

Experiences from and Impact of an Innovative Correspondence Course-based Distance Education Programme in Agriculture

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Can distance education methodology be used to teach subjects like sciences, medicine or agriculture? Distance educators have to face such questions every day and everywhere in India. We think Singh's article answers not only this question but also some more: How may conventional universities use distance education methodologies integratively to achieve their objectives? Can distance education be used differentially to solve the problems caused by English as a medium of instruction?

We welcome articles on similar experiments from within the country and outside.

INTRODUCTION

G. B. Pant University of Agriculture and Technology, Pantnagar, Uttar Pradesh, the first agricultural university of the country was founded in 1960. The establishment of this university marked a very significant event and beginning of a new chapter in the history of agricultural education of the country. Unlike the traditional universities, this and similar other agricultural universities established thereafter, have triple functions, namely, resident instruction, research and extension education. The Uttar Pradesh Agricultural University Act, 1958¹, which paved the way for its establishment, specifically mandated that the University shall make "provision for education of rural people of Uttar Pradesh in different branches of study, particularly agriculture ... and other allied subjects ..." and that, apart from resident instruction, it shall also undertake "field and extension programmes". In discharge of these mandates, besides other programmes and activities, the University launched a Correspondence Course Programme in 1973 with the financial assistance of the University Grants Commission (UGC). The University took over the financial responsibility for running the programme in 1979.

In order to undertake field extension education programmes, including the Correspondence Course Programme, the University has set up a Directorate of Extension Services. Apart from the senior faculty members at the headquarters to operate, guide and oversee the programme, the Directorate also has district extension centres in 20 Districts of Western and the Hilly areas of Uttar Pradesh – the area under the jurisdiction of the University.

When the Correspondence Course Programme was initiated, the instructional system was confined to guidance through correspondence lessons only, as the University then lacked the necessary facilities and infrastructure to impart skills as well at district/block levels. But, with the strengthening of the Directorate in general, and of the district extension centres in particular, and also the extension and reorientation of the Pant Farmers' Club Programme in 1983, it became possible to give skills-oriented programmes on an extensive scale, in addition to the earlier provision of written materials.

OBJECTIVES OF THE PROGRAMME

The programme, since its very inception, has been dynamic both in terms of conception and mode of operation. Its scope, instructional methodology and evaluation procedures have undergone changes based on experiences generated and opinions and suggestions put forth by the participants as well as the faculty members. As of today, the programme is being operated with the following objectives:

1. to effectively communicate knowledge about, impart skills related to and help develop positive attitudes towards new agro-technology among the participants;
2. to build a network of the University-linked village key-communicators;
3. to obtain quick firsthand feedback about the newly developed agro-techniques; and
4. to acquaint the university research system with technical field problems and constraints in raising produc-

tion, productivity and profitability of important agricultural enterprises being undertaken by farmers of the area within the jurisdiction of the University.

MODALITY OF ENROLMENT

Practising farmers, rural school dropouts, retired civilians and defence personnel having education at least upto the 7th standard with a minimum age of 18 years are eligible for enrolment provided they also own agricultural land and propose to take up and/or continue with agriculture as a profession.

The eligible candidates wishing to seek admission are required to make applications in the prescribed proforma obtainable from the Directorate of Extension and its district centres located in 20 districts of Meerut, Bareilly, Moradabad, Kumaun and Garhwal Divisions of Uttar Pradesh.

Among the applicants, practising farmers, office-bearers and members of farmers' and village organisations, including Pant Farmers' Clubs, and opinion leaders are given preference in enrolment. The selected candidates are admitted to the programme on payment of the required enrolment fee. Each enrolled candidate can choose a set of four courses out of the 17 which are available currently. Such choice is allowed to candidates themselves as they alone know what their needs and priorities are.

This one-year programme starts in June, i.e., just before the onset of the *Kharif* (minor cropping season, from July to October) season and ends in May, i.e., immediately after the harvesting of the *Rabi* (major cropping season, from October to March) crops. This enables the participants to get practical training on the crop(s) grown in the two major crop seasons and also to actually try out in their own fields what they are being advised under the programme.

METHOD OF INSTRUCTION

After enrolment and identification of courses, each admitted candidate is provided with related sets of lessons and printed study materials prepared in simple and easily understandable Hindi by teams of Subject Matter Specialists. In the preparation of lessons emphasis is laid on accuracy of content as well as the user-friendliness of presentation in order to enable learners to easily relate the content with their real life situations. The objective is to communicate the new technology accurately and to facilitate its actual adoption.

Each course usually comprises 5-6 lessons, each dealing with a specific aspect of the subject. The lessons are regularly updated. The reading materials are sent either by post or delivered through the district extension centres.

During the session the participants may also receive personal guidance from the specialists located at the headquarters (Pantnagar) or in districts, if they choose to contact them. They may also seek such guidance through the Pant Farmers' Club network, if they happen to be club-members, and participate in their periodical

meetings which are also attended by the University extension specialists. The district extension centres also impart related skills through "Result" and "Method" demonstrations and "Field Days" organised on demonstration plots in selected villages. The participants may also attend *Kharif* and/or *Rabi Goshthies* (group discussions/seminars) organised at district headquarters and in selected blocks and villages.

The participants are invited to participate in *Kharif* and *Rabi* farmers' fairs organised at Pantnagar and other research stations of the University.

The registered farmers are encouraged to correspond with the University and its district units in order to seek additional information or clarification(s). In 1990-91 alone, for example, nearly 1900 such letters were received at Pantnagar and district extension centres.

EVALUATION OF PARTICIPANTS

The participants are subjected to evaluation at two stages. The first evaluation is done before the commencement of the instruction. A set of 100 objective-type questions, selecting 25 from each of the four courses chosen by a student, is administered in the first round. The students are expected to respond in less than three weeks of the despatch. These responses are mainly used for research and for bringing about further improvements in the course contents. However, participation in this exercise is not mandatory.

At the end of the session, each participant is again administered an evaluation schedule containing 100 objective-type questions, 25 from each of the same set of the four courses. The participation in this evaluation is mandatory on the part of the candidates wishing to get a certificate. The participants are required to respond to the second questionnaire within three days of receipt of the same. The responses received within the stipulated period are then evaluated and results indicating strong and weak points in each case are communicated to the participants. A participant securing at least 60 per cent of marks in each of the four courses separately is considered successful.

To facilitate evaluation, the Directorate has developed a "Question-Bank" of 50-75 objective-type questions in respect of each course. For the preparation of evaluation questionnaires, questions are drawn from the same "Bank" by the random sampling method.

IMPACT OF THE PROGRAMME

One study on selected aspects of the programme was conducted by the Directorate of Extension in 1989-90. The main objectives of the study were :

- i) to ascertain the relative popularity of the different courses;
- ii) to find out the personal, socio-economic and regional characteristics of the participants;
- iii) to assess the impact of the programme in terms of increase in knowledge and skills and the degree of

change in the attitudes of the participants; and iv) to identify measures that would help further strengthen the programme.

The study revealed that the four most popular courses dealt with the four most important crops grown in the area under the jurisdiction of the University, namely, paddy, wheat, sugarcane and soyabean, and that the four least popular courses were "Insecticides and their uses", "Soil testing and fertiliser uses", "Dairy cattle management", and "Kharif vegetable cultivation". The main reason attributed for the popularity of the first set of four courses was that they dealt with all the important aspects of cultivation of each crop. On the other hand, the latter group of courses dealt with very specialised subject matter or with enterprises which were not very popular/common.

It was also indicated that nearly 70 per cent of the participants were from the plains where agriculture is relatively more advanced and farmers more progressive and prosperous, and that among the participants from the hills the maximum number was that of retired defence personnel and young well-educated farmers engaged in commercial farming.

The investigation further revealed that participants benefited in terms of acquiring more knowledge about the subject matter covered. The study also showed that, generally, the participants already had a favourable attitude towards both the programme and the adoption of the new agricultural practices. After attending the programme this attitude became still more favourable. It was also evident that the mean level of adoption of the recommended agricultural technology by the participants one year after the completion of the programme was significantly higher than that of the non-participants of the same villages with almost similar characteristics and background.

To further improve the effectiveness and quality of the programme, the participants suggested a number of measures, such as, establishment of more Pant Farmers' Clubs and Study and Experience Sharing Forums, making the specialists of the University district extension centres more mobile in order to enable them to serve more areas, conducting more "Result Demonstrations", especially in the villages where the participants come from. They also suggested that Rampur and Nazibabad stations of All India Radio (AIR) should have the Correspondence Course-linked "Farm School on AIR" programmes regularly. Some of them, particularly those owning TV sets, also suggested that programmes similar to "Farm School on AIR" may also be telecast by *Doordarshan* (Television India). Some very enlightened and

well-to-do farmers of *Terai* (Swampy low land belt in the Himalayan foothills) with telephone facilities also suggested the provision of telephone linked distance education facilities.

CONSTRAINTS AND PROBLEMS

Inadequacy of resources to ensure mobility of specialists attached with the district extension centres, inadequate supervision of the activities of the centres, not-so-strong linkage with the developmental agencies/programmes of the State Governments, voluntary agencies and the media personnel operating in the area are some of the constraints affecting this distance education programme. The Indian Council of Agricultural Research (ICAR) has already suggested to the agriculture universities to earmark 10 per cent of their total budget for extension education programmes and if this is agreed to and sincerely implemented it would certainly go a long way towards improving both the "spread" and the "depth" of the programme.

FUTURE PROGRAMMES

The professional farmers have frequently opined that the traditional extension services and approaches of the State Department of Agriculture were insufficient and inadequate for meeting their guidance and information needs. Obviously, the innovative farmers of *Terai* and Western Uttar Pradesh need quality and specialised advisory services. The following activities, therefore, are contemplated to further improve the services during the 8th Five Year Plan period, i.e., from 1992 to 1997.

- i) Establishment of Krishi Vigyan Kendras/Krishi Gyan Kendras (Centres for dissemination of agriculture-technology) in all districts of the area under the jurisdiction of the University.
- ii) Provision of regular Pant University linked "Farm School on AIR" programme from all the AIR stations located in the jurisdiction of the University.
- iii) Starting, at least on a limited scale, "Farm School on Doordarshan" programme for farmers.
- iv) Expansion of the Pant Farmers' Club programme and its linkage with the professional farmers Correspondence Course Programme whenever needed.

The University distance education programme has to be active and dynamic if it has to provide quality education services, especially to pace-setter farmers of *Terai* and Western Uttar Pradesh who would ultimately help bring about the second Green Revolution as also the "White" and the "Blue" ones.

REFERENCE

1. *Act and Statutes*, 1960 G.B. Pant University of Agriculture and Technology, Pantnagar, Uttar Pradesh.