

## Developing Distance Learning Framework for Promoting Agriculture Education

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### ABSTRACT

*Uttarakhand is a newly carved out state, with its 88 per cent area comprising of hills. People working in fields are mostly untrained and use old technologies of crop production and management. They require learning opportunities to gain knowledge and skills in agriculture to make farming profitable and livelihood sustainable. Keeping this in view the present study was under taken to seek farmers' opinion on delivery mechanism in distance learning. The study indicated that majority of respondents (86.27%) were interested to join need based courses in agriculture through distance learning to enhance their knowledge and skills. Based on farmers' opinion distance learning framework was developed for promoting agriculture education.*

**Key Words:** Agriculture; Distance learning; Education; Knowledge; Skill

There is hardly a system for production of middle level skilled manpower for the agricultural sector. In some states, there are some government run agricultural schools but they often provide post induction training to village level workers and other personnel. A manpower production system aiming at vocational development for self-employment hardly exists in India in the domain of agriculture. Agriculture development of Uttarakhand is determined by cereal, vegetable, fruits, animal husbandry, forestry, etc. The farmers in hills have small pieces of land using traditional method of crop production and mostly family labour is employed for performing various operations. It has been revealed that rural people including farmers are ignorant about the latest practices of agriculture. In view of inadequate extension efforts to promote agriculture and horticulture focused, alternative means of educating farmers need to be explored. Distance education can provide instruction to those living in remote areas, where formal education opportunities are scarce. It enables people to acquire knowledge, skills and capabilities without drawing them from their workplace. It is flexible approach of education, which enables learner to learn at his own pace, place and time (*Ramakrishnaiah and Kumaraswamy, 1994 and Rajadekar, 2000*).

Uttarakhand is a newly carved state, The State

Open University has not yet started offering need based education and training to farmers and rural youth. Thus, there is a need to educate farmers through existing infrastructure and set up new infrastructure for building distance learning framework. In order to suggest a framework, it is necessary to know about farmers' characteristics, their needs, preferences for information communication technologies, opinion of farmers and distance education experts. Therefore, a study entitled "Developing Distance Learning Framework for Promoting Agriculture Education among Farmers in Uttarakhand" was conducted to suggest distance learning framework in agriculture education for farmers and rural youths.

### METHODOLOGY

The study was conducted purposively in two districts of Uttarakhand, Almora and Dehradun to have representation of Kumaon and Garhwal divisions. Eight villages namely Hawalbag and Takula of Hawalbag Block and Tunakot and Tipola of Tadikhet Block in Almora district and Doiwala and Lachiwala of Doiwala Block and Tanuwala and Balawala of Raipur block in Dehradun were also purposively selected. Member of household directly engaged in agriculture and allied activities was selected as the respondent. Probability

proportionate to size technique was adopted for selecting farmers. In all 102 farmers were interviewed for the present investigation.

**RESULTS AND DISCUSSION**

*Agricultural information need of farmers:* Table 1, shows that 73.53 per cent respondents needed information related to crop production whereas, 71.56 per cent respondents needed information in horticulture followed by 16.66 per cent, 2.94 per cent and 3.92 per cent respondents, who needed information related to animal husbandry, plant protection and agribusiness management.

Table-1: Distribution of respondents according to agricultural information need. (N = 102)

Category	Almora		Dehradun		Total	
	F	%	F	%	F	%
Crop production	38	73.07	37	74	75	73.52
Horticulture	31	59.61	42	84	73	71.56
Animal husbandry	8	15.38	9	18	17	16.66
Plant protection	1	1.92	2	4	3	2.94
Agribusiness mgt.	2	3.84	2	4	4	3.92

The findings clearly indicate that majority of respondents had expressed keen desire to enhance their educational level. Since, they were not in a position to attain full time courses, they gave their preference for distance education courses.

*Preference of respondents regarding enrolment and programme mode:* A perusal of Table-2 shows that majority of respondents (86.27%) were interested and get required information through certificate and diploma courses in agriculture to gain knowledge and skills in agriculture to keep pace with changing demands due to commercialisation of agribusiness. Of this 64.70 per cent respondents preferred ‘own time mode’ of education with counselling session and practical training at study centre, while 19.60 per cent preferred ‘correspondence courses’ where they want to learn educational material provided to them, whereas only 1.96 per cent preferred ‘part time mode’ of education and 13.72 per cent respondents were not interested to join such courses.

*Place of study:* The data in same table vividly depicts that majority of respondents (65.68%) preferred to study at ‘study centre’, while 20.58 per cent preferred to study at ‘home only’ and 6.86 per cent preferred to study at ‘KVK’. Most of the respondents suggested that the study centre should be situated within the radius of 20-25 Km. from their place of residence so they can go for contact session during day and return home by the evening.

*Time of contact programme at study centre:* As shown in Table 3 most of the respondents (64.70%) preferred day-time for contact programme at study centre so that they can easily come to study centre and return to their villages by evening. Only 1.96 per cent respondents preferred morning and negligible number of respondents (0.98%) preferred evening time for contact programme at the study centre.

Table-2. Distribution of respondents according preference to enrolment, choice for programme mode and place of study (N = 102)

Category	Almora		Dehradun		Total	
	F	%	F	%	F	%
(a) Preference to enrolment in Diploma/ Certificate course						
Yes	44	84.61	44	88	88	86.27
No	8	15.38	6	12	14	13.72
(b) Choice for programme mode through distance learning						
Part time	2	3.84	-	-	2	1.96
Own time	34	65.38	32	64	66	64.70
Correspondence	8	15.38	12	24	20	19.60
(c) Place of study						
Home only	10	19.23	11	22	21	20.58
Study centre	35	67.30	32	64	67	65.68
KVK	4	7.96	3	6	7	6.86

Table-3. Preference of respondents regarding time, frequency of contact programme and duration of course (N = 102)

Category	Almora		Dehradun		Total	
	F	%	F	%	F	%
(a) Time of study at study centre						
Morning	1	1.92	1	2	2	1.96
Daytime	33	63.46	33	66	66	64.70
Evening	-	-	1	2	1	0.98
(b) Frequency of contact programme						
Alternate days	-	-	1	2	1	0.98
Weekends	29	55.76	27	54	56	54.90
Fortnightly	7	13.46	7	14	14	13.72
(c) Duration of course						
One month	2	3.84	1	2	3	2.94
Three month	26	50	29	58	55	53.92
Six month	14	26.92	16	32	30	29.41
One year	2	3.84	-	-	2	1.96

*Frequency of contact programme:* The data in incorporated in Table 3 indicates that 54.90 per cent respondents preferred contact programme on ‘weekends’ at the study centre as it was not possible for them to visit study centre daily or alternate days due to their busy work schedule at farm and other family commitments. Whereas 13.72 per cent respondents preferred ‘fortnightly’ and 0.98 per cent respondents preferred contact programme on ‘alternate days’.

*Duration of course programme:* A cursory look of Table 3 depicts that majority of respondents (53.92%) preferred ‘three months’ duration of course programme as most of the farmers wanted to gain knowledge and information on various agricultural activities and enterprises like poultry production, honey bee rearing, commercial floriculture and vegetable production. Whereas 29.41 per cent respondents preferred ‘six months’, 2.94 per cent preferred ‘one month’ and 1.96 per cent respondents preferred ‘one year’ duration of course programme.

Table-4: Opinion of respondents on fees, examination, certification and educational facilities (N = 102)

Category	Almora		Dehradun		Total	
	F	%	F	%	F	%
(a). Payment of fees						
No fees	26	50	18	36	44	43.13
Upto Rs. 500	24	46.15	25	50	49	48.03
Rs.500-1000	1	1.92	7	14	8	7.84
Above Rs. 1000	1	1.92	-	-	1	0.98
(b) Examination pattern						
No Examination	2	3.84	2	4	4	3.92
Theory only	-	-	7	14	7	6.48
Practical only	-	-	-	-	-	-
Theory and practical both	50	96.15	41	82	91	89.21
(c) Certification of courses offered						
Yes	50	96.15	48	96	98	96.07
No	2	3.84	2	4	4	3.92
(d) Facilities available at study centre						
Library	37	71.15	38	76	75	73.52
Experimental farm	36	69.23	37	74	73	71.56
Computer	15	28.84	14	28	29	28.43
Internet	-	-	1	2	1	0.98
Audio visual aids	35	67.30	32	64	67	65.68

*Course Fee:* It can be observed from Table 4, that 43.13 per cent respondents wanted the courses free of cost. Whereas 48.03 per cent respondents preferred to pay ‘Upto Rs. 500’ followed by 7.84 per cent respondents willing to pay between ‘Rs. 500-1000’ and ‘Above Rs. 1000’ fee structure was out rightly rejected by the respondents. Thus it seems that respondents were not inclined to pay large amount as for distance leaning courses.

*Examination pattern:* It is clear from Table 4, that most of the respondents (89.21%) preferred theory and practical in examination while 6.86 per cent preferred theoretical exams and 3.92 per cent respondents preferred that there should not be examinations during

the course programme. This indicates that majority of respondents wanted to get hands-on practical training and are ready to being evaluated through examination.

*Certificates:* Majority (96.07%) of respondents expressed the desire for certificates for courses studies as it will help them to get benefit of various bank and government schemes.

*Study centre facilities:* Table 4, shows the opinion of respondents with regard to various facilities available at the study centre. Majority of respondents (73.52%), (71.56%) and (65.68%) preferred library, experimental farm and audio-visual aids respectively, whereas 28.43 per cent and 0.98 per cent respondents preferred computer and internet facilities respectively at the study centre.

*Distance Learning Framework to Promote Agriculture Education in Uttarakhand :* The opinion of distance education experts was sought on the delivery mechanism and several other issues related to distance learning. Based on the findings, distance learning framework has been developed for promoting agriculture education. As a part of the framework, School of Agricultural Science was proposed to be established at Uttarakhand State Open University. School of Agricultural Sciences will offer need based courses in agriculture and allied subjects for farmers and rural youths including women. Organizational Structure of proposed Uttarakhand State Open University is given in Figure 1 Uttarakhand State Open University will be patterned on framework of “Indira Gandhi National Open University” (IGNOU) and have linkages with “Yashwantrao Chavan Maharashtra Open University” (YCMOU) and G. B. Pant University of Agricultural & Technology, Pantnagar in view of their expertise in agriculture education. The proposed School of Agricultural Science shall be a policy making, overall monitoring and evaluation authority for agriculture education through distance mode. It shall be responsible for,

- i) Preparation of rules and regulations for admissions and better implementation of educational programmes.
- ii) Formulation of various need based courses in agriculture and allies subjects by expert committee.
- iii) Production and distribution of high quality self-instructional material to students.
- iv) Production of audio-visual aids like audio cassettes, video cassettes and their distribution to study centres and students.
- v) Training and orientation of counsellors from study centres.
- vi) Conduct examinations and to give Certificates.

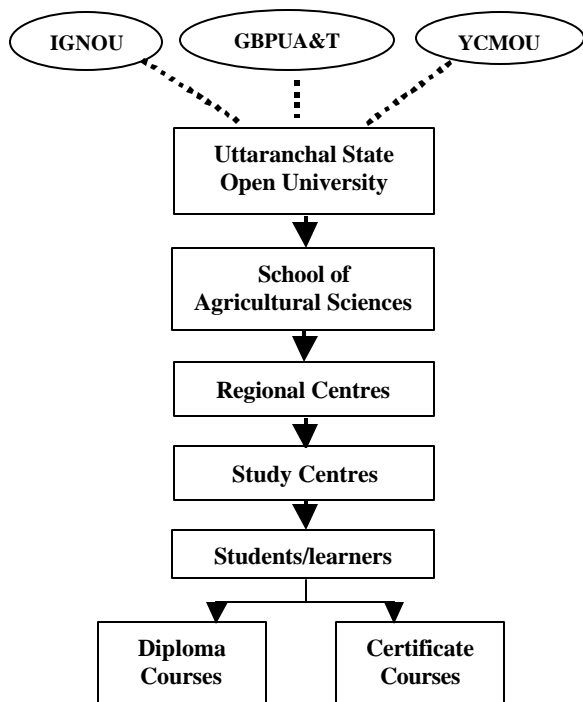


Figure 1: Organizational Structure of Uttarakhand State Open University

*Regional centres:* The framework proposes to establish one regional centre each in Kumaon and Garhwal divisions and plains in the state to ensure timely monitoring and evaluation of the progress and effective implementation of distance learning programmes. The regional centres shall act as a link between the university system and study centres. Regional centres shall be responsible for,

- i) Admission and registration of students from study centres.
- ii) Organize orientation of counsellors with the help of university experts.
- iii) Monitoring and evaluation of study centres on regular basis.
- iv) Providing feedback about performance of study centres and students to the university.

*Study centre:* The framework proposes to establish study centres at the district level. Existing institutions that are already having the infrastructure like Krishi

Vigyan Kendra, Crop Research Stations, Non Government Organisations working in agriculture and rural development can also be utilized as study centres by collaborating with them to carry out different need based distance learning programmes in agriculture. Study centres shall perform following functions,

- i) Admission of students.
- ii) Collection of fees.
- iii) Distribution of self-instructional material to students.
- iv) Counselling of students on regular basis.
- v) Provide practical training in concerned subjects.

*Training facilities to be made available at study centres:*

1. Study centres should have separate teacher-counsellor for each academic programme with at least graduate or post-graduates in agriculture or horticulture.
2. Study centres should have basic facilities like classroom, laboratory, library, computer and audio-visual aids, internet connectivity.
3. Study centres should have minimum of 10 acres of irrigated land with standing fruit orchids, vegetable garden and a floriculture unit of their own.
4. Study centres should have their own plant propagation nursery of at least 3 acre size, with a variety of propagation materials of their own.
5. Study centres should provide all the additional infrastructural facilities as prescribed and recommended by the university from time to time.

**CONCLUSION**

It was concluded that respondents were interested to join need based courses in agriculture through distance learning to enhance their knowledge and skills in the field of agriculture. The findings of present study can be helpful in introducing agriculture education through State Open University in Uttarakhand. The proposed framework aims to promote agriculture education through distance learning and further strengthening distance learning setup in the state.

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