. Working With Emotional Intelligence. New York, NY: Bantam
- Hyde A., Pethe S. and Dhar U. 2001. *Emotional intelligence Scale*. Lucknow: Vedant Publication.
- Petrides K.V. and Furnham A. 2006. The Role of Trait Emotional Intelligence in a Gender? Specific Model of Organizational Variables1. *Journal of Applied Social Psychology*, **36**(2): 552-569.

- Rathi N. and Rastogi R. 2009. Assessing the relationship between emotional intelligence, occupational self-efficacy and organizational commitment. *Journal of the Indian Academy of Applied Psychology*, **35**(1): 93-102.
- Sabitha, R.K. 2011. Emotional Intelligence In Small Scale Industries Of Puducherry State- An Empirical Analysis. *The Journal of Commerce*, **3**(1): 22.
- Simmons K. 2001. Emotional intelligence, what smart managers know? Retrieved from http://www.asaecenter.org/Resources/article_detail.cfm?itemnumber=13040.
- Singh I. and Jha A. 2012. Teacher effectiveness in relation to emotional intelligence among medical and engineering faculty members. *Europe's Journal of Psychology*, **8**(4): 667-685.
- Totuka N. and Naaz A. 2014. Emotional intelligence in government and private sector employee: A comparative study. *International Journal Educational and Psychological Research*, **3**(3): 35-37.
- Villard J.A. and Earnest G.W. 2006. Relationship between job satisfaction of county extension staff and the level of emotional intelligence of county Extension directors [*Electronic version*]. *Journal of Leadership Education*, **5**(3): 191-213.
- Zumwalt K. and Craig E. 2005. Teachers characteristics: Research on the indicators of quality. In M. Cochran-Smith & K. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (pp. 157-260). Mahwah, NJ: Lawrence Erlbaum Associates.