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Comparative Study of Training Need Assessment of Agri-Entrepreneurs under Agri-Clinics and Agri-Business Center Scheme in India

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A B S T R A C T

Training need assessment is considered to be the integral part of well designed training programme. Training needs are closely linked to learning: the target population is looked at more closely to determine the actual content, context and delivery method of performance intervention. Present study was conducted in two states of India i.e. Uttarakhand and Punjab to assess the training needs of the agri-entrepreneurs. One training center from each state were randomly selected and total 120 respondents, 60 from each state were selected using simple random sampling method. The data were collected with the help of semi- structured interview schedule and were analyzed using Statistical Package for Social Sciences (SPSS). Findings revealed that self motivation for own business was one of the major factors, which got the first rank in Punjab and 2nd rank in Uttarakhand. Efficient utilization of resource base (education, knowledge, land etc) obtained 1.88 WMS in Punjab and got second rank, whereas the same factor has scored 2.15 WMS and ranked 1st in the Uttarakhand. Training need of agri-entrepreneurs was higher in the area of agribusiness management with scores of 14.15. The relation between ranks and weighted mean score of states Uttarakhand and Punjab has been studied and found that they followed Zipf-Mandelbrot law (Inverse Power law) (Figure 1, Figure 2) for distribution of respondents for the factors that motivated respondents to join the training programme and linearly increases for the Distribution of respondents according to their training needs assessment with their ranks (Figure 3).

Introduction

Agri-entrepreneurship development is increasingly seen as a promising alternative to traditional economic development, as it unlocks the potential of unemployed agricultural graduates to create job opportunities and strengthen agricultural extension system. After independence, conscious efforts were made towards economic and social transformation in India, followed socialistic pattern of development policy within the framework of five year plan (Tiwari, 2007). Accordingly government concentrated on the development of infrastructure for industrial and agricultural

development. Thus, it was during late sixties that the small-sector began to be recognized as an instrument for tapping entrepreneurial talent. In the initial stages government envisaged a promotional package to facilitate setting up of units (Report of prime minister task force in micro, small and medium enterprises, Government of India, 2010). It consisted of financial assistance and incentives, infrastructural facilities technical and managerial guidance through a network of a number of support organizations of central, state and local levels. But the insufficient progress of this sector however made the planners to realize that facilities and incentives were necessary but not sufficient in themselves to ensure adequate entrepreneurial response. In fact, entrepreneurial growth required focus on the human resource development more than anything else did (Ahluwalia, 2002).

Agri-entrepreneurship is an employment strategy that can lead to economic self-sufficiency of rural people. Agri-entrepreneurship development through training is a key element for the promotion of Micro, small, medium enterprises (MSMEs), particularly, the first generation agri-entrepreneurs (Ahmed 2011). In 1991, India began a process of economic liberalization, including new economic policies with a specific focus on fiscal, structural and industrial reform. Among the structural reforms the abolition of archaic industrial licensing policies and a quota system, both of which had inhibited market entry. The removal of these barriers was chiefly intended to increase private investment and expand entrepreneurial opportunities (Ahluwalia, 2005). Consistent with past policies, these structural reforms also included increased support for self-employment initiatives, with the primary goal of decreasing unemployment. However, convergence of unemployment rates was not found before and after the reform period. Added to that, a long-term sustenance of unemployment rates was prevalent throughout India (Bhalotra, 2003). The regions within India differ in unemployment rates and that, surprisingly, states with the highest incidence of poverty appear to have the lowest unemployment rates and vice versa, making it more than a little puzzling that self-employment policies for the unemployed are still viewed as a viable method of alleviating poverty (Ahluwalia, 2005). In this connection, Government of India constituted a steering committee on agriculture and allied sectors under the chairmanship of Dr. M.S. Swaminathan. The committee, among others, suggested creation of Agriclinics and Agribusiness Centers managed by Agricultural graduates so as to provide consultancy services to the farming community in rural areas. Subsequently, a scheme for setting up of Agriclinics and Agribusiness centers by agricultural graduates was announced by the then finance minister on February 28, 2001. NABARD has formulated a model scheme for financing Agriclinics and Agribusiness Centers. This scheme is being implemented jointly by NABARD, MANAGE and SFAC since from 9th April, 2002. The objective of the present investigation was: To identify the training needs of trainees under the scheme of Agriclinics and Agribusiness centers.

Materials and Methods

The present study carried out two states of India i.e., Uttarakhand and Punjab, because both the state has huge potential for agricultural graduates to establish and run their agri-ventures. This empirical study focused on training needs of the trainees who have taken training from the two training centers College of Agribusiness management (CABM), Pantnagar, Uttarakhand and Indian society of agribusiness professional (ISAP), Amritsar, Punjab. These were selected

randomly for the present study under the scheme of "Agri-clinics and Agri-business center scheme". Motive of the scheme is to provide expert services, advice, input supply and farm equipment to the farmers by Agri-clinics and Agribusiness centers. In this study, we have gone through the following ways:

List of agri-entrepreneurs was collected from both above mention training institutes. After that respondents were selected with the help of simple random sampling by using chit method. The data was collected from 120 respondents in the investigation. A sample of 60 each was selected from both the sates. In some cases snow-ball sampling was used for taking data because it was difficult to explore individual agri-entrepreneurs. This sampling method is highly helpful to the researcher for tracing the agri-entrepreneurs.

Interview schedule was used as a tool for collecting data in face to face situation. Each and every part of the interview schedule was thoroughly examined and discussed with the advisory committee before giving it a final shape. The interview schedule was validated by experts related to the field.

The tool was pilot tested in the field conditions, on 30 non sample respondents. The necessary modifications, alterations and suggestions were incorporate before conducting the survey.

The interview consists with of both close and open ended questions related to the socio personal, socio economic, entrepreneurial characteristics and general information. Data gathered by personally visiting to agri-graduates who engaged in agri-based enterprises.

Z-test has been applies for comparing the Socio economic attributes of the agri-entrepreneurs of Uttarakhand and Punjab state of India. Then, a simulation has been performed and statistical analysis by using t-test was done by using weighed mean scores and their corresponding ranks.

Results and Discussion

The compression between Socio economic attributes of the respondents of Uttarakhand and Punjab for instance Socio-personal characteristics (Age, Education, Cast, Year of Experience), Socio-economic characteristics (Source of earning, Land Holding, Social participation, Possession, Family Size), Entrepreneurial characteristics (Achievement Motivation, Risk taking ability, Leadership ability, Decision making ability, Innovativeness, Management orientation, Self confidence, Information seeking) has been studied by applying Z-test (Table 1).

Data revealed that there was significant difference between the socio-personal characteristics of agri-entrepreneurs in respect of their age (Z=1.98*) but there is no significant difference in education, caste and year of experience. Significant difference between age might be due to younger generation involved in agripreneurial activities.

In case of socio-economic difference in agri-entrepreneurs, significant difference was found with respect to their socio-economic variables like social participation (Z=1.97*), land holding (1.98*) keeping aside source of earning, possession and family size with no significance difference in between.

Further the data in Table 1 revealed that a significant difference was found between the entrepreneurial characteristics of agri-entrepreneurs in respect of risk taking ability (Z=1.99*) keeping aside no significant difference between other entrepreneurial characteristics.

Factors motivated to join the training programme

Factors motivating respondents to take up training under the Agriclinics and Agribusiness center scheme are presented (Table 2). It revealed that self motivation for own business was the main factor, got the first rank in Punjab and 2nd rank in Uttarakhand with 2.12 and 2.05 WMS respectively. This was mainly due to interest of the graduates to take up own business. The second important factor in the Punjab states was found to be the efficient utilization of resource base (education, knowledge, land etc) with the obtained 1.88 WMS, whereas the same factor has got 2.15 WMS and ranked 1st in the Uttarakhand state. This might be due to the technical knowledge of agri-entrepreneurs and their interest in the efficient utilization of government benefits by undertaking Agriclinics and Agribusiness centers. Better institutional linkage was found to be the 3rd most important factor in both selected states Uttarakhand and Punjab as this training programme with the 1.95 and 1.87 WMS respectively, gives the linkage of financial Institutions, agriculture department, NABARD, MANAGE, agriculture universities, successful agri-entrepreneurs.

On the basis of scores in each category weighted mean score values were calculated for each dimension. Low scores in each dimension means the respondents were having poor knowledge or skills in that area. So, the respondents required training in that area.

It is interesting to note that free specialized training got fourth rank in Punjab obtained 1.83 WMS and same factor got 5th in Uttarakhand state with 1.66 WMS, is important factor to join the training programme in the states. Problem of Unemployment is an important factor which made them to join the training programme has 4th rank in Uttarakhand state; obtained1.67 WMS and same factor got 5th rank in Punjab state with 1.83 WMS. It shows that unemployment is also big factor which motivate agricultural graduates to join this training programme. Non-remunerative yields from present farming system got 6th rank in Punjab state with 1.75 WMS and same factor got 8th rank in Uttarakhand state and obtained 1.60 WMS. The factor which has got 7th rank in Punjab state, it was Access to credit facility with 1.65 WMS and this factor got 6th rank in Uttarakhand state obtained 1.61 WMS.

Improved market outlets were 7th important factor in Uttarakhand state with 1.59 WMS was 8th important factor in Punjab state with 1.59 WMS. Similarly, better price expectations from the activity undertaken was 9th important factor in Uttarakhand state with 1.54 WMS was 10th rank in Punjab state obtained 1.45 WMS. The 10th important factor in Uttarakhand state was joining the training programme to get free food and accommodation in the city for searching the jobs with 1.52 WMS and same factor got 9th rank in Punjab state with 1.45 WMS. Increasing cost requirements got same rank 11th in both selected states with 2.15 and 1.88 WMS respectively, was least important factor for joining the training programme under the scheme of Agriclinics and Agribusiness. Rank of all factors shows their seriousness of the training programme and zeal to start their own business. These finding are supported by earlier studies (Karjagi, 2005) who reported that these factors are important to motivate for joining training programme.

After simulation of Distribution of respondents according to factors that motivated respondents to join the training programme it has been found that the distribution of weighted mean scores of Uttarakhand and Punjab and their

corresponding ranks (Figure 1) have followed Zipf-Mandelbrot law (Zipf, 1949; Yadav, 2010) Zipf-Mandelbrot law is

$$log\ f = log\ a - b\ log\ (r + c)$$

Where *a* and *b* are constants and *b* is known as Zipf's exponent and *f* and *r* are weighted mean scores and ranks respectively. For state Uttarakhand the values of a= 2.225 and b = -0.1748 and for state Punjab a = 2.171 and b = -0.1529 respectively.

Based upon the weighted mean scores of both states (Uttarakhand and Punjab) of distribution of respondents for the factors that motivated respondents to join the training programme t-test has been applied by using the formula:

$$t = \frac{\overline{X_1} - \overline{X_2}}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad \text{.....(a)}$$

$\overline{X_1}$ and $\overline{X_2}$ are the means of weighted mean scores, n_1 and n_2 are size of weighted mean score of Uttarakhand and Punjab respectively and S is the c ombined standard deviation of the both states, which can calculated as:

$$S = \sqrt{\frac{\sum(X_1 - \overline{X_1})^2 + (X_2 - \overline{X_2})^2}{n_1 + n_2 - 2}} \quad \text{.....(b)}$$

The calculated value of t from above equation (a) was 2.03567(± ignored) and the critical value at 5% ($p<0.005$) significance level was 2.228, which was greater than the calculated value. Hence the differe4nce between mean scores of Uttarakhand and Punjab was not significant i.e., the mean of weighted mean score were approximately same for all the factors taken in our study.

Training needs assessment of trainees under agriclinics (ACs) and agribusiness centers (ABCs) scheme

Training needs of agri-entrepreneurs was analyzed in various areas like agribusiness management, small business management, general marketing management, agri-marketing management, financial management and information technology.

The Table 3 depicted the rank order of the different areas in which the trainees required trainings under the scheme of ACs and ABCs. The need of agri-entrepreneurs was higher in the area of agribusiness management with scores of 14.15. It might be due to the reason that respondents lacked knowledge regarding different aspects of agribuisness management such as forms of agribusiness organization, their advantages and disadvantages, scope of agribusiness, status, present role and future prospects, agribusiness development analysis and opportunities and agribusiness concepts, nature and scope etc. So, the trainees were showed great interest to learn about these things through training programme followed by the need of managing small business had ranked second (16.24) which included different aspects of training on small business management such as operating franchise, importance of franchising, pit falls in franchising identification, development and diversification of small business, marketing and components and characteristics of small business etc. which means the respondents were eager about to established their small businesses. So that's why they want training in this area under the scheme of Agriclinics and Agribusines centers. The need of financial management was ranked third (19.26) because during the time of investigation respondents expressed that they were not very much aware about the different facet of handling the financial aspect like preparing projects for bank appraisals, project

analysis techniques, analyzing projects, appraisals and reports, capital expenditure decisions etc.

Agri-marketing management need was ranked fourth (22.49) which includes quality issues, standardization, grading and packaging, crop insurance, procurement management, franchise issue, problems and prospects, pre-harvest planning services, marketing environment of seed fertilizers etc. followed by the need of Information technology had ranked fifth (26.39) which cover the information related to various aspects like existing agricultural management information system (MIS) and its commercial use followed by commercial dissemination of information, E-commerce, its scope and local application, kiosks, internet and MS-Office, agricultural portals, IT application and their advantages, Role of IT in changing business with special reference to small business, linking procedure to it led applications and brief introduction of information technology. Mean score value was higher in case of general marketing management (38.14). It means that trainees of the study area were aware about the different issues of rural marketing, advertising management, marketing of services, sales operations and management, sales promotion, retail marketing, pricing and price policies etc.

Table.1 Comparison between Socio economic attributes of the respondents for agripreneurs of Uttarakhand and Punjab

S.No	Variables	Mean		Variance		'Z' value
		Uttarakhand $n_{1=60}$	Punjab $n_{2=60}$	Uttarakhand $n_{1=60}$	Punjab $n_{2=60}$	
A. Socio-personal characteristics						
1	Age	35.27	33.70	41.45	33.02	1.98*
2	Education	1.55	1.46	0.52	0.32	0.70
3	Caste	3.51	3.06	0.43	1.14	0.63
4	Year of experience	1.55	1.53	0.48	0.45	0.13
B. Socio-economic characteristics						
5	Source of earning	1.60	1.58	0.48	0.41	0.13
6	Land Holding	2.85	3.03	1.51	1.82	1.98*
7	Social participation	2.23	2.56	0.99	1.13	1.97*
8	Possession	2.98	3.13	0.66	0.72	0.98
9	Family size	2.38	2.45	0.30	0.28	0.67
C. Entrepreneurial characteristics						
10	Achievement Motivation	11.68	11.91	4.38	4.92	0.69
11	Risk taking ability	7.31	7.65	2.52	1.72	1.99*
12	Leadership ability	10.21	10.48	4.95	4.83	0.66
13	Decision making ability	15.61	15.85	11.18	10.19	0.39
14	Innovativeness	11.85	12.28	9.82	10.20	0.74
15	Management orientation	5.30	5.51	1.80	1.98	0.86
16	Self confidence	5.31	5.53	1.94	1.64	0.88
17	Information seeking	13.25	13.40	7.27	7.39	0.30

* Significant at 0.05 level of probability

Table.2 Distribution of respondents according to factors that motivated respondents to join the training programme

S.No.	Factors	Uttarakhand N=60		Punjab N=60	
		WMS	Rank	WMS	Rank
1.	Unemployment problem in government and private sector	1.67	IV	1.83	V
2.	Non-remunerative yields from present farming	1.60	VIII	1.75	VI
3.	Self motivation for own business	2.05	II	2.12	I
4.	Free specialized training	1.66	V	1.83	IV
5.	Better institutional linkage (training, credit and marketing)	1.95	III	1.87	III
6.	Improved market outlets	1.59	VII	1.63	VIII
7.	Access to credit facility	1.61	VI	1.65	VII
8.	Better price expectations from the activity undertaken	1.54	IX	1.45	X
9.	Increasing cost requirements.	1.34	XI	1.37	XI
10.	Efficient utilization of resource base (education, knowledge, contracts, land etc)	2.15	I	1.88	II
11.	Joining the training programme to get free food and accommodation in the city for searching the jobs	1.52	X	1.45	IX

Table.3 Distribution of respondents according to their training need assessment N=120

S. No.	Areas of training courses	Weighted mean score value of each item	Rank	Total mean score value of each category	Rank
I.	**Agribusiness Management**				
1.	Agribusiness concepts, nature and scope	3.71	IV	14.15	I
2.	Scope of agribusiness status, present role and future prospects	3.65	III		
3.	Forms of agribusiness organizations, their advantages and disadvantages	3.18	I		
4.	Agribusiness development analysis and opportunities	3.61	II		
II.	**Small business management**				
1.	Components and characteristics of small business	2.46	I	16.24	II
2.	Managing small business	2.49	II		
3.	Marketing and services	2.86	IV		
4.	Small business networking	2.99	V		
5.	Identifying, developing and diversification of small business	3.19	VI		
6.	Operating franchise importance of	2.58	III		

	franchising-some pit falls in franchising				
III.	**General Marketing Management**				
1.	Introduction to general marketing principles	2.69	I	38.14	VI
2.	Marketing channels	3.25	V		
3.	Distribution management	3.28	VI		
4.	Brands, product features and packaging	3.24	IV		
5.	Pricing and price policies	3.14	II		
6.	Retail marketing, sales operation and management	3.67	VIII		
7.	Sales operation and management	4.13	X		
8.	Advertising management and its impact	4.20	XI		
9.	Sales promotion	3.33	VII		
10.	Marketing of services	3.21	III		
11.	Rural marketing some issues	3.90	IX		
IV.	**Agri-marketing Management**				
1.	franchise, issues, problems and prospects	4.19	VII	22.49	IV
2.	Pre-harvest planning, services	2.90	III		
3.	Crop insurance	2.94	IV		
4.	Procurement management	3.30	V		
5.	Quality issue	4.01	VI		
6.	Standardization, grading and packaging	2.49	I		
7.	Special feature of agricultural input and marketing	2.66	II		
V	**Financial Management**				
1.	General principles and practices	2.97	VI	19.26	III
2.	Analyzing project, appraisals, reports	2.49	II		
3.	Capital expenditure decisions	2.47	I		
4.	Process of capital, capitalizing and reinvesting	2.53	III		
5.	Payback period, payment management	2.90	V		
6.	Rate of return IRR	2.83	IV		
7.	preparing projects for bank appraisals, banking requirements	3.07	VII		
VI	**Information Technology**				
1.	Introduction to IT	2.78	I	26.39	V
2.	Role of IT in changing business environment, special reference to small business	2.86	III		
3.	It applications, their advantages	3.75	VII		
4.	Linking procedures to IT led applications	3.97	VIII		
5.	Information kiosks, concepts	2.85	II		
6.	Internet, MS office	3.09	IV		
7.	Agricultural portals	3.35	V		
8.	MIS	3.74	VI		

Fig.1 Rank-weighted mean score plot of distribution of respondents according to factors that motivated respondents to join the training programme

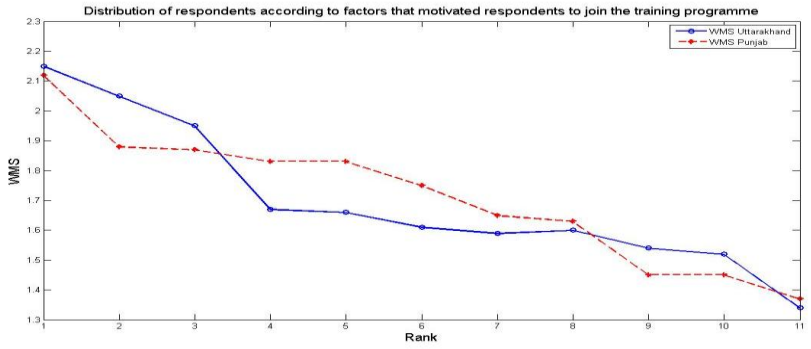


Fig.2 Rank-weighted mean score plot (log-log scale) of distribution of respondents according to factors that motivated respondents to join the training programme

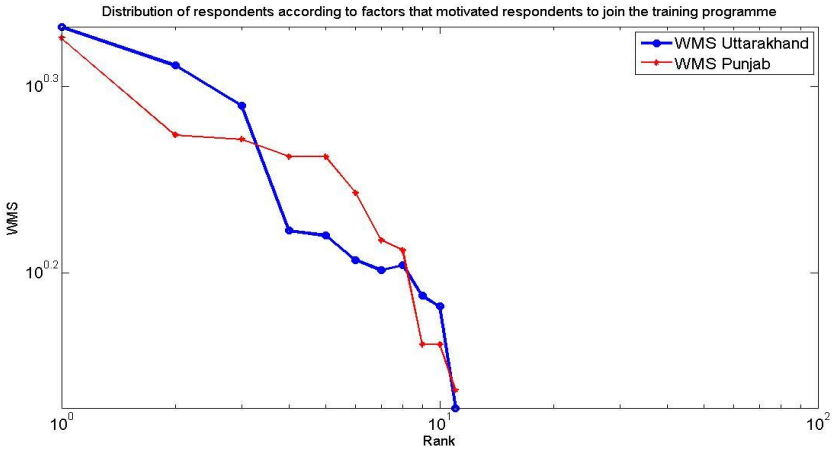
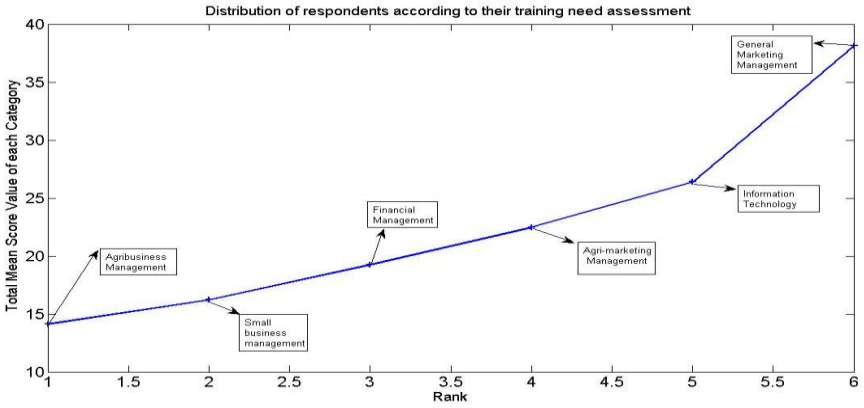


Fig.3 Rank-total mean score plot of distribution of respondents according to their training need assessment



Thus, results of the study depicted that need of agri-business management and small business management was higher in the study area which might be due to the reason that respondents wanted to establish their own agriventures. So, that's why they required trainings in that area (Karjagi *et al.*, 2006), who reported that these areas are major for identifying training need of trainees and after getting the trainings in these areas trainees could perform in a better way.

The simulation between total mean score value of areas of training courses and their corresponding ranks in the Distribution of respondents according to their training needs assessment has been done and found that it increases almost linearly (Figure 2) as

$f(x) = px + q$,

Where p is the slop and q is constant known as intercept. The value of p = 4.389 and q = 7.415.

T-test has been applied for the distribution of respondents according to their training needs assessment ($p<0.005$) and difference was found significant.

On the basis of the major findings of the study it was concluded that agricultural graduates engaged in the agribusiness should receive regular support and guidance from the MANAGE and NABARD for the improvement in the performance of Agri-clinics and Agri-business center scheme. There is also need a state level coordination committee between MANAGE and Nodal training Institutes in order to ensure smooth implementation, monitoring and evaluation of the training programme under the agriclinics and agribusiness centres scheme in India. The findings of the socio-personal and socio economic and entrepreneurial characteristics of the Agricultural graduates engaged in agri-entrepreneurial activities will be much useful for the policy makers for further future training programmes. It will be helpful in designing the content of training programme. Dealership licenses of agri-inputs should be issued only to agricultural graduates like medical dealership license. Agriclinics should be treated at par with government agriclinics especially in distribution of seeds on subsidized rates care needs to be taken by MANAGE while choosing NGOs and private training institutes as they are inefficient in training and lack of infrastructure. MANAGE should approach the successful agri-entrepreneurs for the betterment of agriclinics and agribusiness center scheme. Government should promote agricultural graduates to start agriclinic at Gram Panchayat level. While allotting government schemes or implementing development progarmmes related with agri-entrepreneurial activities, priority should be given to trained agri-entrepreneurs.

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