

# The Role of the University . . . . .

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The main purpose of this paper is to discuss the role of the university within the context of national development; hence it is considered essential that a university should participate and assist in activities which are consistent with national development objectives and other needs of the community.

In general, development objectives are described as follows:-

- (a) To secure the fastest possible rate of economic growth in a manner designed to raise the living standards of the large mass of people within the country; and
- (b) To promote equitable distribution of food and income among the people.

## University Education as an Investment and Social Service

In the light of the above, university education is regarded both as an investment and a social service. The basis of a university should be the training of skilled manpower at a variety of levels and so it has to place the emphasis of its work on subjects of immediate moment to the nation in which it exists and must seek to be committed to the people and their humanistic goals.

University education is very expensive and it is only a very small minority that has access to it and who

tend to derive the maximum benefit from it. Thus the poor societies can only justify expenditure on a university if it promotes the real development of the people. The role of a university in a developing nation is to contribute, to give ideas, to provide manpower and service for the furtherance of human equality, human development and social justice.

The university is generally identified as the most important and apex institution. It is important to realise that universities in the developing countries now have and will continue to have a very real monopoly of the training of the national intelligentsia, and that the great majority of those who will be in a position to influence the future course of education are in the university today. It is essential therefore, that university education should include teaching of the principles of Democracy, Self-Reliance and Unity, and how these may be translated into action. There should be a clear definition of Development and Democracy, the importance of Self-Reliance and the value of unity.

#### Universities Irrelevant to Development Needs

Universities in developing countries have been found to be disfunctional and disoriented as educational institutions. Many of the problems basic to primary and secondary education recur in more or less aggravated form in the universities; there are annual increases in student numbers, rising costs, declining pupil-teacher ratios, deficient facilities, inappropriate curricula, administrative inertia, and ever more serious problems of unemployment and malemployment.

Most universities in the developing countries have been modelled in structure and function after the older institutions in the more highly industrialised societies. Between 1950 and 1970, most international programmes for university development have resulted in

patterning university additions in the developing countries to resemble university organisation and practices established in the developed countries.

By long and powerful tradition, the universities of the western world are structured by disciplines or professions as they have been since the medieval period. This structure of departments and faculties - was exported on a large scale to universities in the developing countries, with little thought or effort given to questions of how this mode of academic organisation would fit or serve existing conditions. Academic excellence has continued to be measured in terms of international academic standards rather than contributions to national development. Thus in the process of building a university for a developing country, it is important to be constantly aware of national principles and development needs and to get away from the concept of a conventional university and consider more a university education institution that will directly promote national development, democracy, self-reliance and unity among its clientele and the community it purports to serve.

### The University and Development

The term university development is itself a misnomer since it can easily and often has given a misleading notion of the ultimate objective of the development of universities. A more apt phrase might be university education for development. Furthermore, success should not be measured in terms of the number of departmental faculty trained or international reputation of the particular scholar or cluster of scholars. Rather success or failure should be measured in terms of the degree to which the university community has participated in and contributed toward the solution of national development problems.

The question to answer is: what are these national development problems and are they sufficiently general to serve as a common operational set of objectives with appropriate measures of success or failure in programmes of support of higher education in developing countries? While it is recognised that priorities and needs differ from country to country, the fundamentals of national development can be delineated and their ubiquity is sufficient to justify a common methodological approach.

A starting point in determining what is meant by national development is to ask the central question raised by Ghandis life and thought: What are the necessary conditions for a universally acceptable aim, the realisation of the potential of human personality? National development efforts to be really meaningful should focus on the appropriate production and more equitable distribution of the following basic human needs: food, income, quality of social services, including education and health and cultural values and national identity.

In view of these factors, the relevant questions to ask of a country's development are these:

- (a) What has been happening to the production and distribution of food and to nutrition?
- (b) What has been happening to the unemployment and the distribution of national income?
- (c) What has been happening to the distribution of social services and such indices as rate of mortality, morbidity and literacy?
- (d) What has been happening to the awareness and direction of cultural values and national identity?

If all four of these have been improved, then clearly there has been a period that could confidently be called a period of national development. If two or three of the central problems have been growing worse, and especially if all four have deteriorated, it would be appro-

pritate to say that development has not taken place, even if per capita income, aggregate food production and educational enrolments have increased.

The fundamental question to ask with regard to any assessment of the impact of support for university education and training in agriculture, health, education, humanities and the social sciences is: how and in what way is this support assisting the university in its efforts to contribute to the solution of the basic problems of undernourishment, poverty, inequality and values. In many instances, it is realised that the university's impact will be difficult to measure; but this should be no excuse not to undertake such an assessment. It is clearly preferable to have a system of minimal assessment with meaningful success criteria.

The fundamental question just posed involves others; what is the nature and cause or causes of underdevelopment or backwardness? And once alternatives are worked out, what solutions are to be adopted; what kind of society should development create, how sound are the development policies and priorities now in force? Then the study and resolution of these and related problems can and should be a primary function of the university in its established activities of teaching, research and service with regard to factors such as agriculture, economics and business, health and other social services and culture.

Recognising that universities in developing countries have rarely been organised to further national development, nor have they often contributed directly to it, the question arises: "What would a university addressed to national development in a developing country be like? How might it be structured more effeciently?

At the centre of university work toward national development are the tasks of identifying and resolving development problems. To be effective, these problem-

solving functions require the appropriate structuring of academic activities and resources in education and training, research and services. The major divisions of a university for national development should accordingly be directed to, and organised around major national development problem areas.

#### Major Divisions of a university

In terms of the problem areas identified the major divisions of the university may be as follows:

| Problem Area                                                                             | Faculty                                             |
|------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Agricultural production and distribution                                                 | Faculty of Agriculture                              |
| Economic and social affairs (Poverty, social justice, distribution of income, and so on) | Faculty of Economics and Social Studies             |
| Social Services (Health and Education)                                                   | Faculty of Medical Services<br>Faculty of Education |
| Cultural Development and National Identity                                               | School of Cultural Affairs                          |

Besides these four development goals or problems, it is important to note that there are others such as industrial production, housing, power and water supply, transport, fuels and communication facilities. Their treatment within a university could be along lines of similar divisions organised by major problem areas with needed disciplinary inputs.

Each Faculty or division might have at its top, or be immediately related to, a centre or institute (for example, the Centre for Rural Development, the Centre for

Educational Reform, and so forth), engaged strictly in problem identifying or problem solving activities. It would then be important for these several centres to work closely together so as to ensure integrated approaches wherever possible to problems of national development. Each division or faculty would be composed of departments that would focus their research, teaching and services on identified problem areas.

When the orientation to development problems is pushed one step further, the major units within each department would also be problem focused. Two examples are as follows:

- (a) the Department of Medical Services would be made up of four main units - communicable diseases, nutrition, population and individual medicine.
- (b) In the Division of Agricultural Production and Supply, the Policy Problem Department would have units for resource control and use; price, wages, taxation, stabilisation; agricultural finance; exports and imports, technology and mechanization and other special programmes.

Departments would not be unidisciplinary as in conventional universities. Rather they would consist of those disciplines which are relevant to the particular problem unit. An important feature throughout would be that disciplines are subordinated to problem-oriented functions. Moreover, each of the various divisions should be seen as a part of an integrated net-work designed to focus on problems of national development from a multi-disciplinary perspective. Students would be primarily associated with a specific division and their training would have a necessary degree of disciplinary concentration. However, a graduate, say in economics or agricul-

ture, would be quite different from his typical counterpart in conventional developing country universities. He would embody training in a variety of relevant disciplines essential to the goal of understanding and solving identified and real national development objectives.

All departments within the university would have teaching responsibilities that would stress problem identification, diagnosis and solution. An important instructional requirement would be that each division, though not necessarily each department, will provide training for all levels of activity within the respective problem areas. This is essential in order to achieve two purposes. One is that development work in any field, such as agriculture, requires a team or concentrated approach, the inter-related effort of many skills and techniques; a person engaged in development work should be acquainted with all the various skills and techniques pertinent to his particular lines of endeavour.

The second purpose has far-reaching consequences for education. It is to foster practical attention and adaptive performance in the university to virtually all levels of education and training in development areas. The university is thereby informed of and equipped in the conditions, problems, and processes of all levels of education, formal and non-formal, primary and secondary.

This second purpose leads to brief comments on ways in which the university can and should contribute to primary and secondary education as institutional means to further national development. For reasons hard to explain and still harder to justify, universities have generally chosen to ignore or taken for granted education outside their own level and immediate commitment. The obvious exception is a university Faculty of Education, which, whatever its work and effect, is agreeably not typically recognised by the other dominant parts of the university.



Wherever it exists, the university Faculty of Education usually trains secondary, even primary teachers and prepares curricula and teaching materials at those levels, but it proceeds without a problem-oriented and serious interest and input by other major divisions of the university. In other words, except for their Faculties of Education (often the weakest part), universities have not taken the world of primary and secondary education as a significant object of attention, study and appropriate action. Individually, university staff members may worry about this when their children are in schools. Then they face up transitorily to the realities of pre-university education.

Given the very large number of persons, relative to university enrolments in primary and secondary education, problem-oriented departments and faculties can and should regard the lower levels of education as important and neglected avenues towards national development in their respective spheres of concern. What is urgently needed are detailed studies and well conceived experiments undertaken primarily by indigenous universities and governmental agencies working together with the partial assistance of outside donor agencies to answer, among others, such questions as:

- (a) At what age should a child who is going to have only a few years of primary education, enter schools?
- (b) Should primary education in a rural community in a developing country be full or part-time?
- (c) Given some type of formal education for children, do literacy and numeracy constitute the highest priority area of instruction for those destined to spend the rest of their lives in a rural zone?

- (d) How can the primary school curriculum be re-structured to provide the majority of students who are likely to live and work in the rural areas with the knowledge, skills and new ideas necessary to function effectively in their rural environment?

Most of the pupils in developing countries live in rural areas where the bulk of the population, land area and potential resources are concentrated. The development of these rural areas is a sine qua non of national development; and rural development goals and problems centre on the national development objectives referred to earlier. University work on rural development is even more urgent and important than in primary and secondary education, though the two are obviously related. This work is of such over-riding significance for national development that support for universities in developing countries needs to be focussed in the first instance on those countries where there is a rural integrated programme. This would make possible concerted cooperation and support of both a rural integrated programme and a university for national development in the same country committed to working with and serving that programme. Thus the balance and integration of efforts urged on the one hand for university work geared to national development, and on the other for rural development, would be applied to both spheres.

#### Academic Recognition of Staff and Students

Any university oriented toward national development and structured along the unconventional lines suggested here should ensure that its staff members and students have appropriate recognition, primarily in the national but also, to a lesser extent, in the international community of academics, as bona fide scholars and scientists. Insofar as this continues to be viewed in terms of the attainment

of accepted international professional standards, it may encourage keen interest in and attraction towards the international scene, even professional careers in foreign countries, to the disadvantage of national development in the country where the university is located. In order to minimize risks of emigration, the university, in co-operation with the public and private sectors, must be able to manipulate prestige factors purposefully through financial and non-financial incentives. Some of these factors or incentives lie within the scales of cultural values within the country in question, recognising that cultural values and how they are rated vary greatly from one country to another. A serious problem for either an international or national point of view is excessive self interest, where the person puts his own personal enhancement before anything else. Today, standards need to be devised and fortified, standards that elevate and reward work for national development.

The young universities of the developing world have a challenge: they have to participate fully in the national development activities of their nations; it is therefore the responsibility of those who direct the development of universities to ensure that they are so structured and developed that they will effectively meet the challenges of national development.

In the light of the fundamental requirements stated so far, the role of the university may now be classified into six major areas as follows:

#### Pursuit, Promotion and Dissemination of Knowledge

The emphasis here must be on the pursuit and inculcation of practical knowledge, not esoteric knowledge or knowledge for its own sake. It must be immediately useful to the generality of the people and therefore locally oriented and motivated.

## Research Function of a University

A university must be dedicated to research, fundamental and applied. But again priority must be given to research into local problems that will contribute to the amelioration, in particular, of the life of the ordinary man and the rural poor. Emphasis must be placed on such topics as: rural health, the problems of poverty in its varying contexts, the conflict of cultures in multi-ethnic societies and the basis for unity and social harmony, agriculture and rural development.

## Provision of Intellectual Leadership

This should be seen as an extremely important function of a university in a developing country and especially in the light of the prevailing illiteracy of the majority of the population, and the relative inexperience of public and other functionaries. It must involve not only research and acquisition of knowledge and its wide and effective diffusion but it must also be involved with the rural populations so that they can plan and execute meaningful programmes of economic and social development. In this process, the academic must set the highest standard of intellectual honesty, simplify his language and ensure that communication with the ordinary man is a two way reciprocal process. The university must not adopt a patronising attitude in its dealings with the mass of the population. In its role of providing intellectual leadership, the university must see itself as the servant and not as the master of the people.

## Manpower Development

Up till now, the university in Africa, following the metropolitan models has concentrated almost exclusively on the training of graduates and allied high level manpower. But most of the graduates have tended to be highly academic and generalist. Many engineering and science graduates remain notoriously deficient of professional and practical skills. Thus even at the high level at which the

university claims to operate, it has sometimes been seriously ineffective. In addition, the university's contribution to the development of middle-level manpower has been marginal. It is here that lie the greatest need for skilled personnel, secondary and primary school teachers, agricultural extension workers, medical assistants and so forth.

The university must reconsider its priorities, it should participate in the planning, organisation, curriculum development and superintendence of institutions for training middle level manpower. It should also shift emphasis in its degree programmes from the purely academic to the professional and practical.

#### Promoting Social and Economic Modernisation

Many developing countries, and especially in Africa, are characterised by a multiplicity of ethnic groups and low levels of economic organisation. They accordingly tend to be plagued by divisive and centrifugal tendencies. It has, therefore, become difficult in many countries for democratic governments and institutions to thrive. The academic communities in the university by virtue of their higher intellectual development and wider horizons have both the capacity and the opportunity to set examples in arresting and solving these problems.

It cannot, up till now, be said that they have always, or even adequately, demonstrated the requisite leadership in these matters. The university administrators, academics, research workers and students must learn to accept the challenge and the primary role in promoting social cohesion and setting examples in the establishment and operation of democratic institutions, to help lift developing countries out of the sixteenth century doldrum in which they find themselves in the twentieth century; the university staff and students must break the chains of tradition which bind them within the walls of the campus

and involve themselves completely with the social milieu. They must be more than research workers and mere purveyours of knowledge. They must become extension workers as well as helping the small scale trader, artisan and farmer, to improve upon their inefficient methods of production and economic organisation.

### Promoting Inter-continental Unity and International Understanding

While the university tends to be essentially a national, or sometimes even a local institution, the frontiers of knowledge are boundless. The truly modern university in a developing country must accept a responsibility to pursue research, disseminate knowledge and take all other necessary action, which will help emancipate the people from the prevailing shackles of ignorance, break down the barriers of artificial isolation imposed by colonialism, as well as the natural barriers of language and cultural separation.

The university should collate, conserve and propagate all that is best in history, literature, social organisation and culture. In so doing, the university will be identifying itself with, and promoting the ideals of unity and social harmony, for continental rapprochement and international understanding.

### Setting of Priorities

The order in which the above functions are listed should not be taken as an indication of their relative importance. In the context of developing countries, none should necessarily claim priority over the others, and the university must pursue them simultaneously as a matter of general policy and within the constraints of available finance and human resources.

In practice, circumstances differ considerably between one country and another and between one university and another. Some countries have one university, while

others have more than one. In addition to this, universities are at varying stages of development. The relative emphasis which each country and each university places on the performance of the functions enumerated must be locally determined.

In some countries where trained manpower is in its critical short supply, the university might well consider manpower development as its first priority. In others, where the shortage has been relatively overcome, the emphasis can shift to more direct participation in social and economic modernisation or research.

The question is who is to set the priorities for the individual university? The general view is that the university in a developing country occupies too critical a position to be left alone to determine its own priorities. The university is generally set up on the initiative and at the expense of the government in order to meet certain objectives. The government too, by virtue of its position of leadership in the task of planning and execution of economic and social programmes, seems best placed to determine the priorities for the universities. The university should in normal circumstances, therefore, accept the hegemony of government. But the relationship should not be one of master and servant as such. The university should itself through research and other means, endeavour to identify and anticipate national needs and bring its own influence to bear on government in setting goals and priorities.

#### University Involvement in the Development Process

An examination of universities reveals that the university in a developing country can be more actively involved in the development process than has been indicated so far. The contribution of the university to national development planning will be considered by discussing the

traditional roles of the academic community, namely, training, research and consultancy, as follows:

(a) Training

Apart from preparing graduates to meet the manpower requirements, the universities have been giving training to people directly involved in the formulation and implementation of development plans. Faculties of Economic and Social Studies in the universities are an attempt to give students who are to become government officials exposure to basic public administrative principles and techniques needed for carrying out government activities. The courses need to be oriented to prepare development administrators both in the public, private and parastatal sectors.

The university must offer training in Public Administration, Development Economics, Business Administration and Applied Statistics. The programme in Development Economics could offer, among others, courses in general theory of economic development, economic planning and project evaluation, while the programme in Public Administration may cover many areas of development administration including performance evaluation. Applied Statistics apart from offering courses in quantitative techniques which are extremely useful for development planning, must also include in its curriculum courses in such applied fields as operations research and demographic analysis. Courses in Business Administration should be designed to train junior managers for the private and parastatal sectors.



(b) Research

An important role of the university in the development process is to increase knowledge which has a bearing on development planning through research. Ideally, the knowledge obtained from research activities should be of a practical nature and should be made available to the planners at the right time, and it should be of value to the formulation of development policies and action programmes. The ideal is, of course, difficult to achieve, and especially when there is no coordinating effort to indicate priorities and to specify research areas which have the most relevance to the development problems of the country and when research studies are not accessible or accepted by the potential users. Consequently the scarce manpower in universities becomes largely engaged in producing something irrelevant or something which is put away as soon as it is published.

(c) Consultancy Service

Apart from training and research activities, university staff need to be engaged in consultancy work. Consultancy services in development tends to be limited and many governments appear to have no confidence in university academics and are therefore reluctant to make use of them - even though they are the very people who train high level manpower for the civil service.

Problems of Cooperation Between University and Government

Despite the efforts made by the academic community to serve development planning and implementing agencies, a number of problems and difficulties stand in the way of cooperation. It appears a two-way cooperative effort is needed if the academic community is to make the

maximum contribution to the development planning processes. There are several problems some of which relate to the universities directly and others concern the operating agencies. The internal problems of the universities are:

- (a) Inadequate capability of the university personnel. Despite their high academic achievement, some university teachers lack the ability to identify problems faced by the planners. Given a well defined problem, university academics are equipped with technical capability to proceed with the analysis, but they are often at a loss if asked to tackle the vague problems which still need to be more clearly identified. Lack of experience, unfamiliarity with the practical aspects of operations and irrelevance of the nature of the courses taught in the university to the real world problems are some of the factors which account for the apparent inadequate capability.
- (b) Very often the academics insist on the adequacy of data before taking up the analysis entailed in the work. But a major problem in planning in developing countries is precisely the unavailability and unreliability of pertinent data. Under these circumstances, academics would be asking for something which does not exist. Until the academics realize that their task is to make the best of the available data and to suggest ways and means to make available any missing data, their contribution will continue to fall short of what is required and expected of them.

Other barriers which prevent cooperation and the participation of the university in the developing process also originate from the government and other operating agencies. These may be summarized as follows:

- (1) The operating agencies tend to expect too much from the university, hoping for ready made solutions to the planning problems they are facing and which are capable of immediate implementation. When the academics cannot produce a magic formula, the trust and the confidence of the operating agencies in the capability of academics wanes, thus making future cooperation even more difficult.
- (2) Part of the development planning involves the articulation of the areas where institutional changes are needed to make possible the smooth execution of development work. But changes are likely to entail the conflict of vested interests which, given the parochial nature of the bureaucracy, are strongly resisted. Bona fide advice given by the academics would then be looked upon as being unrealistic, impractical or politically unfeasible, thus giving rise to frustration on the part of the advisors and possibly creating the uneasy climate of distrust and misgiving.
- (3) Another major weakness on the part of the operating agencies is what may be called the dependency syndrome. It has been a practice among the operating agencies to request foreign assistance in the form of advisors whenever problems arise. It is not implied that the services of all foreign advisors have been useless; what is being stressed is the dependent attitude or the mentality of the number of high-ranking government officials to seek foreign advice. It may be true that the use of foreign experts is dictated by political reasons when controversial issues are involved; but it is

questioned whether the price is not too high in terms of resources used and in terms of the opportunity lost of not using and developing locally available talent. It should be added that this foreign dependency syndrome is not limited to planning bodies and other operating agencies alone. It can also be seen at work in the academic communities as well.

- (4) The lack of cooperation between the academic communities and development planning agencies may arise because these agencies do not feel the need for the services of university personnel either because no systematic planning is being done in the ministries or because internally available services are thought to be adequate in the light of the type of planning envisaged by the government.

#### Arrangements to Promote Cooperation between the Universities and the Government

In order to help alleviate the problems of lack of cooperation between the governments and the universities, the following may be worth considering:

- (1) The university personnel in designing courses for teaching purposes, should enhance the relevance of these courses by incorporating the problems and prospects in the local scene, both for the benefit of the students and as a means of familiarizing the teachers themselves with what is going on locally. Familiarity with the local, practical problems is a prerequisite to the building up of a viable relationship between the academic community and the development planning agencies.
- (2) The above proposal implies that research activities must be carried out. Two types of research

work are envisaged. One is of a more pedagogical nature and the other more of practical use to the planners. Under the first type of research, case studies on the decision process in planning institutional and administrative constraints on planning and implementation, project preparation and evaluation, evaluation of different segments and the development plans - should be written and used as teaching materials in planning courses. These case studies should be appropriate for the exercise and training in problem solving capability. The second type of research involving more time and resources should address itself to increasing knowledge needed by planners. The identification and filling up of data gaps, the long term behaviour of aggregative economic variables and their relationships, the economic and social motivation mechanism which brings about desired changes, the responses of different economic and social groups to motivating forces, the effective plan monitoring system, foreign market research, pre-investment studies, and regional resources and potentials are some of the major areas where fruitful research could be made.

- (3) To promote research activities, a better system of research management is required. Universities have their research promotion funds; but to get the most out of these funds requires research planning indicating priority research areas, and a more effective quality control system.
- (4) To meet the needs of the planning bodies and to inform them about the research activities being carried out as well as to make available the relevant research output produced by the

university and other research agencies, a National Council for Research could be of great help. The National Council for Research should be charged with responsibility for identifying the research areas, research planning and control, and the dissemination of research output and other research clearing house activities.

- (5) To make available the consultancy services of the university on a more permanent basis, arrangements should be made for university teachers to be granted leave with pay to work full time with the planning agencies for approved periods of time. This may be difficult in some cases where there may be a shortage of staff, but it is considered that there is room to manoeuvre in many other cases by appropriate course scheduling and staff rotation.
- (6) The above proposals would come to naught if the planning bodies are not willing to accept the services of the university nor appreciate its role in the development process. The use of foreign experts may still be necessary in some cases, but there are many instances where talents from local universities are available and could be put to more effective use. Neither too great an expectation nor too little expectation on the part of the planning personnel would be conducive to the needed cooperation. The effective use of university resources depends a great deal on the perception of the planning bodies of the role of the university in the development process.

## University Involvement in Out-of-School Programmes

Since the development of any country must benefit not only the urban areas but also the rural populations which constitute eighty percent and more of the total populations, it is desirable that universities in developing countries should be equally committed to the education, planning and development of the rural areas. Thus universities need to establish Departments or Institutes of Adult Studies whose main objective would be to take the facilities of the university to the people and especially the rural masses of the population and to participate in their integrated non-formal education programmes and also in their development activities. The involvement of the university in the out-of-school activities of the nation which it serves will be discussed in some detail in the next chapter. Here we only need to stress that the university must be involved in the planning of non-formal education and in finding workable implementation strategies and to participate in non-formal education programmes.

### The University in Perspective

It is observed that developing countries are committed to take up the difficult task of modernization not only to raise the standard of living of their predominantly agrarian masses but also to gain a respectable place in the community of nations. In the last decade, through exogenous factors beyond their control, some countries, more than others, through sheer luck and conscious effort have weathered the pains of growing rather well.

Many basic problems still remain. The destruction of valuable natural resources, the uneven development pattern responsible for the rural-urban income disparities, the sluggish growth of merchandise exports, urbanization, the social tensions brought about by changes

and the encroachment of new life styles on the cherished cultural heritages are some of the outstanding basic economic and social problems, which have to be seriously coped with through careful planning and multi-dimensional efforts.

Planning has been accepted as the expression of the government's will to develop and as an indispensable tool for rational allocation of resources. There is no objective way to judge how much planning has contributed to national growth, but it is fair to say that considerable waste has been avoided through planning. Planning problems still exist; inadequate planning techniques dictated by inadequate data bases, shortage of capable planners, especially at the middle and upper levels, and the preservation of parochial vested interests on the part of the operating agencies are some of the major areas that the planners will have to face for some time. Some of these problems will be alleviated in the course of time when planning experience has accumulated and pertinent data are increasingly available. Yet the university has an important role to play in helping to solve these problems.

The role of the universities in the development process has been largely in the area of the training and production of the manpower needed to perform the varied development tasks in the public sector. This production



of skills has to continue and expand in some crucial areas, especially in the management and technical fields, agriculture and some levels of teacher education, but caution will have to be taken in expanding some areas of the social sciences, lest the problem of the educated unemployed will get out of hand.

More will have to be done by the universities in the areas of training in planning, research and consultancy. It appears that university resources are potentially available for these purposes and can be made effective if certain conditions are met. The role of the universities in the development process will have to be better understood both by the academic community and by the operating agencies. University personnel will have to take upon themselves the task of upgrading their capability in the application of theoretical knowledge and techniques to the local situation and, at the same time, make the courses they are teaching relevant to the country. Research management and control will have to be improved through a better incentive system and better flow of information. The university authorities should recognise that research and consultancy services offered to outside agencies, government and others, constitute important elements of the total out-put produced by the academic community and should be rewarded accordingly. On the part of the planning practitioners, very high hopes or too low expectations

for the contributions of the university would not be healthy to the cooperative efforts.

It is noted that given the will power, the honest recognition of the roles and limitations of the university and the operating agencies, the cooperative venture in improving the planning process as a means towards national development can pay rewarding dividends. The university must seek to, and be encouraged to participate in all the development activities of the nation.