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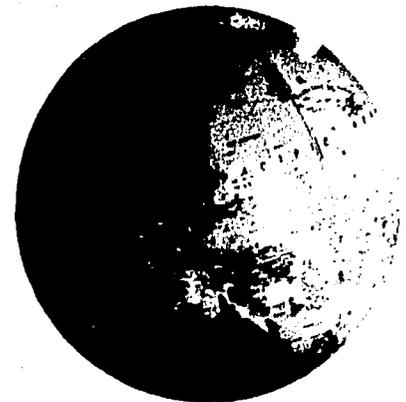
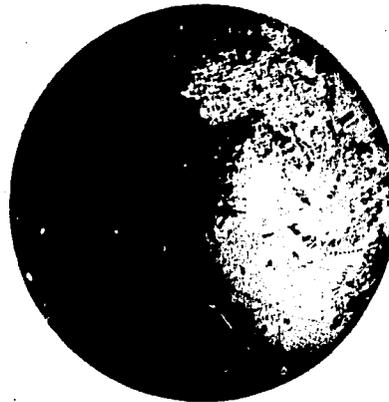
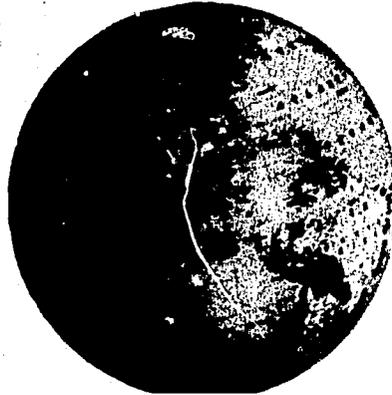
9. ABSTRACT

University Communication Centers have the responsibility of working with scientists to interpret useful research for cultivators through the written word, audio-visual, and all other means of mass communication, and to interpret their institutions to all people of their states. The amount of future support for these agricultural universities will depend greatly on how successful they are. With this is the high priority task of educating young people in these universities as writers, editors, broadcasters, and visual commentators for agriculture. An educational program like this would make faster and more lasting gains if planned and coordinated in cooperation with the mass media. Practical, useful communication research should be a third part of the triumvirate in any Communication Center.

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Can India's Agricultural Universities Meet the Communication Challenge?

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Can India's Agricultural Universities Meet the Communication Challenge?

by William B. Ward and Royal D. Colle, Consultants for the Ford Foundation, and Professor and Associate Professor, respectively, Cornell University (USA)

India's agricultural universities are now playing and will continue to play key roles in the modernization and development of this nation. This is perhaps most apparent in their efforts to help speed up agricultural and rural development. A vital element in this process is *communication*. Thus it seems inevitable that to maximize their contribution, the agricultural universities must pay considerable attention to strengthening their communication activities. These include activities ranging on a continuum from mass communication to inter-personal communication. What is happening in India should be of interest to other nations following similar routes to development.

Communication in education

Communication might well be considered the fourth partner of higher education, teaming with *research*, *instruction* and *extension* in carrying out programmes in each of these areas, and in serving as the connecting link from one to the other.

There are four major needs for *communication support services for the agricultural university*.

1. *For administration*: To provide continuing programmes of internal communication with the staff and students of the university as well as programmes of public information for a wide variety of external audiences who want and need to know about the university.
2. *For research*: To provide systems and mechanisms for scientists to share their knowledge with each other, with instructors and extension workers who have the task of extending knowledge to other audiences, and with actual users of research findings.
3. *For instruction*: To provide modern communication technology and materials to improve the effectiveness of teaching in university courses. Using videotape, cassettes, projectors and other instructional media

Biographical Note

During 1966-68 Professor Ward visited India a number of times at the request of the Indian government and the Ford Foundation to find ways of improving agricultural communication. As a result a model communication centre was planned at Uttar Pradesh Agricultural University. The Ford Foundation provided funds for Professor Colle to assist in establishing the centre as a communications specialist during 1970. The authors acknowledge the helpful comments of Hadley Read of the University of Illinois on an earlier draft of this paper.

often represents a departure from traditional teaching patterns; and to encourage their use wisely and effectively requires skilled assistance from communication specialists.

4. *For extension*: To provide extension specialists and field workers with communication and instructional aids and materials for use with their meetings, demonstrations, and field days.

Education in communication

While communication plays a major partnership role in providing these support services, it also has a primary role in the academic programme. In most developing nations, there is a great need for professional communicators—people who know how to communicate agricultural and related information effectively to those who can use it. It is quite clear that rural development, whether it deals with new varieties or family planning, requires input from the communications expert. With its close tie to the rural community, the agricultural university must be concerned with preparing people for roles as communication specialists.

Undergraduate instruction in communication should serve two functions: (1) To improve the ability of all students to communicate more effectively. (2) To provide sound academic education for students interested in careers in communications. This latter group should also have the opportunity to pursue graduate studies in communications.

Furthermore, the university must encourage and assist in improving the skills of professionals already on the job.

Communication research

Research in communication is needed for a better understanding of audiences and their behaviour, for better use of communication channels, for more effective application of technological advances, and to appraise and evaluate the success or failure of an educational effort. These are not the times to rely on guesses and hunches: we need research to improve communication just as we need research to improve seeds or harvesting techniques. Too frequently communication findings based on research in industrialized

nations are transplanted to different soil without proper consideration for new varieties. Some communications research needs to be done where the communicating will take place.

Higher education and the mass media

Any discussion of communication needs would be incomplete without a brief review of the present and potential contributions the mass media can make to the education objectives of agricultural universities.

We submit that full-scale agricultural and economic development in India cannot come about in this generation or the next unless mass communication is used to a much greater extent than it is now. Are the agricultural universities ready to take some initiative in this endeavour? Do those who run the mass media have the desire to help modernize rural India? That the effort is worth while is documented by research.

In a report of two studies of 680 farmers in 108 villages in three states, four competent researchers made this unequivocal statement: 'We found that exposure to all types of mass media that we examined was positively related to agricultural adoption.'¹ In their sample, 76 per cent of the farmers listened to radio (although not necessarily very often), 34 per cent of their families listened to radio, 67 per cent had seen a film, and 31 per cent read newspapers.

These researchers emphasized that it is not only direct contact with agricultural agents, but also the indirect influence of urban contact and the mass media which help a cultivator to adopt new practices. It has been proved that if Indian farmers have full access to accurate information, interpreted in their terms, things start to happen. One of the major barriers to the adoption of improved practices is inadequate dissemination of reliable information. To reach the masses, mass media are inevitable, and they should receive a higher priority than heretofore at the agricultural universities and elsewhere.

The majority of villagers are illiterate, but some are literate and they act as the intermediaries—the carriers of information. They are the so-called 'multipliers'. These are the ones who expose themselves to the mass media and make use of them so perhaps messages should be directed primarily (but not exclusively) to the 'multipliers'.

In an intensive Indian study, Dr. Y. V. L. Rao found that the 'intermediaries in the villages are the true influentials and they are the active information carriers. For they not only need information as a means of achieving their specific ends, but actively engage in passing on this information, and are recognized as knowledgeable, informed, and intelligent by both the elite and the mass.'² Although information may first be seized upon by the so-called 'elite', it filters to others through the intermediaries.

The nation cannot wait for illiteracy to disappear. There are so many rural people to reach in India and so little time to do it. Prime Minister Indira Gandhi told a group of Indian scientists recently that there should be massive effort to bring scientific knowledge to the masses. In this effort, the role of the mass media should be clear.

In making effective use of mass media in higher education, we must consider the special characteristics of each particular media channel.

Radio broadcasting

Because of the rapid spread of individually owned transistor radios in the rural areas and the wide coverage by All India Radio stations, radio communication deserves more attention. The agricultural universities are moving to make more use of radio, but could they move faster? Could All India Radio (AIR) devote more of its talents and programme time to rural audiences? (Only 7 per cent of total AIR broadcasting time is scheduled for rural programming.) AIR's creation of Farm and Home Cells at stations in several areas is highly commendable, but more of these units are needed, especially at or near agricultural universities—the 'knowledge centres'.

What is a reasonable balance of AIR programme time for urban and rural audiences? We would also raise the question about farm radio programming for both village (community) listening and for individual listening via the small transistor set carried by the cultivator in the field or used in his home. Should the rural programming be different for different types of listening?

Radio broadcasting (as well as some of the print media) can present locally relevant and useful information, and this is exceedingly important for agriculture. Important, too, is obtaining reliable up-to-date facts on the kinds of information farmers listen to now, when they listen, and the types of agricultural information they need and would like to have via radio—and in what form (straight talks, interviews, drama, and songs).

We would also ask the question, 'How can AIR the agricultural universities, and the private sector get together on the promotion of inexpensive transistor radio sets, at least in the villages within the primary coverage area of the broadcasting stations?' A draft of a plan has been worked out by the Communication Centre at Uttar Pradesh Agricultural University involving such a co-operative venture. Some of its provisions include: (1) a reduced price from the radio set manufacturers during a special promotion period; (2) UPAU and All India Radio would use various means to promote the sets—radio announcements, posters, news stories; (3) similar promotion would be made at the Kisan Mela, film shows, cattle fairs, extension meetings, and with direct mail. If this is approved and successful, it could serve as a model for other areas.

The press

India is blessed with some very good newspapers and periodicals (plus some mediocre and poor ones). The figures from the Ministry of Information and Broadcasting add up to approximately 8,000. In this total are more than 500 daily newspapers (with a readership somewhere between 13 and 20 million) and 2,000 weeklies.

Among the several thousand periodicals, only 156 are listed in the agricultural and animal husbandry category. This is rather disturbing to some people, since agriculture is so dominant in India's total economy. This situation should change for the better as the rural economy and literacy improve.

The treatment of agriculture by India's daily press varies from complete inattention to a small amount of attention. This was startlingly evident after reviewing four important newspapers: *The Times of India* (Bombay) for January 1970; *The Statesman* (Calcutta) and *The Statesman* (weekly) for January 1970; *The Hindustan Times* (Delhi) for August 1970; *The Hindu* (Madras) for August 1970. (Papers in the major Indian languages may have been a better choice for this purpose, but the results would probably not have been much different.)

In the four daily newspapers for these months, there were 2,640 column inches of agricultural news out of a total of 115,072 editorial column inches. This means that only about 2 per cent of the editorial space was devoted to agriculture. (The term agriculture here is used broadly to cover much more than farming alone.)

Approximately 53 per cent of this agricultural material dealt with agricultural economics (including market reports). Another chunk of space dealt with agricultural news which was largely political in tone (25 per cent of all agricultural news). These were the 'the-government-did-this and the-government-proposed-that' kinds of articles. Public relations articles filled 12 per cent of the column inches given to agriculture, while research occupied 10 per cent of the space. 'How-to-do-it' articles for farmers took up less than 1 per cent of the total space devoted to agriculture.

The source of most of the articles was an agency of the Centre or State governments. It is ironic that only two articles came from agricultural universities in India, while several were wire-service reports of agricultural research at universities in England and the United States. And here is another saddening piece of evidence: in the *Statesman* of January 26th, 1970, there was a supplement devoted to India's progress in its two decades as a republic. Not one article was about agriculture!

In general, with a very small percentage of the editorial space for agriculture, these papers are not making much of an effort to reach farmers, who no doubt make up a small percentage of their readership.

Moreover, they do not seem to be making a conscientious effort to inform their larger urban readership about agriculture in its broadest sense and its needs and functions which are vital to India's progress.

Why don't the large dailies pay more attention to India's Number One industry? We suggest three reasons: (1) Almost complete urban orientation of the management of the press. (2) The lack of trained agricultural writers. (3) The lack of good accessible material. Communication programmes at the agricultural universities can help rectify at least two of these conditions.

The situation is probably not much different in papers published in other languages. The general manager of India's UNI news service recently described his experience in trying to develop an agricultural news service. This service is designed particularly for the smaller regional newspapers. As he put it, he had to *plead* to get material from the agricultural universities. His communication channel could be an important co-operative venture if it were seriously explored.

Television

India's satellite plans have received such headlines as 'India Getting Ready for Satellite Communication', 'First Launching in Mid '74', and 'TV Coverage for 90 Per Cent of Indian Population by 1980'. If the latter is to be a reality, much work must be done now in the development of television programming. Dr. Vikram Sarabhai, Chairman of India's Atomic Energy Commission, has said that 'the problems of management and software for a television system to perform the role of an initiator of change and development are more formidable than the problem of hardware development'.

One of the top priority goals of the satellite project is to spur agricultural development (Others involve family planning, education, and national integration.) With agriculture so diverse geographically, and with so many different languages and social customs, a new approach to agricultural television is needed. This involves subject matter, presentation, and relationships with production people, experts, and viewers.

Just how formidable a problem this can be is demonstrated in experience with *Krishi Darshan*, the agricultural TV programme beamed to 80 villages near Delhi. S. Mulay and T. K. Chakravarty have reported that 'India's experience with the Agricultural Television Programme has not been happy, perhaps because of a "wearing off" of the novelty value of television, as well as lack of interest in the agricultural telecasts'. If this is so (there have been conflicting reports), why the lack of interest and what can be done about it? We must also discover what kinds of agricultural content are suitable for a communication system as large as the satellite project and as small as a closed-circuit installation.

The agricultural universities should begin exploring some of these questions because the TV hardware will not do magical things—the effectiveness of what comes out of the receiver depends on the quality of what goes into the camera.

Films

India's big motion picture industry—the third largest in the world—has made a tremendous impact on the people. Film is a powerful medium to reach rural illiterates and semi-illiterates. A few good agricultural films have been made by government agencies and private companies, but agriculture needs more films. However, their relatively high cost of production and distribution and the lack of adequate facilities in many villages have limited their creation and use.

Agricultural universities also could produce interesting and useful agricultural films if they had the trained professional manpower, the equipment, and a fairly large budget earmarked for this purpose. These campuses and their experimental stations are rich sources of material for films, as are some of the farms in their regions. The films could be used in college classes and by extension personnel in farmer training programmes, and in other ways. They could be exchanged among the agricultural universities.

The technology of film is changing rapidly and the day is not far off when individual universities or districts may produce simple 8 mm films for instruction. Production of 16 or 35 mm films is a demanding enterprise in money, talent, and time, but innovations in 8 mm will open up new opportunities for using film on the campus and in the villages.

The need for communication centres

What we have said implies a much greater commitment to an organized communication operation than might normally be planned by the universities. It involves creating Communication Centres.

The objectives of such a Centre would be to conduct teaching and research and to provide communication support services (information services) by:

1. Working with scientists to get research published, especially in channels where it can be used.
2. Developing a strong communication service, staffed by qualified communicators, to (a) interpret the results of scientific research and assist in the process of dissemination, (b) improve communication within the university, (c) inform influential people of the institution's programmes and accomplishments, and (d) give the university a stronger image of being a 'people's university'.
3. Offering, initially, basic courses in written, visual, and oral communication at the undergraduate level. The centre should later move into a post-graduate programme, thereby providing a 'seed source' of competent personnel for the mass

media, universities, government agencies, and agri-industries. (Offer also a graduate minor in communication to university students who major in one of the sciences, thereby helping to improve the ability of these students to communicate their scientific knowledge.)

4. Exercising leadership and initiating action for in-service communication education of faculty and agricultural information workers and extension personnel at state and district levels. In the case of the faculty, this work should be planned in co-operation with the Deans; the latter in close partnership with the university's Directorate of Extension, Ministry of Food and Agriculture, State Departments of Agriculture, and other agencies.
5. Conducting research (in co-ordination with the Indian Council of Agricultural Research) to help guide action programmes and gradually to become a major source of communication research knowledge.

Administration and organization

It is generally agreed that no one administrative set-up fits every situation. Success depends on the professional competence and co-operation of the personnel involved. The suggestions presented here relate mainly to those principles of administrative policy and organizational structure that are capable of strengthening a university's communication programmes in teaching, research, and communication support services. They are not intended as standard patterns. The organizational structure of the Uttar Pradesh Agricultural University's Communication Centre is a good one and has much to recommend it. (See Figures 1 and 2.)

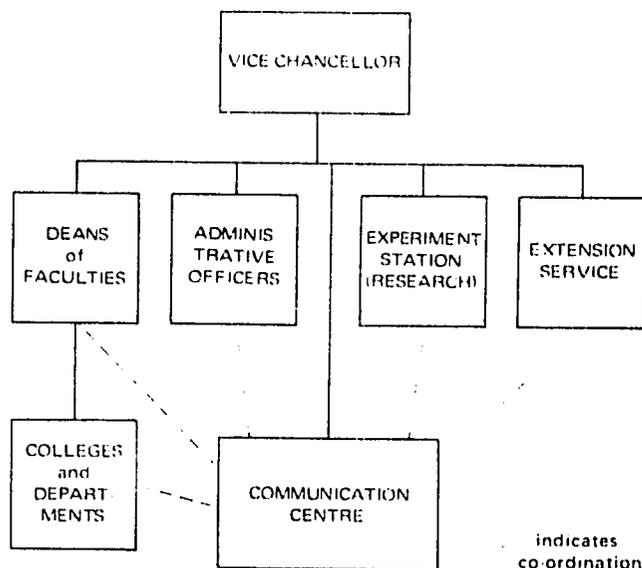


Figure 1. The Communication Centre reports directly to the Vice-Chancellor

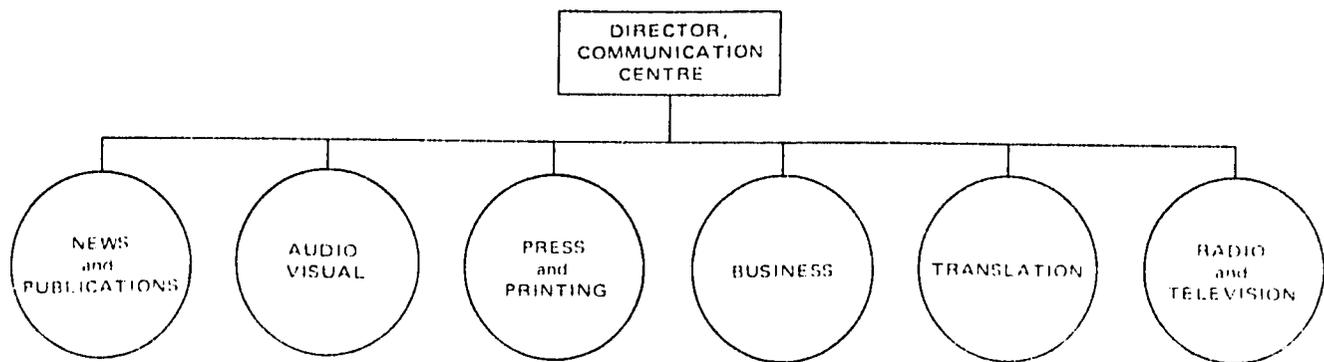


Figure 2. The Centre is organized along media lines

Mention should be made of the relationship between an Extension Directorate and a Communication Centre. One is not a substitute for the other.

Communication deals with the transfer of information and knowledge through the various communication media (printed media, broadcast channels, visual display, etc.) to an intended receiver. It is centrally concerned with the art and science of this process, as well as the political, social, economic and ethical aspects of communication. Communication specialists use the tools of journalism, radio, television, advertising, psycholinguistics, semantics and related techniques to enhance the transfer of knowledge. In this context, communication specialists are also directly concerned with *studying and analysing* the communication process.

The fundamental objective of the extension service is to make useful information available to special groups to enable them to cope more effectively with agricultural or domestic problems. Extension therefore may use some of the communication research findings, techniques and facilities developed by the Communication Centre to achieve its goals. The Extension Directorate thus becomes one of several 'clients' of the Communication Centre in the University.

Recognizing the problems that can be created by broad generalizations, the following are offered as a way of distinguishing between the Communication Centre and the Extension Directorate:

Technique: The Extension Directorate emphasizes person-to-person contact. the Communication Centre emphasizes communicating through media, particularly mass media.

Audience: The Extension Directorate emphasizes special interest groups (e.g., cultivators); the Communication Centre tends to reach heterogeneous groups, which may include these special interest groups.

Characteristics of personnel: Extension professionals tend to be more planning, programme and subject-matter oriented; Communication Centre people are more focused on the communication process itself. Obviously each is concerned with all of these-- it's essentially a matter of primacy.

A successful communication programme requires

1. Effective co-ordination of the programmes of the experiment station, extension, and the Communication Centre.
2. Co-ordinated administration of the communication support programmes of the University as a whole.
3. Co-ordination of communication research and teaching with communication support services.
4. Co-ordinated public relations activities with allied work.
5. Development of techniques and means of communication to assist other agencies that influence farmers.

The following recommendations would also contribute to effective organization and administration of the Centre.

1. The Director of the Communication Centre should be administratively responsible to the operating head of the University (Vice-Chancellor). *since activities would be university wide*. He should have faculty rank, and other key members of his staff who have the qualifications and who do teaching, research and in-service education should also have appropriate faculty titles.
2. Offices for all functions of the Centre should be together, ideally in a separate building of their own. Second choice would be in the central administration building, third choice, in a building of one of the colleges located in the central part of the campus.
3. All communication support services, teaching, and research should be responsible to the Director of the Centre.
4. The Director of the Centre should be involved in policy and programme development of the University so that he is familiar with the reasons for decisions and can therefore be more effective in guiding the communication programmes and helping to interpret the institution to its clientele.
5. A budget should be established for the Centre and be under the authority of the Director of the Centre. This may have to be developed over a period of

time, but a separate budget for the Centre is highly important.

6. The staff of the Communication Centre should be professionals in oral, written, or visual communication. One person cannot be expected to be a professional in all the various communication specialities any more than a person, for example, can be an expert in all areas of the plant sciences. There is need for professionally trained persons in publication writing and editing, printing, radio writing and broadcasting, news writing, motion picture production, photography, exhibit planning and preparation, public speaking, and translating information into local languages—or such combinations of these as is most practical under local conditions.

A 'phased-in' programme

If a full-fledged Centre cannot be started at once, a university may wish to create the overall structure, with a Director reporting to the Vice-Chancellor, and establish it in stages. A suggested sequence follows:

- Stage I Organize sound communication support services; draw together the available personnel, equipment and supplies into one location on the campus. (For example, writers, photographers, editors, and audio-visual specialists who may be assigned to various units should be reassigned to the new Centre.)
- Stage II Offer a few optional basic undergraduate courses in communication; later consider a stronger programme at both undergraduate and post-graduate levels, but stress the necessity of a background in the sciences along with communication.
- Stage III Provide in-service communication education programmes.
- Stage IV Begin a programme of communication research.

In summary

University Communication Centres have the responsibility of working with scientists to interpret useful research for cultivators through the written word, audio-

visual, and all other means of mass communication, and to interpret their institutions to all people of their states. The amount of future support for these agricultural universities will in no small measure depend on how successful they are in communication with their clientele.

Hand in hand with this is the high priority task of educating young people in these universities who can become talented writers, editors, broadcasters, and visual commentators *for agriculture*. In our judgment, nothing really significant will take place in this regard unless these universities start with undergraduates who are interested, offer an adequate number of excellent courses in communication, and make arrangements to provide the students with some practical experience along the way. An educational programme like this would make faster and more lasting gains if planned and co-ordinated in co-operation with the mass media.

Practical, useful communication research should be a third part of the triumvirate in any Communication Centre. The questions are many, and answers found in one area may not apply in others. For practical purposes, it would probably be a mistake, for example, to try to apply the results of Assam communication research in Uttar Pradesh. Certainly it would be a big mistake to use the *findings* of foreign research, particularly that from the United States and Europe. (It may serve as a guide for asking questions.)

UPAU Vice-Chancellor D. P. Singh has said that 'one of the most striking changes of all has been the new rapport that has sprung up between farmers and 'our universities', as some now call them. A few years ago there was almost no communication between the two; the universities were . . . well schooled in the classics but innocent of what was going on a few miles from their own gates. Today there's a lively dialogue between scientists and farmers.'

Communication Centres are and should be an integral part of that vital dialogue.

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