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LIMITS TO VOCATIONALLY-ORIENTED EDUCATION IN THE THIRD WORLD

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Introduction

The years after the Second World War, more than any earlier period in history, witnessed momentous transformations in Third World countries. With the achievement of political independence from their colonial masters in the post-war years, one of the major policy initiatives in these countries was the large scale expansion of educational provision at all levels under strong central state control. This unprecedented expansionist education policy was spurred largely by the urgent issues of national unity, economic growth, manpower needs, and the promotion of greater equality of opportunity. Due to high rate of population growth and growing resource constraints, this rapid proliferation of new schools did not provide primary and secondary education opportunities for all children of school going age as in the developed countries. It did, however, dramatically change the system from an elite to a mass base phenomenon and thus enhanced the access to educational opportunity for large sections of school going population, both boys and girls and made remarkable strides at the tertiary level. In spite of this, tertiary education remains highly selective and elitist. In terms of numbers in the Asia/Pacific region alone, enrollments at all levels grew from 263 million in 1960 to 522 million in 1982 - a doubling in 22 years. Of this increase 61% was in primary education, 35% at the secondary level and 4% at the tertiary level (Raja Roy Singh, 1986 : 49).

This great surge in educational expansion brought about a number of highly complex and contentious issues in almost all these 'less developed market economies'. The most pronounced of them, since the 1960s, has been the chronic and alarming problem of rapidly rising 'educated' unemployment, in particular among school leavers and tertiary institution graduates. The International Labour Organization's (ILO) employment missions to Kenya, Sri Lanka, Columbia and the Philippines in the early 1970s and the numerous subsequent regional and country studies of the ILO's World Employment Programme (WEP) have well documented and highlighted the unemployment scenario in many Third World countries of Africa, Asia and the Pacific, Latin America and the Carribbean. Persistent and increasing high unemployment rates with little signs of abating is one of the main concerns of Third World Governments. A large and growing section of the unemployed in these countries

are poorly educated, lack appropriate skills and come from rural and urban poor sections of the communities.

In order to contain, and if possible reduce to acceptable level , this persistently increasing high rate of youth unemployment, the rural-urban drift in search of the elusive wage employment opportunities and eradicate the accompanying economic ills and hostile counter-cultures, such as crime, drug addiction, and vagrancy, national political decision-makers and planners of Third World countries have made various attempts to device and implement appropriate policies and strategies towards accelerating the utilization of "surplus" labour, one of them being the attempt to interface education and the world of work. The assumptions being that an appropriate and workable education-oriented labour market will, firstly, ameliorate the growing problem of unemployment among the 'educated' youth; secondly, will justify the continuous and increasing heavy burden on public expenditure on education to the taxpayers and parents in these countries; and, lastly, will abate the growing fear that if appropriate and workable solutions are not found, there is going to be a growing disillusionment with education's utility and social returns. This has been the case in a number of countries in the West, where public confidence in education appears to have declined considerably and consistently since the 1970s (Weiler, 1983 : 35).

The main focus of this paper is analytical. It sketches and generalizes within a broad framework the underlying reasons for the formulation of policies and practices to alleviate the growing problem of the 'educated' unemployed through the initiation of vocationally- oriented educational programmes with reference to selected Third World countries. The paper then outlines the main reasons why the dimensions of the vocationally-oriented educational initiatives did not converge and reinforce with other related employment initiatives to achieve their intended goals. In particular, the fit between training and work remained elusive. The paper will discuss why many Third World countries have begun to question if the assumptions that underlie it are a 'fallacy', as Foster (1965) has indicated in his seminal paper. Finally, the paper attempts to suggest alternative educational strategies for these

Third World countries. This strategy will outline how it may be possible not only to interface education and work but bring about greater efficiency and equity in this relationship.

The Issue

As indicated earlier, in all Third World countries, since the end of the Second World War, education was viewed as vital for economic growth and the development of education was accelerated at all levels. This gave rise to a revolution of rising aspirations and job expectations among students and their parents. In this revolution of rising aspirations for jobs, the expectations in Third World countries were far too high and, therefore, not consistent with the job opportunities available in many of these countries.

One of the reasons for this was that in almost all Third World countries, the modern educational systems are a replication of varied forms of Western models of education (see Carnoy, 1974 and Altbach & Kelley, 1984). This is particularly so at the formal levels of school and tertiary education. The educational systems based on Western models that operate in these countries are either a legacy of their colonial occupation or adopted by them as a prerequisite to their state-initiated and state-directed process of modernizing themselves in order to "catch-up" with Western levels of development. These models are basically elitist, pyramidically oriented with a highly centralized and standardized curriculum and examination system. In spite of marked social, economic and cultural differences between the West and these countries, these highly stratified urban-based and commercial-industrial oriented models have changed very little in their basic form and structure and will probably remain unchanged for a long, long time to come. However, in almost all these countries, with the achievement of self-government and independence, some cosmetic changes were made to their highly academically-oriented curriculum. These changes were made largely to nurture and socialize their young nationals into their distinct cultural heritage and national ideology. Some Third World countries through this changes hoped to achieve social, cultural and political integration and forge a unified society out of what were termed internally divided and differentiated groups. In a nutshell, as Ibrahim Saad (1976) points out in the Third World, 'most of the

curriculum changes have been emeliorative, thus the core of the curriculum is still based on former colonial models'.

More importantly, these Western models have continuously proved to be resistant to any form of radical structural change. This is largely because Western models of education are potent and pervasive, culture carriers. With their implantation and development came the pervasive internalization of deep-rooted Western cultural and value orientations, one of them being the notion of the supremacy of the elitist form of academic oriented education. This is largely because the vehicle for success for both the colonial rulers and the indigenous elite who politically advanced and succeeded them in these countries had done so through a Western academically-biased general and non-technical education. Thus Western-biased academic education became a "status-effect" . In particular, their products became the powerful reference groups for the vast majority of aspiring students and their parents. Any inclusion of vocationally-oriented subject into the academic mainstream was resisted as it was considered to be inconsistent with the elitist occupational ideology.

The economic, political and social consequences of this deep rooted bias towards academic education was accompanied by growing unemployment among the burgeoning school leavers and graduates for tertiary institutions. Another contributory factor was the preference of school leavers and graduates, both boys and girls, to be employed on a wage or salary basis depending on their qualifications, in the formal sector, as opposed to the informal sector or self-employment. This dramatic rise in the number of the 'educated' unemployed has now become submerged under the overall and chronic problem of generalized unemployment in almost all these Third World countries. This has raised serious problems for policy makers, planners and educationists in these countries. An 'over-educated' unemployed population is considered to be a wastage of scarce human resources and a potent threat to political, social and economic orders in all these countries.

The most plausible explanation given to this pervasive and critical

phenomenon was that there was a wide spread mismatch between jobs in the labour market in Third World countries and the expectations generated by a preponderance of the highly stratified and academically oriented and characterized but less costly humanities biased education system in all these countries . As Raja Roy Singh (1986 : 14) points out:

> ... schooling has tended to make educational process abstract and 'bookish', divorcing it from the needs, interests and problems of real life, and ... a hiatus is created between the world of work and the world of learning, which are otherwise essential parts of a seamless web.

According to 'seasoned' Western and domestic pundits (see Harbison, 1967 : 17-21) who studied the ills of formal education and economic growth in some of these countries, the only rational and pragmatic way to solve this disjunction between education and work was to relate education more closely to the economy. This required students to be trained with appropriate skills and attitudes to be more relevant for the jobs that are supposedly being offered in the rapidly developing modern and agricultural sector of the economy in these countries. In short, the pervasive philosophy of educational systems in these countries was to produce school leavers and graduates who are easily employable in the supposedly growing and job creating organized sector, which in actuallity never grew fast enough to create the rising demand for jobs in the first place.

The contention among policy makers, manpower planners, human capital theorists and aid agencies was that an investment in academically biased education, though prestigious, was inappropriate to the real world of agriculture, commerce and industry in these countries as well as to the large number of school leavers and graduates in terms of their employability. This growing double-edged problem was thought to be a wastage of talents and a hidden cost to the resource poor economies of the Third World.

To ameliorate this growing problem, the solution was to emulate and introduce

alternative forms of investment in education that have been demonstrated to be more 'practical and relevant' to the world of work. Therefore, it was anticipated that investment in work related education would have several benefits. Firstly, it would produce the skilled manpower to man the nascent industrial establishments. Secondly, it would enable school leavers and tertiary graduates to be easily employable and thus create greater equity within the population. Thirdly, it would contribute to greater industrial development and productivity and thus economic growth. For example, the Kenyan Education Commission Report of 1964 emphasized that the training of technicians and skilled craftsmen was a sure way to industrial development in Kenya (Commonwealth Secretariat, 1987 b : Box 2). This was in line with the human capital theorists, who postulated the close connection between a nation's productivity and its human resources in terms of the levels of skills, ability and education of its population (see Bowen, 1966). It was assumed by the proponents of this theory that nations that failed to pursue an active 'improvement in the quality of human resources' will be doomed to low productivity and economic stagnation (Bowen, 1966 and Berg, 1970). However, empirically, very little evidence exist to show how investment in education facilitates economic growth in Third World countries.

In some capital abundant Western industrial countries, with the inception of the industrial revolution in the mid-19th century and the development of 'scientific' technology, a fair proportion of education was vocationally and professionally oriented. Since then and with the continuous growth and expansion of varied forms of industry, commerce, navigation and the service industry, there has been a legitimate shift towards work-related education at all levels (see Sum, 1985 : 112-3). The proliferation of this type of formal vocationally-oriented education was both general and occupational and it gradually edged out the institution of apprenticeships. By and large, though this form of education did not bear any direct relationship to particular occupations even in industrialized countries, the employability of the products of this type of education was not a major issue in these countries till the 1970s. This was largely because, with the rapid creation of viable jobs in the ever expanding Western industrial market economies, there was continuous demand for skilled and semi-skilled workers. Therefore, employers were willing and able to substitute

workers with less preferred qualifications (Williams, 1985 : 183).

Vocationally-Oriented Education

Since academically-oriented education has increasingly shown to be counter-productive in terms of its inability to prepare school dropouts and leavers with 'job-related' skills (see Chapman and Windham, 1985 : 279), Third World country policy makers, planners and educators were persuaded to pursue a practical-materialist approach as an alternative education system. The contention being:

> Developing countries need more of their young people to go in for vocational education of all types, agriculture as well as technical, and overcome the traditional aversion toward manual labour. (Hug, 1965 : 100)

This was in the form of gender-appropriate vocationally-oriented education, which was introduced in a number of the Western industrial countries to prepare and supply a more highly structured labour force (Law, 1986,32-33; Sum, 1958 : 112-3 and Carnoy, 1974 : 328). A similar attempt was made to solve black education and employment in the United States of America (Carnoy, 1974 : 328).

In spite of the paucity of data on actual manpower needs, and the absence of visible signs that a demand for vocationally-related skilled and semi-skilled jobs was being created on a viable scale within the Third World countries, this form of education was replicated and implemented in isolation. It was anticipated that vocationally-oriented education would not only produce the growing skilled manpower needs of industry but also ameliorate the unemployment problem of school leavers and act as a catalyst for industrial development. This was largely because in the planner's eyes the needs of industry were not only trained and skilled workers but workers who could carry out their task with great dexterity. This need, the planners believed, had now been foreseen by them through the promotion of a vocationally-oriented educational system. Through an expansion of this system, they hoped to meet the appropriate trained manpower needs of their anticipated industrial expansion in both scale and quality. Thus, Third World policy makers too, like

Tegema Seiichi, the foremost promoter of Japanese vocational education in the Meiji period (1868-1912), argued that economic and technological development flourished in countries like Britain due to the facilitation of vocational education (Toyoda, 1987-12). In other words, vocationally-oriented education was considered as an adjunct of the industrial sector.

Therefore, one of the chief educational priorities in many Third World countries from the 1960s onwards was the diversification of their educational provisions as 'an attempt to adapt the content of secondary education to the expected job needs of those leaving school' (World Bank, 1980 : 44). This policy was pursued through the introduction of varying forms of 'practical or occupational subjects to the requirements of the labour market into an otherwise completely academic programme' (World Bank, 1980 : 44). It resulted in the development of two distinct educational routes at the school level - namely academic/general and technical/vocational streams. In most of the countries, vocationally-oriented education was relegated to full-time vocational and practical subjects in order to provide introductory skills and thus produce semi-skilled graduates for the employment market. This form of formal school-based vocational education whose value was somewhat uneven was further sponsored and supplemented in various fragmented forms in a number of countries by other Government Ministries and agencies, non-government organizations, voluntary sectarion and non-sectarion and charitable bodies, private profit-seeking training institutions and commercial/industrial organizations. In other words, this dual model in effect divorced academic/general curriculum from work experience.

As the tertiary graduate job market too was fast deteriorating in the 60s and 70s, particularly for arts and humanities graduates in many of these countries, tertiary institutions too were encouraged to take the initiative to orient their various courses of studies more narrowly towards the world of work with emphasis on engineering, business, commerce and agriculture. The contention was that graduates with different tertiary qualifications cannot be easily substituted for one another, particularly in the supposedly expanding vocationally-oriented occupations in

industry, commerce and agriculture of these fast developing countries.

The Conference of Ministers of Education and Ministers responsible for Economic Planning of Member States in Asia and the Pacific in the early 1960s stated :

> The need for diversification of education by enlarging and strengthening vocational and technical education at the second and third level in line with the developing capacity of the economy to utilize trained skills (Unesco, 1966 : 21)

However, the form of vocational education that was introduced in many countries, particularly at the school level was essentially to teach school leavers useful skills and attitudes as well as prevent them from developing negative attitudes towards manual labour. In other words, to equip and give an opportunity to school leavers to meet the minimum requirements of work in their society at the expense of the three R's. Attempts to introduce this form of vocationally-oriented education are not something new. Historical evidence shows that without exception the aim of producing 'a good type of sturdy literate peasantry' (Wyndham, 1933 : 62) has been a subject of major reports and recommendations related to educational development in almost all Third World countries during the colonial and post-colonial era (see Foster, 1965).

The earliest and best known of these attempts to introduce vocational education was made in the report of Sir James Kay-Shuttleworth in the last century. Sir James in the 1840s recommended the establishment of "Schools of Industry .... as Part of the System of Education for the Coloured Races in the British Colonies" (see Bacchus, 1987 : 2). His two major objectives according to Bacchus (1987 : 2) were to ensure that the:

> (a) instruction was 'interwoven' with labour so that education would not only provide useful skills but would also prevent the youngsters from developing a distaste for practical work, in particular, manual labour.

(b) schools would, through practical training which they provided, become economically self-supporting.

Throughout the present century various short-lived 'successful' attempts were made to introduce vocationally-oriented education in Third World countries (see Bude, 1983). The better known of them were the two Memoranda of 1925 and 1935 of The Advisory Committee of Educational Policy in British Tropical Africa (see Bude, 1983 : 342). In Colonial Malaya, for example, the aim of this form of education, apart from instilling a little literacy and simple skills in arithmetic, was to impart skills that were "sufficient for the ordinary requirements of Malay boys, who will become bullock-wagon drivers, padi growers and fisherman" (quoted in Roff, 1967 : 26). However, as Bacchus (1987 : 3) points out, "despite this lack of success, the arguments for vocationalizing the curriculum of schools were repeatedly revived, particularly in the 1960s".

Since most Third World countries did not have an industrial tradition and base and a formally established vocational training expereince, they were encouraged and enticed to emulate various Western patterns of vocationally-oriented education that were deep rooted and practised in the different industrial countries with very little attempt to examine their appropriateness, relevance and particularly the cost-effectiveness in the context of the Third World country's economic and organizational constraints. This uncritical adoption of Western models was largely because of the fact that adaptation to local situations required considerable extra resources in terms of indigenous intellectual and skill expertise and resources. These were not readily available in many Third World countries. Even if they had the indigenous intellectual capacity and the resources, the whole process of trying to hitch Western models of education effectively to the needs and cultural environment of a Third World country needed a great deal of effort, resources and ingenuity in terms of training and assembling locally relevant material, equipment and teaching manpower. Also the political urgency of the problem called for quick policy implementation which invariably resulted in hasty and costly solutions. For example, in Malaysia, the approximate cost per student in the academic stream is about M$720/=, while in

the vocationally-oriented stream it is M$2,800/= (Commonwealth Secretariat, 1987 c : Vol.II, MLY 15). This indicates that the cost of providing a vocationally-oriented education for a student is about four times that of the predominantly traditional 'chalk and talk' method of academic/general education. Therefore, Western models of vocationally-oriented education - in many cases with externally devised and linked qualifications - were readily adopted in most instances without recognizing their relevance, efficiency and feasibility within the recipient country's socio-cultural and economic environment, level of development, resource endowment and demographic structure. For example, a member of the Indian Education Commission pointed out:

> We [in India] have developed a kind of education which is not related to the needs of a nation that is trying to transform a traditional society into a modern society, to make use of science and technology, and of all the techniques that are available for national development (Quoted in Coombs, 1968 : 76)

This was further compounded by the fact that due to humanitarian, political and economic considerations almost all development planning in Third World countries was debt or aid financed. This included the planning and development of vocationally-oriented education. Under this form of bilateral, multilateral and non-governmental tied aid, Western aid donor countries and agencies because of their powerful financial lever were politicized. Through this relations of dominance, they only sanctioned their loans or aid on the basis of technical advice of a Western professional 'expert'. The 'expert' after spending a few weeks or months in the country, would invariably recommend a model that was based on his or her own educational background or experience as well as the intentions of the donor country. Thus Third World countries adopted vocationally-oriented education policy which by and large had a dominant Western educational component and thus invariably more suited to a Western industrial-cum-manufacturing and service economy. In other words, in this implantation of a Western model of vocationally-oriented education, the so-called beneficiaries from within the indigenous societies of this important and costly dimension of development were invariably alienated from the final decision-making process. Moreover, in almost all instances the whole orientation of

vocational education courses that were offered in these countries through external aid programmes were closely designed and linked in such a way as to create a market for the new "technologies of education" that a particular aid giving country's or a group of aid giving countries' Multinational Corporations (MNC's) were developing. In other words, it further locked the domestic economies and education system of these countries into the World capitalist system. It invariably imposed conditions and constraints on Third World countries which had lasting effects. For example, Coombs (1968 : 154) points out:

> ... to the degree that the educational crisis of developing countries stems from the unsuitability of their educational systems to their circumstance, the problem is not entirely their own making. They have plenty of 'expert' help from the outside.

In the long run, many Third World countries have found these models accompanied by their educational hardware and software costly to sustain and upgrade in the light of the rapidly changing technology. For example, a Brazilian case study points out that one of the major problems that Brazil faced is the maintenance and operation on a continuing basis the vocatinally-oriented schools that were established with aid from institutions such as the World Bank and Interamerican Bank of Development (Tavares, 1986:142). They were also detrimental to the development of an indigenously oriented vocational education system that would enable the graduates of vocational courses to effectively participate in the country's organized and unorganized developmental process. In other words, vocationally-oriented education can only be effective if it is promoted within the context of the development background of a country. For example, even the European Economic Community (EEC) recognizing the vast cultural differences among its member nations has abandoned attempts to create a common vocational education and training pattern among member states (Twining, 1987 : 14).

The Outcomes - Relevance and Effectiveness :

The optimistic proponents of vocationally-oriented education in many Third World countries in the past decade have come to realize that its outcome did not match

its expectations. This form of "anticipatory investment" in vocational education also was not as marketable a skill as it had been expected in Third World countries, except in the expanding economies of the Newly Industrialized Countries (NIC) - the "Four Little Dragons" - Hong Kong, South Korea, Singapore and Taiwan. Again with the exception of the NIC's, this form of intensive capital and recurrent cost education did not act as a cure for unemployment. At the same time it did not help to increase the relevant skills that were necessary for the working of a viable indigenous economy. The world economic crisis of the mid-1970s and 1980s accompanied by a big fall in the prices of primary commodities, has further exacerbated the growing 'educated' unemployed in most of the Third World.

Various 'lessons from the past' go to show that an important contributing factor for the failure of the development and employment objectives of vocational education, particularly at the lower level, was the inappropriateness of the Western models of vocational education to Third World countries. These models were developed and adopted for a totally different cultural, economic and technological milieu and in Third World context it had been conceived and implemented with unrealistic development and employment objectives. Therefore, many Third World countries have began to question whether the assumptions that underlie the Western model of vocationally-oriented education is a 'fallacy', as Foster (1965) had postulated.

It is not surprising therefore in vocationally-oriented schools that were established 'some of the implements, materials and machines introduced were highly sophisticated and thus only suited to European conditions' (Blackmore and Cooksay, 1980 : 52). For example, in Pakistan these very well equiped vocational institutions were found to be underutilized largely because the curricula was not suited to the local market requirements and there was a lack of the right type of local instructors to handle the prescribed curricula (Popalzai and Hashmi, 1986 : 207). There was also a shortage of local professional and experienced staff to handle these highly sophisticated resources. Unlike traditional apprenticeship which met the specific needs of the productive process, this form of formal Western model of vocational education, though narrow, was relatively non-specific to jobs in Third World country

situations. In particular, Rathgeber (1986) in a summary of several studies shows few workers use vocational skills taught to them in schools, instead vocational skills are generally acquired on-the-job. Even if these countries wanted to make their vocational training suit specific jobs, they are not equipped with the resources to pursue this type of individual training (Puntasen, n.d : 14). For example, in a country like Brazil approximately half of the vocationally-oriented schools are private and they are not willing to invest in costly vocationally-oriented programmes (Tavares, 1986 : 113). In addition, most Third World countries, are dominated by an unorganized agrarian sector. Therefore they do not have a viable industrial productive base to absorb the products of a vocationally-oriented education based on a Western industrial and occupational milieu.

In their naivety, Third World educational planners developed vocationally-oriented education more narrowly in terms of its content and purpose. Firstly to meet the immediate needs of the labour market and secondly, to rehabilitate pupils whose cultural or individual handicaps limit their opportunities for job success with 'useful skills'. In other words, assumed utilitarian objectives over-rode educational ones. In doing so, within the schools a dichotomy was created between vocational education and the prevailing highly academic and selective educational system. For example, in Bangladesh it was explicitly made known that the country's Vocational Training Institutes catered for school dropouts, unemployed youths and rural untrained adults (Commonwealth Secretariat, 1987 c : Vol.II BAN 3). In Mexico too, a new form of technical education was established that was terminal (Little, 1986 : 19). Therefore, vocational education was marginalized and stigmatized as an inferior and 'low-status' form of education tied up with a track record of being at the bottom of the elitist education system accompanied with low pay and poor working conditions.

However, in most of the Third World countries the selection for the coveted jobs and higher status positions within the bureaucratic, professional and technocratic structures is heavily weighted and legitimized only through a course of academically- oriented education and its credentials. An education and its credentials

which are also invariably tied to academic and professional standards set by prestigious Western universities and their professional examination boards. In the past several decades, it has been demonstrated in several of these essentially credentialially oriented Third World countries, that numerous members of their ruling class and the bureaucratic, professional, technocratic and business elites originally from very humble origins have achieved their current status, power and wealth through this form of education. Therefore, there was naturally a disdain on the part of the vast majority of pupils and their parents across all social strata in Third World countries to embrace to vocational education, particularly at the school level. Since the strategic and dominant link to higher education in almost all Third World countries continues to be through the publically acclaimed passage of an academic education; this naturally led parents and puplis with high levels of aspirations and expectations to opt for an academic curriculum and its credentials - the primary and most viable mechanism for upward mobility. By and large, individuals who did not pursue this form of education and were unemployed tended more to blame themselves than the economic system for their unfortunate predictcament. Not surprisingly, in a resource scarce country like Mauritius due to a preference for academically-oriented education and a lack of support for vocationally-oriented education from pupils and their parents, the authorities have reverted to the original single stream of academic/general education at primary and secondary level (Commonwealth Secretariat, 1987 b : 8).

In addition, in recent years economic recession and a fall in the number of jobs available has brought a 'tightening bond' between years of education and jobs. Therefore, employers who are often inundated with a large number of applicants, use education as a 'screening device' and employ only those candidates who have not only the right type of training but who possess such effective skills of communication and other qualities as are relevant to them. However, in some countries it is claimed that in periods of economic recession and growing scarcity of jobs, prospective employers may tend to pay less attention to academic and vocational qualifications and employ applicants on personal recommendations or political patronage or pressure (Commonwealth Secretariat, 1987 b : 6-7). This form of recruitment has also

permeated the job markets of countries like Mexico, Sri Lanka and Ghana and in practice this form of recruitment is operated to foster and cement political, class, caste or tribal alliances as the case may be (see Oxenham, 1980 : 8-9).

The need for vocational training in many of these countries was felt with the onrush of industrial development strategies. In particular, to ameliorate the skill shortages that prevailed in these countries in order to attract MNC's to invest in their nascent industrial sector that their national economic plans prioritized. This was because MNC's were basically interested in minimum labour costs and high profits and any form of training within their plants meant extra cost to them. However, for the smaller foreign and domestic companies training within their plant was not economically viable. In addition, the growing technological sophistication in the productive process ushered in an uncertainty about future requirements for skilled labour. Therefore MNC's preferred to recruit their skilled labour from the market place instead of embarking on a costly 'in-house' training programme. All this shifted the business of skill training on the shoulders of resource scarce Third World countries.

Thus, in order to facilitate the MNC's immediate manpower needs of skilled and semi-skilled workers, many Third World countries accelerated their vocational training programmes. A Philippines study points out that the philosophy behind this was that if the Phillippines must have industrialization, then she must invite foreign investors; and in order for the MNC's to "put up shop in the country, they will need cheap manpower supply" (Research Center, 1982 : 3). Therefore, to meet the MNC's trained manpower demands, 'the schools must be integrated with economic planning attuned and sensitive to the needs of foreign interest in the country and those who are still coming' (Research Center, 1982 : 3). The training that was given in these institutions because of resource constraints was limited in its range of courses - more attuned to meet the job requirements of the MNC's than to the development of the innate potentialities, general skills and self-reliance of the students. This narrow utilitarian objective to meet the needs of the MNC's gave the surplus graduates very little flexibility for them to be fitted into the traditional economy, as the labour needs

are very different between the modern industrial and traditional sectors.

In Latin America, for example the introduction of heavy industries and the internationalization of trade, has ushered fragments of the Brazilian and Mexican economies to move into a specialized global system of manufacturing (Harris, 1987 : 76-8). This was accompanied by the constant emergence and adoption of high technology oriented equipment in order to sustain and keep their competitive advantage in a highly pervasive and competitive 'free world capitalist market' economy. This technological change is going to be inreversible and continuous . In addition, the share of foreign investment to create new industries appears to be declining in many Third World countries in the 70s and 80s (Harris, 1987 : 45). It has resulted in the investment of labour-saving equipment and machinery to economize the further use of labour. This is a policy of continuous displacement of workers in order to make the manufacturing process cost-effective and therefore more competitive. This has further created not only unemployment but a wastage of skilled manpower in Third World countries. It is largely because the new technologies that are introduced rely much less on skilled workers but instead on 'multi-skilled' technical positions. As Musson (1982 : 250) states:

> Human labour is not homogeneous and easily transferable factor of production : men and women cannot easily be redeployed, retrained, removed and rehoused when their skills are made redundant by technological change.

In other words, what seems to be a cardinal point to emphasize is that societies which constantly adopt new technology face the prospect of their knowledge industry and vocationally-oriented education system getting out of date rapidly. In such a rapidly changing situation individuals have to constantly keep learning and unlearning in order to keep themselves employed. As Zymelman (1984 : 35-6) puts it :

> Where a 'high degree of skill' once meant manual dexterity, it now often means a formal higher education and technical training coupled

> with the ability to control and repair the machine and a capacity to perform both manual and mental tasks. The complexity of the equipment and its high cost imposes greater responsibility and calls for a better understanding of the production process and the ability to communicate writing to assure continuity of operations and to evaluate results.

The proponents of the vocationally-oriented school of thought did not have the foresight to perceive the fact that the creation of vocationally-oriented education in itself will not be an open sesame to jobs for those who graduate with a vocationally-oriented qualification. The demand for the specialized skills of these graduates had to manifest itself by the growth of a viable and employment generating economy. In other words, the realities of the society's job market system have to be taken into consideration before a country decides to move into vocationally-oriented education. As Athar Hussain (1976 : 419) emphasizes:

> Educational qualifications serve as bases of selection for occupations : but it is not the educational system which actually channels into occupations. The volume, categories and the terms of employment are determined not inside but outside the educational system.

The inability on the part of many Third World policy makers and planners to perceive this cardinal point has resulted in as Coombs (1968 : 76) points out in :

> ... many sad stories whose common plot tells of technical training schemes, embraced by all parties with good intentions, yet rendered irrelevant in their application. One African country, for example, with outside help, has been training cabinetmakers in compliance with established European standards. Right now, however, that country does not need cabinetmakers.

This explicitly points out that if the goods of a particular skill training produces is not marketable then such a skill is irrelevant to the society.

Therefore, it is imperative for Third World countries to ascertain the relevance, feasibility and cost-effectiveness of vocationally-oriented education in

terms of employability within a changing world economy before they embark upon it. This will help them to use their scarce as well as dwindling resources more effectively particularly in a world of ever-increasing inflation and expanding and thus competing social services. As we have seen earlier the cost of vocationally-oriented education is considerably higher than that of academic/general education, and therefore education policy-makers have to justify the cost of vocationally-oriented education.

Many Third World policy makers, planners and educationists find it difficult to anticipate the type of rapid and immense changes that their economic, social and industrial environment is subjected to within a world capitalist system. World Commodity and oil prices might slump, as they have. Foreign industries in order to be cost effective in a highly competitive capitalist system might fold-up and relocate themselves in countries which are more cost- effective in terms of wages and overheads. As Musson (1982 : 25) cogently puts it :

> Multinational companies simply adjust to the facts of international economic life, with the aim of maximizing production and distribution at the lowest costs; if manpower in one country is obstinately obstructive to new technology, workers and governments elsewhere may be more receptive in the national interest of maintaining or increasing their competitive industrial power and employments.

On the other hand, if conditions are favourable for them to stay on, they may want to go for greater automation of their plants, thus changing the content of their labour requirements, as we have seen earlier was the case in Brazil and Mexico.

In such fluid situations many vocational skills become obsolete overnight and new ones emerge. As mentioned earlier, in this type of situation of occupational redundancy, skills are not readily transferable. The link between education and work is rather loose particularly in a world of rapid technological change, except in the established vocationally-oriented traditional professions such as medicine, pharmacy, accountancy and law, where acquired training and its intensity are important. Therefore, the precise relationship between vocationally-oriented education and the

world of work is a matter of continuous debate. In other words, the marketability of graduates of vocationally-oriented courses is vulnerable as it is at the mercy of the employers demand. Who is to be employed and who is not to be employed in the productive process is an employer's prerogative and not that of a vocationally-oriented education system. In the last decade, issues and questions concerning the interface between education and work have been subject to tensions between equity concerns and efficency within Third World countries.

Therefore, various studies conducted on vocational education in Third World and developed countries have shown considerable amount of skepticism on the relevance, effectiveness and feasibility of this form of education at the school level (see Chapman & Windham, 1985; Forster, 1965; Psacharopoulos, 1987 ; Commonwealth Secretariat, 1987c). Different countries have experienced different forms of felt dissatisfaction with vocationally-oriented education. However, broadly there seems to be agreement that vocationally-oriented education is cost-ineffective, it has a curriculum that is too narrow, too out-of-date and irrelevant to the present-day needs of Third World countries. In particular, on economic grounds it has not given the extra benefits that were to be accrued from it. As Psacharapoulos (1987 : 194) puts it :

> The extra cost of vocational or pre-vocational subjects at the secondary level could be justified if society derived correspondingly extra benefits from such investment. Yet the existing evidence does not substantiate this hope. Several evaluations of this programme both in the advanced and developing countries, have typically concluded that the extra benefits are not there.'

Social-Political Perception

For a number of Third World and Western scholars, educationists and critics, the ideals of education and the compelling demands of practical interests were of constant debate and criticism. These critics have viewed the shift towards a narrowly focussed work-oriented education with concern (see Bacchus, 1987; Coombs, 1968 & 1985; Forster, 1965). For them education has much more loftier ideals than

preparing pupils for work and thus locking them into the economic and political motives of the dominant class. According to Carnoy (1974 : 1) :

> Educators, school administrators, and teachers stress the elightening function of the school; they claim that formal schooling is an important component of a life-long process of education, teaching youth not only an understanding of important phenomena but also the process of learning itself.

Therefore, their fear is that vocationally-oriented educaton is bound to defeat these lofty ideals and instead produce people with uncritical thinking and who are thus not self-determining people. It is thus for them a betrayal of educational values. In particular, vocational education in order to fit individuals into particular job requirements narrows the development of the cognitive and other skills of pupils from an early age. This type of education does not give them the opportunity for an all round personal development and enrichment which is necessary for life-long activities. Instead, it stunts all round vision and the potentialities of the human mind. The development of the human resources along these lines will lead to their under-utilization, particularly in a rapidly changing technological society in which occupational structures change constantly.

However, the largest and most important resource Third World countries are endowed with are human beings who have been tied into a culture of work. Therefore, the vast majority of them aspire for a life-long vocational destiny. They should be able to maximise their vocational contribution to the development and modernization of their economies. Education for people in these countries should not therefore, be so narrowly focussed that it forecloses further education or training options. Instead, education should be oriented in such a way that it will enable them to acquire written and oral communication skills and numeracy all of which have a broad range of applications in both the organized and unorganized sectors of the economy. Even in the rural sectors of Third World countries, as agriculture moves into greater use of mechanization, tubewells and irrigation, fertilizers and high yielding varieties, farmers need a sound general education with basic sciences to cope with the

sophistication that goes along with this form of production and management techniques (see Psacharopoulos, 1987 : 192). Education should also be able to cope with the unforeseen and with the unforeseeable change. In other words, with the not yet ' invented ' techniques and the fast developing new information technologies. In our fast developing societies, all types of occupations both in the present and future would need greater mental and physical ability. This will make the preparation for the present and future world of work more practically effective. This is very aptly illustrated by the following concern of Brazalian educators :

> The advanced nations, with their elevated level of socio-political development, large investment potential, efficient infra-structure and extensive industrial capacity, absorb the "information revolution" into their operational context, understanding that the mastery of this new technology is decisive for maintaining their leadership and status.
>
> In the case of developing countries, where the political and cultural dimensions are under-developed in comparison to economic growth, the incorporation of new technology tends to increase the "gap", transforming the nation into a production sub-system of the developed world.
>
> Our capacity to govern the direction of this revolution will depend on the familiarity we have with the techniques involved and the control we have over the resultant social effects (quoted in Romiszowki, 1987 : 81).

Alternative Strategies

In the light of the foregoing discussion, there seems to be an urgent necessity for resource-scarce Third World countries to orient their education and training policies in order to achieve greater social and economic effectiveness. This may be necessary in the light of the fact that the Western oriented academic/general and vocational/technical educational models in Third World countries have been slow to respond to the world of work in general and the labour market signals in particular. Therefore, we need a radical rethink of the structure, content and process of both formal and non-formal educational systems in Third World countries. In other words, what is needed is a shift away from the present emphasis in the nature of education

and of its link with the acquisition of specific skills for particular occupations (see Dore, 1980 : 60). This shift in the approach to education is towards an integrated double-edged strategy. When implemented, it will hopefully enable individuals to have a sound general education which will help to develop their all round mental and physical skills and creativity and thus prepare them to participate more effectively in the design and operation of cultural, political and economic activities of their societies at the national, regional and local levels.

In addition, the rapid and pervasive technological advances, that affect not only the world of work but every spectrum of human life, call for a constant cultivation and upgrading of an individual's full range of mental and critical skills, aptitudes and talents. This form of educational perspective has to be conceived and implemented under one overall formal and non-formal educational policy and not in a fragmented and hierarchically stratified and dichotomized way as we saw earlier. In other words, we need a comprehensive general educational policy which aims to integrate and inter-link in a coherent fashion both formal and informal institutions and agencies that provide education and training within a country interfaced with the country's world of work. In order to achieve this each country should undertake a comprehensive inventory of all the formal and informal vocational programmes offered within the country by the various government agencies, private institutions, industries and the various non-government organizations. In the light of this inventory, each country should try to integrate and interlink the various vocational training facilities that may exist within the country. In doing so, each country must mould its educational system to its own economic environment as well as its own social, cultural and related social organizations. In this pursuit, excellence should be the guiding principle for all. In particular every effort should be made to help all schools and every pupil in their pursuit towards life-long education. In such a situation every parent knows that his or her son or daughter has an equal chance to move up the social ladder. As Fantini (1986 : 50) points out :

> True equality, however, means inclusion. All are expected to learn. We now know that every person can learn under the right conditions, which may mean finding the best learning sequence or best learning

> environment for each person ... when quality and equality are merged, elitism is replaced by inclusivity. Quality is not measured by how few students, but by how many succeed.

In order to achieve the above mentioned aims, at the formal school level, there should be a total integration between a sound general education and the world of work. For every individual, the interface between education and the world of work should start from the primary level and systematically progress towards the secondary and even tertiary levels. In this interface between education and work, the major thrust of the school curriculum should not be to raise the overall level of vocational skills at the expense of a sound general education. In other words, the relationship between a sound general education and vocational skills should be asymmetrical. In an integrated educational system of this nature pupils when they leave school can have the option of either seeking employment or continuing their academic or vocational education. As Bacchus (1987 : 4) suggests :

> While 'practical activities' can be very usefully included in the educational programmes offered at these levels, they should be an intrinsic part of general education, primarily focused on improving the overall quality of instruction rather than be seen as an attempt at providing skills.

Since this form of integrated education unlike 'diversified' curriculum and technical/vocational schooling initiates all students from young, irrespective of the socio-economic background to a variety of work related programmes, it may help to reduce the deep rooted social and economic inequalities within Third World countries.

In particular, in Third World countries at the primary level, it will be educationally more beneficial and economically more rewarding, if pupils are given or "have instilled into them" a sound general education which ensures that they undertake a broad, balanced range of subjects. However, their complusory core curriculum should emphasize the 3Rs and basic sciences and relevant concepts of technology. This form of education should be linked to appropriate practical oriented knowledge and skills in the wider world of work environment in the community. In other words, in this model of education there is a continuous and growing interdependence between the

pupil, the school and the wider world of work environment in which the school is situated. The intensity of this interdependence should accelerate as the pupil progresses through his or her first level educational cycle. This type of education will provide prevocational skills and thus avoid the harmful effects of early vocational specialization. For example, it has been pointed out that early vocational specialization for young children has its limitations as these children 'are as a rule too physically, mentally and socially immature to manipulate heavy tools, to understand the economic context in which skills have to be practised, or to be able to take reponsibility for work projects' (Commonwealth Secretariat, 1987 a : 8).

At the level of the second cycle too the broad general education should be continued with a greater emphasis on core curriculum which pertains to literacy, numeracy, basic science and technology should be continued. Like in the first cycle, the second cycle too should integrate within its core curriculum work related practice with greater intensity. Australia's recent policy on secondary education may be relevant for the Third World as well. According to this policy :

> Secondary education should provide young people with a sound general education on which further, more specific education and training can build. Secondary education can best meet the needs of employers and the vocational needs of young people by imparting a higher order of knowledge and skills which are generally useful and widely applicable and which create the cultural pre-conditions favourable to economic and technological change (Commonwealth Secretariat, 1987 c : Vol.II, Aus I).

The above discussion recommends a broad general education with a combination of a cluster of practical skills, rather than in an early specialization in a specific vocation in the Third World. This form of integrated education could give an individual an all-round training, minimise the long established dichotomy between academic/general and technical/vocational education, check the growing educational stratification, be cost-effective and prepare individuals to come to terms with their essentially agricultural base as well as the rapidly changing technological and industrial scene. In particular, in a changing technological scenario, a workforce with a sound broad general education can easily upgrade their skills and equip

themselves for jobs in the new industries as old ones are phased out.

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