Urban Bias in Technical Education Should Go

M. A. Sattar

The needs of urban areas are primarily guiding the technical education system in our country. The crying needs of the people living in villages have not been properly reflected in the curricula of technical education. Ours is an agro-based society, 85 per cent of the population of Bangladesh live in villages. Since the aim of all developmental activities of a country is the welfare of its people, rural Bangladesh should be the focus of our economic development programmes.

With this end in view increasing attention should be given to the development of agriculture, fisheries, cottage industries, electrification of villages, setting up of rural health complexes, construction and improvement of roads and embankments and similar other projects to accelerate the growth of the rural economy by opening up alternative avenues of employment.

Various kinds of machinery and equipment, tools and implements are used for the implementation of development projects in rural areas. The inflow of machinery, equipment and tools to rural areas is expected to increase considerably in the coming years. To ensure proper maintenance and operation of these machinery and equipment, it is essential to give technical know how to the rural people in the shortest possible time. The formal technical education cannot be prescribed for the rural masses for the purpose.

Non-formal training

Vigorous efforts need be made to organise non-formal vocational training of short duration for the rural people. The main purpose of such non-formal vocational education should be self-employment.

This will widen the scope of employment near their homes and enable them to attend simple day to day problems instead of waiting for "experts" from cities and towns. Courses should be so designed that they equip the villages with the right type of technical knowledge and skills for farming, irrigation, pisciculture, cottage industries, poultry farming and other activities. Introduction of such courses will help minimise tendency of rural population to migrate to urban areas for employment.

Higher education

Education is a basic human right. The availability of educational facilities, however, depends on the financial resources of the country. In Bangladesh higher education above secondary level may be restricted to the very brilliant students only. Rest of the students may be diverted to technical or vocational types of education. This will help reduce unemployment of the educated youths and save funds for increasing facilities of education at the lower levels.

Manpower requirement

To make education responsive to economic needs of the country, it is necessary to conduct surveys of manpower needs sectorwise, category-wise and levelwise, and organise the educational facilities accordingly. Such surveys need be carried out periodically, say once in every five years. The Bureau of Manpower Development and Training can carryout surveys under guidelines given by the Planning Commission.

Teaching English

Neglect of the English language since 1972, has very adversely affected the employability of the output of our educational system both at home and abroad. Private sector establishments, foreign and joint venture enterprizes, import and export firms use English as their made of business communications, and in maintaining accounts and office records. Many young men and women coming out of our universities and colleges with 1st class degrees do not get jobs in commercial and industrial establishments because of their poor knowledge of English. This is causing unemployment and frustration among the highly educated youths.

Neglect of English has also adversely affected the quality of education at the higher levels. Most of the good text and reference books on subjects of higher education are in English. Students with poor knowledge of English cannot use these books. They depend mostly on short notes prepared by their teachers in Bangla. The result is that students acquire superficial knowledge in their subjects of specialisation. Emphasis on teaching of English is a must to improve the quality of education at higher levels.

Manpower utilization

Development of human resources calls for close co-operation between the producers and users of manpower. Employers are very often too critical of the quality of products, but are reluctant to offer practical training facilities to students and teachers of the technical education system.

This attitude needs to be changed. Employers are the primary beneficiaries of technical education system.

While sanctioning and industry the government should clearly spell out the types and numbers of trained personnel to be employed. Some organization like the Bureau of Manpower Employment and Training may be authorised to check and report implementation of this provision. Punitive action should be taken against defaulters.

For large industries, establishment of research and development (R&D) wings should be made obligatory. The government should ensure that the R&D wing is manned by qualified staff.

The author is a former Director of Technical Education.

Stop Abuse of Promotion Rules in Varsities

Iqbal Mahmud

It is now well recognized that higher education directly contributes to overall expansion of intellectual capacities and to the quality of social and national life. The most enduring concern of all universities around the globe is to ensure leadership for excellence in higher education through recruitment of high quality teachers. Thus, recruitment of high quality teacher in universities needs to be considered as a matter of significant importance. It has been observed in the Newly Industrializing Countries (NIC's) of Asia that extreme care has been taken in ensuring recruitment of high quality teachers in the institutions of higher learning.

Varsity Education

Tertiary education occupies a small area in the overall structure of formal educational system of Bangladesh. Yet, it had its beginnings nearly 70 years ago with the establishment of the University of Dhaka. During Pakistani days three other general universities and two technical universities were established with full complement of teachers in most of the departments. With liberation of Bangladesh three new universities have been established. However, none of the newly established institutions have been able to make any headway in the recruitment of teachers to enable proper functioning of the proposed academic departments. Initially, in developing the structure of the academic department the philosophy pursued in European especially British universities were taken as the ideal. Thus, it was envisaged that the departmental structure would be built around one or two professors of outstanding calibre who would give leadership in academic affairs and design research programmes in the department which would be staffed by relatively junior persons of various ranks (eg Reader, Senior Lecturer, etc). However, this system gradually gave way to more or less the North American egalitarian system of having a clearly structured hierarchy of Lecturers, Assistant Professors, Associate Professors and Professors. Posts were created in a department with a fixed ratio between the four different ranks.

The European concept of having one outstanding academician as the Professor and Head of the Department had its natural demise with the rise in the number of specializations offered within the broad discipline of the department. The recently introduced system of rotation of departmental Chairmanship has finally transformed the structure of the academic department to a system more akin to those practiced in north American universities.

Recruitment

For appointment of teachers, the qualification tests are traditionally set by the Academic Council and approved by the Syndicate. In Bangladesh the Academic Councils overwhelmingly consist of teacher especially the senior ones. However, in the Syndicate representatives from various walks of life are present.

In case of teacher recruitment it used to be presumed that every appointment is to be a fresh appointment with the opportunity for qualified candidates working outside the realms of a particular university to apply and complete along with internal candidates.

Theoretically, this would allow the Selection Board to choose the best candidate from a broad range of qualified candidates. It is interesting to note here that at present, in some cases, most of the members of the Selection Board are teachers of the same University. Opinion of external experts is also taken. Outside experts are appointed by the Chancellors' Secretariate.

The teacher strength and structure of an academic department is decided primarily on the basis of teaching load. Research and specialization needs are still secondary considerations in deciding the needs of a department. In some of the universities "Departmental Development Committees" have been constituted to democratize the decision making process during academic planning. In other universities such decision making is still being done through informal parleys. Recruitment policies are formulated by the Academic Councils and finally approved by the Syndicate. However, in recent time the UGC (University Grants Commission) have laid down some general guidelines and prescribed some minimum qualifications for recruitment.

Inbreeding

In some western (as well as developing countries) institutions follow strict policy of not recruiting their own graduates because they fear the consequences of academic inbreeding. Other objections to recruiting one's own products are based on the well-known tendency of senior professors to continue to direct their former students' activities rather than accept them as equals.

In the technical universities of Bangladesh there is limited possibility of recruiting teachers from other universities.

In view of the limited No of universities in the country the problem of "inbreeding" will perhaps remain with has for the foreseeable future.

However, the newer universities could adopt a policy to diversify their source of teacher recruitment. Unfortunately, these newer institutions already face the problem of identifying faculty members of desirable qualifications and experience. The added dimension of ensuring diversity of educational background has not yet been dealt with by them.

Promotion

The fixed ratio of the four faculty ranks have given rise to the problem of finding enough senior professorial positions for those who have attained more than enough requisite qualifications in terms of teaching and research experience. The question of "in situ promotions" have been debated and instituted in many universities. The previously held practice of advertising for each faculty position is being dispensed with for some special cases. For those who have really attained high academic distinctions this practice of "in situ promotion" and application of the principle of "right to promotion" and application of the principle of "right to promotion" are indeed welcome.

However, it is painful to observe that this practice is being widely abused. In the name of "re-structuring" some of the universities have lowered academic requirements to such levels that a person can get promoted just on the basis of the number of years served in the university. This is going to spell disaster for the quality of faculty in our departments. Any consideration other than academic excellence and proof of continuing effort to contribute to knowledge and national development should not cloud the recruitment and appointment procedure in our universities. Thus, the presently practised modalities of "restructuring" should be discontinued immediately.

The another is a Professor in the Department of Chemical Engineering, Bangladesh University of Engineering and Technology (BUET). the paper was presented at a seminar on higher education organised by the University Grants Commission (UGC).

A science practical class in progress

Conceptual Development of Post-Literacy

Prof S M Saifuddin

THE term 'post-literacy' was used first time around 1970. The first systematic definition we heard in 1977 in Unesco Regional Conference of Experts on post-literacy held in Daker, Senegal. Unesco conference of Senegal offered the following definition:

"By 'post-literacy' we understand all measures taken to enable the neo-literates to put into practice the skills acquired and to increase the knowledge obtained during the previous stage. Thus he will be able to go beyond what he has learned and to use his new knowledge, and above all, by learning how to make decision, take an active part in the continuing process of development and mastery of his environment".

The aim of post-literacy programmes is to give participants the self-confidence and fulfilment which enable them to use this tool for individual and collective participation in the development and progress of their society.

There is no universal or general prescription of post-literacy. Post-literacy is an activity involving many agencies.

One might think that two decades of practice and a dozen years of recognition of the concept would have resulted in general acceptance of the term and the content behind it. This is not the case. Literacy and basic education programmes are too varied and complex for unanimity to have been achieved. From the various studies done by Unesco we see that there is no systematic programme of post-literacy as part of continuing education in developing countries.

Many countries that launched either mass or selective functional literacy campaigns have not planned post-literacy activities in advance. Hence post-literacy activities have generally been limited in scope to remedying relapse and drop-outs among particular target groups. What is understood by the term, therefore, refers to arrangement, if any, that have been made locally.

This calls for the logical need for some planning of what neo-literates whether adults or young people, young people with some primary schooling or school drop-outs — should do with their new skills and how they are enabled to go further. Such a need derives from the simplest perception of post-literacy as a linear chronological successor to literacy.

Unesco has considered post-literacy as part of the life-long education and elaborated the concept of post-literacy as set of measures or actions aimed at:

— consolidation and enrichment of what has been acquired in the I-phase of the literacy;

—continuation of learning through different modes and within formal, non-formal and informal structures; and

— application of learning to development for the mastery of the environment and its necessary transformation for a better quality of life.

Continuation implies the opportunity to re-enter the formal system of education. There is no starting point for post-literacy.

Strategy

A total of 12 categories of learning strategies have been identified through case studies by Unesco. These relate to the use of :-

1. newspapers, wall-papers, posters and magazines for neo-literates;
2. textual materials prepared for post-literacy studies;
3. supplementary reading materials;
4. extension literature produced by development agencies such as health departments, agricultural extension services, etc;
5. radio, TV, video, films, etc. (New Media);
6. correspondence courses;
7. libraries for new readers, mobile exhibitions and museums;
8. Vocational technical courses, apprenticeship programmes;
9. programmes based on special needs and interests;
10. local study and action groups;
11. traditional and folk media; and
12. sports, games and physical culture.

The structures and strategies of post-literacy do not remain fixed however, since the clientele grows and becomes diversified. Moreover, the implementation of post-literacy, and the strategic decisions associated with it take place in specific socio-cultural and economic environments. Extra-educational dimensions are major factors in the diversity of programmes, and in the determination of the intentions and objectives of literacy, post-literacy and development.

The lack of regular planning for post-literacy does not necessarily mean that programmes mounted adhoc have not served the needs and purposes for which they were divided. Examples of such success have been found in many countries.

The post-literacy activities may be formulated before a literacy project is planned. Now that the problem of relapse is well known, it is easy to see that it is better to prevent than to cure. Prevention of relapse and drop out implies the selection of effective literacy strategies.

Clientele

The clientele of post-literacy learning materials are :

a. neo-literates;
b. self-taught literates;
c. those who are wanting support to acquire reading and writing skills or to apply these effectively;
d. those who are from poor rural background, and
e. women and young people who take decisions on essential aspects of their daily, economic, civic and political lives.

Books

Providing new literates with books to read is not as easy as it might seem. In developing countries where post-literacy materials are most needed are often most lacking in infrastructures to support writing and publishing. Writers do not write books for neo-literates. Publish are find no profit in publishing materials for new literates.

There is another important problem in the provision of reading materials for neo-literates. New literates have typically low level reading skills but high knowledge needs. They need materials to be written in easy-to-read language. Such books have to be specially written. Then should be incentives writers to write books for new literates.

Topic selection

Selection of subject and topic is not the complete prerogative of the writer. Good writing does not have to be indifferent to the state's development initiatives or be outright anti-state. The choice of the subject and topic in fact reflects on the one hand, the national development visions and aspirations, and on the other, the immediate needs of local communities. Again, subjects and topics do not all have to be about rice, green vegetables, nutrition and sick children. Writers must instruct and at the same time entertain and promote both national growth and individual growth. They must learn to go from rather general objectives to specific objective so that their writing can become more and more concrete. Writers need not simply list what they will do as writers as they sit down to complete their books. Instead, they must state what the readers will know after reading the book, how the reader will feel and what he will be able to actually do after reading the book.

Pre-testing

Pre-testing of books for new readers of both text and illustrations is necessary. Systematic pre-testing is costly and is often impossible because professional resources to conduct the pre-testing are not available. But some pre-testing is absolutely essential. Working with as few as one, two or three readers can generate useful information.

In developing and producing literacy follow-up materials the following steps should be considered:

(a) field survey;
(b) selection of topics of materials;
(c) preparation and production of materials;
(d) field testing; and
(e) revision & finalisation of the materials.

Professor S M Saifuddin is the Executive Director, Mass Education Programme, Ministry of Education.

NIC Comes of Age

NEW DELHI : The smooth flow of information during the just-concluded general elections brought into focus the nodal agency that made it all seem so easy — the National Informatics Centre.

The organisation that started 15 years ago with three persons and a small computer to become the country's "depository of information" has come a long way. It is now an extensive network covering the entire country, with over 2000 personnel comprising software specialists, hardware engineers, communication specialists database experts, and a variety of hardware ranging from super computers to table top personal computers.

The NIC was conceived as a high priority project by the Government of India in 1976, with a long-term objective of establishing an extensive countrywide information system on India's economic and social development.

Information plays an important role in planning and policy implementation in developing countries where the governments have to plan in advance to achieve regional economic growth.

Informatics is the combination of information technology and telecommunications, with computers playing a key role in the information flow from planners to implementation level.

NIC aimed to achieve a four-tier hierarchy of government information—national level informatics through the centre; state-level informatics through 32 state governments and union territories; district-level information through 439 district administrations; and grass-root level information through 5000 block development agencies.

During the last decade, the NIC has been able to make headway in creating awareness in the government sector on the importance of computer-based information systems as an effective tool for decision support. NIC provides macro-level information of project monitoring and national planning in various core sectors such as finance, commerce, industry, energy, agriculture, urban development and communications.

Other objectives of NIC include promotion of the informatics culture at district, state and national levels; development of modelling, simulation and forecasting techniques required for planning; establishing a computer-communication network to ensure ready flow of information across the nation; and providing gateways for access to international databases.

The NIC has already established a nationwide satellite-based computer communication network called NICNET to provide informatics services to the government at three levels — centre, state and district.

With this, NIC has emerged as some sort of a bridge between the state and centre on one hand, and states and districts on the other. In the NIC scheme, therefore, the states are a focal point with upward coordination with the centre and downward coordination with the districts.

NIC has already emerged as an organisation of considerable national and international repute, notching up a series of successes and scoring a record of several firsts. It was the first to develop a Delhi-based computer network for government informatics at the centre, first to set up a computer network for Asiad-82, and a national computer communication network connecting districts, state capitals and the centre, through NICNET.

NICNET makes use of supercomputers at the four NIC regional centres in New Delhi, Pune, Bhubaneswar and Hyderabad, super minicomputers at state capital levels and PCs in each district.

The information system has several support groups such as the systems management group for maintenance and operation of computers, systems software group, design automation group for development of computer aided design, operations research and modelling group, artificial intelligence and expert systems group.

NIC has also launched a District Information System programme (DISNIC) to develop the necessary information system and data base in various core sectors for planning and project implementation at the district level; to improve analysis capacity and presentation of statistics; and develop modelling and forecasting techniques.

Its Geographic Information System (GISNIC) is designed to store, manipulate and display geo-referenced and geo-designed data, comprising chiefly cartographical maps on landscape, atmosphere and population, and political and municipal maps.

The problems that can be analysed by the existing NIC facilities include bridges, dams and barrages; offshore, shipyard and multi-storeyed structures; ships and semi-submersiles; railway wagons and automobiles; transmission towers and microwave antennas; and pipelines.

NIC has provided NICNET access to the police department, and is being used to access a criminal records database set up at the Pune centre, with information on about six lakh records of arrested persons, both convicted and non-convicted. It has also been found to be very useful in verification of character antecedents and passport clearance.

A vehicle registration information system has been developed to enable quick tracing of vehicles involved in accidents, and for other purposes such as revenue collection and police use.

Another key service provided by NIC includes monitoring and disbursement of social welfare pension (such as old age pension, widow pension, cancer, tuberculosis and leprosy pensions, and destitute pension) and labour department schemes.

A design automoation group set up in 1982 caters to the design automation needs of India industries, develop CAD centres in the country and establish a national software library.

The Pune centre has also taken up a pilot project for establishing a sugar directorate, with NIC experts foreseeing a high potential for computerisation in the sugar sector. The system involves data from factories concerning the factory performance, crushing, financial and manpower management, and inventory of crucial parts.

Agencies which have already utilised the NICNET facilities include the Food Corporation of India, Border Roads Organisation and Zoological Survey of India.

— PTI Feature