

The Hashemite Kingdom of Jordan



The National Center for Human Resources Development

SELECTED TOPICS ON HUMAN RESOURCES DEVELOPMENT:

- 1. The Role of the Private Sector in a Labour
Market Oriented Vocational Training.**
- 2. The Actual and Potential Role of Arab
Universities and Research Institutes.**

Dr. Munther W. Masri

Publication Series 58

1998

/

SELECTED TOPICS ON HUMAN RESOURCES DEVELOPMENT:

1. The Role of the Private Sector in a Labour Market Oriented Vocational Training.

- Introduction.
- Occupational Levels and Educational Outputs.
- The Role of the Enterprise in TVET.
- The Planning Function.
- The Financing Function.
- The Implementation Function.
- Identification of Training Needs.

2. The Actual and Potential Role of Arab Universities and Research Institutes.

- Introduction.
- Universities and Research Institutes in HRD Systems.
- Occupational Levels and Educational Outputs.
- Mass Education: Pressures and Challenges.
- The Funding Issue: Who Pays?.
- Private Universities.
- The Academic vs the Applied Approach.
- The Gender Issue.
- Standards and Accreditation.
- The Regional Dimension: a Planning Dilemma.
- Research: Constraints and Challenges.

**THE ROLE OF THE PRIVATE SECTOR
IN A LABOUR MARKET ORIENTED
VOCATIONAL TRAINING**

Table of Contents

	Page
Introduction	5
Occupational Levels and Educational Outputs	8
The Role of the Enterprise in TVET	11
The Planning Function	11
The Financing Function	13
The Implementation Function	15
Identification of Training Needs	18

The Role of the Private Sector in a Labour Market Oriented Vocational Training

I. Introduction

The role of the private sector in technical and vocational education and training (TVET) can better be explored if it is treated through a more comprehensive approach related to the overall system of human resources development (HRD).

Human resources development, which is mainly implemented through the formal and non-formal systems of education, is the concern of both educationists and economists. This is so because education is recognized both as a social service on the one hand, and an investment and hence an economically feasible activity on the other. The existence of a link between education and economic development is, in general, a feature of modern national economies and education systems. Such a link is mainly the result of manpower needs being translated into educational targets and plans.

The relation between education and economic development is a complex one, because there exists no strict relationship between occupations and levels or types of education. Consequently, the ability and need to design manpower preparation and development systems based rigidly on the needs of employment requirements are questionable. The complexity of the relationship between education and economics is also due to the fact that education can be both a cause and effect of economic development. This applies in particular to technical and vocational education and training (TVET), whose quality, size, standards and diversification of offerings promote economic development on the one hand, and are strongly influenced by such development and by work standards on the other. Therefore in manpower planning, which essentially requires the matching of supply and demand, such matching should emphasize interdependence, rather than dependence or independence, as a basic strategy.

Figure (1) shows the position of Human Resources Development and Utilization Systems in general, and TVET in particular, vis-a-vis the systems of manpower supply, manpower demand, and the supply-demand interlinkages, within the relevant social, economic and cultural framework.

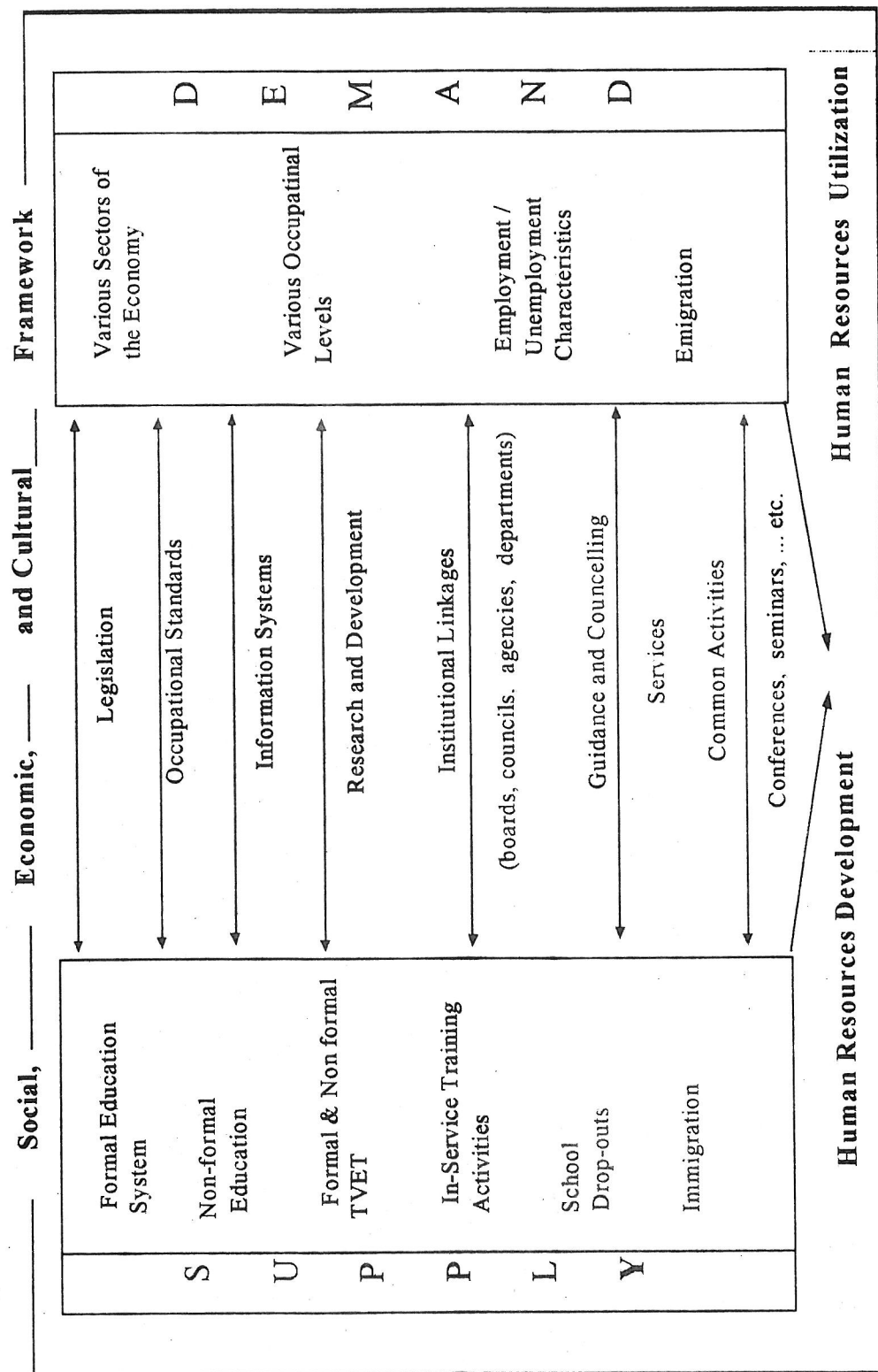


Figure 1 : Human Resources Development and Utilization Systems

The criteria used for the evaluation of educational and HRD strategies and systems frequently reveal the differences in the views of economists and educationists. Thus the feasibility of a TVET system can be assessed through the ability to secure employment, level of earnings, self and social image, job satisfaction, and the degree of lateral and upward mobility on the individual level; and through productivity levels, quality standards and national income figures on the national level. It is difficult, for example, to justify high investment in a TVET scheme that tends to accentuate unemployment in certain occupational fields and levels and labour shortage in others; or that leads to unplanned and harmful migration of manpower from rural to urban areas. On the other hand, one should have reservations against TVET schemes that tend to prepare a skilled rather than an educated labour force, or that do not enhance the status of work and inculcate positive attitudes towards labour.

To an educationist, HRD, mainly through formal and non-formal education and training, should first be human and then professional, since such education and training should do more than provide the learner with the skills and knowledge specifically needed for his job, and since occupations are more effectively performed by individuals who are generally, as well as specifically, prepared. In the field of vocational and technical education, individuals should be prepared to be intelligent users of the means of production rather than mere means of production. An economist, on the other hand, would emphasize the need for as accurate a matching of supply and demand in educational and manpower planning as possible, and would in general be sensitive to the 'marketability' of the 'products' of the education system. Poorly balanced education systems, to an economist, are a waste of resources that are usually badly needed elsewhere. Vocational and career guidance, from the point of view of economists, therefore, is oriented more to the fulfillment of market needs and the adjustment of learners' inclinations to such needs, than to the discovery of their abilities and inclinations and the realization of their potentials and educationally justified ambitions.

In developing countries, it is not uncommon to have the education system out of phase with and sometimes ahead of, the economic system due to various economic, political and cultural factors. Such situation can lead to the shortage of labour at the lower occupational levels despite the existence of unemployment which is concentrated mainly among the higher levels. Planners, in this case, are faced with the dilemma of whether to sacrifice some

of the individual aspirations and social ideals to ensure the adequacy of manpower supply, or to sacrifice the fulfillment of some of the economic needs to better respond to individual claims and social pressures.

Many countries, especially those with limited resources, are continuously faced with the dilemma of defining long and short-term priorities in their plans for socioeconomic development. The share of HRD in general, and education in particular, despite universal recognition of its importance, seems in most cases inadequate. One contributing factor is that politicians and economic planners usually feel that quick direct benefits are badly needed, and that investment in HRD does not lead to quick returns.

Planners, on the other hand, are faced with many questions. To what extent should education be deployed for the requirements of development plans, and hence to what extent should education be planned and controlled? At what age should specialization through technical and vocational education and training (TVET) commence? How broad-based or how narrow-based, and hence what are the components, of any educational programme, especially in TVET schemes? What is the role of industry, and the enterprise in general, in TVET?

II. Occupational Levels and Educational Outputs

Every occupation comprises a great number of functions, tasks and skills performed by individuals of varying performance, ability and degree of responsibility, thus requiring different occupational and skill levels as part of the more comprehensive 'division of labour' concept. In practice the skill ladder is usually divided into 'bands' to simplify the process of classification, the hierarchy of responsibility, and the design of manpower development programmes.

Figure (2) shows a diagrammatic representation of one of the well-known systems of occupational levels and the relation with the outputs of the various educational levels.

Occupational levels at the top of the skill ladder include professionals and technicians (sub-professionals) who are usually prepared in tertiary level

educational institutions; while occupational levels at the base of the skill ladder comprise skilled workers and craftsmen prepared frequently within senior secondary education or parallel to it. A professional or specialist is in general, prepared in educational institutes of university level. A sub-professional or technician, on the other hand, is prepared usually in educational institutes of sub-university, but within the tertiary, level of education such as community and technical colleges. The basic occupational levels, which comprise various categories of craftsmen, skilled workers and limited-skills workers, are not usually defined internationally in terms of the required educational levels as is the case in upper occupational levels of professionals and technicians. Different countries have different standards, educational backgrounds and systems of manpower preparation at the basic occupational levels, although it is becoming more and more accepted that such levels lie at least within the senior stage of secondary education or parallel to it, inside or outside the formal education system.

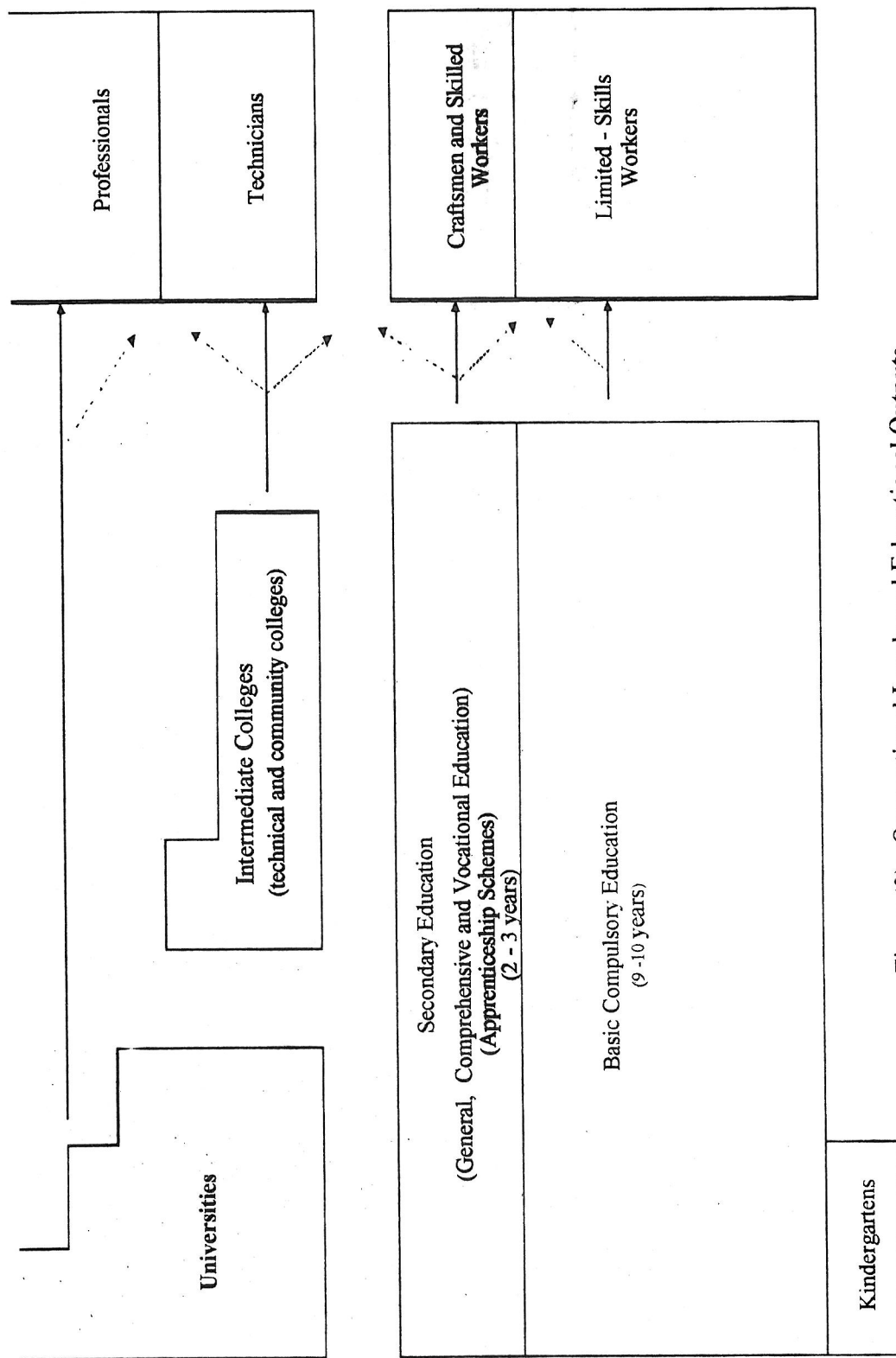


Figure (2): Occupational Levels and Educational Outputs

Occupational classifications and standards within the various occupational levels is an area that has important reflections on both the development and utilization aspects of humanpower. Employers should be full partners in the initiation, development and implementation of the relevant activities. Apart from the fact that such classifications and standards should emanate from the world of work, they have direct influence on such matters as wage structures, labour mobility and performance standards of the labour force.

It is worthwhile noting here that the traditional pyramid-like distribution of the labour force among the various occupational levels is gradually being replaced by an ellipse-like distribution in modern economies, as illustrated in Figure (3). A big deficit or surplus at the higher occupational levels can be as much a source of imbalance and economic weakness as a similar deficit or surplus at the basic occupational levels.

III. The Role of the Enterprise in TVET

The role of the enterprise in technical and vocational education and training can be explored through the following main functions:

- (i) the planning function.
- (ii) the financing function.
- (iii) the implementation function
- (iv) identification of training needs.

The following is a brief discussion of each of these functions.

IV The Planning Function

The quality and efficiency of TVET systems depend, to a great extent, on the quality of planning for such systems. The credibility and effectiveness of the planning function, on the other hand, is closely related to the involvement of all the concerned agencies, not the least of which are the employers whose enterprises are the main target for TVET programmes. The involvement of the private sector in the planning function for TVET can assume many forms, and can be realized through different measures. These include:

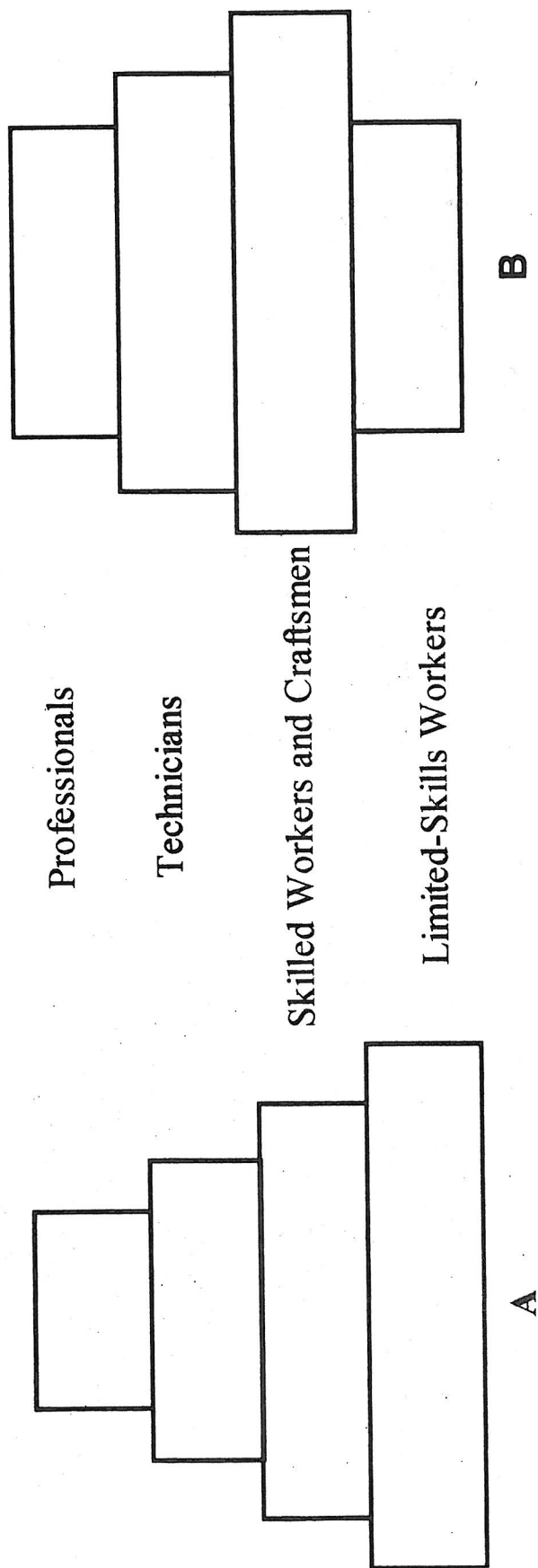


Figure (3) : Occupational Levels and Labour Force Distribution

A: Pyramid-like distribution.

B: Ellipse-like distribution

1. Legislation

Laws, by-laws and regulations in such fields as labour, employment, education and human resources development, can be utilized to provide the legislative umbrella and legal framework for defining the role of the private sector in the planning for HRD in general, and for TVET in particular.

2. Institutional Frameworks

The involvement of the private sector in the institutional setups related to the planning for TVET can be secured through active and full-fledged participation of employers' representatives in the relevant boards, councils, commissions and committees responsible for the planning and supervision functions at the institution and local levels, as well as on the systems and national levels.

3. Curriculum Development

Employers' participation in curriculum development for TVET systems and programmes is an important aspect of the private sector involvement in the planning function. Through such participation, the employment and labour market needs of the various TVET programmes can rationally be taken into consideration.

4. Information Systems

The availability of effective information systems is essential for the provision of the necessary database needed for planning activities. Information systems in this case should cover both the supply and demand sides of manpower. The quantitative and qualitative aspects of human power and training needs of the various economic sectors are the major components in such database, which can be secured through full coordination and cooperation between the public and private sectors.

V. The Financing Function

Practices vary considerably between countries as to the sources and means of funding for TVET systems and programmes. In general, TVET can be funded through four main sources:

1. Taxpayers

Funding from the taxpayers through the state budget is an option which is sometimes resorted to when TVET is viewed as a national responsibility which should be shouldered by the whole population according to the income level of the various cohorts.

This source of funding is common in some societies, especially in developing countries. It has the disadvantage sometimes of being inadequate, especially in countries with limited resources, because it is not given due priority in national budgets.

2. Employers

Funding of TVET from industry and business in the private sector is an option that gains credibility when TVET is viewed as an activity earmarked for the direct benefit of employers. Apprenticeship schemes, on-the-job training, and dual (school- enterprise) systems of training are examples of TVET schemes that are usually funded, total or partially, by employers. In addition to paying the wages of trainees and apprentices, employers' financial responsibilities include the provision of training facilities and paying the wages of instructors and training officers. In some cases, a special tax or training levy is applied on industrial and business enterprises to secure funding for national TVET systems.

3. Beneficiaries

According to this funding option, the learners, trainees and their families, who are considered the main beneficiaries of the TVET services on the individual level, are expected to meet the costs, total or partially. Training fees, acceptance of reduced wages, and involvement in productive activities, are some of the practices that lead to the involvement of trainees in the funding of TVET.

When TVET is utilized for the preparation and training of skilled workers and craftsmen at the basic occupational levels, charging training fees is not a common practice, except when private (profit or non-profit making) institutions and agencies are the providers of the relevant services.

4. Voluntary Efforts

Donations, grants and fund-raising activities can be an important source of funding for TVET services, especially when such services are targeted to special groups of the population, including the handicapped and the underprivileged.

In many countries, especially developing countries, the lack of financial resources for TVET is an acute and chronic problem, especially that such education and training is usually much more expensive than general education. External loans are often utilized for this purpose. Nevertheless, a rational approach to the funding of TVET systems would necessitate such measures as:

- (a) the development of economic systems of TVET such as in-plant and combined school/ in-plant systems.
- (b) spreading the cost of TVET services on various sources such as local communities, employers, trainees and the national budget.
- (c) raising the efficiency and effectiveness of TVET systems.

VI The Implementation Function

The role of the enterprise in the implementation of TVET programmes can be categorized into two main groups of activities. The first group is generally related to in-service training activities for those who are already employed. Such activities are usually of short-duration nature and include such variations as initiation training for newly appointed employees, re-training for new jobs and skills, and upgrading training to raise the competence of employees and enhance their productivity. The second group is related to pre-service education and training activities, such as formal and non-formal types of apprenticeship, aiming at the full preparation of labour for the needs of the enterprise through a programme of vocational education and training which, in this case, is usually of longer duration and a more comprehensive nature.

The positive role of the enterprise in the first category of in-service training activities for employees at all occupational levels has long been taken

for granted, and employers are realising more and more how important it is to have a comprehensive policy for the development of the skills and abilities of their work force. The services and facilities needed for such in-service training activities can be provided either "in-house" by the enterprise itself, or by an external agency. It is in the field of the second category of pre-service vocational preparation programmes, to prepare skilled workers and craftsmen, that practices and judgements differ considerably.

The question of whether vocational preparation should be the responsibility of the education system or that of the enterprise is a major issue, especially in developing countries. If vocational, and hence manpower, preparation is interpreted broadly to comprise any type and level of education and training made available to the individual to prepare him for his future vocation, then most, if not all, of higher education at the professional and sub-professional levels in universities and technician institutes can be classified as vocational preparation. But at these higher occupational levels, the predominant responsibility of the education system is taken for granted; although, in some countries, technician education in particular is a shared responsibility.

Therefore, it is vocational education and training for the preparation of skilled workers and craftsmen at the basic occupational levels that is contested in practice between the school and the enterprise. In this respect, five main criteria are usually of relevance when investigating the roles of the enterprise and the school in vocational education and training:

1. the kind of agency responsible for policy making and planning. This usually indicates whether manpower preparation is oriented more to educational aims and objectives or to manpower requirements and economic criteria.
2. the place of implementation of vocational preparation, especially the practical element, which can be undertaken on-the-job in the enterprise or off-the-job in the school.

-
3. the general content and components of the education and training programme, including the size and nature of the general and specialised components.
 4. the status of the learner who can be considered either a student going through a specialised education cycle, or an employee and wage earner under training as in the case of apprenticeship schemes.
 5. the source of finance, which can be the public budget through the educational system or the enterprise through direct or indirect channels.

Those who support a school-based model of manpower preparation at the basic occupational levels require that the education system should be responsible for policy-making, planning and overall content specification and criteria. The rationale for such an approach stems from the view that education is an activity intended for the development of the individual and, thus, encompasses both general and vocational education. Such a view assumes that the enterprise is unable to take overall responsibility for manpower preparation without running the risk that one-sided narrow economic criteria will govern the various aspects of the training programme, including its objectives, content, standards and quality.

The supporters of an enterprise-based model of manpower preparation at the basic occupational levels believe that, because such preparation is mainly connected with the requirements of the enterprise, it should have little place in the school. The enterprise, according to this approach, is the controller of manpower preparation which thus becomes an integral part of employer responsibilities. The scope of such responsibilities includes policy-making, planning, standards setting and content specification. Industry-based vocational preparation schemes are, in general, more economical than school-based ones. This is because productive work can more readily be undertaken by trainees, and because of the possibility of utilising existing facilities, at least partially, instead of establishing new ones. But a major consideration in this respect is the fact that the greater part of the training cost is usually distributed among employers. It is usually argued in support of the enterprise approach that, at the basic occupational levels, the training needs of industry can more effectively be

responded to through in-plant training because of its relevance, flexibility, cost effectiveness and ability to offer smooth transition to work. In practice, the school system is often at a disadvantage when new specific training needs emerge, and frequently runs the risk of a mismatch between its output and employment requirements.

In many countries, especially developing ones, two separate systems of vocational preparation at the basic occupational levels exist side by side; one is school based and the other is enterprise based. This can be attributed sometimes to the fact that industrial development is rather new and partial. Formal in-plant vocational preparation is thus a newcomer, while a traditional school-based system would have been in existence for some time. The introduction of the in-plant system is usually facilitated by the expanding needs of new industrial developments and the inability of the education system to respond effectively both quantitatively and qualitatively. One of the main shortcomings in this case is that the two systems usually exist and develop without effective coordination and, sometimes, even with mistrust and rivalry.

In many developing countries, the education system developed earlier than industry. This contributed to the assimilation of formal vocational preparation under the school umbrella. The underdeveloped state of industry and the scarcity of advanced industrial establishments at the beginning, excluded the enterprise from having a role in formal vocational preparation, and enabled the education system to lay down the standards and set the rules for vocational preparation. Even when industries started to develop, the role of the education system in formal vocational preparation was so established and taken for granted that it hindered for some time any effective role for the newly emerging industries in this respect. It is only when the education system started to lag behind the needs of employment for the basic occupational levels that industry, under tight labour market conditions, showed an interest in assuming some responsibilities.

VII. Identification of Training Needs

The identification of training needs of the enterprise is governed in general by economic considerations and production requirements with the objective of providing the labour force needed in the various fields and at the

various levels; in addition to raising productivity, enhancing performance standards, and improving product quality. At the enterprise level, a comprehensive approach to the identification of training needs incorporates the following elements:

- (i) Studying official and unofficial national policies of human resources development, as well as the provisions of socioeconomic development plans. This includes strategies, policies and plans related to education, employment, labour mobility and the expected surpluses and shortages in manpower.
- (ii) Identifying policies and objectives of manpower development in the enterprise. Such policies should be explicitly or implicitly adopted or should have already been adopted by top management. They include sources of recruitment, extent of modernisation, promotion policies, modes of administrative structures and lines of authority.
- (iii) Assessing the manpower situation in the enterprise. An appropriate database would be of great value in this respect. The assessment of the manpower situation as it exists usually takes into consideration the quantitative and qualitative aspects. The quantitative aspects identify the number of employees in the various departments and administrative units at the various occupational levels. The qualitative aspects, on the other hand, identify the characteristics of the labour force including educational background, work experience, rates of turnover, age profiles, as well as performance standards and potentialities.
- (iv) Assessing the manpower needs of the enterprise. Such assessment also takes into consideration the quantitative and qualitative aspects that are of relevance. Of special importance are the following factors:
 - a. plans for the expansion of production activities, whether by raising the capacity of existing production lines or introducing

new ones, thus necessitating the recruitment of additional employees.

- b. rates of labour turnover due to retirement, resignation, and vacancy creation due to promotion.
 - c. plans and attitudes towards the modernisation of production processes, and the need for the -re-training of employees accordingly.
 - d. attitudes and plans to increase productivity and improve product quality, and the need to upgrade the performance standards of employees accordingly.
 - e. policies and plans concerning the extent of specialisation and division of labour. In this respect, some enterprises adopt a policy of 'work revolvment' whereby the employee is trained to perform more than one function or to operate several workstations with the objective of introducing an element of interchangeability and flexibility, reducing monotony, and enhancing morale.
- (v) Identification of training needs. These are defined as the difference between the manpower needs of item (iv) and the manpower situation of item (iii). Plans and procedures can thus be designed for recruitment and training.

**THE ACTUAL AND POTENTIAL ROLE
OF ARAB UNIVERSITIES
AND RESEARCH INSTITUTES**

Table of Contents

	Page
Introduction	23
Universities and Research Institutes in HRD Systems	24
Occupational Levels and Educational Outputs	27
Mass Education: Pressures and Challenges	31
The Funding Issue: Who Pays	33
Private Universities	33
The Academic vs. the Applied Approach	34
The Gender Issue	34
Standards and Accreditation	35
The Regional Dimension: a Planning Dilemma	36
Research: Constraints and Challenges	36

The Actual and Potential Role of Arab Universities and Research Institutes

I. Introduction

A comprehensive approach to the issue related to higher education and research institutes, necessitates taking into consideration the position of such education within the overall system of human resources development (HRD).

Human resources development, mainly through the formal and non-formal systems of education, is the concern of both educationists and economists. This is so because education is recognized both a social service on the one hand, and an investment and hence an economically feasible activity on the other. As an investment, education is expected to lead to higher productivity and economic development, on the national level, and higher income and potential advancement, on the individual level.

It is not unusual to find the term "human capital", which to an educationist might seem a phrase with inhuman overture, being used by economists to emphasize the investment dimension in education. Approaches to the economics of education in general can have positive as well as negative reflections. The positive aspect lies in the recognition given to the importance of education as an essential factor in national development, justifying its place as a priority in investment policies. The negative aspect, on the other hand, accrues when education is viewed predominantly as an economic investment, thus facing the danger of sacrificing some of the values and ideals which do not lend themselves to economic evaluation, and hence are not measurable by purely economic development, is a feature of modern national economies and education systems. Such a link is mainly the result of manpower needs being translated into educational targets and plans.

The criteria used for the evaluation of educational and HRD strategies and systems frequently reveal the differences in the views of economists. Thus the feasibility of a university education system can be assessed through the ability to secure employment, level of earnings, self and social image, and job satisfaction, on the individual level; and through productivity levels, quality standards and national income figures on the national level.

To an educationaist, HRD mainly through formal and non-formal education, should first be human and then professional, since such education should do more than provide the learner with the skills and knowledge specifically needed for his job, and since occupations are more effectively performed by individuals who are generally, as well as specifically, prepared. An economist, on the other hand, would emphasize the need for as accurate a matching of supply and demand in educational and manpower planning as possible, and would in general be sensitive to the "marketability" of the "products" of the education system. Poorly balanced education systems, to an economist, are a waste of resources that are usually badly needed elsewhere. Vocational and career guidance, from the point of view of economists, therefore, is oriented more to the fulfillment of market needs and the adjustment of learners' inclinations to such needs, than to the discovery of their abilities and inclinations and the realization of their potentials and educationally justifies ambitions.

The gap between the views of educationists and economists can be narrowed if the approach to HRD issues is guided by a comprehensive strategy that encompasses economic, social, cultural and political development. It will be a major step forward if, instead of measuring national development through GNP and GDP figures, appropriate criteria and indices are devised to measure such development through GHP or "Gross Human Product" attainment. According to the GHP approach, egalitarian as well as utilitarian aspects of HRD are taken into consideration. The gap can further be narrowed if economists and educationists agree that the quantitative aspects of HRD, including manpower requirements of the various occupational levels and sectors of more within the economist sphere of concern; while most of the qualitative aspects, including the structure and content criteria of manpower preparation systems, are the concern of education.

II. Universities and Research Institutes in HRD Systems

Figure (1) shows the various components of systems and networks that constitute both sides of the formula of human resources development and human resources utilization (HRU) within the relevant social, economic and cultural framework.

As illustrated by the figure, HRD comprises both the supply side of humanpower and the links that bind, loosely or otherwise, the supply and demand sides. Therefore, in order for university education, which is part of the formal and non-formal education system, to be viewed as an HRD component, rather than just a humanpower supply component, it should utilize and take into consideration the various channels that link it with the demand side of humanpower. Research and development, which can be initiated by universities, industry, demand-side institutions, or independent institutions, is, in this context, one of the important HRD/HRU links.

The actual role of Arab universities at present, including their role in the field of research, is predominantly defined as a component of humanpower supply. It is their potential role as an HRD component that needs development and enhancement. With few exceptions, a typical Arab university tends to be more of an academic inward-oriented source of humanpower than an interactive outward oriented institution. This requires serious measures to activate the links and channels referred to, including institutional setups, information systems, legislative provisions, research and development, etc.

Independent research institutes tend to be more demand oriented and, hence, more relevant to socioeconomic needs than universities in the field of research. Nevertheless, the modest involvement of the demand-side institutions, in general, and industry in particular, deprives research efforts from a valuable source of expertise and humanpower, thus, adding to the constraints and difficulties in the field of research, as will be explained in more detail later.

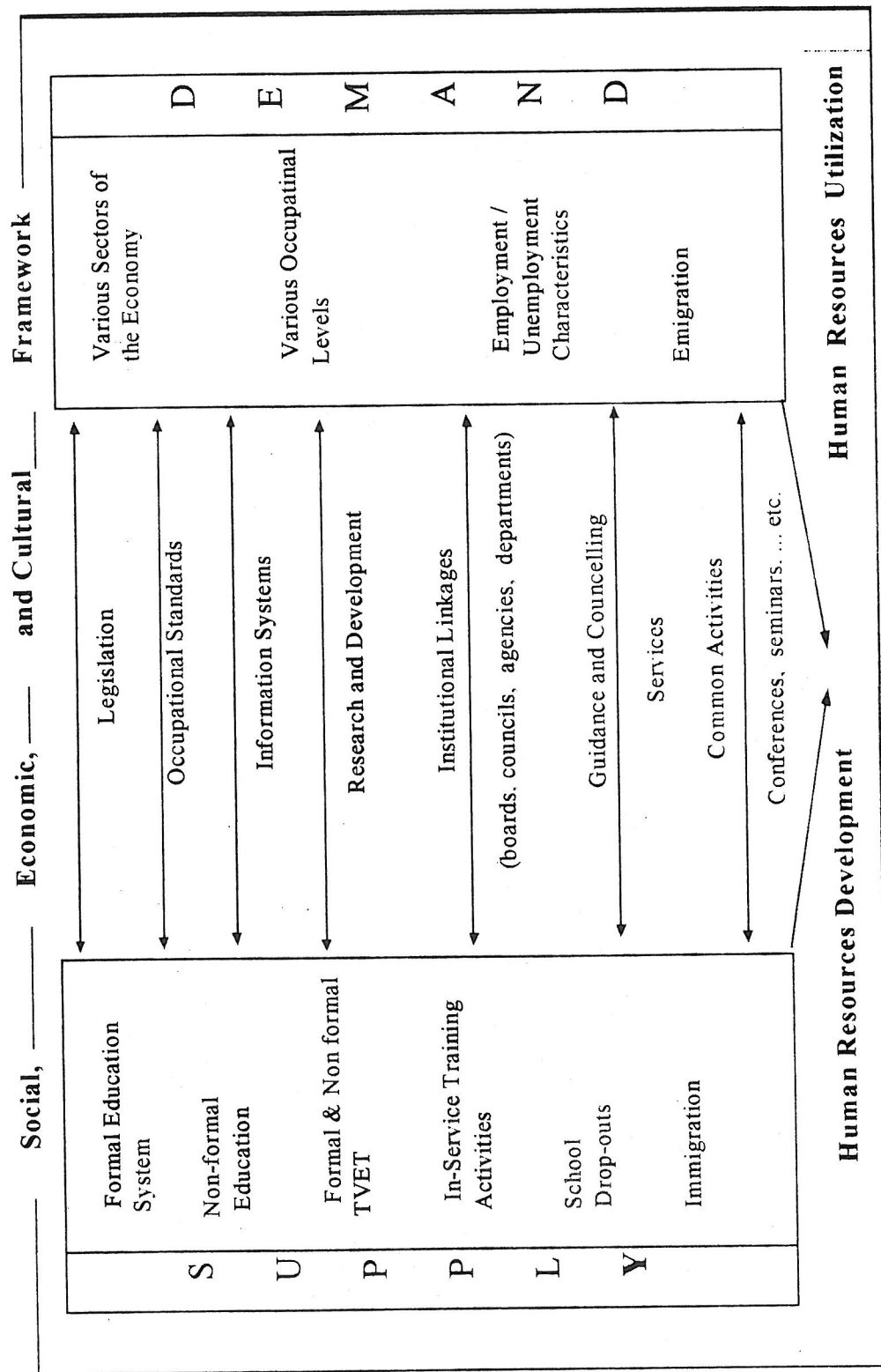


Figure 1 : Human Resources Development and Utilization Systems

III. Occupational Levels and Educational Outputs

Every occupation comprises a great number of functions, tasks and skills performed by individuals of varying performance, ability and degree of responsibility, thus requiring different occupational and skill levels as part of the more comprehensive "division of labour" concept. Theoretically, there is an infinite number of such levels, but in practice the skill ladder is usually divided into "bands" to simplify the process of classification, the hierarchy of responsibilities, and the design of manpower development programmes.

Figure (2) shows a diagrammatic representation of one of the well-known systems of occupational levels and the relation with the outputs of the various educational levels.

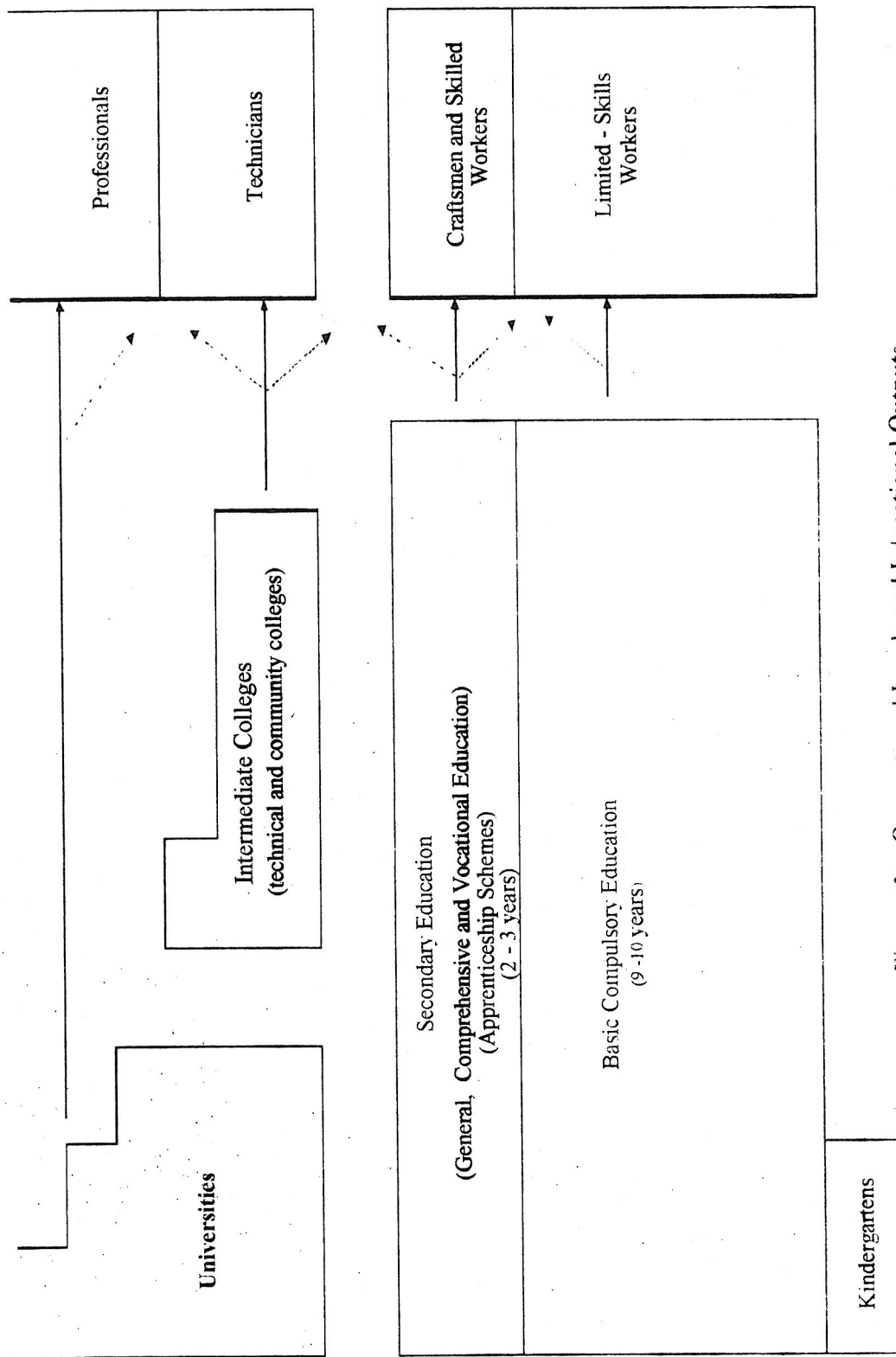


Figure (2): Occupational Levels and Educational Outputs

Occupational levels all the top of the skill ladder include professionals and technicians (sub-professionals) who are usually prepared in tertiary level educational institutions; while occupational levels at the lower or basic occupational levels comprise skilled workers and craftsmen prepared frequently within senior secondary education or parallel to it. A professional or specialist who performs functions that require a high level of scientific, technological and managerial skills with advanced knowledge content is, in general, prepared in educational institutes of university level. A sub-professional or technician, on the other hand, is prepared usually in educational institutes of sub-university, but within the tertiary level of education such as community and technical colleges. Each of the two occupational level bands that correspond to professionals and technicians in order to match different educational and occupational standards.

The traditional pyramid-like distribution of the labour force among the various occupational levels is gradually being replaced by an ellipse-like distribution in modern economies, as illustrated in Figure (3). A big deficit or surplus at the higher occupational levels can be as much as a source of imbalance and economic weakness as a similar deficit or surplus at the basic occupational levels. Nevertheless, it remains a basic educational issue and a social dilemma in many societies whether to accept or restrict the rush for higher education taking into consideration that much of the rush is, especially in developing countries, motivated by individual ambitions and aspirations for higher occupational levels and social status rather than by response to individual abilities or societal needs. Thus, vocational preparation at the basic occupational levels is accorded low status because of the employment levels it leads to and the social status it implies. The size of flow to higher occupational and educational levels is therefore as much an economic as it is a social concern. But the conditions and criteria of such flow should be such as to enable the education system to undertake its selective function free from socioeconomic prejudices and non-educational influences as far as possible.

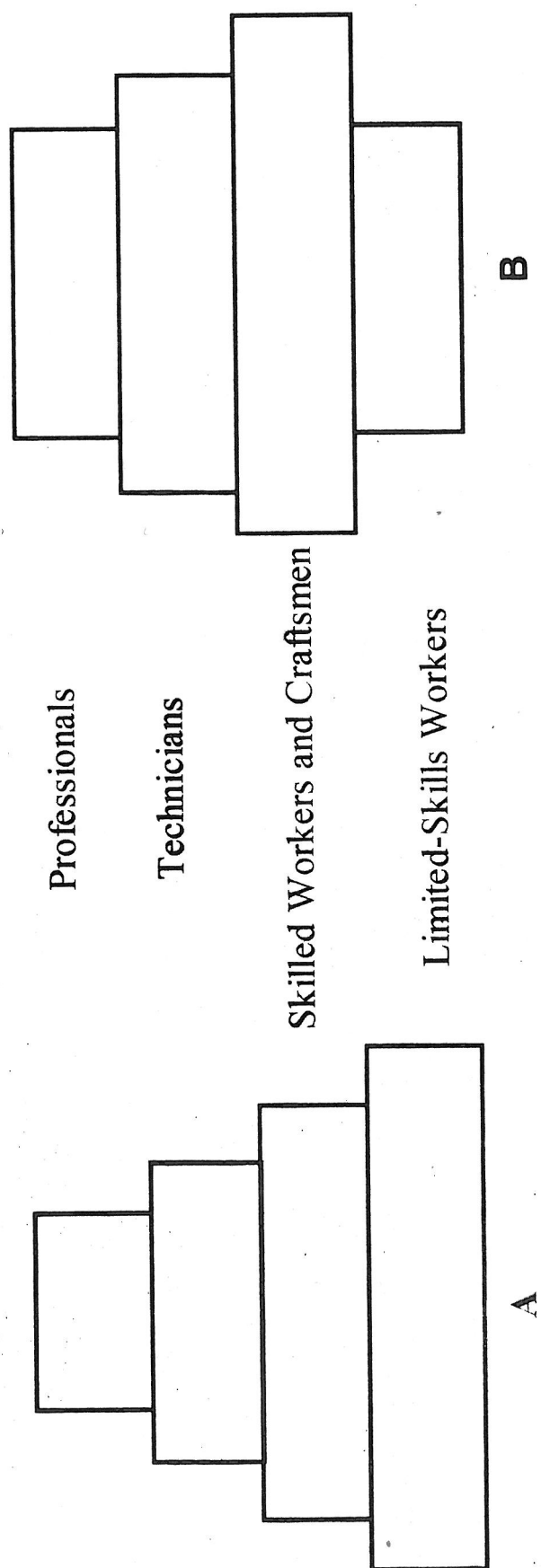


Figure (3) : Occupational Levels and Labour Force Distribution

A: Pyramid-like distribution.

B: Ellipse-like distribution

The relation between education and economic development is a complex one, because there exists no strict relationship between occupations and occupational levels on the one hand, and types or levels of education on the other, as illustrated by the broken arrows in figure (2), consequently, the ability and need to design human resources development systems based rigidly on the needs of employment requirements are questionable. The complexity of the relationship between education and economic development is also due to the fact that education can be both a cause and effect of economic development. Therefore, any planning for human resources development, which usually involves some matching of supply and demand, should emphasize interdependence, rather than dependence or independence.

IV. Mass Education: Pressures and Challenges

Mass education is an issue that influences and is influenced by the socioeconomic development of the country concerned. It implies, among other things, the provision of formal education facilities to all citizens for a certain number of years as a minimum requirement. The problem that arises sometimes in developing countries with limited resources is that, although mass education has long been accepted as an important factor in development and in the realization of the democracy of education, the education system is not always capable of dealing adequately with all its requirements and by-products, because of the accompanying socioeconomic and technical constraints.

Mass education, which is considered a necessity at the basic compulsory stages of education up to the age of fifteen or sixteen, poses a challenge in later cycles of education. Such a challenge has to be dealt with by human resources development systems, including senior secondary and higher education cycles, which are often subjected to great pressures from graduates of lower cycles to provide equitable educational opportunities to the masses while, at the same time, being expected to maintain high academic standards, taking into consideration the degree of availability of financial resources.

The adoption of educational screens and filters, usually in the form of national examinations or evaluation schemes, helps to regulate the flow to secondary and higher education. But educational "filters" can only help in the solution of the problems of manpower preparation if they are part of a

comprehensive strategy that encompasses both general and vocational education.

In many Arab Countries, pressures on university education, due to the phenomenon of mass education in preceding cycles of education, coupled with inadequate financial and human resources, are creating concern and fears of lowered standards and inability to meet the relevant economic consequences.

The great social demand for university education has consequently resulted in irresistible pressures, inflated enrolments and a surplus of graduates who are expected to work as professionals and specialists in the various sectors of the economy. The dynamics of utilization and development of human resources reacted by having a good proportion of graduates:

- (i) taking up at lower occupational levels, mainly as technicians and sub-professionals, leading to reduced job opportunities for graduates of middle level post-secondary educational institutions, such as technical institutes and community colleges;
- (ii) taking up work in fields that are different from those in which they specialized;
- (iii) joining the relatively sizeable pool of the unemployed; and
- (iv) emigrating to other countries of the region, or to Western countries. Nevertheless, the brain drain phenomenon is only practically explained by the oversupply of university graduates. Inadequate political, technological or research environments contribute greatly to such phenomenon.

In many Arab countries, it is not uncommon to have the education system out of phase with, and usually ahead of, the economic system, due to various economic, political and cultural factors. This situation has lead in some cases to the shortage of labour at the lower occupational levels despite the existence of unemployment, which is thus concentrated mainly among the higher occupational levels. Planners, in this case, are faced with the dilemma of whether to sacrifice some of the individual aspirations and social ideas to ensure the relevance and adequacy of humanpower supply, or to sacrifice the fulfillment of some of the economic needs in order to respond better to individual claims and social pressures.

V. The Funding Issue: Who Pays?

Practices in Arab universities and research institutes, as to the sources of funding, vary considerably between countries; and sometimes, between concerned institutions in the same country. University education is almost free to learners in most Arab countries. In this case, the state budget, and hence the taxpayer, constitutes the major source of funding. In some universities, as is the case in private universities, students' fees meet the full cost. In other cases, student fees meet part of the costs, in which case university education is subsidized from the state budget either directly or through special taxes.

In general, university and research activities can be funded from four main sources: the taxpayers through the state budget, the beneficiaries (learners and/or their families), the income from special services and income-generating activities such as research services, consultancies, extension activities, etc., and donations from various sources.

In general, Arab universities and research institutes seem to rely more on the state budget for funding than on other potential sources. In countries with limited resources, as is the case in most Arab countries, this reflects negatively on the quality of services, and the ability to expand and develop.

The diversification of funding sources for universities and research institutes should be seriously explored if the coverage and quality of services are to be guaranteed. More emphasis should be placed on such sources as income-generating services (e.g. to industry), fund raising and learners' fees. In the case of learners meeting a substantial part of the relevant cost, care should be taken to avoid a situation whereby the economic status of the family stands as an obstacle in the way of joining a university. Through a suitable system of loans, credits and exemptions, student fees would, instead of contributing to social elitism, become a democratizing agent through its contribution to the concept of income redistribution.

VI. Private Universities

Private universities are not common in Arab countries where public/state universities are the norm. Nevertheless, where they exist, private universities are either non-profit or profit-making institutions.

The emergence of profit-making institutions of higher education has become a major controversial educational issue. The Jordanian experience in this respect is not old enough to evaluate. Even in the case of non-profit private universities, which usually charge relatively high fees compared with public universities, it is always argued that the existence of high-fee universities is an obstacle in the way of the democratization of university education when certain social groups of the population miss the opportunity to join such education because they cannot afford the cost, while at the same time they cannot join a public university because of the highly competitive nature of admittance to such universities, and the limited number of seats available.

VII. The Academic vs. the Applied Approach

Arab universities derive their structure and approach to knowledge to two main sources: The academic traditions of the past, and the traditional European universities. Both sources value the academic standard, and emphasize the theoretical dimension of knowledge. The shift in industrialized societies to applied paths and approaches has not yet found full acceptance in Arab universities. Thus, degrees in applied engineering, that emphasize the technological and experimental dimensions, are rare and not as popular as academic engineering degrees that emphasize the design aspects with high content of basic sciences. The lack of graduate training/apprenticeship schemes adds to the problem.

Although models of the applied paths and approaches do exist in some Arab university colleges, these remain the exception with a lower status and popularity. The applied approach to higher education is a challenge that has not yet been fully appreciated by Arab universities, reflecting negatively on their credibility and functionalism. The models that exist are even under pressure from students, parents and staff to become more academic.

VIII. The Gender Issue

The decade of the seventies witnessed a surge in the demand for higher education in general, and university education in particular, in most Arab countries. This was mainly the result of economic growth as well as the great expansion of secondary education. Because the participation rate of girls in university education was then much lower than that of boys, the rate of growth of girls' participation was higher.

At present, girls' participation rates in university education in many Arab countries are comparable to those of boys. In general, girls account for about one third of the student population in Arab universities; and, although some disciplines seem to be more popular to them than others, they virtually participate in all programmes.

Sometimes, high rates of participation by girls in such disciplines as medicine, pharmacy, law and engineering are questioned and criticized when they fail to join employment, either because they choose not to, or because of unemployment which is usually higher among women. The question arises because of the highly competitive nature of admittance to such disciplines, and the limited number of places available.

IX. Standards and Accreditation

The growing pressures on universities in many Arab countries, accompanied by the limitations on financial resources, have reflected negatively on the standards and quality of university education. Uncertainties and doubts about standards are difficult to assess or measure with the absence of means, mechanisms and criteria to facilitate evaluation procedures for the performance of universities, through a national or/and regional accreditation system.

The accreditation function for university programmes, which can be undertaken by the concerned ministries, professional syndicates, or independent agencies, is practically non-existent in Arab countries. In some instances, as in Jordan, private universities are required to fulfil specific accreditation criteria before they are fully licensed. Nevertheless, this is applied only during the initial phases of operation, and is not implemented on a regular basis after that.

The Union of Arab Universities can undertake an important role in the field of accreditation on the regional level. At present, it does very little in this respect.

In general, therefore, Arab universities would benefit greatly from the establishment of national or regional accreditation systems, as this would help in raising the standards of university education, improve its quality, and facilitate international recognition and equivalence.

X. The Regional Dimension: a Planning Dilemma

For the past decades, some Arab countries have been known to be regional sources of manpower. These include Egypt, Jordan, Palestine, Syria, Lebanon, Sudan, Yemen and some North African countries. Other countries, including Saudi Arabia, the Gulf States and Lybia, have been known as manpower recipients.

Some sort of a regional approach to HRD issues in general, and manpower issues in particular, seem justified in view of the existing and potential labour mobility, and the common factors that underlie Arab education systems, not the least of which are culture and language.

At times, economic considerations and market forces seemed to be the decisive factor in labour mobility on the regional level. The surplus in the supply of higher education graduates in some countries helped to serve the demand needs of other countries suffering from manpower shortages. Nevertheless, political factors have frequently caused some ups and downs in the size of labour mobility, resulting sometimes in big number of professionals and technicians returning to their original countries, and raising unemployment rates among higher education graduates. Under such circumstances, the regional dimension of HRD planning is characterized by weakness and uncertainty.

With the new political developments in the region, it is expected that labour mobility will be gradually enhanced and subjected more and more to market forces, thus facilitating a regional approach to human resources development planning.

XI. Research: Constraints and Challenges

In general, research facilities and services in Arab universities and research institutes suffer from the inadequacy of financial resources and the state of relative underdevelopment. Furthermore, the weakness of linkages between the universities and industry, as mentioned earlier, reflects negatively on the availability of adequate funding for research activities, and on the relevance of such activities to socioeconomic development needs and priorities.

The brain drain phenomenon, from which many Arab and other developing countries suffer, deprives research efforts from a valuable source of high-caliber manpower, and adds to the difficulties and obstacle encountered by universities and other research institutes.

To meet the challenges posed by the status and special requirements of research institutes and the initiation of research activities should be seriously considered, especially in such areas as energy, agriculture, environment and health. Linkages and interchanges with foreign universities and research institutes, on the other hand, help to activate research work and enhance its capacities. Furthermore, more emphasis on post-graduate studies is needed, especially for doctorate and post-doctorate work. Such studies are usually the backbone of research activities and the major source of the relevant manpower.