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Extension management ability of the programme coordinators of Farm Science Centres / Krishi Vigyan Kendras (KVKs) of India

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ABSTRACT

The study was carried out selecting a random sample of 160 Programme Coordinators of five years old KVKs of all the eight zones of India with full-fledged activities in the service of farmers. The Ex-Post-Facto Research Design was used for this study. The data were collected through mail questionnaire as well as interview schedules either by contacting through post or personal contacts. The suitable statistical tools were used to analyze data. The study reveals that slightly more than half of the programme coordinators of KVKs had high level of planning ability (51.25 per cent), majority of them had medium to high level of organizing capacity (85.00 per cent), high level of ability of directing their subordinates (76.87 per cent), high level of ability of communicating (58.13 per cent), medium to high level of capacity to maintain human relations (91.87 per cent), high level of lead taking behavior (61.88 per cent), high level of supervising ability (71.26 per cent), high level of coordinating ability (62.50 per cent) and medium level of overall extension management ability (68.12 per cent), whereas slightly less than half of the programme coordinators had high level of decision making capacity (45.00 per cent) and high level of controlling power (48.12 per cent). The personal variables of programme coordinators of KVKs such as; young age, higher education, vigorous status of health and rural native place, while organizational variables like; conducive organizational climate, needed organizational facility and better interpersonal communication, whereas socio-psychological variables for instance; extrovert personality and positive attitudes towards extension work and low level of job stress played significant role on their extension management ability. The positive attitude towards extension work, extrovert personality and favourable organizational climate together accounted 55.70 per cent variation in extension management ability of the programme coordinators of KVKs.

Key words : KKVs, programme coordinaters, extension management ability

Farm Science Centre which is known as Krishi Vigyan Kendra (KVK) is leading edged transfer of technology project initiated and run by the Indian Council of Agricultural Research (ICAR), which is central governing body of agricultural development established by Government of India. It is intended to create able human resource for agriculture development of the country. The Farm Science Centre or Krishi Vigyan Kendra (KVK) is one of the innovative programmes of the council designed to provide skill oriented vocational training to the farmers, farmwomen, rural youths and field functionaries. It helps in crafting competent practicing farmers, farmwomen, rural youth and extension personnel. Understanding such importance of KVK, it is expected to have ideal leader with certain useful qualities and positivism to improve the operational quality of the KVK to get desired results (Pathak *et al.*, 2005. The quantitative and qualitative functioning of the KVK depends on the unambiguous qualities of its leader. In the existing pattern of KVK, Programme Coordinator (PC) is working as the head of the center.

A creative and visionary leader with demonstrated integrity, enthusiasm, motivation, flexibility and confidence to act as programme coordinators has

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great chance to show the real impact of the KVK (Mangala Rai, 2006). The programme coordinator can establish and guide new research directions, lead technical and social research and development proposals, new technologies and capabilities and interact with in key clients. The programme coordinator as a key position holder should try to utilize opportunity to lead centre and offer at the forefront of the emerging technology (Patel *et al.*, 2004).

Thus, the effectiveness of the Krishi Vigyan Kendras mainly depends on how it is efficiently and successfully managed by its leader or the head. Generally it is observed that the KVKs are headed by postgraduates with specialization in different subjects of agriculture. They need to have sufficient experience in managing the multidisciplinary faculties of KVKs. The heads of KVKs have to perform multifold roles of planning, organizing, directing, communicating, controlling, supervising, coordinating, leading, human relation maintaining and decision-making. These managerial qualities make them able to perform role as per the mandate of the KVK. By managing all those qualities they have to create conducive condition for effective training.

The KVK, which is started with set objectives, needs be assessed by evaluating managerial ability of its leader to understand its utility and effectiveness. It was therefore, felt necessary to assess the qualities possessed by its heads or who the key persons in effective functioning of centers in terms of agricultural development. Such study helps to locate the strong and weak points of managers of KVKs in overall functioning. It also helps to give direction to the continued in building brining confidence and satisfaction. Understanding this, the present study was conducted with general objectives of measuring the extension management ability of Programme Coordinators (PCs) as heads of Krishi Vigyan Kendras with following specific objectives :

1. To measure the managerial ability of Programme Coordinators (PCs) of KVKs.
2. To find out the relationship between selected independent variables and managerial ability of programme coordinators of KVKs.
3. To estimate the functional relationship between managerial ability and various independent variables of the Programme Coordinators (PCs) of KVKs.

METHODOLOGY

The Krishi Vigyan Kendras of India are managed and functioned in India in the eight zones. The present study was carried out in all the eight zones of India. The study was carried out selecting half of KVKs with full-fledged activities in the service of Indian farmers and at least five years of working experience. At the time of investigation, about 320 well established KVKs were short listed. The representation of each zone was included in this study. A random sample of 160 KVKs was selected for this study. Ex-Post-Facto Research Design was used for this study. The Extension management abilities of the Programme Coordinators were measured with the help of the Scale developed by Patel (2001). The data were collected through mail questionnaire as well as interview schedules either by contacting through post or personal contacts. The statistical tools such as mean, standard deviation, coefficient of correlation and standard partial regression coefficient were worked out. The mean, standard deviations were used to classify the variable in low, medium and high groups while coefficient of correlation was used to know relationship between independent and dependent variables. The standard partial regression coefficient was used to predict the functional relationship.

RESULTS AND DISCUSSION

Extension management ability of the programme coordinators of KVKs

The extension management ability of Programme Coordinators was measured by selecting ten indicators; the studied indicators were planning, organizing, directing, communicating, controlling, human relation, leading, supervising, coordinating and decision making. The results are presented in following Table 1.

Planning

The Planning is one of the important indicators of extension management ability of the programme coordinators of KVKs. It shows scheduling style implemented by them to determine the objectives, training needs, process of transferring technologies, utilization of funds, extension facilities and monitoring and evaluation work. The result presented in Table 1 indicates that slightly more than half (51.25 per cent) of the programme coordinators of KVKs had high level of planning ability, followed by 33.75 per cent and 15.00 per cent with medium and low level of planning ability, respectively. It is concluded that (85.00 per cent) of the programme coordinators found with medium to high level of planning ability. Proper guideline, systematic direction and continuous

Table 1 Distribution of the respondents according to various extension management ability (n = 160)

Sr. No.	Types of extension management ability	Number	Per cent
Ability of planning			
I	Low	24	15.00
II	Medium	54	33.75
III	High	82	51.25
Ability of organizing			
I	Low	24	15.00
II	Medium	68	42.50
III	High	68	42.50
Ability of directing			
I	Low	15	09.38
II	Medium	22	13.75
III	High	123	76.87
Ability of communicating			
I	Low	34	21.25
II	Medium	33	20.62
III	High	93	58.13
Ability of controlling			
I	low	45	28.12
II	Medium	38	23.76
III	High	77	48.12
Ability to maintain human relation			
I	Low	13	08.13
II	Medium	70	43.75
III	High	77	48.12
Ability of leading			
I	Low	29	18.12
II	Medium	32	20.00
III	High	99	61.88
Ability of supervising			
I	Low	13	8.12
II	Medium	33	20.62
III	High	114	71.26
Ability of coordinating			
I	Low	43	26.87
II	Medium	17	10.63
III	High	100	62.50
Ability of decision making			
I	Low	23	14.38
II	Medium	65	40.62
III	High	72	45.00
Overall extension management ability			
I	Low	21	13.13
II	Medium	109	68.12
III	High	30	18.75

supervision by concerned officers and ICAR might have made them able with medium to high level of planning ability. The result is in the line of Popat (1991).

Ability of organizing

Ability to organize different functions is one of the important indicators of extension management ability requires in any head of organizations to arrange various activity on a regular basis. To call regular meeting to provide work opportunity according to specializations and to invite suggestions from subordinates as well as to divide activity into groups and to delegate authority according to responsibility are important functions which require proper ability to organize functions of organizations. It can be clearly stated that majority (85.00 per cent) of the programme coordinators of KVKs had medium to high level of organizing capacity in relation to extension management in their respective KVKs. The probable reason might be that have to carryout series of activities throughout the year; as a result of this, they might have understood the importance to systematize various activities for their effective implementations. The results are also supported by Patel (2001).

Ability of directing

The ability of directing was measured by knowing Programme Coordinators' frequency in directing their subordinates about different functions. This is an important activity any Programme Coordinators have to do to carry out for effectual functioning of the work. The results indicates that majority of the Programme Coordinators (76.87 per cent) took high level of interest to give clear instruction of work, to give due credit to a person, to appreciate good work done by their subordinates and to give continuous information.

Ability of communicating

It is well understood that effective extension management is possible through high ability among the head of the organization in communicating subordinates. Understanding importance of this ability as one of the indicators of extension management, it was studied. It can be seen from the result that majority of the Programme Coordinators had high level of ability of communicating. The result indicates that majority of the Programme Coordinators had taken constant interest to give timely instructions, to listen subordinates, to select proper medium for instructions and to receive feed back .the results are same with Patel *et al.*, (2004).

Ability of controlling

The ability of controlling is also an important sign

which requires any heads of the organization dealing with human resource development for its effective management. This variable was measured by knowing degree of frequency of Programme Coordinators' command of linking their subordinates and their different functions. It was seen that majority (71.88 per cent) of the Programme Coordinators of Krushi Vigyan Kendra had medium to high level of controlling power for effective functioning of extension activities in terms of monitoring the work, proper style of visits, determining standard for work, evaluating the work and measuring performance of staff.

Ability to maintain human relation

An ability to maintain human relation is very important excellence the Programme Coordinators of Krushi Vigyan Kendra need to retain effective extension management. This variable was measured by knowing degree of frequency of their touch with all the persons of the organization to carry out mandatory functions effectively. Accepting importance of this ability as one of the indicators of extension management, information was collected. It was obvious that majority of the Programme Coordinators of Krushi Vigyan Kendra had medium to high level of interest to make personal contacts, deal fairly, pay attention in development of juniors, adopt participative approach, understand others' behaviors and to offer good co-operation. The results are further supported by Patel (2001).

Ability of leading

It can be perceived from the results that great majority (81.88 per cent) of the Programme Coordinators of Krushi Vigyan Kendra had medium to high degree capacity to take lead in different functions such as promoting team work, taking initiative task, applying technical competency and inspiring subordinates.

Ability of supervising

An aptitude of supervising is another considerable trait required in the head of any extension organizations for upholding effective extension management. This quality was measured by knowing degree of Programme Coordinators' administering behaviour with various functions of KVK successfully. It was observed that great majority (91.88 per cent) of the Programme Coordinators of Krushi Vigyan Kendra had medium to high level of ability to regulate various functions by providing constant extensive counseling, focusing on quality work and giving valuable suggestions. Due to frequent involvement in various kinds of activity by the Programme Coordinators, they might have established such ability in them.

Ability of coordinating

The ability of coordination is one additional substantial attribute; head of extension organization requires for keeping efficient extension management. This element was calculated by insightful degree of Programme Coordinators' behaviour to organize, synchronize, harmonize, match up and brings together various on-campus and off-campus functions of KVK fruitfully. Considering core of this talent as one of the indicators of extension management ability of programme coordinators, facts were collected and presented in Table 1. It was interesting to note that majority of the Programme Coordinators of Krushi Vigyan Kendra had high level of ability to establish linkages, integrate the extension work, establish mutual trust and get co-operation from outsides. To fulfill the mandate of KVK, head of organization has to deal with internal and external personnel of various agencies, thus, while working with them, they might have realized importance to establish such ability. This might be the reason for above finding. This finding was in line of the results reported by Popat, (1991).

Ability of decision making

The ability of taking right decision at the right time is an added considerable characteristic; head of extension organization needs to have for keeping proficient extension management. This ingredient was studied by knowing degree of programme coordinators' behaviour to take different judgments to carry out various on-campus and off-campus activities of KVK at right time by proper ways. Taking into consideration role of this capacity as one of the indicators of extension management ability of programme coordinators, information was collected. It can be stated that great majority (85.62 per cent) of the Programme Coordinators of Krushi Vigyan Kendra had medium to high level capacity to take timely decision, find out facts for decision, adopt participative decision style, taking unbiased decision for implementation.

Overall extension management ability

The overall extension management ability of programme coordinators was measured by combining all the indicators including planning, organizing, directing, communicating, controlling, human relation, leading, supervising, coordinating and decision making. It can be seen that majority (68.12 per cent) of the heads of KVK were observed with the medium level of overall extension management ability, while 18.75 per cent of them with high and 13.13 per cent with low level of overall extension management ability. Thus, the extension management ability of the heads of KVK was predominantly medium. The same results were reported by Patel *et al.*, (2004).

Relationship between profile of the programme coordinators of KVKs and their extension management ability

To ascertain the relationship between personal, job related, organizational and socio-psychological variables of the programme coordinators of KVKs and their extension management ability, correlation coefficient was worked out. The results are given Table 2.

It was observed that the personal variables like education, health status and native place of the programme coordinators of KVK were observed positively, while age was observed negatively significant with their extension management ability. The variables *viz.*, size of family and type of family were non-significant with extension management ability of the programme coordinators of KVKs. The result was supported by Patel (2001). The Job related variables like total experience as TO, total experience in KVK and training received were negatively non-significant with extension management ability of the programme coordinators of KVKs. The organizational variables like organizational climate, organizational facility and interpersonal communication were observed positively significant with their extension management ability. While, other organizational variables like span of control was observed non-significant, only staff facility was observed negative not significant with their extension management ability. Same was reported by Patel (2001). The socio-psychological variables of the programme coordinators of KVK like personality and attitudes towards extension work were observed positively significant, while job stress was observed negatively significant with their extension management ability. The other socio-psychological variables; workload and job involvement observed non-significant with extension management ability. The results are in the line of the results reported by Popat (1991).

Table 2 Relationship between the profile of the programme coordinators of KVKs and their extension management ability n = 160

Sr. No.	Name of variables	Correlation coefficient	
I	Personal variables		
1	Age	-0.362	**
2	Educational qualification	0.238	*
3	Health	0.365	**
4	Type of family	-0.011	NS
5	Size of family	0.020	NS
6	Native place	0.384	**
II	Job related variables		
1	Total experience as TO	-0.060	NS
2	Total experience in KVK	-0.013	NS
3	Training received	-0.019	NS
III	Organizational variables		
1	Span of control	0.144	NS
2	Staff facility	-0.120	NS
3	Organizational climate	0.524	**
4	Organizational facility	0.537	**
5	Interpersonal communication	0.401	**
IV	Socio-psychological variables		
1	Personality	0.675	**
2	Attitudes towards extension work	0.622	**
3	Workload	0.023	NS
4	Job involvement	-0.047	NS
5	Job stress	-0.158	*

* Significant at 0.05 level of probability.
** Highly significant at 0.01 level of probability.

Table 3 Step-wise multiple regression analysis of extension management ability of the programme coordinators of KVK

Independent variable	Multiple co-relation co-efficient (R)	(R^2)	'F' values	Partial regression co-efficient (b)	't' value	Standard partial regression co-efficient (SPRC)	Rank
Positive Attitude towards extension work	0.675 (45.50 %)	0.455 **	131.952 **	1.700	11.487	0.443	I
Extrovert Personality	0.736	0.542 (54.20 %)	92.781 **	0.383	5.447 **	0.285	II
Positive Organizational Climate	0.746	0.557 (55.70 %)	65.376 **	0.236	2.320 *	0.155	III

* Significant at 0.05 level of probability. ** Highly significant at 0.01 level of probability.

Thus, it can be concluded that the personal variables of programme coordinators of KVKs such as; young age, higher education, vigorous status of health and rural native place, while organizational variables like; conducive organizational climate, sufficient needed organizational facility and better interpersonal communication, whereas socio-psychological variables for instance; extrovert personality and positive attitudes towards extension work and low level of job stress played significant role in improving their extension management ability.

The functional relation between extension management ability and independent variables of the programme coordinators of KVK

The results presented in Table 3 indicate that the 45.50 per cent variation in extension management ability of programme coordinators of KVKs was contributed by attitude toward extension work. However, positive attitude towards extension work + extrovert personality of the programme coordinators of KVK accounted for 54.20 per cent, while, positive attitude towards extension work, extrovert personality and favourable organizational climate together accounted 55.70 per cent variation in extension management ability of the programme coordinators of KVKs.

CONCLUSION

Slightly more than half of the programme coordinators of KVKs had high level of planning ability (51.25 per cent), majority of them had medium to high level of organizing capacity (85.00 per cent), high level of ability of directing their subordinates (76.87 per cent), high level of ability of communicating (58.13 per cent), medium to high level of capacity to maintain human relations (91.87 per cent), high level of lead taking behavior (61.88 per cent), high level of supervising ability (71.26 per cent), high level of coordinating ability (62.50 per cent) and medium level of overall extension management ability (68.12 per cent), whereas slightly less than half of the programme coordinators had high level of decision making capacity (45.00 per cent) and high level of controlling power (48.12 per cent).

The personal variables of programme coordinators of KVKs such as; young age, higher education, vigorous status of health and rural native place, while organizational variables like; conducive organizational climate, needed organizational facility and better interpersonal communication, whereas socio-psychological variables for instance; extrovert personality and positive attitudes towards extension work and low level of job stress played significant role on their extension management ability.

The 45.50 per cent variation in extension management ability of programme coordinators of KVKs was contributed by their positive attitude toward extension work. However, positive attitude towards extension work and extrovert personality of the programme coordinators of KVK accounted for 54.20 per cent, while, positive attitude towards extension work, extrovert personality and favourable organizational climate together accounted 55.70 per cent variation in extension management ability of the programme coordinators of KVKs.

IMPLICATIONS

The present study was highlighted direction on the new area in which, research work was needed to carry out. The following implications emerged from this study. A definite approach to craft India as developed nation in the shortest possible time is realized by a rapid agricultural growth. Today in first line of transfer of technology mission, Krishi Vigyan Kendra needs to play a role of key extension system to develop the farming communities. The findings of the study reveal that, to manage and run KVKs as per its mandate, there is need to appoint young, talented, well qualified, dedicated, enthusiast programme coordinators to reinforce role of KVKs. The results indicates that programme coordinators of KVKs with rural native background were observed more active and commanding in managing extension activities and KVK, thus it is suggested that person with rural background or feelings to work in rural and semi urban area should be appointed to work as programme coordinators of KVKs. During the study it was seen that training received by the programme coordinators of KVKs did not exhibit any impact in improving their extension management ability. Thus, there is need to give special trainings which can prepare programme coordinators of KVKs as good manager.

The positive relationship indicates that extension management ability of those programme coordinators of KVKs was seen better who had more workers to look after. The programme coordinators of KVKs with more members to control directly by them were more active in managing KVKs. It indicates that programme coordinators of KVKs who had adopted strategy to maintain direct control and observation on all members of their KVKs had better extension management ability. Thus, it is recommended that programme coordinators of KVKs should try to maintain direct contact with each member of KVK for effective management. It was seen that extension management ability of those programme coordinators of KVKs was

observed better who had better and favorable organizational climate. Thus, programme coordinators of KVKs are recommended to maintain conducive organizational climate to improve their level of extension management ability to manage KVKs in effective manner. To accomplish mandates of KVK, programme coordinators of KVKs have to perform many activities like training, publication of farm literature, edification and organization of demonstrations, e-extension, field visits etc. For this, they need many infrastructural facilities like land, laboratory, vehicles, audio-visual aids, reading materials, furniture, stationary and other communication facilities like telephone, Xerox machine, fax, computer and internet connections. Thus, it is recommended to provide all the facilities to manage their duty effectively. This was also reported by (Van de Ban, (2004). The interpersonal communication is key component in development of any organization. It is degree of contacts of head of organization with other officials. It is needed to gain knowledge from another individual to predict how they think, feel and act. Such act provides ability to achieve high level of extension management ability. Thus, it is recommended to develop better interpersonal and inter organizational communication ability among the programme coordinators of KVKs. The extension management ability of programme coordinators of KVKs was observed better who had extrovert type of personality. It is thus, dreamed that each KVK of India should have such kind of programme coordinators of KVKs. The job stress was seen negative significant with extension management ability of the programme coordinators of KVKs. The job stress is feedback of programme coordinators of KVKs with regards to their emotional and/or physical pressure for their job. The person who is head of KVK should have physically and mentally powerful outlook to do work in any adverse situation. He should be sufficient strong, punctual, nervousness free, matured, accommodating and talented to do any type of job successfully with whatsoever accessible staff he has. It was seen that extension management ability of those programme coordinators was seen better who had less job stress. Understanding this fact it is advisable that programme coordinators of KVKs working at KVKs should be given specific training to deal with high job stress. The results indicates that variables such as attitude towards extension work, extravert personality of the programme coordinators and organizational climate contributed 55.70 per cent variation in extension management ability of the heads of the KVKs, thus authority of KVK should try to do something considering these variables to create ideal and conducive situation in KVKs.

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