NOTICE

The quality of this microform is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Reproduction in full or in part of this microform is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30, and subsequent amendments.

AVIS

La qualité de cette microforme dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

La reproduction, même partielle, de cette microforme est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30, et ses amendements subséquents.

UNIVERSITY OF ALBERTA

FROM VOCATIONALIZATION TO VOCATIONALISM IN EDUCATIONAL PLANNING: AN ANALYSIS OF CROSS-NATIONAL PERSPECTIVES

BY

KHORSHED CHANDRA

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

IN

INTERNATIONAL/INTERCULTURAL EDUCATION

DEPARTMENT OF EDUCATIONAL FOUNDATIONS

EDMONTON, ALBERTA

SPRING 1991

UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR: KHORSHED CHANDRA

TITLE OF THESIS: FROM VOCATIONALIZATION TO VOCATIONALISM IN EDUCATIONAL PLANNING: AN ANALYSIS OF CROSS-NATIONAL PERSPECTIVES

DEGREE: MASTER OF EDUCATION

YEAR THIS DEGREE GRANTED: 1991

(Signed) Khorshed Chandra

(Permanent Address) C 478, Sheikh Sarai - I

New Delhi, India

DATE: 16 January, 1991

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

THE UNDERSIGNED CERTIFY THEY HAVE READ, AND RECOMMEND TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH FOR ACCEPTANCE, A THESIS ENTITLED "FROM VOCATIONALIZATION TO VOCATIONALISM IN EDUCATIONAL PLANNING: AN ANALYSIS OF CROSS-NATIONAL PERSPECTIVES" SUBMITTED BY KHORSHED CHANDRA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION IN INTERNATIONAL/INTERCULTURAL EDUCATION.

DR. R.S. PANNU (Supervisor)

DR. M. ASSHETON-SMITH

DR. K.L. GUPTA

DATE: 31 December, 1980

ABSTRACT

The deteriorating unemployment problem, since the Second World War, in both industrialized and developing countries, has focused attention on the quantitative and qualitative imbalance between the output of the education system and the occupational opportunities in the labour market. Different schools of thought and changing theoretical conceptualizations about the symbiotic relationship between education and work have influenced research on education's link with employment and development needs. Major shifts in educational strategies and new directions in educational planning and policy have placed a new emphasis on increasing productivity and removing socio-economic inequalities.

Vocationally-oriented secondary education and/or the diversification of school curriculum with a vocational bias were introduced on a worldwide scale and in keeping with the broader view of education's role in developing both the individual and the society. It was envisaged that vocationalization would lead to economic growth and national development by providing the relevant skills-training to meet the manpower needs of changing economies. It would simultaneously contribute to a more equitable distribution of the fruits of development.

Empirical studies based on the experience of both advanced, industrialized countries and newly independent and

developing countries of the Third World indicate that the attempt to interface schooling with the highly differentiated occupational structure of modern society has given rise to several problems and issues. The case of India, particularly, demonstrates that vocationalization, as an old and recurring policy theme, is largely influenced by economic imperatives and political ideologies. With the global shift in emphasis between economic considerations and orientation towards egalitarian values, "vocationalization" and "vocationalism" will continue to hold the interest of researchers in the years to come.

ACKNOWLEDGEMENT

I wish to express my sincere thanks and deep gratitude to my Supervisor, Professor R.S. Pannu, who has given me guidance and moral support. Without his direction and his sense of commitment, it would have been difficult to give substance and shape to this thesis. Professor M. Assheton-Smith's interest in my research and her continual support were a motivating factor. To her I am deeply grateful for the assistance she gave me on several occasions. I also wish to thank my external examiner, Professor K.L. Gupta, for his comments and his suggestions for further research. I am indebted to the Chair and Faculty members of the Department of Educational Foundations, Professor M.K. Bacchus, Professor J.R. Young, Professor A.M. Decore, Professor D.R. Pugh, and Professor C.A. Torres, whose words of advice and encouragement were always a source of inspiration to me. To them I wish to convey my appreciation of the help given to me during the course of my program of study.

My friends and fellow-students in the Department were always there to exchange ideas, share thoughts and contribute new perspectives. To them I wish to convey my sincere thanks. Last, but not the least, I wish to thank my husband, Vikash, for his support and encouragement and my daughters, Yasmin and Sonali, for their assistance and their confidence in my ability to complete my program of study.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

Vocational education is an integral part of educational systems all over the world. It lays special emphasis on the preparation of people for jobs that do not require a university degree to qualify for employment. It has always been shaped by the changing perceptions of people. It includes two related needs: the needs of individuals to find personally satisfying positions in the occupational structure and the needs of society to fill required positions so that the economic system will operate efficiently. One's selection of a particular kind of work has important implications both for the individual and for the total society. Therefore, it is imperative that any research on vocational education should focus on both the occupational needs of individuals and the labour requirements of society.

Vocational education has developed over the years as a specialized aspect of education. In the past, the supply of skilled people from vocational education programs has met the demands of the economic system in many developed and developing countries. In response to rapid technological and economic changes following World War II, vocational education has become increasingly diversified and formalized. However, there has been criticism of vocational education programs, and

many new terms, concepts and theories which have evolved in recent years make it essential to review what can be accomplished through vocational education programs.

At the very outset it is important to delineate the terms vocational education, vocationalization, and vocationalism for an understanding of the growth of that aspect of education which serves the skill-training needs of the individual and the manpower needs of the nation. The generic term **vocational education** has been used historically to mean education programs which include skill-training and preparation for occupations and careers. It was added to the school curriculum to achieve a particular set of purposes to make schools serve the needs of industry more effectively. Vocational education is vast in scope and is characterized by a variety of units and areas for instruction. It is beyond the scope of this study to comprehend the vastness of vocational education and it is to occupational training in schooling that we turn our attention for an understanding of the nature of vocationalization.

It is a generally held view that the manpower needs of a changing economy as a system of production are of importance to the individual and to society. To facilitate the adjustment of the skills of school leavers to the changing demands of the employment market, **vocationalization or diversification of school curriculum** was embarked upon at various stages in the development of vocational education in different countries.

This was based on the assumption that education increases individual and societal productivity and contributes to national economic growth and social development. It was also ostensibly an answer to the quest by national and international development and educational policies to find a ready and permanent solution to the increasing problem of unemployment and underemployment.

Policy responses to pressures to bring the education system into close alignment with the demands of the labour market, and to the problems created by high levels of youth unemployment have revived interest among researchers to examine the new ideology of **vocationalism.** The economic imperatives of vocational education as vindicated in the trend toward **vocationalization** of education in both advanced industrialized countries and developing countries have gradually been superimposed by political and ideological imperatives which are playing an important role in evolving and conceptualizing the new **vocationalism.** It is these changing perspectives on the restructuring of the relationship between education and work/economy and their impact on policy making and educational planning that this study attempts to explore, examine and analyze.

In the 1950s and 1960s, the phenomenal expansion of education systems in both advanced industrialized countries and developing countries was rooted in the belief that national economic growth required an increasing supply of

educated manpower. This could be provided adequately by the formal education systems existing in most countries. Therefore, national and international development policies and programs involved increased expenditures on education as an investment in economic growth. Educational expansion was affected largely by manpower planning and cost-benefit approaches in educational planning. These influences on national policies of educational development were joined by the social demand for education.

By the end of the 1960s, the "world education crisis" indicated that there was an imbalance between the kinds of manpower most countries needed and the kinds, quality, and numbers actually being turned out by education systems. It was predicted that the problem of educated unemployed would become a serious one in both advanced industrialized and developing countries. The need to vocationalize and train students in employable skills was realized, but critics pointed to the inefficiencies of the program and the growing spectre of youth unemployment.

The economic recession of the mid-1970s brought a fundamental shift in the relation of educational supply to employment demands. The rapidly increasing output of educated persons from the education systems began to exceed the demand of the labour markets. The high and rising level of youth unemployment in both industrialized OECD (Organization for Economic Co-operation and Development) countries and

developing countries of the Third World prompted researchers and policy-makers to focus attention on the relation between education and work. Vocational education re-emerged as an important issue in the international debate on educational development and planning.

1.1 Scope of the Study and its Limitations:

The growing mismatch between the qualification structure which the schools produce and the skill structure which the economy needs is a leitmotiv (a dominant recurring theme) in current research on the complex and symbiotic relationship between education and work. In both developed and developing countries, this relationship is deeply rooted in the evolution of political, social and economic systems. It plays a pivotal role in the orientation of education around preparation for labour markets.

The relationship between education and economic growth - between the educational qualifications of the labour force and the changes in the structure of occupations - is a matter of concern not only among economists but also for sociologists. While economists emphasize the link between the educational system and occupational structure and the labour market, sociologists focus on education as means of social control and a means of legitimating inequalities in society. This study is based on the premise that social and economic relations are equally important in determining the role and

function of vocationally-oriented secondary schools in the training and distribution of the young workforce in the labour market.

Earlier, in the late 1950s and 1960s, interest among researchers focused not only on the need to widen access to vocational education and training, but also on its relevance to socio-economic conditions. The post-industrial revolution period of the late nineteenth century and early twentieth century and the post-World War II period in the developed countries required skilled manpower to maintain and keep pace with the technological developments. As production came to be centred around factories, the education system began to play an increasingly important role in imparting training and developing skilled manpower. In the developing countries, the restructuring of national economies based on European models of industrialization and modernization led to an expansion of post-primary education and the establishment of public vocational education in the post-World War II period.

Recent trends - since the 1970s - indicate that vocationalization is seen as an integral component of education, the objectives of which include the attainment of education for all and the development of human resources for enhancing the capacity of developing societies for social and economic progress. There has also been an emphasis in the United Nations on viewing education as an essential right of the individual. The rapid growth in education in the 1960s and

1970s was based on the optimistic assumption that expansion of education systems would lead to greater mobility and thus contribute to greater social equality. But experience in most countries does not confirm this view and this has posed a serious challenge to the political authorities who have made "equality of opportunity" a major target in their educational development plans. International debate focuses on this wider purpose of education.

Even though every level of education - primary, secondary, tertiary - has been permeated with vocationalism, it is secondary schooling which has become the principal manifestation of specific skill training and the most important avenue of entry into the labour market. This thesis limits the scope of the study to a critical examination and analysis of the aims, objectives, problems, issues and prospects of vocationally-oriented education at the secondary level of formal schooling and does not include nonformal and informal educational methods.

The purpose of this thesis is twofold: one, to critically examine the burgeoning body of international literature on the vocationalization of education and the renewed interest in vocationalism; and two, to examine the experience of India in vocationalization in the light of the economic and ideological imperatives of vocationalism. In other words, the purpose is to relate international perspectives on vocationalism to the program of vocationalized secondary education in India.

described as the weakest link in the system of education. Expanding and improving secondary education has not solved the problems of unemployment and social and economic inequalities associated with national development. The major issue is the criticism that the quality of Indian secondary education is poor. University education has received more attention in the past because of its prestige and social demand. Elementary education has been given sentimental emphasis because of populist stances. The problem of secondary education is one of reconciling the claims of general education with those of occupational skill in a manner compatible with the needs and resources of the country. What promise does vocationalization hold for the future in the present context of expansion of secondary education, under-expansion of vocational education and increasing unemployment in India?

1.2 Objectives of the Study:

As mentioned earlier, to take a comprehensive view of the program of vocationalization in India in the context of international perspectives on its relation to general education and its contribution to economic growth and national development is the main objective of this thesis. This necessitates an examination and analytical evaluation of the concept, philosophy, objectives and implementation strategies of vocational education. The form that vocationalization takes

Notwithstanding these differences, the common constraints on implementation of vocationalization and the fundamental issues of vocationalism ricocheting on the criteria of economic efficiency and social equity indicate the convergence of global education systems. Whether the country is capitalist, socialist, or communist, policy makers regard vocationalization as the solution to educational problems and economic ills. In spite of efforts to justify its relevance on the grounds of egalitarian ideology in most countries by introducing comprehensive secondary schooling that combines academic and vocational tracks, vocational education or diversification of secondary curriculum has been challenged by critics who argue that it has not served the purpose for which it was intended. On the other hand, it has created problems and issues which are the focus of international debate. The objective of this study is to identify these issues and to understand them better by adding a global perspective to them. The prevalence of vocationalism indicates that it is an educational trend of international importance and it is hoped that this study will contribute to furthering our understanding of its globalization.

1.3 Study Questions:

This thesis is based on a critical literature review of the theoretical position taken by researchers in the

vocationalization as a response to the need to establish a meaningful relationship between schooling and the labour market. Empirical evidence from the Western industrialized countries and from the developing countries of the Third World is used to weave the many threads of diverse vocationalization programs into a patterned fabric in an attempt to find an answer to the following questions. Why does vocationalization emerge consistently as a recurrent theme for educational planning? What factors and forces of change have influenced the emergence of the ideology of the "new vocationalism"? What is the overall impact of international trends in vocational education on developments in India which is embarking on an ambitious program of diversification of secondary curriculum? Why is the appeal of vocationalization so powerful in spite of increasing evidence that it is ineffective as a general solution to education and economic problems?

1.4 Sources of Information:

As the main objective of this study is to examine and analyze the role of vocational education and training in the context of cross-national perspectives, it was not possible to conduct an in-depth field study in any particular country. It is therefore based entirely on information and data gathered from secondary sources. An extensive and intensive library search revealed secondary data (from several

material for the analysis.

Publications of scholars and researchers on the theoretical rationale of vocationalization provided the framework for a close examination and analysis of the theories linking education and work. The question of the relationship between vocationalization and the economics of education was explored through the theories of human capital and human resource development; the theories expounding the link between education and economic growth, and education and the labour market.

In the context of this theoretical background, it was possible to survey the experience of developed and developing countries through a study of government documents and papers, reports of educational commissions and analyses of the same published by researchers. Detailed accounts based on ethnographic studies of the emergence of the "new vocationalism" in England were studied as secondary sources to describe the challenge it poses to existing policies and their implementation and the trend of future policy initiatives. The themes explored were relevant to the issues and problems of vocationalization in other industrialized countries and in the light of social and economic changes taking place in these countries. Case study literature on countries like the U.S.A. and the OECD countries was examined for a review of the goals, principles and purposes of

perspectives on vocationalization and its effectiveness in relation to general education.

Empirical evidence located in journal articles, books, seminar and conference reports, and evaluative studies of programs initiated and funded by international agencies like the UNESCO and its IIEP, the OECD, and the World Bank and its affiliated organizations supplemented scanty information available from reports of local agencies on the programs of diversification of secondary education in developing countries of the Third World. Case studies were used to examine the issues of vocationalization which have deep historical roots and links with development and economic growth.

The detailed study of vocationalization of education in India, in the broad context of educational development and economic growth, was organized through a review of historical records, reports of educational and planning commissions, documented government reports and recent/contemporary publications on the subject. As the purpose was to investigate the factors influencing the development of vocational education and training, it was necessary to trace the historical antecedents to the British colonial period in order to study the impact of shifts in economic policy on changes in education policy. The periods under review are: the period when the traditional educational system was almost wholly replaced by the colonial one (1813-1900); the period when the

the Indian people (1900-1947); and the post-independence period (1947 onwards) when India's economic policies and strategies have largely determined the direction and pace of change in the educational system.

1.5 Mode of Analysis:

The mode of analysis used for this study includes an examination of:

1. the theories which vindicate the aims, objectives, and purpose of vocationalization and provide the rationale for the program on the twin criteria of economic utility and social control.
2. the case studies of vocationalization programs in Western industrialized countries and developing countries of the Third World which indicate the structural pressures for introducing the program and the constraints on the successful implementation of the program.
3. the economic and ideological imperatives of vocationalism; their changing patterns; their prevalence and diffusion from the industrialized to the industrializing countries.

1.6 Organization:

The thesis is organized into an introductory chapter, four major chapters, and a concluding chapter. The

a theoretical framework encompassing a review of the literature on theories expounding the relationship between education and economic growth, education and work, education and unemployment. These theories provide the rationale for vocationalization as a response to the articulation of schooling with the labour market.

Chapter 3 looks at the nature of vocationalization programs in the advanced, industrialized countries and examines the issues of the "new vocationalism" in Britain.

Chapter 4 covers the diversification of secondary curriculum programs in the developing countries of the Third World and explores the historical roots of the problems encountered in the development of vocational education.

Chapter 5 examines attempts in India since the colonial period to interface secondary education and work with greater efficiency and equity and the corresponding problems and issues.

The concluding chapter serves to bring together and synthesize the results of the preceding analysis on the limits and possibilities of vocationalization of secondary education in India and other similar developing countries.

THEORETICAL FRAMEWORK

Introduction:

The diversification of secondary school curriculum or curriculum change in a practical or vocational direction is an educational strategy that has been introduced, with varying degrees of success and with different outcomes, in both developed and developing countries. It has given rise to a controversial issue which has refused to stay "buried" (Bacchus, 1988:33). The main objective of diversified or vocationalized secondary education, according to policy makers and planners, is to prepare and equip secondary school students for the world of work by introducing changes in the curriculum to make it more relevant to the labour market.

Historically speaking, vocational education has deep roots. In the general sense, it is as old as mankind itself. For centuries past, vocational education was organized, in the form of apprenticeship, for future master-craftsmen or skilled tradesmen. It grew out of a social need for a skilled workforce and was shaped by the changing needs of the workplace. The introduction of mechanical power and the consequent rise of large-scale industry in the nineteenth century; increasing automation and technical progress and the consequent economic and social changes revolutionized the traditional concept of vocational education. Since the Second

aims and objectives of vocational education have continued to be challenged. In the contemporary world, life has become predominantly work-oriented and the structural theorists hold the view that the primary role of education is to produce a work force whose requirements may be defined as behavioural skills needed to fit future work roles (Simmons, 1974:8). Trained workers have become important to the realization of national goals and vocational education faces a unique challenge in the years ahead - a challenge rooted in the social and economic welfare of people.

This chapter first looks at the new rationale of Human Resource Development as investment in skill development. This is deeply rooted in the theoretical debate over the relationship between education and economic development. Is investment in human capital (expenditure on education) a profitable investment for the individual and for society? Does it increase productivity and economic growth? An attempt is made to find an answer to these questions in the abundant literature on human capital research. In relation to the world of work, schooling has certain functions to perform. These are examined in the context of theories of education and work. The precise relationship between vocational education and the labour market has been the focus of the Balogh-Foster debate in the 1960s. The major issues underlying this international debate which continues to hold the interest of researchers,

are identified and examined. With the emergence of unemployment as a worldwide problem, research is once again focused on the relationship between education and work in an attempt to find an answer to the question of the relevance of vocational education and training to a changing labour market. In brief, this chapter attempts to present a broad theoretical framework as a background to the current international debate on the objectives, problems and prospects of vocational education and training.

2.1 Education and Human Resource Development:

In the second half of this century, scholars from a variety of disciplines have extensively documented the role of education in many facets of development. The rapid expansion of education in most countries since the Second World War has been largely motivated by economic or human resource development. It was repeatedly pointed out by economists that the process of economic growth was greatly influenced by the quality of human resources. They emphasized that "human resources, not capital or income nor material resources, constitute the ultimate basis for the wealth of nations" (Harbison, 1973:3).

The ensuing debate on the underlying issues of "economics and education" stemmed from the works of Schultz (1961), Becker (1964), Denison (1962), Hanson (1969), Weisbrod (1969) and Blaug (1968, 1969) and others who argued that

"people enhance their capabilities as producers and as consumers by investing in themselves and that schooling is the largest investment in human capital" (Schultz, 1964:x). The human capital theorists 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 (Bowman, 1966). The evidence of the 1960s demonstrated that the education of large numbers of people alone did not create or generate employment. A number of international organizations, including the ILO and the Ford and Rockefeller Foundations, were engaged in intensive analyses of the education-employment nexus in developing countries in the early 1970s (Edwards and Todaro, 1974:27). This led to abundant literature on the relationship between education and employment in developing nations and the evolution of policies on Human Resource Development (HRD). We will concern ourselves with these two aspects in so far as HRD and employment have influenced and become the leading challenge of economic development.

HRD is mainly concerned with the development and allocation of human resources in occupations (Mehmet, 1988:1). Its rationale is to facilitate socio-economic development by improving and enhancing the quality of the work force. Knowledge and skills are acquired for ultimate exchange in the labor market. In the 1960s, HRD was interpreted as public investment in higher education which was expected to produce

manpower for accelerated national development. Research on the economics of higher education (Schultz, 1961; Blaug, 1968) based on rate-of-return studies of investment in education (Becker, 1964; Psacharopoulos, 1973; Psacharopoulos and Woodhall, 1985) and manpower forecasting exercises (OECD, 1962; OECD, 1964) emphasized the need for large-scale public investment in higher education as a necessary prerequisite for producing the much required high-level manpower particularly in developing countries (Harbison, 1973). It was justified on three grounds. First, higher education would promote equality of educational opportunity by narrowing income differentials and raising the quality of human resources (Schultz, 1972). Second, public investment in higher education was justified on the basis of rates of return studies (Becker, 1964; Blaug, 1968). Third, education was a major source of economic growth and consequently countries should achieve equilibrium between the educational system's output and the requirements of economic growth for national development.

Evidence from many developing countries on the unprecedented expansion in higher education during the 1970s and 1980s suggests that the role of public higher education both as an income equaliser as well as manpower producer is very much in doubt. It falls short in relation to the twin criteria of efficiency and equity (Mehmet, 1988:4). In the light of these developments, an alternative explanation, like the "Screening Hypothesis" has been put forth to account for

the recent rapid expansion of higher education. Formulated by Arrow (1973), Taubman and Wales (1974) and others, this hypothesis argues that higher education is a "filtering device" which does not influence productivity of graduates and that the university is a "service station" performing the role of grading, classifying and providing credentials for prospective employees of future employers. Important social and environmental factors as well as personality differences are responsible for differences in choice of educational careers and income differentials. Although the "diploma disease" (Dore, 1976) is a world-wide phenomenon, credentialism with its undue emphasis on "paper qualifications" continues as an inefficient and inequitable dysfunctional practice and as a colonial legacy in a majority of Third World countries. It creates a distortion in the wage-productivity relationship resulting in wasted resources and retarded economic growth (Mehmet, 1988:12).

HRD has acquired a new rationale even though conventional arguments continue to favour public investment in higher education on the assumption that it is a public good provided by the state and there is a social demand for it for climbing up the socio-economic ladder. HRD policy makers and planners in the 1980s, particularly in the developing countries, have realized the importance of the training of "blue-collared' workers and the need to invest in skill development for the purpose of increasing the productivity of technical and sub-

professional manpower. As a result of rapid technological changes, skill-training is assuming great importance in promoting rural development and small-scale industrialization. With the exception of the skill development policies of Japan and the Far Eastern NICs (Newly Industrialized Countries) or "Gang of Four" (Singapore, Hongkong, Taiwan and South Korea), other developing countries, by contrast, tend to over-invest in university education and under-invest in sub-professional skill development. In order to correct this imbalance in the pattern of educational investment, innovative strategies for diversification of secondary education to expand vocational and technical education in order to encourage entrepreneurship and self-employment are targeting HRD programs to train and educate not only workers but future workers-cum-managers.

2.2 Education and Economic Growth:

Since the 1950s there has been a tremendous growth of research and publications in the area of the economics of education. Some of the topics which have been the focus of international debate are: the contribution of education to economic growth , the profitability of investment in education (social and private returns to education), the role of educated manpower in economic development, the costs of education (cost effectiveness and productivity), the financing of education, and the effects of education on the distribution of income and wealth.

The question of how education contributes to economic growth continues to dominate the vast literature on the economics of education and has recently been expanded to include the controversy about the relative importance of general education versus diversified or vocationalized education in post-compulsory schooling in developed and developing countries.

Since World War II, economic growth has been a consistent goal of most countries. For developed countries like the U.S.A. it means reducing unemployment as well as increasing the social welfare of the people. For developing countries like India, it means trying to raise the standard of living and to reduce widespread poverty and deprivation. The goal of attainment of high, steady rates of economic growth, as measured by the growth rate of gross national product (GNP) has not been reached by many countries.In attempting to understand the process of economic growth, economists have examined, among other factors, changes in the size and quality of the labour force. The contribution of education to economic growth is presumed to occur through its ability to increase the productivity of an existing labour force in various ways, including both general education and vocationalized or technical education. However, while a shortage of educated people might limit growth, it is not clear what kinds of education will assist economic growth - general formal education, technical or vocational education or informal

education related to specific jobs (Hicks, 1987).

World Bank studies show that in general, countries that have higher levels of income (like the U.S.A., France, Sweden) also have high levels of educational attainment (higher adult literacy rates and higher enrollment rates) but this does not mean education is a necessary cause of higher levels of output and income. Economists argue that education is both an investment good and a consumption good. As income grows, people demand more education as they can afford more education both for themselves and for their children. Whether this education contributes to raising productivity and stimulating economic growth remains a debatable topic in the literature on education and economic growth. What is clear in the literature is the overall agreement among economists that education has an impact on participation in the labour force and national economic growth and that human capital, a critical element in the production function, explains differences in productivity growth between developed and developing countries.

The theoretical debate over the relationship between education and economic development has shifted dramatically in recent years. Arguments rooted in the human capital perspectives, which dominated research in the 1960s and early 1970s, have been criticized and partially supplanted by Marxist and neo-Marxist conceptualizations founded in the dependency and world-system perspectives. Earlier, theorists

were the mechanization of agriculture, rural-urban migration, the expansion of a national market, a mass communications network, a decline in mortality and fertility rates, and an increase in political participation (Benavot, 1989:15). As such, human capital theorists regarded the provision of education as a social and productive investment in human capital, as profitable as investment in physical capital. Regarding education's purported role in the process of economic development, early human capital theorists (Schultz, 1961; Denison, 1964; Inkeles, 1974) argued that the main contribution of education to economic growth was to increase the level of cognitive skills possessed by the work force and consequently to improve their marginal productivity. The greater the provision of schooling, the greater the stock of human capital in society and the greater the increases in national productivity and economic growth. Recent researchers argue that the "inefficiencies" associated with educational expansion in the Third World (high drop-out rates, poor-quality schools, repetition of grades) point out that it is not the scale of educational provision (enrollment rates) that is critical to economic growth but the actual amount of education attainment embodied in the paid labor force (Psacharopoulos and Arriagada, 1986).

Recent theorists focus on the dynamics of the world system that cause economic transformations in both the core

foreign investment capital and the dependence on imported technologies constrain long-term economic development, others hold the view that integration in the world system may have contributed to economic growth in the Third World (Benavot, 1989:15). Thus while human capital theorists argue that education increases productivity, according to modernization theorists educational expansion, through its effects on individual values, beliefs and attitudes, accelerates the building of a more productive work force and sustained economic growth (Halsey, Floud and Anderson, 1961).

During the 1970s, the human capital and modernization perspectives became the focus of international debate, especially in the context of Third World development/underdevelopment. Researchers stressed that educational expansion led to credentialism. According to them, learning relevant skills became secondary in importance to acquiring credentials (Collins, 1979). The unsatiated demand for education increased the preponderance of credentialism, educational inflation and vocationalism, thereby placing severe constraints on the limited resources of developing economies (Dore, 1976). The neo-Marxist theories of underdevelopment propounded by Amin (1973) and Frank (1967, 1978) and of education's role in reproducing existing social and economic inequalities (Carnoy, 1974) questioned the view that education was an important precondition for economic

of education on economic development were far more problematic and contradictory than earlier theories had assumed.

2.3 The Concept of Human Capital:

Human beings invest in themselves, by means of education, training, or other activities, which raises their future income by increasing their lifetime earnings. This concept was developed in the 1960s by the American economists Theodore Schultz and Gary Becker. Earlier, a number of classical economists like Adam Smith had pointed out that education helped to increase the productive capacity of workers (investment in human capital) in the same way as investment in physical capital increased the productive capacity of a factory or other enterprise. Schultz (1961) and Becker (1964) analyzed educational expenditure as a form of investment and developed a theory of human capital formation and further analyzed the rate of return to investment in education and training.

Since that time the concept of human capital has dominated the economics of education and it has had a powerful influence on the analysis of labour markets. The human capital model of labour markets considers the schooling process to be intimately related to labour market behaviour. According to this theory, all productivity-relevant differences between individuals can be scaled along a single dimension - the

individual "acquires" human capital through investment in education and post-school investments in on-the-job training (Becker, 1967; Mincer, 1970). Workers supply what employers demand - human capital. Economists who use human capital models believe that among major components of productivity under modern technological conditions are cognitive skills. Years of schooling completed and years of experience are indices of an individual's productive ability, her/his intellectual and technical skills. These are easily observable by employers who have little problem relating human capital to productive capacity. However, investment in human capital remains a controversial issue. Critics argue that education does not increase the productive capacity but simply acts as a "screening device" which enables employers to identify individuals with higher innate ability or personal characteristics which make them more productive (Woodhall, 1987:21). Schooling is correlated with productivity but contributes little to productivity. According to this hypothesis, the investment in schooling benefits the individual by allowing her/him access to high-paying jobs, but contributes little to her/his job performance and nor does it add to society's stock of productive resources (Carnoy, 1980:24). This has been refuted by others who argue that investment in education and training can produce different results for different groups in the society.

a significant part of the differences in wages paid to different groups in society is a function of the social organization of production; that is, who controls the means of production and for what purposes production is used. Out of the inherent antagonism of labour and capital, members of the working class are pitted against each other through "segmenting" themselves into different groups. They are paid different wages and perform different kinds of work. According to Carnoy (1980), under "segmented labour market" theory, an individual can improve his chances of being employed by increasing his level of schooling. But giving more education to disadvantaged and minority groups will not raise their employability. This is because it is the nature of the labour market and the capitalist control of that market which determine the level of unemployment and wages and those who are more susceptible to being unemployed (Carnoy, 1980:112). While education and training will increase certain kinds of labour skills and may contribute to economic growth, "segmentation" theory suggests that structural changes in the economy are necessary to achieve equity, economic development and full utilization of human resources.

The results of studies conducted and reviewed by Psacharopoulos (1973, 1981) confirm that expenditure on education (investment in human capital) is a profitable investment both for the individual and for society. However,

adequate measure of the economic benefits of education and it is difficult to decide which of the two - human or physical capital - represents the more profitable form of investment. As mentioned earlier, critics have also argued, in accordance with the "screening" or "filtering" hypothesis (also known as the "certification" or "sheepskin" argument in the literature), that education simply confers a credential which enables the holder to obtain a job without directly affecting his or her productivity (Blaug, 1987:119). Some writers call the view that employers value the certificate or diploma provided by the educational system, rather than the knowledge and skills that are taught in schools, "credentialism". Some critics even argue that in developing countries "credentialism" has become a "diploma disease" (Dore, 1976).

This hypothesis generated considerable controversy in the 1970s. A number of economists argued that while a "weak" version of the hypothesis is acceptable since educational qualifications are used in selection processes (Blaug, 1972, 1987; Chiswick, 1973; Layard and Psacharopoulos, 1974), there is no evidence to support the "strong" version of the hypothesis that education has no direct effect on productivity. Psacharopoulos (1979) argued that the fact that employers continue to pay educated workers more than uneducated workers throughout their working lives refutes this.

influenced by the idea of education as a "screen" or "filter". Blaug (1987:100) who describes research on investment in human capital as "a slightly jaundiced survey" of the empirical status of human capital theory, argues that the "screening" hypothesis serves as a reminder that education does far more than impart knowledge and skills. The possession of an educational qualification indicates that an individual has certain abilities, aptitudes, and attitudes, but it is the educational process that contributes to shaping and developing those attributes. Thus the concept of investment in human capital must be extended to include activities which affect personal attributes as well as skills, and it must recognize that such activities increase workers' productivity in a number of ways (Woodhall, 1987:31). There is now a widespread view that education affects productivity both directly, by imparting vocationally useful knowledge and skills, and also indirectly, through its effect on attitudes.

As Mincer sums up the debate:-

> The productivity and screening functions of schooling are not mutually exclusive in a world of imperfect information .... The controversy, if any, concerns the relative importance of the productivity and screening functions of schooling in affecting earnings.
>
> (Mincer, 1980:125)

The human capital research has influenced many programs that have developed in recent years in response to increasing unemployment among young people and these programs are

increasingly concerned with forging closer links between general and vocational education, training, and work experience, all of which represent investment in human capital.

2.4 The Functions of Schooling in Relation to Employment:

The issue of vocational education is complex and the whole concept is treated as problematic. Researchers - historians, sociologists, economists and educators - have attempted to unravel the many threads that make up the complex web of the relationship between education, training and work. Education has always had a close link with the world of work. Since the end of the Second World War, in particular, schools have increasingly been expected to develop in young people the knowledge, attitudes and skills which will enable them to contribute to the economy. It is generally believed that educational institutions perform the functions of selection, socialization, orientation, and preparation in relation to employment (Watts, 1985). Educational qualifications or credentials are necessary prerequisites for selection to many occupations. Even though the case for credentialism is built on the principles of efficiency and competence (the most able people get the most demanding jobs) and equity (talents and efforts rather than the accident of birth determine the social status of individuals) it is also argued that educational

qualifications are used as criteria for entry into occupations because they are convenient to administer and defensible in public.

A second function of educational institutions in relation to employment is one of influencing the attitudes of students to the world of work. The structure and social relations of education reflect and reproduce the structure and social relations of the work-place (Bowles and Gintis, 1976). The process of socialization into employment remains a strong feature of the educational system as the schools nurture, within young people, attitudes and behaviour in keeping with their likely future levels of participation in the labour force.

The third function is to use the curriculum to help students understand the choices they will have to make on entering the world of work. This function includes career-education programs and learning about work as part of the preparation of their role of citizen.

The fourth function, according to Watts, is that of promoting the acquisition of specific skills and knowledge which students can apply directly after entering employment. It is these skills which draw attention towards the need to vocationalize education. Yet the general view has come to be that introducing vocational education in schools requires resources, equipment and expertise which schools rarely possess. Furthermore, it runs the risk of limiting pupils'

occupational horizons prematurely and developing skills which would rapidly become outdated in a changing labour market.

2.5 Theories of Education and Work:

Education and work are connected in most societies. Theories of the relation between education and work can be either normative or positive (Levin, 1987). The two normative theories are as follows. One theory holds the view that a major function of schools should be the preparation of workers to serve the system of production. Schools should be designed for "social efficiency" by preparing workers for the existing economic order. The criterion of success is the degree to which the schools provide trained manpower to fulfil the needs of firms.

The second normative theory holds the contrasting view that schools should serve the ideals of providing a moral education dedicated to human development and democratic ideals without reference to the needs of the workplace. (Dewey, 1916 and participants in the Progressive Education Movement in the U.S.A.) John Dewey's philosophy of pragmatism, instrumentalism or experimentalism emphasized the concrete over the more abstract problems of life and showed the significance of schools as social institutions. It fostered progressive education in which experimental methods would develop student initiative. Dewey was a strong

proponent of vocational education which, in his view, would bridge the gulf between knowledge and action. Further, it would provide the skills and attitudes necessary for living in an age of science. Vocational education was needed as a form of practical education for the masses to counterbalance the emphasis on liberal education for the elite.

Thus there are two dominant views based on normative theories about the relationship between education and work. The first view, the social efficiency view, focuses on the value of education in preparing the young for existing adult roles. In this framework, schools exist as part of a broad system of socialization for competence. The emphasis is on the "output" of the school rather than the process itself; competent workers must have specific skills and attitudes which the schools must provide in order to create a properly socialized adult workforce. The second derives from the philosophic view that education creates social growth, a view closely associated with Dewey who saw in education the potential for transforming the young so as to create a more desirable future society. Education is to be justified, not by its external returns, but rather it is to be measured against the intrinsic value of the process itself in developing the talents of the young. In this context, the preparation of the young for the workplace is denigrated in favour of preparing them for creating a system of work in the future based upon the values that will arise from their

education.

Most capitalist societies seem to have been influenced by the logic and values underlying the "social efficiency" approach and the notion of "correspondence" between the structure of the schooling experience and that of the workplace. In this view, the schooling process contributes to the formation of workers, and in doing so, to the reproduction and expansion of the production process. Educators and social thinkers are opposed to the concept of separating vocational and general education on the ground that such segration leads to undesirable status distinctions between individuals because of their occupational choices and to false superiority-inferiority attitudes towards equally essential aspects of education.

While normative theories emphasize an ethical or moral approach to what should be the relation between education and work, positive theories attempt to explain the observed connections between education and work. The human capital theory offers an explanation of the relation between the educational system and the system of work. It links specifically labour markets and returns to investment via labour market participation. Although it does not address the issue of "correspondence" between schooling and the workplace directly, it does propose investment returns as the ultimate guide for educational decisions, and expects that families and societies will attempt to make certain that education is

Sociologists have put forward different explanations to the close correspondence between the organization of schools and that of the workplace. Functionalists view schools as the single most important agency of socialization for creating competent adult workers for modern work institutions (Parsons, 1959; Inkeles, 1966; Dreeben, 1968). This approach argues that schools can be understood as a response to the need to prepare workers for the technical requirements and social organization of modern work enterprise. Since workers have little or no control over the product or nature of their work, it is necessary to motivate them through rewards that are external to the work itself, such as money and prestige. Similarly in schools, there are external rewards such as grades, class ranks, and diplomas (Dreeben, 1968).

However, the functionalist approach has been criticized on two grounds. First, although both schools and workplace have changed over time, the forces of change that dominate both the school and the workplace are not evident in the functionalist explanation of the correspondence between education and work. What forces and processes have shaped and continue to shape the schools? What are the connections between changes in the workplace and the education of the young? Second, the functionalist approach does not take into account the differences in the treatment by schools and workplace of race, sex, and persons from different social-

class backgrounds.

Schools are seen by Marxist theorists as instrumental in preparing wage labor that will be properly inculcated with the skills, values, and attitudes to accept the capitalist order and to contribute to capital accumulation (Apple, 1979; Althusser, 1971; Bowles and Gintis, 1976). These theorists focus on a dominant capitalist class moulding the structure and agenda of the schools either directly or indirectly to reproduce exploitable labour power for the needs of capital expansion and to mediate the contradictions of capitalist production. Their explanation, however, does not take into account the fact that schools tend to be more equitable and democratic than the workplace and that there are greater opportunities for upward educational mobility than upward occupational mobility (Apple, 1979).

2.6 The International Debate on Education and Work: Major Issues:

In the development of education, a long standing issue has been the controversy over diversified secondary education or vocationally-oriented education. This issue is linked inextricably to the issues of productivity or efficiency and social equity of education and job training and to the more fundamental question of how these can be substantially improved in rapidly changing economies. These issues have become increasingly important in the light of the widening

in the variant demographic trends, patterns and tendencies in developed and developing countries. Worker productivity has become a central concern worldwide since the mid-seventies and especially so in those countries where schools are turning out masses of educated youth who cannot all match the skill requirements for available jobs, the supply of which is severely limited in the labour market in any case (Ishumi, 1988). The current debate focuses on new perspectives on the "school/work/society" dimension, that is, the costs and benefits of a greater emphasis on vocationalization.

While the recent interest in vocationalization of education in the West is related to the changing international economy, the debate over the pressing need to vocationalize schooling in the Third World dates back to the 1960s (Foster, 1965b; Hanson and Brembeck, 1966; Lillis and Hogan, 1983). In his proposal, to relate education more directly to production, Balogh argued for using the schools as the training agents for the production process, gearing their curricula and teaching to produce skilled people who could step directly into jobs, having been fully and expertly prepared by the schools. Balogh's arguments were mainly concerned with considering a balanced educational program for the newly independent countries of Africa where, he argued, agricultural backwardness was the gravest cause of poverty, hunger, misery and even illness (cited in Hanson and

reform in African countries, therefore, was the reorientation of schooling towards agricultural progress.

In his rebuttal, Foster pointed out the questionable nature of Balogh's view of the role of vocational education in economic development. For Balogh, school was an extremely flexible institution that could accomplish almost anything as an agent of social change and adapt its operations to problems not included in its historic tasks. The school possessed independent power that enabled it to invoke social change by direct intervention.

Foster's major disagreement with Balogh was twofold. First, unlike Balogh, he did not place much reliance upon the school or formal educational institutions in carrying out social change and was skeptical about the power of the school to solve problems that were created outside the school. Second, Foster did not view vocational and general education as substitutes for each other; rather he saw them as essentially complementary. He argued that academic education was pre-eminently a vocational education which provided access to the highest paid occupations in Ghana. It was fallacious to reason that vocational aspirations of children would be altered by massive changes in curriculum; that by changing the curricula and introducing agricultural and technical subjects the aspirations of young people would be directed towards agricultural activities and consequently the

the growing volume of unemployment would be checked. Vocational aspirations are determined by factors which lie outside the schools - "the structure of incentives within the economic system and the degree to which the institutional framework provides a milieu which is supportive of entrepreneurial activity" (Hanson and Brembeck, 1966:173).

Since the Balogh-Foster debate, issues connected with vocational education have assumed increased importance as varied solutions to unemployment and strategies to improve education have been proposed. One view is that vocational education and training should be delinked from public and formal schooling. Studies (based on World Bank and UNESCO data) show that the benefits generated by vocational education do not exceed those of general education (Psacharopoulos and Loxley, 1985). Consequently, the most socially efficient way of providing specialized skills in a given economy is the function of specialized vocational and technical institutions rather than the formal school system. The second contrasting view holds that, notwithstanding the many dilemmas and questions, vocational education has presented itself as one of the solutions of the future. For most countries across the continents, four major patterns of vocational education have been identified. These serve the purpose of providing specific skills for employment or employability in a range of job categories. They also

Further, by calling a halt to the movement of youth from rural to urban areas they thereby check the transfer of manpower and skill resources from the needy traditional sectors to the modern sectors. According to Ishumi (1988), these four principal approaches to vocationalization of education are: (1) parallel vocationalized systems, (2) diversification of the total system, (3) vocationalizing a component of the core curriculum and (4) establishment of specific non-formal training-cum-production centres.

In the first pattern, parallel, practical, vocationally-oriented programs like the agricultural school and the trade schools or polytechnic centres serve the purpose of creating manpower for economic growth in situations where lower-level school graduates cannot be absorbed at higher levels in the formal system. But they are often relegated to a second position as second-chance institutions for less capable individuals.

The second pattern which argues for whole-system vocationalization aims to integrate education with work, to de-emphasize elitist bookish knowledge and to orientate students' attitudes towards society, the community surrounding them and the world of work. But the problem is of striking and maintaining a right balance between education and production as a twin-package for all schools (Ishumi, 1988).

vocational subject or group of subjects as a compulsory component of the curriculum takes care of the students' academic and intellectual development and at the same time sensitizes them to alternate vocational avenues possible in the world of work upon leaving school. But such an approach does not claim to be steeply vocational as such for the stress is placed on influencing attitudes and interests at a pre-vocational stage.

The fourth pattern consists of low-cost, out-of-school, pre-employment-entry institutions designed to offer post-primary vocational training, trade training and/or work experience to primary school leavers. But notwithstanding tangible results such as addressing the mounting problem of school-leaver youth unemployment and lowering training costs by engaging in the production of goods and services, these nonformal institutions are only seen as second- or third-alternative institutions after "failure" with the originally targeted conventional academic school.

Since most newly independent Third World countries in the post-World War II period did not have an industrial tradition and base, they were encouraged to adopt and emulate Western patterns of vocationally-oriented education with very little attempt to examine their appropriateness, relevance and cost-effectiveness. The inappropriateness of the Western models of vocational education to Third world countries

the Third World with the exception of the NICs.

The world economic crisis of the mid-1970s and 1980s was accompanied by a big fall in the prices of primary commodities. With the onrush of industrial development strategies and in order to facilitate the multi-national companies' manpower needs of skilled and semi-skilled workers, many Third World countries accelerated their vocational education and training programs even though the assumptions underlying the Western model of vocational education whose underlying "fallacy" was pointed out by Foster (1965) had begun to be questioned. A policy of investment in labour-saving equipment and machinery and a policy of continuous displacement of workers in order to make the manufacturing process cost-effective and therefore competitive created in the 1970s and 1980s not only unemployment but a wastage of skilled manpower in Third World countries (Selvaratnam, 1988:137).

A matter of continuous debate is the precise relationship between vocational education and the world of work. In times of rapid technological change, societies face the problems of the knowledge base of occupational training, the vocationally-oriented educational system, and the industrial structure itself (Musson, 1982; Zymelman, 1985). Consequently the realities of the changing labour markets must be taken into consideration before a country decides to

relevance, effectiveness and feasibility of vocational education at the school level continue to be the focus of international studies of vocational education conducted in both developed and developing countries. This evaluation of vocational education programs has led to a radical rethinking of the structure, content and process of both formal and nonformal education systems in Third World countries.

2.7 Education and the Labour Market - the Issue of Unemployment:

Research in the past few decades has also attempted to understand the massive problems of widespread and increasing unemployment and underemployment in both developed and developing countries. One of the issues of educational planning in the 1970s, following the Balogh-Foster debate on vocationalism in the 1960s, was the issue of educational reform when it is unaccompanied by reform of the labour market. Economists argued that the problematic phenomena of unemployment and overeducation, especially in Third World countries, are brought on mainly by imperfections in the labour markets, besides other factors like demographic trends, misguided public policies on education and employment and institutional deficiencies of the educational system (Irizarry, 1980:342).

Young people (15-24 age group) are usually more affected

by unemployment than adults. The causes are many. However, the most frequently suggested explanation is that young people are unemployed because they are unskilled and they are unskilled because they are untrained and poorly educated. Thus, it has become commonplace to assign a central role to education in solving the "youth unemployment problem" (Jallade, 1987).

Economists and sociologists argue that youth unemployment is mainly caused by a number of economic, demographic, educational and attitudinal factors. Lagging economic growth and increasing population growth dramatically affect the supply of labour. Many argue that large numbers of young people are unemployed because they are uneducated and lack marketable skills for jobs available and consequently the solution lies in more and better education. Critics of this view remind us that today's young people are, on average, far better educated than their elders at least in terms of number of years' completed schooling. Second, a good level of general education no longer guarantees ready employment. Moreover, a substantial proportion of jobs do not require education beyond the level of compulsory schooling. Yet those who argue that youth employment is due largely to lack of education and training, call for more education, to assess the nature and content of the learning that goes on within schools and to complement formal education with vocational training in order to increase "employability".

Rather than blaming the lack of general education or its poor quality, many believe that a number of young people are unemployed because the education system has failed to provide them with the specific marketable skills that employers want. In spite of their general education, school leavers are referred to as "unqualified" because they lack professional training. Such a situation provides a rationale for establishing vocational education and training as a transitional area between formal education and employment. In recent years, a number of employment-related training schemes and strategies have been introduced in a number of developed and developing countries. But as critics of vocationalization point out, evaluation studies on the effectiveness of vocational education and training on the "employability" of workers have failed to produce conclusive evidence to answer the question of whether or not vocational training is the right remedy for unemployment.

Conclusion:

In summary, both as a consequence and as a cause of the development of the human capital theory, education has been accepted as an aid to the achievement of individuals' economic ambitions and/or national economic and social objectives. In both developed and developing countries, where large numbers of young people are unemployed, the focus of educational debates has been the relationship between

education and work. Disagreements over the treatment of school-leaver unemployment have tended to be sharp and many put the blame on the schools themselves and on the antimanual work aspirations which they are said to produce through inappropriate curricula and teaching methods. In most countries, schooling is planned and assessed according to its contribution to manpower needs and creation of a productive labour force. General education provides the basic skills which will increase an individual's productivity in all jobs, whilst vocational education, on the other hand, will increase an individual's productivity in a narrower range of jobs by providing more specific skills. But in practice, linking education and work is fraught with difficulties. Each country will have to find its own solution according to its socio-economic milieu - a solution to the problem of growing numbers of the young unemployed who are in desperate need of help at a crucial stage of their lives.

In the following chapters an attempt will be made to examine evidence available from the industrialized world and the developing countries of the Third World where a solution to the problems outlined in the theoretical debate has been sought in vocationalization programs and the ideology of "new vocationalism".

INTERNATIONAL CASE STUDIES - THE DEVELOPED WORLD

THE "NEW VOCATIONALISM"

Introduction:

Technology, as organized knowledge, is a prime and growing force for social and economic change throughout the world. The momentum of change has accelerated since the Second World War. Recent economic changes affecting most countries, coupled with a number of political, demographic, and social factors, are modifying attitudes regarding the value, status and role of general and vocational education. The slow-down of global economic growth, the contraction of the job market, and widespread youth unemployment in both developed and developing countries have led to a questioning of the nature of the link between schooling and work and the contribution of formal education to economic growth. As a result, a new approach to the acquisition of skills which, it is argued, would make it possible to absorb new knowledge and learn new tasks throughout life - both of vital importance in a period of rapidly advancing technology and changing society - has emerged.

Efforts have been made in a number of countries, both developed and developing, to integrate work into the school curriculum, and to break the long-established dominance of

mismatching between requirements and output suggests that these attempts have not been successful. Vocational education and training is too often being done for a rapidly receding mechanical age, not for the new technological era. Since the range of skills required in future jobs is not perceivable, there is need for a new understanding of the relationship between education and work, and between the school and the workplace.

When the problem of educated unemployment began to emerge in the 1960s, the vocational school solution became the recommended cure for the "academic bias" of traditional education. The oil and inflation crises of the early 1970s and the extended economic recession of the 1970s and 1980s together with the accompanying high levels of unemployment and growing disenchantment with education brought major changes in the relationship between education, training and employment.

This chapter first looks at the changing perspectives of general education and vocational education in Western industrialized countries. While the former includes the academic, pragmatist and polytechnic paradigms of general education, the latter raises the issue of whether technical training/job training should be part of general education or imparted outside schooling and in industry. To resolve the issue one needs to understand the relationship between

Vocational education and training systems in the U.S.A., Norway and West Germany are examined with a view to establish a link between standardization (provision of equal educational standards) and stratification (selection procedure) and their impact on educational attainment, occupational status and job changes. Can this typology be used for evaluating vocational education in developed and developing countries? Recent trends in vocational education and training in the U.S. and Canada are reviewed because they address the current international debate on the crisis affecting vocational education in the high school. In Britain, the "new vocationalism" is a bid to tighten the bond between schooling and the labour market. The factors influencing its introduction and development are discussed. The schemes launched under the new program and the debate on the objectives, goals and problems of the "new vocationalism" are reviewed.

3.1 General Education and Vocational Education: Changing Perspectives

This section looks at a burgeoning case study literature in which the role of vocational education in changing economies has re-emerged as an issue of intense debate. In Western industrialized countries, there are differences in the functions that "post-compulsory" education is expected to perform but on the whole, post-compulsory education includes

higher education, and for direct entry into the world of work (Lauglo, 1983:286).

According to Lauglo (1983), perspectives on general education (academic, pragmatist and polytechnic perspectives) are rooted in elaborately formulated theories. These theories are concerned with questions regarding the aims and objectives of education and include many curriculum models. The academic perspective is based on the theory that general education has both an instrumental function and an intrinsic value. It identifies general education with formal education (liberal education) or preparation for university. Modern Western secondary schools reflect the tradition of "liberal education" in which cognitive knowledge is of superior importance because it frees the mind from error and illusion. The "forms of knowledge" theory (Hirst, 1974) favours a secondary school curriculum which gives pride of place to academic disciplines. Critics of the academic curriculum paradigm argue that schooling, exclusively based on the academic curricula, extinguishes natural intellectual curiosity. Further, extrinsic motivators for learning such as the quest for qualification and the importance of examinations and grades come to the fore in the post-compulsory school. Yet the learning theory associated with academic curricula has paid little attention to such extrinsic factors and how they might inhibit the development of intrinsic interest in what is

The pragmatist perspective argues that the key to education is "learning to learn" and that this requires greater relevance both in terms of students' motivation and the prospect of applying school learning to "real problems" than that believed to be given by academic disciplines. In the U.S. the pragmatist perspective has encouraged variety and choice in secondary school curricula (critics call it 'cafeteria style curricula'). But in contrast to this trend in the late 60s, and in keeping with the economic changes in the 70s and 80s, there has developed emphasis once again on educational values such as habits of hard work, concentration and perseverance and measurable and useful skills and competencies in post-compulsory education. The pragmatist perspective has helped to reduce the dualism between theory and practice (pure and applied knowledge) by de-emphasizing the importance of intellectual systems that have an existence and justification apart from their practical application.

The polytechnic perspective also repudiates the dualism between theory and practice, but it goes further in that it is mainly concerned with the educational value of productive work, especially manual work. In the 1950s, the U.S.S.R. implemented the integration of school learning with participation in production as the major organizing principle of general secondary education. This feature of participation in production for general education purposes has interested

populist notion that productive work is in itself a maturing experience that can compete with schooling in its value as general education. In recent years, work experience has become part of general curricula in many countries on the grounds of "career orientation". Thus the academic, pragmatist and polytechnical perspectives are internationally influential paradigms of general education (Lauglo, 1983:294).

In contradistinction to general education perspectives, vocational education perspectives shift attention away from general education and focus on either workplace-based and/or school-based job training. The former emphasizes the importance of the workplace as the best locus for vocational training. It is wider than apprenticeship as suggested by the model in use in the U.S.A. and OECD (Organization for Economic Cooperation and Development) countries, where the problems of youth unemployment are severe. According to this model, school-based education is being linked with training on the job in the form of "cooperative education", "internships", "education-work programs" and apprenticeships during the last two years of high school. Special schemes provide either subsidized employment or training for young unemployed school leavers. The Youth Opportunities Program and the TVEI (Technical and Vocational Education Initiative), two such schemes in Britain will be discussed in a subsequent section of this chapter.

curriculum diversification is more popular in Third World countries than OECD countries. But the issue remains focused on the two themes: first, that such curriculum reform in itself does not solve the unemployment problem and second, that the cost of school-based vocational education is much higher than that of general education. In OECD countries in the 1960s, comprehensive education was advocated on the grounds of "equity and efficiency" (Husen, 1964:298), and it was argued that the development of school-based vocational education in comprehensive institutions would contribute to a higher level of general education. Since then, the growing problem of youth unemployment has encouraged the promotion of "pre-vocational" courses in school. But school-based vocational education has been increasingly criticized in the U.S.A. and OECD countries on the twin criteria of economic efficiency and social equity. The general tendency now is to look to employers to undertake greater responsibility. Alternatively, it has been suggested that school-based vocational education can be done more effectively in specialized institutions than in comprehensive ones. Those in favour of employment-based vocational education argue that the young need to be trained for adaptability and to see the work of their choice in a wider perspective. Both arguments may be valid in societies where work is available although the crux of the problem is the demands of the changing labour market.

3.2 Vocational Education Structures Based on Standardization and Stratification - Typologies

Empirical sociological research on how individual and environmental factors interact to influence educational attainment and mobility patterns indicates that the organization of education influences work mobility. Allmendinger (1989) attempts to show that educational systems define occupational opportunities for individuals at entry into the labour market. The amount of schooling a person attains and the occupational career this person experiences are dependent on the educational environment. According to a typology which classifies educational systems on the criteria of "standardization" and "stratification", and using empirical evidence from the U.S.A., West Germany and Norway, Allmendinger (1989) concludes that characteristics of educational systems affect occupational outcomes and rewards.

To develop his arguments, Allmendinger (1989) first presents a typology for the classification of educational systems. According to his typology, educational systems can be distinguished along the criteria of "standardization" (the provision of equal educational standards nationwide) and "stratification" (the selection procedures within the educational systems). Thus the typology has two dimensions - standardization of educational provisions and stratification of educational opportunities.

and vocational education and training arrangements. Cross-national comparisons of educational systems and structures indicate that differences persist in spite of similar levels of industrialization, development and modernization. At the same time, the structure of educational systems is not entirely determined by demands of the industrial system. In each of the three nations studied by Allmendinger, characteristics of standardized and stratified educational systems and structures co-exist. At the level of primary and secondary schooling, the U.S.A. has an unstandardized and unstratified system. This is because a range of options is open to all students, but these options are restricted by the unequal quality of educational provision throughout the country. Keeping in mind the same criteria, West Germany has a standardized and stratified primary and secondary school system. Norway has a stratified and unstandardized primary school system and a stratified and standardized secondary school system.

So far as higher education is concerned, the Norwegian and West German systems are unstratified, while in the American system which stratifies students, the admission of students is highly selective. Again, while the American higher education system reflects unstandardized educational provision, West German and Norwegian universities are state institutions and adhere to the same standards throughout the

In the U.S.A., vocational training is provided as part of general schooling but vocational school tracks are considered a stage of career preparation rather than as actual career training. Besides training in general schools, other types of vocational education and training are given in vocational schools, as apprenticeships in firms, and as on-the-job training. Vocational schools are closely linked to the [illegible] labour market and in the U.S.A. community colleges largely engage in vocational training. On-the-job training, common in the U.S.A., is unregulated by State laws, and workers are not protected against lay-offs or dismissal. Training in general and vocational schools does not stratify people because everyone is eligible for and has the option to participate; on-the-job training stratifies people because employers decide who to hire and who to dismiss. Thus the U.S.A. provides a stratified system and unstandardized structures so far as vocational education and training is concerned. It is a stratified system because in the U.S.A. vocational training is mainly on-the-job training. Vocational school tracks in general and vocational schools are more in the way of career preparation rather than as actual career training. It has unstandardized structures of on-the-job training as the latter is firm-specific and depends on the characteristics of the firm which will differ from firm to firm and from region to region.

unstructured systems of in-firm training (such as apprenticeships) and standardized structures of vocational training. This is because the most common form of vocational education and training is apprenticeship. In Norway, the apprenticeships are regulated by State laws and in West Germany, under the "dual system", apprentices attend public schools while under contract with employers.

The above observations have an important bearing on how characteristics of vocational education and training systems shape labour market outcomes. Within a stratified educational system, occupational status is closely determined by individual educational attainments. With a standardized system, job changes occur less frequently than with an unstandardized system. In West Germany, where the apprenticeship system is standardized, occupational training and skills are more important than is seniority and the stratification is between skilled and unskilled workers. On the other hand, in the U.S.A. where on-the-job training is common, organizations and enterprises follow an "organizational" and "seniority" labour market system rather than a "qualification" labour market system as in West Germany (Allmendinger, 1989:242).

In his study, Allmendinger (1989) also examines the effects of stratification and standardization of educational systems on occupational status attainment and comes to the

following conclusions which are pertinent to future research on vocational education and training in the context of cross-national comparisons. First, in stratified educational systems, the more people who attain the highest formal education, the less their average occupational prestige. In the American system of higher education, there is considerable variation in the content and quality of education provided by colleges and universities (unstandardized educational provision). Besides heterogeneity in curricula, American colleges and universities are stratified in terms of the status and prestige they confer on students. The hierarchy of colleges and universities reproduces and perpetuates social hierarchy. Each level continues to recruit disproportionately from different social levels. Further, it is not enough to know the number of years of college education or the degree attained. Differences among universities produce students with heterogeneous knowledge and abilities. Thus workers with the same amount of formal education are rewarded differently in stratified versus unstratified systems. In the U.S.A. the stratified higher educational system curbs opportunities (available at primary and secondary stages) because it aims to secure status barriers. On the other hand, in West Germany and Norway, where highly selective mechanisms prevail at the lower levels, opportunities are more equally distributed among those who have reached the upper level.

Second, the more education people acquire (the more the

number of years of formal training), the higher is the status of their first job. Thus individual educational attainment and the organizational structure in which educational credentials have been awarded determine occupational status at the beginning of the career trajectory. Third, in stratified educational systems, formal qualifications attained in education are more significant. Thus in stratified educational systems, the level or type of educational qualification is more important than the length of education (the sum of years of formal schooling and years spent in vocational training). Fourth, the difference between workers who are trained in standardized vocational systems and those trained in unstandardized systems (in the former there are fewer job shifts at the beginning of the career trajectory) is likely to diminish over time. In apprenticeships, screening mechanisms are provided by standardized examinations; in on-the-job training, screening strategies and selection procedures other than standardized examinations are used. Thus in the latter, more job shifts are likely to occur at the beginning of the career trajectory. However, after the initial stage of 5 years, firm-specific training (on-the-job training) ties workers to their firms and jobs just as much as occupation-specific training (apprenticeships) ties workers to their occupations.

India, like the U.S.A., offers an unstratified primary and secondary school system, but unlike the U.S.A., one that

is unstandardized at the same time. A range of options is open to all students, but the options are, at the same time, restricted by the unequal quality of educational provision throughout the country. So far as higher education is concerned, colleges and universities in India are substantially stratified in that the admission requirements vary considerably in selectivity across the institutional spectrum. There are basic differences among universities in the prestige and status they confer and college curricula are generally heterogeneous, broad and not orientated toward career training or career preparation. This unstandardized higher education provision reproduces and perpetuates the social stratification.

So far as vocational education and training is concerned, India presents a picture of a mixture of the four types of vocational training - training in general schools, training in vocational schools, apprenticeships in firms, and on-the-job training. The crux of the current debate is whether vocational education and training should be part of general schooling or imparted in vocational schools or provided in apprenticeships and on-the-job training. The 1986 National Policy on Education has expressed India's commitment to vocationalizing her secondary education system even though evidence from other countries does not support vocational education on the grounds of economic efficiency. This has given rise to a controversy among researchers on the future

will be discussed in a subsequent chapter.

In summary, in Allmendinger's analysis, when a person is educated in a stratified system, his or her occupational status is strongly determined by educational attainment and a person educated in an unstandardized system changes jobs more frequently than does someone educated in a standardized system. How far can the above conclusions be applied as a guide in analyzing the effects of standardization and stratification of educational systems on educational attainment and occupational status in developing countries like India? Do these conclusions have a bearing on the emergence of the ideology of the "new vocationalism"?

3.3 Vocational Education and Training in the U.S.A. and Canada

Besides philosophical and sociological factors, the rationale of vocational education has been largely influenced by economic considerations. In democratic countries like the U.S.A. and India, where there is a strong commitment in principle to equality of educational opportunity, vocational education is grounded in the belief that it contributes to the optimal development of every citizen in accordance with his or her needs and interests. There is increasing realization that vocational education is inseparable from sound general

all students as well as the demand of a technological society. While performing its basic function of preparation for useful employment, vocational education is deemed to have the potential also to contribute indirectly to many other aspects of personal and cognitive development.

Two major aspects of the economics of vocational education are:- vocational education as a contributor to society's economic welfare and the economics of vocational education itself (performance standards and cost effectiveness) (Calhoun and Finch, 1982:68). The availability of vocational education, as a source of labour supply, affects the economic welfare of a nation. In this way, vocational education is seen to be responsive to the needs of a fast-changing society. In particular, the effects of automation and the impact of computerized technologies have increased the importance of the field as an intermediary between production technologies and labour. To substantially reduce unemployment, it has been argued, a country must accelerate the pace of improving vocational education (Calhoun and Finch, 1982:68). As technology has advanced, it has left in its wake a high level of unemployment among unskilled workers. The view that automation, in the long run, creates more jobs than it displaces is being challenged today as the immediate effects of technological unemployment fall heaviest on the untrained and undereducated youth (16-20 year old group). Economists

will increasingly depend on the rate of technological development - which, in turn, will depend on the availability of a technically trained labour force.

Even as the development and availability of vocational education as a source of labour supply has paralleled economic growth, the demand for vocational education seems to outweigh the available resources. Escalating costs in implementing vocational education programs and increasing tax burdens make the public question if the desired goals of vocational education are economically affordable. The economic effectiveness of vocational education programs is difficult to evaluate in terms of cost-effectiveness if concrete information is not available. Not surprisingly, an increasing number of evaluative studies of its contribution to economic welfare has been undertaken in recent years.

For instance, in well-studied countries like the U.S.A., new perspectives on vocational education have emerged as a result of the re-examination of the relationship between training and working. Vocational education, which is broadly defined as "a combination of programs designed to equip students with work and life skills" (Cantor, 1989:125), is offered in a number of American secondary and post-secondary institutions, both public and private. A large proportion of the vocational education taken by American high school students is delivered in comprehensive high schools (the

including academic as well as some or all of vocational education courses that are available.

In the U.S. vocational education is a logical extension of the American dream and has received much public support. It was created in 1917 by the Smith-Hughes Act, the first of a series of federal legislation to provide vocational education at the secondary level. It provided funds for three areas of vocational education at the secondary level - agriculture, trade and industry, and home economics. The development of vocational education was largely based on the conviction that self-determination and hard work bring success. Linked with this was the belief that manual training and work help develop the intellect and character. Thus the key tenets of the American belief in material success - attainable through equalizing opportunities, promoting individual effort and emphasizing the morality of hard work and success - formed the basis of a national program of vocational education in the early years.

Further, an emerging conception of individual freedom recognized the responsibility of the more fortunate to help the less fortunate and thus added a new dimension to public schools providing the avenue of skill training to work and material success. Vocational education would promote equality of opportunity by providing all students with the chance of industrial training. This was all the more important in the

occupational status and education. Students could increase national productivity just as vocational education could indicate to them the way to economic self-sufficiency through individual effort, determination and self-reliance.

Faced with a labour shortage, industry and agriculture called for vocational education and training programs in the public high schools. The idea that vocational education should be designed to supply the labour needs of the economy became embedded in the law -a series of legislation from the Smith-Hughes Act, 1917 to the Vocational Education Act, 1963. In the late 1960s, the emphasis changed from the needs of the economy to the needs of the people and with it vocational education underwent reorientation to sociological and humanitarian goals (Leighbody, 1972:).

Till the mid-1970s, little research was done to evaluate the programs of vocational education on the criterion of serving its social purpose. At this point, its political appeal gained ground when the issue of youth unemployment aroused national interest. As well, researchers began to examine the ramifications of vocational training for employment. Most studies, however, failed to show any substantial gains in employment or earnings for graduates of high school vocational courses (Rumberger and Daymont, 1982; Meyer, 1981; Mertens and Gardner, 1983). Employers showed a preference to giving on-the-job training and expected schools

1984:89). Evidence also indicated that there was an obvious split between academic and vocational programs in high schools and within vocational programs there was inequality with respect to students enrolled in programs leading to high-level and lower-level jobs coming from different socio-economic and ethnic backgrounds (Goodlad, 1984).

Recent evidence indicates the paradox that while funding in the U.S. for vocational education has increased from $10 million to $9 billion since 1917, and 65% of all high school students enrol in vocational programs, vocational education continues to be stigmatized with a low status as it is disproportionately targeted on low-income, minority students (Wilms, 1988:90). Its practical social function of giving non-achievers and disadvantaged groups an "equal" chance at success and its political appeal as an educational response to increase economic productivity make it popular in spite of the empirical evidence that it has serious shortcomings and does not adapt to contemporary needs. In an increasing number of studies, critics argue that vocational education contributes to occupational and class stratification by substituting job training for education and tracking students into dead-end jobs. In spite of its failure to make any measurable impact on students' success in the labour market, its social rationale which has deep roots in the American dream of material success helps it to find continued support

The current debate on the crisis affecting vocational education in the high school has provided extensive literature on the subject. Vocational education in the American high school is in a state of flux. It faces many problems including its low, second-class status, a lack of sufficient high quality teachers (underpaid, underprepared and asked to work miracles), inadequate and outdated resources (at a time of rapidly changing technology), declining enrolments (in the post baby-boom era) and sex stereotyping (Cantor, 1989:127).

In a reappraisal of its functions and purposes, researchers argue that vocational education may not enhance productivity generally or improve the quality of the labour force. Yet it persists partly because of its "practical social function" in that it provides a means whereby students who are academically non-achievers may succeed in obtaining good jobs and in that it also inculcates good work habits (Wilms, 1988:91-92).

In the light of major trends in America's economy and the nature of its workforce, it has been argued that the vocational education curriculum should place high priority on preparing young people to adjust to change. To this end, it should teach them how to master basic skills (including computer literacy), how to develop skills in problem-solving and reasoning and how to gain an overall perspective on the environment in which they will work (Wirth, 1986:43-45). Thus

education is one which helps students to develop their capacity to learn, to think critically, to adjust to rapid changes in technology, and to gain some understanding of their later working environment.

In Canada, over the last six decades, investment in vocational education has contributed directly to economic growth. Financial incentives to organize and implement programs at regional levels have been given by the federal government to ensure that an adequate workforce is sustained in the interest of broad social and economic goals. Vocational education refers to a certain range of educational experiences at the secondary level and beyond.

Regan, for instance, defines vocational education as:-

> The educational experiences offered at the secondary and post-secondary school levels that provide individuals with skills and talents to develop capacities for: (a) entry level employment, or (b) upgrading in an occupation, or (c) retraining in a new occupation, leading to qualifications for employment requiring less than a university degree upon completion of the program.
>
> (Ross H.Regan, 1980:1)

But over the years, expectations have increased in order to meet manpower demands and a wide range of social needs in the society. Unemployment is now a major issue in Canada as in other countries across the world. There is growing concern

economically disadvantaged and handicapped persons, and evolving gender balance in traditional as well as new jobs. This poses a challenge to educators to provide effective vocational education programs. General vocational trainir takes place in post-secondary institutions and is heavil subsidized by government. It has been criti ized as beir "inadequate and inequitable" (Labour Canada Report, 1979:131).

This has led to a review of the goals, principles and purposes of vocational education and a comprehensive study of the need for vocational education. The critics of vocationalism argue that in the twentieth century the econ nic purposes of schooling came to dominate the political and oral ones, compromising both "equity" and "excellence" (Laz rson, et al. 1985). Vocationalization led to a decline in cc cern for the quality of schooling; the instrumental value of education, and not its intrinsic worth, became primary (Gaskell, 1984:259). Economic advantages (both individual and societal returns) from schooling have provided the basis for educational expansion and diversification. It has been accepted that schooling in Canada is designed to keep students in school and get them a high school credential, as well as prepare them to continue their further schooling in order to get further labour market credentials

issue therefore, as Gaskell argues, is not one of belittling the importance of vocationalism but revolves around the polytechnic approach of integrating the vocational logic of schooling with a broader approach to learning - integrating meaningful preparation for work with general and critical learning. Thus instead of dismissing vocational education as education for somebody else's children, efforts are being made to develop long-range planning for collecting research information on vocational education and coordinating research studies with economic projections, manpower planning, welfare agencies and all levels of the educational system.

In summary, the current debate in the U.S.A. and Canada about the future role of vocational education in the high school focuses on the declining enrolments in vocational courses, insufficient resources and teaching expertise, obsolescence and inadequacy of equipment, the stigma attached to vocational education, sex stereotyping and the national movement towards academic "excellence" and competency in high schools. The questions raised by the debate are relevant because they are linked to internationally urgent and researched topics like recent trends in vocational education, its link with general education, the economic efficiency of vocationalization and the future of vocationalism in educational planning.

The work of schools, the work of teachers and the work available to young people have become closely linked themes in educational development and policies in Britain. The 1988 Education Reform Act has raised a range of issues related to the involvement of the state in education - education is expensive, the curriculum and assessment must be determined nationally and teachers must be carefully controlled, monitored and appraised (Deem, 1988:250). Critics of current educational policy in Britain argue that economic restructuring, alterations in the market for young labour, and unemployment, together with changes in educational process and curriculum are changes, the effects of which are being acutely felt by the individual youth struggling to make sense of the situation in which he finds himself.

The problem of youth unemployment is an important public issue and the state has sought solutions to the problem in vocationalization of education. The "new vocationalism" is basically an attempt to tighten the bond between schooling and the changing labour market. As a response to the so-called "collapse of the transition from school to work", many young people are delaying entry into the labour market by opting to stay on in full-time education; many are being compelled to join government schemes for unemployed youth in order to bridge the gap between school and work; and many are

experiencing long periods of unemployment (Phillip Brown, 1987:7).

The educational crisis in Britain in the 1980s has been linked by researchers to social and economic changes taking place outside the school over the last decade. International competition (among manufacturing industries), world economic recession, mass redundancies and unemployment have all contributed to the virtual collapse of job opportunities for school-leavers in England and Wales. Thatcherism and the New Right have sought to define the present educational crisis as a consequence of ill-conceived egalitarian liberal democratic reforms in the post-World War II period. A major program of educational reform has been launched to ensure that the educational system meets the needs of industry. Recent programs, such as the TVEI (Technical and Vocational Education Initiative), the CPVE (Certificate of Pre-vocational Education), and CTCs (City Technology Colleges) have accompanied the emergence and gradual development of a broad ideology about education and training known as the "new vocationalism" (Bates et al., 1984; Dale, 1985; Ranson et al., 1986).

Three major developments - increasing youth unemployment (brought on by a deepening economic recession in the 1970s), loss of confidence and direction in the educational system and consequent redirection of government policy - have had an important impact on the emergence and growth of the "new

vocationalism". The stark reality of high youth unemployment influences school-leavers who decide to continue with their education in the hope of gaining higher qualifications and increasing their chances of entering desired jobs. It is also affecting the nature and content of the school curriculum (Watts, 1983; Ashton, 1985). As Wellington also points out, education, training and pre-vocational education are increasingly seen as an instrument to respond to youth unemployment because the traditional function and direction of schooling and education are being questioned. But within the school and classroom context, growing unemployment have led to greater emphasis on qualifications and credentials (Wellington, 1987).

Research studies in the 1970s showed a growing loss of confidence in progressive education and comprehensive schooling. The "new vocationalism" provided a renewed purpose and an attempt to restore faith in post-war educational reforms. The formation of the MSC (Manpower Services Commission) in 1973 by the Labour Government and schemes such as the Job Creation Scheme (1975) and the Work Experience Scheme (1976) were attempts to generate new forms of vocational education and training because the ideology behind the schemes was based on the belief that young people were unemployed because they lacked the necessary skills and attitudes for work. The YOP (Youth Opportunities Program) launched in 1978 to "provide unemployed youth with full-time

training and work experience" did not abate the problem of growing unemployment. In the early 1980s the YTS (Youth Training Scheme), which offered a one year and then (from 1986) a two-year traineeship to all unemployed 16-year-old school-leavers, was part of the effort of the Conservative Government (elected in 1979) to introduce new programs of vocational education and training. The TVEI for 14-18 year old youth, a scheme announced in 1982 by the Thatcher Government (funded by MSC and involving practically all Local Educational Authorities), the CPVE (Certificate of Pre-vocational Education), the LAPP (Lower Attaining Pupils Program), the CGLI (City and Guilds of London Institute) and the BTEC (Business and Technical Education Council) indicate a major orientation of education and training in Britain towards the "new vocationalism". But critics feel that the "new vocationalism" is a "band-aid solution" to a problem which needs a major and systemic change (Holt and Reid, 1988).

The current debate on the nature of the "new vocationalism" stems from the controversy concerning the central purpose of education. Does the "new vocationalism" constitute a major challenge to the principles of comprehensive education? Is the "new vocationalism" concerned primarily with individual self-development or does it also serve the needs of society by preparing pupils for future positions in the occupational structure? Critics of

the "new vocationalism" argue that it represents an attempt to subordinate concern about the provision of equal educational opportunities for the working class to making the preparation for a place in the occupational structure the raison d'etre of public education (Grubb and Lazerson, 1982). The "new vocationalism" attempts to maintain rather than break down educational and social inequalities (Brown, 1987:4). It largely retains the role that education and training has had in the generation and legitimation of inequalities according to gender and ethnic groups (Pollard et al., 1988:5).

According to Brown (1987), who has researched the political and classroom context of the "new vocationalism" in detail, the Thatcher Government has increased the vocational emphasis and technical content of the curriculum in an effort to tighten the bond between school and local industry. But evidence supports his argument that the rationale for the "new vocationalism" does not solve the contradictions in the educational experiences of the ordinary working class kids or the professional troubles of teachers. On the other hand, it is a recipe for inequality (Brown, 1987:107). It is an attempt to preserve the privileged education of the middle class at the expense of a broad comprehensive education for all pupils. Discussing the political context of the "new vocationalism", Brown refers to the 1960s and the 1970s when the pursuit of the dual objectives of increasing social

justice and economic efficiency culminated in the transition to comprehensive education and various compensatory educational programs were introduced in the hope that talented children from socially disadvantaged groups would be able to respond to new educational opportunities and revive the economy. But educational reform not only failed to produce a more equitable society, it also failed to prevent economic recession and abate the growing problem of unemployment. The "great debate" on education (launched by James Callaghan in October, 1976 at Ruskin College, Oxford) raised an important issue regarding the relationship between the school and local industry. The consensus of opinion was that the schools were producing too many consumers and not enough producers of wealth.

The Conservative critique of comprehensive schooling claimed that there was no relationship between economic efficiency and investment in education and blamed the educational system for contributing to youth unemployment and other economic ills because the occupational aspirations are hopelessly out of tune with economic circumstances, and if left intact may lead to social unrest (Brown, 1987:109). A senior official of the Department of Science and Education put it tersely:

> People must be educated once more to know their place.
>
> (Ranson, 1984)

To remedy the apparent mismatch between the needs of

industry and the products of schooling, the Thatcher Government has attempted to restructure the secondary school curriculum. The TVEI began in September, 1983 in 14 areas in England and Wales. According to the MSC, which has been given funds to initiate technical and vocational education programs, the TVEI, one such program, is intended to make the school curriculum more relevant to the world of work. But critics point out that the "new vocationalism", which is intended for the 14-18 age group is aimed at the lower ability range rather than those who take the more traditional academic curriculum. Thus the ideology behind the "new vocationalism" implies a major downward adjustment of attitudes, aspirations and expectations among the unemployed youth.

Brown's study further indicates that the ordinary working class youth have become increasingly frustrated when they discover that there are insufficient places in the world of work to accommodate them. This view is contrary to the traditional view that school-leavers are unprepared for the world of work and must be educated once again to know their place in the occupational structure. Thus, in spite of government efforts to tighten the bond between school and employment, youth unemployment is not an education problem, but as Watts (1983) has described it, "a problem for education." This is because youth unemployment is a problem which cuts the connection between the reward structures of

the school and the labour market, which led the ordinary kids to see that it was worthwhile to make an effort. The ordinary working class kids want to get on in the working class and although the labour market has changed they are optimistic and realistic about finding the kind of jobs they want. They are likely to be critical of the relevance of education to their future lives but are ready to make an effort. Thus evidence collected in his study makes Brown conclude that the "new vocationalism" intensifies divisions within the working class including those of gender, and adds much less to the future of school-leavers' lives than a broader more general education would do. The structure and organization of schooling influences the way ordinary kids respond to school. The current crisis in schools results from the fact that there has been a widespread collapse of the kind of jobs that enabled the ordinary kids to "get on" in the working-class terms. The "new vocationalism" needs to break down social and economic inequalities if the educational challenge to contemporary social and economic change is to be met.

Blackman (1987) also comes to the conclusion that the "new vocationalism" may lead to increasing class and gender inequalities. In his study, he investigates the attempt by Thatcher's Conservative Government to introduce radical reform in the educational system and the labour market - the radical case for TVEI which amounts to the "velvet glove" over an "iron hand" (Blackman, 1987). The TVEI will mean that

curriculum and as such it is a new approach to curriculum development. The radical case for TVEI rests on three proposals:- first, an integrated curriculum against a collection of separate subjects, second, pupil assessment and evaluation such as profiling against formal external examination, and third, the new pedagogy of experiential learning and problem solving against traditional or academic learning (Blackman, 1987). But the consensus among TVEI evaluators interviewed by Blackman was that the initiative may lead to bifurcation rather than integration - traditional academic curriculum for able pupils with limited vocational guidance, and a separate "new curriculum" vocationally led for the less able non-academic pupils.

The TVEI is based on the same implicit assumptions of the Newsom Report (DES, 1963) which recommended an increase in vocational education in secondary schools - young people do not possess the right attitude to the value of work and therefore cannot reach the required standards of ability and competence. But unlike the Newsom Report, the TVEI is based on an unrealistic assessment of labour market possibilities for young people and has evoked criticism not only from sociologists but also from economists of education. It raises two related issues regarding vocational education. First, does it limit pupils' access within education and the labour market, and second, does it become the exclusive area for the

pupil? Besides denying the working class pupil access within education and access to an increased range of sites within the occupational structure, the TVEI does not train for employment but for unemployment (Reynolds, 1986). How far do courses on vocational education predetermine a pupil's job selection, at an age too early to permit evaluation of the pupil's ability and skill? The flexible learner is capable of being employed in a variety of jobs. But there is no evidence on the ways in which "transferable skills" can be taught.

Thus working class pupils in secondary schools have limited access to educational opportunities because of selective processes and structures and the TVEI Curriculum developments have brought socially ascribed discrimination in the form of the values and barriers of the labour market into the secondary school. Within the "new vocationalism" lies a fundamental danger to the principles of equality. Education becomes training to enable pupils to acquire skills which direct them to employment relevant to their social class, gender or ethnic origin as the world of work is not neutral; the labour market is strictly segmented and segregated by class, gender and race.

In summary, government policy in Britain in recent years has been one of giving vocational direction to the secondary school curriculum by introducing initiatives such as the TVEI and by including a compulsory technological component in the

one or the other. Will secondary vocational programs and initiatives increase the earnings or employment prospects of all students?

Conclusion:

A series of evaluations of vocationalism in industrialized countries has shown that there are diversified vocational curricula which prepare young people for the highly differentiated occupational structure of corporate society. In industrialized countries, youth unemployment has emerged as a major problem as a result of the increasing rate of technological change. Special schemes have been introduced to tackle the problem. In Sweden, Norway, West Germany, the U.S.A. and Japan, a large percentage of youth continue in full-time schooling, apprenticeships or other forms of employment-based vocational education during the early post-compulsory years. In Britain's depressed labour market, Government intervention has introduced schemes for providing full-time training and work experience to the unemployed youth. However, there has been considerable criticism of these schemes. In general, the economic and political dynamics of an economy in a state of recession and restructuring do not favour institutional integration between general and vocational post-compulsory education. In some countries there are signs of further divergence (Lauglo,

The American experience indicates that "because of the assumptions and structure of vocationalism, it cannot avoid becoming economically useless and sorting students by class and race" (Grubb and Lazerson, 1981). The stratification of the West German system provides excellent vocational education for the majority but cuts them from the academic few and labels them from the start as second best. In France, many pupils choose the wrong courses because of complex procedures and lack of advice at vital stages. Japanese companies prefer to provide their own training and the content of education is viewed as being of secondary importance to industry (Holt and Reid, 1988:25).

There is no evidence to suggest that a vocationalized curriculum promotes economic success and critics point out repeatedly that the rhetoric of vocationalism has harmed both education and industry. Recent evaluations of vocationalization emphasize that vocational education is twice as expensive as non-vocational education; the social benefits of vocationalization do not outweigh the costs of vocationalization; and therefore vocational education is more efficient and equitable if it is given as on-the-job training or in vocational schools where it is privately financed (Psacharopoulos, 1988:145).

Do the same issues exist in the developing countries of the Third World where a "new educational vision" is emerging

diversification of curriculum and vocationally-oriented secondary education improve employment prospects? Are developing countries and the World Bank programs and projects moving away from vocationalization in formal education to vocationalization in non-formal education? What are the implications of these changing patterns and perspectives of vocationalism for a country like India? The next chapter will attempt to examine these questions in the light of reviews, appraisals, evaluations and comprehensive analyses of vocational education and training in developing countries.

INTERNATIONAL CASE STUDIES - THE DEVELOPING WORLD

THE "NEW EDUCATION VISION"

Introduction:

In the developing world, a major thrust in education is to relate it to development. Vocational education as a means of human resource development has, in the past, played an important role in the innovations in the educational systems to influence the pace and direction of economic progress. Apart from the development of human resources, there is urgent concern today to provide adequate and increasing opportunities to all people for a better life. If the objective of development is to ensure that the increase in national income leads to improvement in the standard of living of masses of people at the bottom of the income distribution pyramid, then qualitative changes are needed to make vocational education relevant to national development objectives. The developing countries have institutionalized various types of vocational education and training at the secondary stage and are increasingly diversifying curricular offerings. In other words, it is highly valued and accorded special support as part of national social and political development policies in developing countries. Furthermore, the UNESCO, ILO and other international agencies, over recent years, have also organized programs in important areas like curriculum innovation,

teacher training, instructional resources and material development, and planning methodologies with a view to make vocational education and training relevant to the needs of agrarian economies where a large majority of people are still dependent on agriculture.

This chapter first looks at the crisis in education in developing countries - especially the growing problem of youth unemployment. It then traces the historical roots of vocational policies during the colonial and post-colonial periods in order to analyze the major problems and issues of vocationalization with reference to the criteria of efficiency and equity. The "new education vision" with its focus on curriculum diversification at the secondary school level promises to make the school system in developing countries of the Third World more relevant to the world of work. This is critically examined in the light of recent empirical evidence and changing patterns in World Bank investments in vocational education and training.

4.1 Issues of Education and Development in the Developing Countries of the Third World:

To understand the problems and issues of vocationalism in the developing countries, it is necessary to first review the dilemma in education and development in the developing countries (focusing on formerly colonized societies) where the social demand for education remains largely unfulfilled

and where education is still clearly in a flux. The crisis in education in the 1970s was matched by a spate of reform measures covering the entire gamut of educational aims, contents, methods, administration and management and supervision. This crisis was multifaceted (Huq, 1975): the targets set in national plans for economic and social development did not reflect the national aspirations and needs, and hence attempted educational changes lacked clear direction and support. Second, the "inherited" educational systems did not evolve out of indigenous systems since the latter had been supplanted by highly elitist systems during the colonial period - systems in which only a few were given access to Western education. In the post-colonial period, the new educational systems became symbols of power and prestige of the ruling elite and this caused a widening chasm between educational aims and national needs. Third, investment in education was not commensurate with the goals set for it with the result that educational achievements fell short of objectives, both quantitatively and qualitatively. Fourth, many of the reforms, particularly in technical and vocational education have not been relevant to the realities of the situation and therefore ineffective. Fifth, the forces of resistance seem to have got the better of the forces of change, reform and "educational revolution". Elitism, although denounced by many as a colonial heritage, has continued to characterize the educational systems in a number of developing

countries. Thus in the 1970s it was evident from the experiences of the previous two decades that the distortions in the education growth patterns in developing countries were caused not by a lack of reforms but despite them.

The current complex educational problems facing developing countries are quantitative expansion with minimal qualitative change, financing educational development projects with limited resources, the myth of equality of educational opportunities, wastage (in the form of dropping out of school or repeating grades) and unemployment among the educated. To these may be added the problems of internal inefficiency, the widening gap between the developed and the developing world in the "knowledge explosion" and youth activism which is regarded as an inevitable and endemic social malaise. These problems are interwoven with social and economic problems in the developing world (Huq, 1975).

Among these problems, the growing number of educated unemployed and of under-utilized educational manpower are defying all solution. Numerous studies of the ILO's World Employment program have emphasized that in many Third World countries of Africa, Asia and the Pacific, Latin America and the Caribbean, continuing high rates of such unemployment is one of the main concerns of Third World governments (Selvaratnam, 1988:129). There is a body of research which analyzes the major causes of unemployment, underemployment and overeducation. It indicates that unemployment shows no

sign of diminishing (Todaro 1977, Irizarry 1980, Blaug 1980, Carnoy 1980, Bacchus 1981, Leonor 1985, Blaug 1987, Psacharopoulos 1987). Some of the underlying factors which contribute to a growing number of educated unemployed and of under-utilized educated manpower in the Third World are as follows. The mismatches of educational and training programs in relation to the occupational skills requirements for industrialization, the irrelevance of curriculum orientations to the processes of development, and the traditional preferences of the people for humanistic education over manual, technical, and scientific training are largely the effect of institutional deficiencies and labour market imperfections (Irizarry, 1980:338). Added to these factors are the government's discriminatory fiscal support in favour of secondary and higher education and the corresponding neglect of elementary education and the state bureaucracy's excessive employment of university graduates, a factor which encourages "credentialism" and the "diploma disease". Thus unemployment and overeducation in the Third World must be seen within the context of the existing socio-economic structures and the industrialization efforts and the historical evolution of the relations of dependence of the underdeveloped countries to the economies of the developed and industrialized countries.

Further, the average level of education has increased not only of the employed but also among the unemployed (Carnoy, 1980:153). Some of the arguments put forward stress

the need to provide an education which will help those at the secondary level of education not only to increase their knowledge, understanding and awareness of their role as future workers and citizens in the society but also to acquire skills required to do a technically competent job (Bacchus, 1981:225). They also emphasize the urgent need for a concerted effort and policy action by both the LDCs and MDCs - the less developed countries need to make employment creation a major social and economic objective and the more developed countries need to readjust their economic policies vis-a-vis the Third World in the areas of trade, aid and technological transfer (Todaro, 1977:225). Others support the need for education and development policies to adopt more broad and encompassing strategies directed to alter the internal structure of dependence of the underdeveloped countries (Irizarry, 1980:350). If large-scale unemployment is inherent to capitalist development in dependent economies, or results from inefficiencies in capitalist development, then, it is argued, education can have effect on unemployment. On the contrary, high rate of unemployment may significantly increase the demand for more education (Carnoy, 1980:154:160). As long as population growth continues unabated, educating and employing an ever-increasing number of people will strain the capacities of most countries (Carnoy, 1980:159). Again, as long as credentialism and income differentials in the occupational hierarchy remain, the phenomena of educated unemployment and

underemployment in Asia, Africa and Latin America are unlikely to be more than marginally affected by major changes in the qualitative aspects of education like vocationalization of the curricula and the integration of production and education (Blaug, 1987:81).

A study investigating "mis-education" as the major supposed cause of widespread unemployment among school-leavers in developing countries (Leonor, 1985) focuses on schooling and training rather than on macro-economic variables such as inappropriate economic structures and low overall demand for labour. Taking evidence from empirical studies carried out in Tanzania, Egypt, the Philippines and Indonesia, the study concludes that three measures need to be simultaneously substituted to address the problem of educated unemployment. The first measure is that wage differentials between workers at different levels of schooling should be narrowed. Second, school and training systems should be appropriately designed to cope with dynamic labour markets. Third, school and training systems should be redesigned so as to be both flexible (increasing vocational content of curricula) and produce school-leavers who are flexible in terms of trainability and occupational mobility at the same time. Leonor stresses that schools fail to develop among school-leavers the flexibility to adjust to changing labour markets and thus fail to equip them with employable skills for which there is a foreseeable demand.

Is there a remedy in sight for unemployment among the young (15-20 year old) or the educated in the foreseeable future in the developing countries? Does it lie in the implementation of vocational curricula and/or out-of-school training programs, or the slow and patient reform of primary education from within by curricular reform, examination reform and the improvement of teacher training (Blaug, 1980:150-152)?

4.2 Historical Roots of Vocationalism in Developing Countries:

During the last two decades, the World Bank and other international agencies have funded a large number of educational projects with vocational education components in developing countries. This continued effort of Third World countries to diversify their secondary school curricula by adding practical , pre-vocational or vocational subjects to them has deep historical roots (Bacchus, 1988:33).

Vocationalizing the curriculum as a policy in developing countries was pursued both by the colonial rulers in the colonial period and national leaders in the post-independence period. Colonial rulers argued for the introduction of two streams of education - academic and technical (occupational education in polytechnic schools). These were seen as measures "to stabilize traditional agricultural life and to curb educational 'over-production' - the tendency of individuals

from rural areas to continue in school past the capacity of labour markets to absorb them" (Grubb, 1985). This policy of providing vocational skills to increase the pupils' contribution to their societies was continued in the post-independence period. National leaders like Gandhi in India, Mao Tse Tung in Communist China and Nyerere in Tanzania supported educational reforms which argued for vocationalizing the curriculum. Even though there was a strong political motivation at the roots of the policy to use vocationalization as "a means of lowering the occupational aspirations of the youngsters in these societies to a more 'realistic' level" (Bacchus, 1988:35), there was much more to it than an attempt by elite groups to maintain social control over the masses and reproduce the social hierarchy. Influenced by the human capital theory, policy makers believed (and still believe) that schooling can make a substantial contribution to economic development and growth by imparting vocational skills to students and preparing them to meet the existing manpower requirements in their societies.

In the context of the global education crisis in the 1960s (Coombs, 1968 and 1985), vocational education came to be regarded as the panacea to the complex educational problems in the developing economies of the Third World. Diversifying the secondary curriculum would, it was widely believed, slow down the increasing demand for higher education, divert meagre funds to primary and secondary education and reduce

unemployment among the educated. Educational diversification would establish a link between school and work - educational attainment and occupational differentiation. It was also seen as a measure for promoting equity with a rural bias and serving the needs of poor people (Tilak, 1988:245).

Several arguments put forward by those in favour of vocational education were that vocational education seemed to be the solution to the problem of students dropping out of school without occupational skills (Grubb, 1985:527) and an answer to rural problems. It would help

> .... to alleviate unemployment; to reorient student attitudes towards rural society; to halt urban migration; to transmit skills and attitudes useful in employment ....
>
> (Lillis and Hogan, 1983:89)

The "vocational myth" was exploded by critics like Foster (1965a and 1965b), Blaug (1973), Bacchus (1979 and 1988), Lillis and Hogan (1983) among others and this led to an international debate on the causes of unemployment among the educated and the proposal of vocational education as the solution to the problem. The evaluation of the program on the criteria of external efficiency and equity generated much heat in spite of relatively few empirical studies.

The debate continues as there is little empirical evidence to either confirm or reject the hypothesis that vocationalization is a viable venture in the less developed countries. Critics point out that recent research projects carried out in Colombia and Tanzania by Psacharopoulos

(sponsored by the World Bank) and in Kenya by Lauglo and his colleagues (sponsored by SIDA) indicate that vocational education does not change attitudes towards manual work, nor does it solve the unemployment problem among school-leavers. On the other hand, a necessary, if not sufficient, condition for raising the status of vocational education must be to integrate it into the structure of general secondary schooling (Foster, 1987:137).

The debate notwithstanding, international agencies such as the UNESCO and the World Bank have continued to further the cause of vocationalized/diversified secondary education in the developing countries. Several developing countries like India have diversified their secondary education system but research indicates that "unlike general education, there has not yet evolved a rational organizational structure for technical and vocational education" (UNESCO, 1983:17). And as Psacharopoulos concludes,

> because of the inherently logical and simplistic appeal, vocationalization will be with us for years to come, and more countries will attempt, in vain, to tune their formal education systems to the world of work.
>
> (Psacharopoulos, 1987:203)

It is not enough to dismiss vocationalization of curriculum as a failure and as an educational program that does not work because evidence shows that the outcomes are not those expected. Rather, the problems and issues facing vocational education must be traced to the development

strategies used by the developing countries and the need for restructuring their socio-economic systems. Issues of vocational education cannot be properly understood or explained without taking into account the overall historical constraints of colonial dependency. Vocational education runs the risk of being seen as "an illegitimate extension of the concept of education" (Lillis and Hogan, 1983:93). For understanding this, it was necessary to examine, in this section, the historical roots of vocationalism in the developing countries of the Third World before analyzing the problems and issues.

4.3 Issues of Vocationalism in Developing Countries:

The degree of vocationalization of the curriculum at the secondary level and/or the role of vocational education within the schooling system has raised contentious and complex issues which have become the focus of international debate. While educational economists mainly argue that vocational education is not cost-effective, educators, policy-makers and administrators continue to support vocational education as a fundamental element in national educational policies. The argument of economists involves basic issues of whether vocational secondary schools are more cost-effective than general academic schools and whether vocational training in schools is more cost-effective than other forms of vocational training outside the school system.

The dilemma before policy makers revolves not only around efficiency issues, and economic considerations being incorporated into policy decisions on curriculum diversification/enrichment, but on issues of equity as well. This section will attempt to analyze these issues of efficiency and equity and review the available evidence in the light of recent trends in Third World countries.

The issues of economic efficiency and social equity are inextricably interlinked with each other and with the objectives of vocational education for the purpose of determining the type of planning of vocational education in developing countries. The case for vocational education has received much support from those who see it contributing to the goal of economic progress. This support is based on the assumptions that vocational education can reduce unemployment and meet the economic demands of the labour market by providing practical and relevant skills; vocational education can develop in school leavers a positive attitude for labour force participation; vocational education can increase productivity and offset the schools' recurrent costs; and vocational education can increase individual earnings (Tilak, 1988:245, Heyneman, 1987:64).

Critics, on the other hand, argue that vocationalization policies are largely a political response to economic recession. Vocationalization has political appeal as an educational response to economic problems (Lauglo and Lillis,

1988). They also argue that the greater cost per student that vocationalization requires does not justify the investment in vocational programs. A number of studies conducted in Colombia, Tanzania, Kenya, India, Somalia, Swaziland, Nigeria and Sri Lanka, to name only a few, have shown that vocational schools are not cost-effective when compared with the traditional academic secondary school (Heyneman, 1987:73). Similarly, when compared to other modes of training like on-the-job training and apprenticeships, vocational training is a high-cost form of training. One of the few exceptions to this trend is the Israeli experience where over half of all secondary school pupils (and over 40% of all youth of secondary school age) attend vocational secondary schools (Neuman and Ziderman, 1989:151).

Empirical evaluation studies are similar in their finding that it is a costly policy to vocationalize the curriculum of general secondary schools. Heyneman (1987) gives the following major sources from which evidence can be drawn to assess the impact of vocationalization (adding practical subjects to the curriculum). The first source is public demand. Parents are a good barometer of curricular choice and when an economy is in recession, they want to enforce curricular priorities of their own. If the vocational emphasis in the curriculum does not contribute to parental aspirations of upward occupational mobility, then the curriculum is considered inefficient and ineffective. The

second source is cost - both monetary and cognitive. The first depends on the additional cost of curricular diversification - the number of additional subjects besides the core subjects, how often they are taught, the equipment and facilities required, the number of specialized teachers required, the cost of teacher training and teachers' salaries. Cognitive cost is calculated by estimating the advantages and disadvantages of spending time on vocational (practical) subjects as related to the time spent on core subjects. Is there a significant sacrifice of core subjects? The third source is the potential economic benefits or returns. Cost/benefit studies will indicate whether the rate of return is higher for core subjects like general science, mathematics and language or for practical/vocational subjects like agriculture, industry or commercial subjects.

Although data on these sources of evidence is difficult to obtain and often unreliable, Heyneman uses the empirical evidence provided by Psacharopoulos (1985a, 1985b and 1987) to conclude that

> it can no longer be safely assumed that additional subjects, specific to a manual occupation, will be an advantageous investment on the part of society, or the individual.
>
> (Heyneman, 1987:68)

In another study "Curriculum costs: vocational subjects", Cumming (1988) summarizes the various findings from the literature on costs and benefits of vocational subjects in educational institutions in the U.S.A., Tanzania,

Kenya and Thailand. He concludes that where costs of vocational/practical subjects can be compared to other subjects in the curriculum they are likely, other things being equal, to be more expensive in terms of costs per student-hour (Cumming, 1988:149).

In the Indian subcontinent, countries like Afghanistan, Bangladesh, Bhutan, Burma, India, Maldives, Nepal, Pakistan and Sri Lanka have diversified their secondary education systems. Studies conducted by Tilak (1988) on the basis of UNESCO Statistical Yearbook data indicate that vocational education is costlier than general secondary education and allocations for vocational education, as a proportion of expenditure on total secondary education, as well as per student, have declined. Even though no estimates of rates of return are available for the countries in the Indian subcontinent, Tilak argues that

> given (a) no sizeable reduction in unemployment, (b) very high costs associated with vocational education, and (c) the existing wage structures in the labour market, rates of return to vocational education may not be as attractive as general secondary education, as has been found in many developing countries.
>
> (Tilak, 1988:251)

In their study of industrial education subjects (wood work, metal work, power, electricity) within the academic curriculum of junior secondary schools in Kenya, Lauglo and Narman (1988) conclude that such educational programs with practical subjects have high unit costs and have been largely

possible because of foreign aid (given in this program by SIDA - Swedish International Development Agency). Moreover, they demand more managerial expertise and initiative for their establishment and maintenance.

Further, from the data on occupational aspirations and expectations of students exposed to industrial education, Lauglo and Narman infer that industrial education has the effect of interesting them in practical/technical work as a future career. The problem is not one of changing their occupational aspirations but one of realization of their ambitions under current labour market conditions. Thus such vocationally-oriented programs should not be launched as large-scale programs for speedy implementation throughout a national system of education unless the general education benefits of these vocational/practical subjects merit the expense and development effort which they require (Lauglo and Narman, 1988:255).

In his review article, Foster (1987) refers to the Kenyan experiment and points out that such programs do not meet the criteria of external efficiency; "their relatively high costs are not justified in terms of major cognitive or affective curricular effects nor is there any compelling evidence with respect to positive labour market outcomes, whether these are measured in terms of occupational destinations or income" (Foster, 1987:143). Further, Foster finds it difficult to understand why a vast volume of aid has

been concentrated in 35 government-maintained schools which constitute the elite sector of Kenyan secondary education.

This brings us to the issue of equity. Do less privileged groups in the population have increased access to levels and types of vocational education that will be eventually rewarding? Are those who are privately benefitting from vocational education bearing the cost of their education? Are wage differentials in society reduced as a result of vocationally-oriented education?

According to Psacharopoulos (1987) there is little evidence in the empirical studies regarding these three dimensions. The data for Colombia shows that academic graduates earn more, relative to the rest (Psacharopoulos, 1985a:516). Studies of vocational school programs in Mexico, Sri Lanka, India, Barbados and Swaziland, together with the data from the Colombian and Tanzanian case studies, indicate that even though vocational education attracts lower social groups and classes, the students do not always follow the field of their specialization in further education and training or take jobs in the field for which they were trained. Given the choice, students prefer to attend an academic school because vocational graduates do not receive the salaries they expect from industry. Employers use educational credentials or qualifications as a starting point and prefer to give on-the-job training and schools find it difficult and costly to equip and maintain training units.

Negative results have also been obtained from similar vocational education programs aimed at improving employability of secondary school leavers in El Salvador, Brazil, Nigeria, Kenya, and Somalia (Psacharopoulos, 1987:197).

"Equality of educational opportunity" has historically been a major rationale for vocationalization but it has also led to issues regarding its merits. Some argue that vocationalization reduces the distinction between "theoretical" and "practical" knowledge and the gap between non-manual and manual work. Also, vocational education in secondary schools provides opportunities to more students than other forms of vocational training like on-the-job training or apprenticeships. Critics, on the other hand, argue that vocationalization creates, within the same school, curricula of different status. Invariably, the vocational curriculum becomes a second class alternative and prevents those in the vocational track from climbing the academic ladder.

The experience of vocationalization of secondary education in Brazil and secondarization of technical education in Argentina indicates important issues regarding implementation of vocationalization of academic secondary education (Gallart, 1988). These are common to most developed countries and include "strong social demand for secondary education linked to mobility aspirations, competition among

social sectors for access to the upper levels of the educational ladder with the consequent segmentation between tracks, schools, and/or optional courses; the influence of the characteristics of the labour market on the social demand for the different tracks; and in the positions open to school leavers, given the labour market's segmentation, the devaluation of credentials, and changes in salary differentials" (Gallart, 1988:204). Given the strong tradition of social mobility through education, vocationalization should take into account the demands of parents and students if it has to succeed.

In summary, vocational education in developing countries is not viable from the angle of economic efficiency but its appeal remains because

> it promises equality of opportunity within unequal societies where the pressures to reproduce inequality are even greater.
>
> (Grubb, 1985:547)

In the current international debate about education and social inequality, the question remains - do vocationalization policies reinforce rather than question the legitimacy of hierarchical relations between social classes, genders or ethnic groups in terms of economic power?

4.4 The "New Educational Vision" for Secondary Education - World Bank Studies:

An important innovation in the development of secondary

education in developing countries has been the diversification of curriculum. It is based on the assumption that students can develop vocational skills in the field of their choice together with traditional cognitive skills. The rationale behind it is that students are given a wide choice of options in what are called pre-vocational courses before they can decide on which technical or academic curricula to pursue for further education. A diversified curriculum strikes a balance between an academically-oriented and a vocationally-oriented curriculum and has therefore been encouraged as an innovative strategy.

The belief that diversification can contribute to secondary schooling meeting labour market needs with more equal access to education has led to heavy investment in this innovative strategy. This effort to re-orientate, and in some cases as in Tanzania and Cuba to restructure, the national education system to a vocational direction has been described as a "new educational vision" emerging for secondary education (Middleton, 1988:213).

Those in favour of diversification argue that it provides to disadvantaged socio-economic groups a wider access to secondary schooling. Second, it ensures cognitive attainment in both pre-vocational and academic subjects and thus gives students more realistic attitudes and aspirations towards the world of work. Third, it gives students the opportunity to choose their occupation according to their

interests. Thus motivated, they earn more than they would after either an academically-oriented or vocationally-oriented schooling and consequently, investment in diversification promises a higher social and private rate of return than in either academic or vocational education alone.

These assumptions have been there from the time economic, social and political pressures in developing countries have shaped schooling policies and educational reform. The World Bank and its affiliated organizations have been giving assistance to vocational education and training in developing countries for the past three decades. The DiSCuS (The Study of Diversified Secondary Education Curricula) sponsored by the World Bank has contributed to the research in a field which lacks empirical evaluations (Psacharopoulos and Loxley, 1985b). Developing countries have started the diversification of the secondary school curriculum on a large scale by introducing pre-vocational subjects. In Africa, in countries like Lesotho, Botswana, Ethiopia, Somalia, Uganda, Cameroon, Gabon, Nigeria, Swaziland, Tunisia, Morocco and Tanzania pre-vocational courses have been added to secondary school curricula in an effort to instill in students the concept of self-reliance. In Latin American and Caribbean countries like Colombia, the Dominican Republic, El Salvador, Jamaica, Guyana, Trinidad and Tobago, Brazil, and Peru, multi-track or comprehensive

schools offer both vocational and academic programs. These diversification programs differ from apprenticeship programs which lie outside the mainstream of formal secondary schooling. In Asia and the Pacific, countries like Papua New Guinea, Thailand, Sri Lanka, Indonesia and South Korea have reorganized their secondary education systems towards the objectives of a flexible diversified curriculum. In all these countries, assisted by World Bank education projects, diversified education programs are offered either in multi-track comprehensive schools (several vocational options with academic courses) or double-stream (one major vocational course with an academic curriculum) and are different from single-track academic or vocational schools.

Psacharopoulos and Loxley (1985) have reviewed the World Bank's experience in encouraging diversification in developing countries. Most Third World countries continue to diversify as part of the "new educational vision" for improving secondary education. But as Middleton indicates, the "new educational vision" has manifested itself in the form of diversified secondary schools and has receded (Middleton, 1988:213). As of 1979 the World Bank had invested in 79 projects in more than 25 countries (Haddad and Conly, 1987). Since 1977, educational authorities in developing countries have moved away from investment in diversified secondary schools to nonformal training systems and university level training. It was found that diversified

secondary schools were not cost-effective. They suffered from high costs, implementation difficulties and low returns (Psacharopoulos and Loxley 1985b, Psacharopoulos 1987, Psacharopoulos 1988, Lauglo and Narman 1988). Those in favour of diversification argue that these schools were evaluated on the wrong criteria - labour market outcomes - employment rates, earnings and social rates of return. They expose students to pre-vocational subjects and as such are intended to contribute to social objectives like favourable attitudes towards manual labour. The experiential content of a diversified curriculum is intended to prepare them for adult life.

Economic recession in the period 1977-1986 led to constraints on employment opportunities and on education budgets. Tight labour markets and reduced resources made it difficult for diversified secondary schools to develop the flexibility and efficiency they needed. The "new educational vision" envisaged in diversified secondary school curricula became clouded with two major issues. First, there is little evidence in the reviews of World Bank investments in diversified schools to show that diversified schools can achieve the non-employment objectives like imparting a better knowledge of crafts and changing social attitudes towards work. Second, that these objectives can be achieved by diversified schools in a cost-effective manner and by using effective training modes grounded in the labour market

realities they face.

The experience of Brazil, Jordon and Korea demonstrate that "a new educational vision" is possible if developing countries invest in training systems which are characterized by an ability to adjust to changing economies (Middleton, 1988). Diversified secondary schools need to have linkages with industry, incentives to attract and retain qualified teachers and students and good feed-back systems instead of continuing as stereo-typical public vocational secondary schools. The three countries, in terms of World Bank vocational education and training investment, are among 22 middle-income countries reviewed for the effectiveness of their industrial training systems, both formal and nonformal. In his study, Middleton has analyzed the common characteristics that have contributed to the success of their industrial training systems and appear to be good examples for other developing and industrializing countries.

In all these countries, investments were made over a long period of time (15-18 years), in all modes of training (formal and nonformal) in order to provide a broad context in which the training system could evolve and mature. There was a strong demand for skilled workers in the industrial sectors during the period and training institutions could rely on a feed-back from employers seeking workers. Beginning with relatively small investments in formal institutions, the three countries gradually invested in larger numbers and

different modes of training and the development of policy and management capacity. Instead of using formalized manpower forecasting techniques, these countries planned their industrial training systems in response to employment demand. Industry played as active role in curriculum and enrolment development and in the design and provision of on-the job training and apprenticeships. Alternative financing sources (payroll taxes, tuition fees, user fees) helped stabilize resources available from the government. Salary and scholarship incentives were given to attract and retain good teachers and students. Curriculum development was integrated with teacher training. These characteristics enabled the countries to respond with flexibility to their changing economies and develop a variety of training modes, including secondary vocational schools, that are comparatively s ccessful.

These conclusions drawn from World Bank experiences of investment in vocational education and training (1963-1986) raise important issues regarding the role of diversified secondary schools and the "new educational vision" in developing countries. Given that no evaluation has been made (previous to the study of diversification in Colombia and Tanzania by Psacharopoulos and Loxley, 1985) of the overall efficiency of diversified curricula relative to traditional academic or vocational schooling, important questions being asked by researchers are: How far have projects of

diversification achieved their objectives, both social and economic? Is there any assessment of diversification as an effective educational model? These issues are important, even as the majority of developing countries, industrializing their economies, are facing the policy dilemma of how to match education and training to changing economic needs in a way that would expand secondary educational opportunities on an egalitarian basis. Many underdeveloped countries are entirely dependent on agrarian economies and they face the additional problems of curbing rural to urban migration and evolving education and training systems which serve the needs of rural populations

Evidence indicates that Colombia's 19 diversified secondary schools called INEM (Institutos Nacionales de Educacion Media) have contributed positively to educational equality in terms of improved life chances (as measured in terms of scholastic attainment, cognitive achievement, chances for post-secondary study, employment opportunities and income attainment) of students from lower income families (Psacharopoulos and Loxley 1985, Patrinos 1988). But critics (Selvaratnam 1988, Tilak 1988, Heyneman 1987) question whether INEMs make secondary education more accessible to students from poorer socio-economic backgrounds. The study shows that INEMS were built in the poor urban areas; the majority of students are from the blue-collar worker families; more affluent families prefer to send their

graduates of the INEMs can find employment upon graduation at a level of earnings that is equal with the graduates of non-INEM schools indicates that the INEMs are not of poor educational quality (as measured by student-teacher ratios and costs per students) and they do not lock people into "dead-end" jobs. They may not be cost-effective, as the critics point out, but they do improve educational and income equality and provide a place for working class students in the secondary school system. Thus the INEMs are an example of a diversified secondary education program which has contributed to equity of educational opportunity. Their relative high cost can be reduced if the program is expanded to generate increasing socio-economic benefits in a differentiated society. Further research is required before castigating diversification as an educational innovation that has not brought any change to the development of secondary education in developing countries.

The case study of Tanzania presents different issues as its political ideology has dictated the role of education in social change and national development. In keeping with the concept of "education for self-reliance", primary schools teach crafts and skills useful in the rural community, where 80% would eventually live. In the public secondary school education system, diversified education is to prepare students for work and for advanced training in broad economic

sectors - commerce, agriculture and industry. The rationale for diversification is that restructuring the entire primary and secondary education system is a means of implementing the political ideology of socialism and self-reliance. Making secondary school curricula more practical will instill positive attitudes towards work and provide students with training for their individual development and for the development of the community and nation at large. Its value can be judged by the extent to which diversification contributes to individuals benefitting from their education and to the achievement of the national goals of socialism and self-reliance. The study of the issues of internal efficiency (achievement scores and course hours, influence of home and school, unit costs by curriculum, cost-effectiveness of cognitive achievement) and external efficiency (demand for post-secondary schooling, employment prospects and earnings differentials) in Tanzania indicate that all pre-vocational curriculum tracks are more costly than academic ones and for all students (technical, commerce and agriculture) there is a trade-off between gains in the vocational subjects and losses in the academic ones. Further, rates of return are poor indicators of the social profitability of educational investment and the first indications in the Tanzanian case study do not support the hypothesis that the introduction of pre-vocational studies into secondary schooling can be judged on the grounds that the economic pay-off is greater for an

academic curriculum.

In summary, the movement towards curriculum diversification in developing countries, in keeping with the "new educational vision", has focused on the hope that pre-vocational studies will ease students' transition from school to work by changing their attitudes and by teaching them employable skills. Thus the responsibility of schools for determining the labour market outcomes of graduates has been emphasized more in developing countries than in developed industrialized countries. In view of the poverty of in-depth evaluations based on case studies of both success and failure of diversification, it is difficult to come to any conclusion regarding the dilemmas of diversification in developing countries, but it is clear that vocationalization and/or diversification can be made effective if it is an integral part of an overall development strategy - a new vision of a better future.

Conclusion:

The issues of vocationalization/diversification in the developing countries of the Third World seem to hold in balance the key concerns of economic efficiency and social equity. Recent studies on the effectiveness of vocational education versus general education and documented World Bank evidence on the evaluation of vocational education programs with the help of cost-benefit analyses or rate of return

estimates clearly show that investment in general education carries a higher rate of return than investment in vocational education. Further, the assumptions on which vocationalism is based, have been disproved by experience in many developing countries. It does not solve the increasing unemployment problem; it does not create employment; it does not contribute to self-employment; it does not change attitudes towards manual work; it does not reduce the demand for post-secondary education; it does not ensure higher earnings. In short, "the power of vocationalism needs to be explained on grounds other than its effectiveness" (Grubb, 1985:530).

On the equity issue, there is consensus of opinion that secondary education should be expanded to contribute to equality of opportunity. It is not clear whether vocationalization and/or diversification helps to reduce or increase inequities - educational, social and/or economic.

In understanding these issues, it must be remembered that Western models of vocationally-oriented education were readily adopted in most developing countries without recognizing their relevance, efficiency and feasibility within the recipient country's socio-economic environment, level of development, resource endowment, and demographic structure (Selvaratnam, 1988:134). Vocationally-oriented education can only be effective if it is developed within the socio-economic background of a country. "Lessons from the past" indicate that the failure of the objectives of

vocational education was largely due to the inappropriate nature of the Western models of vocational education to Third World countries. Vocational education has been marginalized and stigmatized as an inferior form of education to academically-oriented education. In a changing technological scenario, Third World countries find it difficult to anticipate and adjust to the rapid changes their socio-economic environment is subjected to within a world capitalist system. Diversification of secondary school curriculum promises a "new educational vision" in the development of education in Third World countries. The crux of the problem is that vocational education is not just an educational issue or a curriculum question. The problems and issues of vocationalism are

> paradoxically not primarily educational but ultimately bound up with intricate economic, technological and social variables.
>
> (Lillis and Hogan, 1983:98)

CHAPTER 5

VOCATIONALIZATION OF SECONDARY EDUCATION IN INDIA

Introduction:

In India, as in other advanced and developing countries, the drive for vocationalization of secondary education is linked with national economic problems. A critical analysis of the relationship between economic growth and educational development in India is presented in this chapter to illustrate the validity of international perspectives on vocationalization and to understand the rationale underlying vocationalism. The National Policy on Education, 1986, not only recognizes the need to vocationalize the secondary education system in order to reduce the mismatch between the demand and supply of skilled manpower at the secondary level, but also indicates the country's commitment to it by stipulating quantitative targets for the next decade. It envisages attempts to enhance its quality and relevance to employment and the labour market by continuing it in the secondary stream in order to improve the employability of school-leavers.

"The Challenge of Education" document, issued by the Government of India in August, 1986, initiated a national debate as a first step in the formulation and implementation of a new policy for educational development and economic progress. It was in response to the urgent demand to reorient

education to give it greater relevance to the needs of a society facing the challenges of a new technological age in the coming decades of the twenty first century. In its strategy to improve access to school education, the New Educational Policy, 1986, has endorsed diversified vocationalization. It seeks to establish a national system of education which lays down a curricular framework of core and vocational subjects at the secondary stage to establish a system necessary for achieving the goals of an egalitarian, democratic and secular society.

There is not much in the way of conclusive empirical studies and/or evaluative research on the success or failure of the implementation of vocational programs in the different states of India even though vocationalization is not a new issue. Since independence in 1947, several Education Commissions have advocated and supported vocationalization of secondary education, but "attempts made in the past have not borne fruit" (Ministry of Education, 1985). The purpose of this chapter is to study the relationship between economic development and educational development in India in the colonial and post-independence periods and to critically analyze the shifts in policy and planning from "vocationalization for economic growth" to the political and ideological imperatives of vocationalism. The inability to absorb educated graduates and secondary school leavers into the modern wage economy and the need to pursue the egalitarian

goals enshrined in the national constitution accounts for the government policy of vocationalism - a program influenced by ideological rather than economic imperatives.

This chapter first looks at the British period in the history of education in India which witnessed the development of modern, western-style formal education. In this system of education, vocational education was developed essentially as an offshoot of the system of formal education ostensibly in response to the needs of British administration in India. Why vocational and technical education in British India prior to the First World War was limited in scope, in quality, and in effectiveness is discussed in the first part of Section 1. This is explained in the context of the underdeveloped and undiversified economy and the British educational policy of English-language education for the elite, vernacular-language education for the masses and the corresponding neglect of primary education. The post-World War I to 1947 period saw changes not only in the economic scene (modernization and industrialization of the economy) but also developments in technical and vocational education. In the second part of Section I, these changes are reviewed in the context of the link between economic growth/retardation on the one hand, and the development/underdevelopment of vocational, technical and industrial education on the other hand.

A much more philosophical Indian response and reaction to the situation brought about, among many experiments, the

movement for Basic Education and Gandhi's attempts to restructure the educational system and make primary and secondary education craft- and work-centred. The Basic Education movement is also reviewed in Section 1. Attempts to vocationalize secondary education were made in the post-independence years in the three periods 1947-1965, 1966-1985 and 1985 onwards. These are examined in the context of changes in the educational system and are linked to the development process set in motion after independence.

As in other developing countries, in India too, vocationalization of secondary education has re-emerged because policy makers and educational planners see it as a strategy to make secondary education more relevant to the world of work in the face of rapid industrial growth and as a means to promote equal opportunity in the face of a class system based on occupational status and educational attainment. The problems and issues of vocationalization of secondary education in India in the context of international studies of how well vocational education has fulfilled its economic purpose and social goal in the post-independence period are examined in the third section of the chapter.

As mentioned earlier, the lack of substantial evaluative research on vocational education in India has not prevented the resurgence of interest in vocationalism. In fact, Rajiv Gandhi's government's renewed commitment to it in the National Policy of 1986 has raised important questions among

researchers. Are the arguments in favour of vocationalization sound in the light of the experience of other countries - both developed and developing - concerning investment in vocational education or diversification of secondary education?

In most countries, vocationalism has not solved the economic and educational problems it was designed to address. Does it hold promise and power to establish a closer relationship between schooling and work, to reduce unemployment, to improve individual and societal productivity, to promote equity and to serve the needs of disadvantaged groups? The final section of this chapter attempts to answer these questions and presents a review of recent perspectives on the envisaged role of vocational education in employment creation and economic growth. It concludes that substantial research needs to be done before vocationalization can be dismissed as an uneconomic venture. A review of cross-national evidence on the effectiveness of vocationalized secondary education, available in the literature, indicates that the scanty evidence that is available on the issue is at best inconclusive. Researchers agree that vocationalism is not just an educational issue or a curriculum question. The political, social and economic dimensions of the dilemma need to be taken into account before assessing the future prospects of vocationalization of secondary education in India.

5.1 Historical Background - Vocational Education in India in

the British Colonial Period (1813-1947)

According to Carnoy, the primary purpose of schooling in British India was control, not change. In such a system, preparing a skilled labour force was unnecessary and undesirable and vocational and technical education therefore received little attention. Educating an English-speaking Europeanized elite who could serve as middlemen between the British administrative system and the Indian masses remained the backbone of British educational policy in India (Carnoy, 1974:61).

Any modifications in the policy were in keeping with the basic policy of maintaining a small system of primary education and expanding secondary and higher education to serve the elitist system. Changes in the character of British imperialism and the system of production were reflected in the type of education. The classes served by the system of production were the classes needed to maintain the British imperial system. The British were willing to make a change in their educational provisions for India only when they felt they had to, when it would pay for itself, and when they could control it (Koehl, 1975:281).

Carnoy also argues that British educational policies were designed to control politically the Indian subcontinent and to keep its people economically dependent on Britain (Carnoy, 1974:62). During the era of mercantile or early colonialism (1757-1813) India ceased to be a leading manufacturing country

of the pre-capitalist era and was reduced to the position of supplier of agricultural goods and raw materials to the industrializing economies of the West, particularly Britain (Bagchi, 1982:82). Further, as Bagchi points out, the long process of de-industrialization of India began with the catastrophic disappearance of cotton manufactures from the list of exports of India and the sudden rise and the steep ascent of cotton manufactures in the list of her imports - almost exclusively from Britain. Other rural or urban manufactures were ruined partly by the rise of alternative sources of supply (as in the case of Chilean nitrate for Indian saltpetre) and by government restrictions (as in the case of the gun-making industry of Monghyr). This policy of de-industrialization of India together with land revenue policies led to a "semi-feudal" structure of society (Bagchi, 1982:82-83).

The ruination of the cotton textile industry and the discriminatory free-trade policy characterized the period of free-trade industrial colonialism between 1814 and 1858. The development of structural underdevelopment initiated in the period of mercantile colonialism was accelerated and reinforced throughout this period and the remaining half of the nineteenth century. The exposure of Indian handicrafts and manufactures to the competition from Britain's industrial exports resulted in extensive disruption of India's pre-capitalist artisan economy and was unaccompanied by

compensating development of modern capitalist industries (Das Gupta, 1975:19).

Given this background, let us analyze the educational policy and provisions made in this period. The beginning of the system of formal education in India can be traced back to the year 1813. In that year, the Charter Act abolished the East India Company's trading monopoly and gave British manufacturers free access to markets in India. The Charter Act made an annual provision for a sum of one lakh (100,000) of rupees for the promotion of learning in India. This was for

> the revival and improvement of literature and the encouragement of the learned natives of India and for the introduction and promotion of a knowledge of the sciences among the inhabitants of the British territories in India.
>
> Clause 43, Charter Act, 1813

At this time, the concern of the East India Company in India was not to interfere with the indigenous institutions of culture.

In 1835, Lord Macaulay's famous minute advocated education of the upper classes and the spread of western learning through the medium of English -

> We have to educate a people who cannot at present be educated by means of their mother-tongue. We must teach them some foreign language .... our own language .... stands pre-eminent even among the languages of the West .... We must at present do our best to form a class who may be interpreters between us and the millions whom we govern .... to render them by degrees fit vehicles for

> conveying knowledge to the great mass of the population.
>
> (cited by Aggarwal, 1984:5)

As a result of the new policy of providing State aid and supervision to schools teaching English, the establishment of schools helped in the dissemination of Western learning. According to Carnoy, Macaulay's Minute clearly indicated that the primary concern of the British educational policy was to build a cultural dependency among the educated classes so that revolutionary overthrow was not possible in the immediate future as a likely alternative. This kind of education instilled in them an awe for the English language and culture, and a corresponding disdain for their own background (Carnoy, 1974:67).

Further, Macaulay's "downward filtration theory" argued that the Indian elite would share their Western values and concepts imbibed from English-language education with their own people and eventually this type of education would "filter" down to the masses. This was a justification for the fact that in the early half of the nineteenth century the British government in India did not take direct responsibility for the education of the masses. The education was confined exclusively to the instruction of a small elite group of future civil servants. The whole system, particularly in Bengal, became geared toward training for government service (Carnoy, 1974:67).

The responsibility of the government in establishing and

maintaining educational institutions came to an end with Wood's Despatch (1854) in which the policy was laid down that the government would withdraw from the field of secondary education. But in fact it did not do so and a dual system of secondary education developed, one group of high schools under government control and management and the other under local private management. Further, Wood's Despatch of 1854 (also known as the Magna Carta of English Education in India) declared that "the diffusion of the improved arts, science, philosophy and literature of Europe" was the object of the extension of education in British India (Aggarwal, 1984:17). This Despatch formed the theoretical basis for British educational policy in India over the next seventy years - English-language education for the elite and vernacular-language for the masses. Very little was done in mass education and the mode of agricultural production brought little response from the people to pay for primary education.

The period of monopoly capital and imperialism (1858-1947) saw the pursuance of the policy of making India subservient to the economic and political interests of metropolitan Britain. The lack of investment in agricultural development and industrial growth ruled out the possibility of the emergence and development of conditions for capitalist development. Cottage industry was destroyed without incorporating artisans with their skills into the new structure. For the British, development in India meant

controlling Indian resources for British use, and education was structured to achieve that goal (Carnoy, 1974:66).

The Indian Education Commission (1882-1883), also known as the Hunter Commission, recommended "a more adequate recognition to the indigenous schools" and a bifurcation of secondary education into two divisions, "one leading to the entrance examination of the universities, the other of a more practical character, intended to fit youths for commercial or non-literary pursuits" (Aggarwal, 1984:23). This was in keeping with the laissez faire policy of state non-interference in education.

Limited industrial growth between 1871 and the 1920s, combined with small-holding plantation agriculture, made the demand for primary-school-trained labour limited. British policy was to spend more on the higher levels of schooling and to limit the expansion of primary education. The resistance to giving Indians control of secondary and higher education indicated that these levels were more important to their educational and colonization policy than the neglected and disregarded primary schools (Carnoy, 1974:69).

Crane's account of the situation of technical education in the period under discussion confirms evidence given by other scholars that nineteenth century Indian higher education was primarily a training ground for civil and subordinate government services. Even though there are stray instances of attempts at medical, engineering, and industrial

education, the general apprehension was that technical and industrial training would create a population with skills for which there might be no employment (Crane, 1965:173).

To illustrate this, Crane points out that the 1886 "Review of Education In India" drew attention to the fact that

> apart from the higher instruction in law, medicine and engineering, required for the attainment of University degrees, there is not as yet in India anything like a general or systematic provision of technical instruction.
>
> (cited by Crane, 1965:174)

Further, as the same official argued:

> There is no demand for technical instruction because the industries in which it could be utilized do not exist. The industries do not exist because in the absence of skilled labour, capital cannot be employed ..... technical education can only advance rapidly in a country where the industries and manufactures are highly developed; ..... India is not such a country ..... it is a fallacy to suppose that any scheme of technical instruction will open out a royal road to industrial prosperity, the attainment of which depends upon far different conditions.
>
> (cited by Crane, 1965:177)

The Government of India's Resolution on Education Policy, 1904, during the vice-royalty of Lord Curzon, recommended that education provided in secondary schools should be sound "for the instruction, health, recreation, and discipline of the pupils" (Aggarwal, 1984:29). Another government resolution on education policy in 1913 made

recommendations concerning the inclusion of subjects of industrial importance in the curriculum. Further, the admixture of private management and state control of secondary schools was laid down as a policy in the Government Resolutions of 1904 and 1913.

In summary, before World War I, the absence of a well-developed system of vocational and industrial education, combined with other, perhaps more fundamental, causes served to keep India industrially backward. As made clear in a number of government reports issued during the period under review and as cited by Crane (1965), the Indian economy remained singularly undeveloped and its modernization was severely retarded. The absence of an effective system of technical, scientific and industrial education, if not the only factor, was an important factor which contributed to keep this economy backward (Crane, 1965:193).

The First World War, the crisis of the British Empire and the growth of the nationalist movement in India compelled the British Government to modify its free-trade policy. India's links with the U.K. were loosened and she entered into a situation of multilateral dependence on the advanced capitalist countries. But the growth of industries remained tied to a stagnant economy in the interwar period (Bagchi, 1982:91). Although India achieved a fair degree of self-sufficiency in the basic consumer goods produced by industry and such goods as pig iron, steel and cement, this phase of

import-substitution industrialization in India's economic growth did not usher in a period of sustained growth.

This formed the background to the Hartog Report of 1928-29 which condemned a policy of "hasty expansion" of secondary education and observed that attempts to provide vocational and industrial training had little contact with the education system and were, therefore, not fruitful. It recommended "the diversion of more boys to industrial and commercial centres at the end of the middle stage, for which provision should be made by alternative courses in that stage, preparatory to special instruction in technical and industrial schools" (Aggarwal, 1984:46). It proposed that there should be more diversified curricula at the secondary stage. This question of providing greater facilities for technical and vocational education was taken up by the Sapru Committee (1934), appointed to enquire into the causes of unemployment in the United Provinces (now Uttar Pradesh). It recommended providing diversified and parallel courses of study at the secondary stage offering instruction in technical, commercial, industrial and other vocational subjects.

The upsurge of the nationalist movement compelled the British Government to make some concessions to Indian capitalists. But the latter could not escape the grip of international companies and cartels which had already begun to dominate world capitalism, especially in the fields characterized by advanced and rapidly changing technology

(Bagchi, 1982:92). In response to this, the growing interest in technical and vocational education was evinced in the Abbot-Wood Report (1936-37) which recommended the establishment of "a complete hierarchy of vocational institutions parallel with the hierarchy of institutions imparting general education" (Sen, 1970:359). As a result, a new type of technical institution known as polytechnic came into existence. The Abbot-Wood Report affirmed that technical education was equally important as general education and recommended that, as general education and vocational education "are the earlier and the later phases of a continuous process," .... "vocational education must be based on an adequate general education" (Aggarwal, 1984:67).

Between 1937 and 1946, there was a discernible shift from a state of unilateral dependence on Britain to one of multilateral dependence on the advanced capitalist countries. As a backward, predominantly illiterate country, India lacked the base for autonomous technological development. With a poor population and a social structure dominated by a weak and heterogeneous capitalist class, the demand for basic and sophisticated consumer goods remained restricted and with this the demand for skilled manpower was limited (Bagchi, 1982:94). It was only in the "difficult" or late phase of the import-substitution period in post-independent India that the industries involved and required the use of more skilled manpower than was available and correspondingly, there was a

training institutions.

In summary, the growth and development of general and vocational education in India in the colonial period were directly or indirectly the outcome of the interaction of social, economic and political factors. Social determinants (like family traditions, social hierarchy, aspirations and attitudes of people), economic determinants (like poverty, growth of population, unemployment, economic exploitation) and political determinants (like the policies of the colonial power, political ideologies, international events, the mass national movement for freedom, the class character of the leadership) had an impact on the formulation of educational policies in British India (Saini, 1980).

The British attempt to formulate a system of education that would answer the needs of the colonial social, economic and political system established under their rule had two important implications. First, it was an adaptation by the British responding to the needs of administration in India, integrating existing functional structures into the new system and adjusting to pressures and demands from within sections of the colonized society. Second, the Indian response was to accept the basic programs and structures of Western education (Shukla, 1983:59). Regarding technical education, the widely held view in the official reports (during the period under review) was that those upper classes

not have any aptitude for technical or industrial training. Paradoxically, those classes which did have a tradition of artisanship were not likely to go to high school or college as literary achievement was not part of their tradition (Crane, 1965:181).

The colonial system developed a three-tier pattern which consisted of elementary schools (which generally used the Indian languages as media of instruction), secondary schools (which taught English as a second language to begin with and then used it as a medium of instruction) and colleges and universities (which used English as a medium of instruction). This new system was possible because of the support by the colonial government which found it politically and administratively useful to create a class of intermediaries between them and the masses. It was also supported by the educated persons in the Indian society who found the new educational system of great use to rehabilitate themselves in the new social, economic, and political order created by the British. Further, it was based on the conflict between the traditional education system and the modern one. Attempts, during the freedom movement, to create a national system of education was based on the conflict between the interests of the colonial rulers and the Indians' demand for self-rule (Naik, 1978:9).

In such an educational system, British policy had two

an appropriate institutional first stage in the preparation for the later stages of education. The indigenous elementary schools had traces of a vocational character only in as much as a very few, as in Bengal, taught accounts along with keeping of records. The majority encouraged the study of language and literature and were mainly of a cultural character. British policy was to reorient the existing indigenous, quasi-vocational schools towards the administrative and revenue system established by the government (Shukla, 1983:65).

As an antidote to the elitist, academic education of the colonial system, Gandhi's experiment in Basic Education attempted to upgrade the status of manual labour and develop new attitudes toward work. Gandhi dominated India's political scene between 1920 and 1948, and as Saha (1989) points out, the course advocated by him was one of reviving and diversifying the rural economy. The main thrust of his economic philosophy was to pick up the pieces of colonial destruction of the indigenous industries and restore the country back to the pre-colonial base line of rural self-sufficiency in agriculture as well as manufactured products. His advocacy of swadeshi (things pertaining to one's own country) in economic life and khadi (fabrics made out of hand spun yarn) and village industries was based on the argument

swadeshi and khadi [illegible]

industries (Saha, 1989:127-128).

He was concerned with the education of "three hundred millions" surrounded by an "ocean of darkness" (The Harijan, 13 July, 1937). Education could be inexpensive and self-supporting only by relating it to some useful craft. His scheme was to make craft-centred education the "spearhead of a silent social revolution" (Sen, 1970:174). His educational policy was mainly concerned with what he called primary or basic education but which in effect covered the secondary stage of school education. He proposed that education should be compulsory and free for every child up to the age of 14. To make this basic education self-supporting, it should be linked to the training of some handicraft. His scheme of a self-supporting, craft-based elementary education stressed the inculcation in the pupil of a sense of dignity of all manual labour. It was based on the principle that the school must be self-supporting not only for economic considerations but to provide proof of its efficiency as a vocational educational institution. It showed his concern for the education of the masses because illiteracy, according to him, was "the sin and shame of India."

In 1937, Gandhi called the National Education Conference at Wardha to consider his scheme of a seven-year, free,

Scheme of Education, drawn up by Zakir Hussain and Saiyidain in 1938 and approved by Gandhi, with its emphasis on free and compulsory education for seven years, instruction in the mother-tongue, and education being centred round some form of manual and productive work. The Wardha Scheme stressed that the objective of training in a basic craft was the development of a skill so as to enable the pupil to pursue it as an occupation. It came as a consequence of Gandhi's attempts to restructure the educational system.

The scheme of Basic Education was worked out on an experimental basis and accepted as the Nai Taleem (New Education) at the Conference on National Education at Sevagram, 1945. It was looked upon as a means of universalizing education based on village arts and crafts (because India lives in its villages) and Sarvodaya (vision of an equal society at low technological levels). It was reiterated that basic education should be self-supporting and place adequate emphasis on craft-work, both in its educational and productive aspects. But the practical application of Gandhi's Basic Education as enunciated in his book "Basic National Education" raised many doubts and controversies in the post-independence period (Sen, 1970:279). Gandhi's scheme of self-sufficient, craft-centred

The political change to national independence preceded large-scale industrialization and economic development and was not translated to more equal social relationships. It was not supported by a large base of industrial growth; therefore changes initiated in the political process were not carried through into social relationships nor had sustained effect on changes in the educational system. "The inertia of an existing and continuous system of education persisted with greater strength and ultimately prevailed over the trends of change" (Shukla, 1983:63).

Bhatt (1988), in his review of Sundrum's book "Growth and Income Distribution in India" (1987) draws our attention to the emergence during the struggle for independence of two ideologies relating to the Indian response to its development problem. One was Gandhi's Sarvodaya and the other Nehru's Socialism. Both aimed at removing poverty and unemployment through socio-economic development in an environment of freedom and democracy and it was the latter that was accepted after 1947 as the dominant development ideology. In spite of the handicaps of a backward economy with extreme poverty and socio-economic stratification and stagnation, on the eve of independence, India had development potential in the form of

"development" interchangeably [illegible]

to mean a steady increase in per capita national income (Sundrum 1987:215). In recent literature, however, development is equated with a more desirable distribution of income. Government policies on improvements in education (the human aspect) and infrastructure (the physical aspect) cannot be formulated and implemented on the basis of their short-term effects on the economy. They need to be planned over a long period of decades rather than of years. In present-day less developed countries, governments need to take a more active role in implementing development measures ahead of the private demand for them and thus stimulating such demand. This is because they need economic development urgently to solve their problems. But as Sundrum (1987) indicates, in the case of India the main causes for her poor development related to: (1) a lack of understanding of the development problem; (2) a lack of development strategy from a development perspective as distinct from a growth perspective; (3) a lack of an institutional and policy framework for relating growth to development. The development problem, accordingly, was the problem of bringing about a profound change in the attitudes, motivations and behaviour

perspective plan for the development of the strategic and critical elements related to the task of development. The educational system and the infrastructure were developed in response to demand and determined on the basis of the existing social and economic inequality and stratification. There was no plan of action to build them ahead of demand in an integrated manner. To illustrate this, the target of giving free and compulsory education to children up to the age of 14 - laid down in the Directive Principles of State Policy in the Indian Constitution adopted in 1950 - has still not been achieved. The result is a poor development and economic growth performance even after independence and an entrenchment and perpetuation of socio-economic stratification and inequalities.

In summary, at independence (1947), India inherited an educational system with great disparities. The colonial policy of "downward filtration" prevented the development of an education system with a broad base. This was due to several social and economic factors: - limited economic development; a feudal, inegalitarian and hierarchical agricultural society; social handicaps which prevented women

from educating themselves; caste discrimination which prevented lower castes from being educated; and isolation in the remote hill areas which led to the economic and educational backwardness of tribal people (Ghosh, 1987:12). Given this background, vocational education and training had a slow development even in the period after independence.

5.2 Historical Background - Vocational Education in India in the post-1947 period:

For the purpose of this study, the post-independence years have been divided into three periods - 1947-1965, 1966-1985 and 1985 onwards. The relationship between economic growth and educational development in India during these three periods is examined in this section. The performance of the Indian economy since 1947 represented a break from the near stagnation of the late colonial period, but still fell short of the rapid economic growth with social justice that was so confidently expected to follow the attainment of political independence (Sundrum, 1987:199)

Bhagawan (1987), in his "Critique of India's Economic Policies and Strategies" points out that the predominant economic goal during the first period (encompassing the first three Five Year Plans) was "self-sustaining growth in industry, transport, and energy" (Bhagawan, 1987:59). It was argued that the rapid creation of physical and human capital would contribute to dynamic economic growth. To achieve this

goal of transforming India into a strong nation-state, priority was given (in the Five Year Plans) to: (1) the import and production of capital goods required for the manufacture of intermediate goods, consumer goods and other capital goods like machinery for making other machines; (2) the expansion of higher education in science and technology; (3) the manufacture of iron and steel, cement, fertilizers and heavy chemicals. This "heavy industry strategy" was one of importing machinery and technological knowledge to promote domestic manufacture of capital goods. The central bureaucracy in New Delhi controlled and enforced the strategy of industrialization through import substitution by banning imports and granting import licenses and industrialization-production licenses on a highly selective basis. This economic strategy was accompanied by public investment in multi-purpose river valley projects and construction of dams (described by Nehru as the "temples of modern India") for irrigation and hydroelectricity. These, like the Bhakra Nangal Project in Northern India, gave maximum benefit to the middle and rich farmers and industrial entrepreneurs in a few selected states. At the end of the first period the base for self-reliant industrialization had been established, but social and economic programs for agricultural development, employment generation and poverty reduction were a dismal failure (Bhagwan, 1987:61).

So far as vocationalization of secondary education for

the purpose of making education relevant to the economic changes taking place in the country was concerned, the first period saw an important policy decision in the Radhakrishnan Commission Report (1948). This Report recommended a vocational bias in the pre-degree courses without sacrificing the emphasis on preparation for university education -"to impart vocational and professional training" as one of the aims of education (Aggarwal, 1984:85).

This was followed in 1954 by the Mudaliar Commission Report (also known as the Secondary Education Commission Report) which declared the objective of "increasing the productive or technical or vocational efficiency" not only as "a new attitude to work" but as a need "to promote technical skill and efficiency at all stages of education so as to provide trained and efficient personnel to work out schemes of industrial and technical advancement" (Aggarwal, 1985:109). It recommended the starting of technical schools at the secondary stage as part of multi-purpose schools and favoured diversification at the secondary stage. The multi-purpose schools were to have a "vocational bias" but were not to provide vocational education. But the curriculum of these schools included the same subjects as the academic higher secondary schools with one or two vocational courses. As a result, students would be left still aspiring to university education.

During this period, a number of other committees set up

to examine various aspects of educational development, advocated diversification of curriculum at the secondary stage to meet the needs of all students. It was felt that secondary education provided "a critical bottleneck in the educational system" (Arnove, 1984:391) because it was overly academic and characterized by passive learning and lack of concern for preparing graduates for the workplace. But diversification did not keep pace with the changes in the economy and society, and the problem of unemployment intensified on the one hand, while there was an equally acute shortage of trained manpower in several sectors on the other hand.

In summary, during the first period (1947-1965) there was a tremendous expansion of secondary education. (See Appendix 1). Vocational schools were established in large numbers. But the expansion of general secondary education outstripped that of vocational education and the proportion of enrolment in general and vocational streams remained almost unchanged at 10:1 throughout this period (Naik's Foreword in Verma, 1980:xi). As Naik points out, unemployment (among secondary school leavers) figures reached unprecedented heights; the inadequate preparation of students in secondary schools began to lower standards in higher education; the under-expansion of vocational secondary education (See Appendix 2) placed excessive pressures on university admissions even as economic development was

suffering from the inadequacies of middle-level trained personnel (Naik, 1980:xi).

At the end of this period the social and economic problems remained the same; the large mass of the population still lived in the villages, professional and bureaucratic values and the 'diploma disease' intensified the demand for general academic education and not for work-centred or vocationally-oriented education. The Education (Kothari) Commission Report, 1966 stated:

> What is now needed is a re-orientation of the basic education program to the needs of a society that has to be transformed with the help of science and technology. In other words, work experience must be forward looking in keeping with the character of the new social order.
>
> (Education Commission Report, 1966:202)

At the beginning of the second period (1966-1985), the food crisis (droughts of 1965 and 1966 and famines in 1966 and 1967) and the foreign exchange crisis (suspension of credits by Western governments and devaluation of the rupee in 1966) forced India to change her earlier economic goals and strategies to goals of food self-sufficiency and export promotion (Bhagawan, 1987:62). In agriculture, the strategy was to invest in the new technology of high yielding varieties of wheat in the northern states of the Punjab, Haryana and western Uttar Pradesh and rice in the river deltas in the southern states of Andhra Pradesh and Tamil Nadu. By the end of this period, dependence on foreign

imports of food grains seemed to be over but problems of poverty remained. For example, in 1985 it was found that three million landless labourers and marginal and small peasants still lived below the absolute poverty line (defined by the World Bank as "that income level below which a minimal nutritionally adequate diet plus non-food requirements is not affordable") (Bhagawan, 1987:63).

The main criticism of the so-called "Green Revolution" which took place during this second period is that the unequal availability of the essential technological ingredients (irrigation, fertilizers, pesticides, farm mechanization and storage facilities for grain) and economic ingredients (credit facilities and support prices for farmers) increased disparities between states and between different classes of farmers within the states. Benefits went mainly to middle and large farmers in the northern states. Further, the abolition of the absentee landlord system and the partial implementation of the land-to-the-tiller demand in the mid-1970s led to the emergence of a middle land-owning peasantry which became very influential economically, socially and politically (Bhagawan, 1987:64).

Regarding the other major economic goal of this period, export promotion, Bhagawan points out that there was no dramatic increase in export earnings, or significant change in the structure of exports in favour of modern manufacture. On the other hand, the reduction in investment in public-

sector industry by the state at the start of the second period had a negative effect on the whole industrial sector, which suffered from both recession and structural retrogression up to the mid-1970s. As investment increased, industry showed substantial real growth rates of around 10% per annum during the Fifth Five Year Plan (1974-1979). But during the Sixth Five Year Plan (1980-1985) this dropped to an annual rate of 5% (Bhagawan, 1987:67). Also from the mid-1970s, the emphasis on state ownership of Indian industry gradually declined and large-scale private industry, receiving state subsidies and tax relief, found it easier to import the latest in Western technology. This was a definite shift from the earlier strategy of indigenous development of the latest technology and had its repercussions on the policy of vocationalization and the overall educational policy.

The Kothari Commission (1964-66), for the first time in the history of free India, gave a comprehensive review of the entire educational system. The Commission's thinking seems to have been deeply influenced by the then ascendant Human Capital Theory. This is evident in the position adopted in its Report that "no investment is likely to yield greater returns than investment in human resources of which the most important component is education" (Government of India, 1966). The Report clearly indicated that the link between education and productivity could be forged by making science education and work experience (participation in productive

work) an integral part of school education. The proposed integration of science education and work experience would, in the future, lead to a "fruitful mingling of general and vocational education" (Aggarwal, 1985:193; UNESCO, 1984:11).

The Report called for a revolution in education which would in turn set in motion the much desired social and economic revolution. It recognized "the colossal poverty of the masses and the large incidence of underemployment or unemployment among people, particularly among the educated" (Government of India, 1966:4), and realized the urgent need for the development of human resources through education. It advocated several programs for forging the link between education and productivity - and chief among these were making work-experience an integral part of general education and "vocationalization of education, especially at the secondary school level, to meet the needs of industry, agriculture and trade" (Government of India, 1966:12). Further, the Report admitted that the education system was continuing to train young persons mainly for government services and white-collar professions despite the recommendations to introduce practical subjects in secondary schools by earlier commissions which had not been implemented with the result that enrolment in the vocational courses at the secondary level was very low (Government of India, 1966:15-16).

Reaffirming that education is a three-fold process of

imparting knowledge, developing skills and inculcating proper interests, attitudes and values, and that general education should introduce school children to the world of work and to an understanding of science and technology, the Report recommended diversification at the "plus two" stage, in the suggested 10+2 pattern of school education, with ten years of general education followed by two years of general education or one to three years of vocational education. It further recommended a work-experience program to bridge the gap between manual and intellectual work for all students in schools (Government of India, 1966:681). It criticized the widely held view that vocational education at the school level is an inferior form of education, fit only for those who fail in general education, and the last choice of parents and students. Instead it advocated that the training given should be linked directly with production, oriented to problem-solving and directed towards improving instructional methods through professional contacts (Government of India, 1966:681). Further, while vocational courses should be predominantly terminal qualifying those taking them for direct entry into employment, there should be adequate opportunities for such students to rejoin the mainstream for further and higher education. Thus transferability was proposed as an integral feature of the proposed model of secondary education.

The Kothari Commission Report (1966) is considered an

important landmark in as much as it recommended a national structural pattern of 10+2 with diversification at the plus two stage, emerging into two distinct streams - academic and vocational, linked to each other via the transfer provisions. This model of diversification of secondary education would not only play an important role in the overall national development but would also help to address the more immediate concerns such as the need to divert students from going into one academic stream, the need to reduce and eliminate frustration among the educated youth resulting from non-productive education, the need to check the mad rush to universities and the need to reduce unemployment (Sacheti and Ray, 1986:1). It was believed that the singularly academic pattern of secondary education exaggerated the educational and occupational aspirations of students, and thereby created excessive demand for post-secondary education, which in turn, led to increasing the number of the educated unemployed (Tilak, 1988:46). Therefore, the nature and content of secondary education was to be reformed by diversification of curriculum.

In summary, vocationalization of secondary education, as recommended by the Kothari Commission Report (1966), would lead to:- (1) easier entry into the labour market; (2) employment in the field of vocationalization at the school level; (3) a close relationship between school programs and specialization of post-secondary training; (4) shorter

periods of job search (unemployment) after secondary school graduation; (5) less demand for post-secondary level education and (6) higher graduate earnings (Metcalf, 1985:43).

The National Policy on Education Resolution (1968) of the national Parliament endorsed the recommendations of the Kothari Commission (1964-66) by lending legislative authority to the proposal that vocational courses at the secondary stage should be adequately diversified and effectively terminal (Government of India, 1968). In 1975, the National Council of Educational Research and Training (NCERT, an apex body working for the improvement of school education) was directed by the Central Advisory Board of Education (CABE, the highest policy making body in the field of education) to implement the program of vocational education. The document "Higher Secondary Education and Its Vocationalization" prepared by the NCERT for the implementation of the program emphasized diversification of the program and flexibility in the duration of courses as features in the introduction and implementation of vocationalized education in the general education (higher secondary) schools. But evidence given by researchers indicates that the attempt to diversify and vocationalize higher secondary education so that about half the number of students at this stage would choose courses that would have prepared them for middle level jobs rather than for entrance to the university failed. In 1975, the

enrolment rate in vocational education at the secondary stage remained among the lowest in the world.

The reasons for this failure were partly social, partly educational and partly economic. Unfavourable wage policies for middle level skilled workers as against white-collar job-operators persisted. The failure to create adequate job opportunities caused a mismatch between educational qualifications and labour market expectations (Naik, 1975:10). This mismatch was one between the range and variety of employment opportunities available to school-leavers and the students' expectations of appropriate occupations for them to follow (Verma, 1980:5).

Between 1975 and 1985, the pace of vocationalization slowed down, except in the southern state of Tamil Nadu where it was introduced and adopted on a large scale (largely because of the political will and commitment of the state government). Several reports of national seminars on the implementation of vocationalization stressed the need to reform and modify the program for its effective implementation. Some of these were Learning To Do, 1978; Learning To Earn, 1983; Vocationalization of Education: Profile and Direction, 1985; Report of National Seminar on Vocationalization of Education, 1985 (Sacheti and Ray, 1985:3).

The third period began with the change in political leadership following the assassination of Indira Gandhi in

1984. Although India, as an agro-industrial country in 1985, could boast of achieving (i) self-reliance in food production and food supply; (ii) self-reliance in modern industry; (iii) a high savings rate of 22% of GDP; (iv) a good foreign exchange reserve of about 6 billion dollars, the other side of the picture was the stark reality of poverty (Bhagawan, 1987:68). Declining public investment in industry and its corresponding increase in energy, transport and communication sectors, while encouraging a leading role for the private sector in the industrial sector, characterized India's economic policies. A deepening fiscal crisis of the state caused by the relative stagnation of Indian industry and increased deficits are the hallmarks of the economic policy of the post-1985 period (Bhagawan, 1987:74). As Kotovsky points out, the structural distinctiveness in the system of production relations which permeate the socio-economic structure of contemporary India is succinctly expressed in the dual nature of the economy. Although a considerable proportion of the GNP is generated by modern industries and transport as well as by the entrepreneur-type agricultural farms using hired labour, the bulk of the population is involved in the type of production that is based totally or predominantly on manual labour (Kotovsky, 1984:1134).

The economic problem of growing unemployment among the educated youth in the 1980s prompted the national government to appoint a working group to:- (1) formulate the concept of

education and training should be imparted; (2) recommend the nature (of courses) and time allocation for general education courses and vocational courses; (3) recommend required linkages among agencies responsible for the implementation of vocationalization; (4) make the program more attractive by exploring avenues for vocationalization in higher education and linking it to apprenticeship schemes; (5) promote vocationalization by preparing an action plan regarding training of teachers, provision of instructional materials and facilities and other related aspects (Sacheti and Ray, 1986:3-4).

The National Policy on Education, 1986, even though it lowered the targets of higher secondary students to 10% by 1990 and 25% by 1995 (Government of India, 1986:1.6.4) as compared to the target of the Education Commission, 1966, of 20% of all children at the lower secondary level and 50% beyond Class X by the year 1986 (Government of India, 1966:713) made it clear that vocationalization would be an integral part of the formal education system.

> .....the introduction of systematic, well-planned and rigorously implemented programs of vocational education is crucial in the proposed educational reorganization.
>
> (Government of India, 1986:13)

In order to enhance individual employability, reduce the imbalance between the demand and supply of skilled manpower and provide a career-oriented alternative, the National

Policy on Education, 1986, proposed that vocationalization programs be streamlined, beginning after the secondary stage (after grade 10) and being completed in the plus two stage of the higher secondary level (Ghosh and Talbani, 1989:22-23).

The National Policy on Education, 1986, generated much discussion and debate in India. Apart from the criticism that the policy was an attempt to restructure education to benefit particular interests (Kumar, 1988:120), it was regarded by many as a departure from earlier educational policies. It shifted the focus away from education being merely a social welfare activity with peripheral status in educational planning to education being given a more important role in national development and economic growth. Apart from Kerala, state governments regarded education and health-related programs as social services which competed with other welfare measures and not as essential inputs for development. The Policy's commitment to increase the budget allocation to education was based on the belief that "if investing in education is costly, not doing so is costlier" (Government of India, 1985:90). This is an important change because earlier the allocation of funds across states and between and within social services like education and health remained inconsistent with demonstrated needs. Within the state budgets particularly, there was no significant shift in composition towards services like primary education and health which benefitted the poor disproportionately (World

Bank, 1989).

Further, the National Policy on Education, 1986, recognized that a more determined effort was needed to be made to raise revenues from beneficiaries of educational services who could afford to pay. Thus it saw no justification in subsidizing higher education to such an extent as was being done. The report, The Challenge of Education, 1986, suggested raising funds by reducing subsidies at all levels above primary education, levying special taxes and encouraging private contributions, student loans and scholarships awarded on the basis of economic need and academic merit.

In summary, there is an amazingly close parallel between educational development and economic development of the post-independence period. The existence of illiteracy and slow substandard growth in elementary education closely correspond to the slow economic growth and incidence of poverty (Kamat, 1985:113). The problems of large-scale educated unemployment and the near-absence of vocationalization and diversification at the secondary level are linked to the period since 1965 when growth of the economy decelerated. The situation of the educated unemployed is aggravated by the imbalance in the educational system which allows and encourages secondary and higher education to expand at a rate faster than the needs of the economy. Further, there is not much of diversification and vocationalization at the secondary stage of schooling

(Grades 10-12) so as to provide terminal points leading to remunerative employment opportunities (Kamat, 1985:115).

There is a growing realization that the general problem of unemployment cannot be solved without adopting an altogether different strategy of economic development and the latter can hardly be initiated without effecting a radical change in the existing socio-economic structure. Many efforts, in the post-independence period, to introduce work-bias in the education system have not met with success. Basic schools, multi-purpose schools, and technical schools did not prove popular and most secondary students, or their parents, preferred the well-trodden path of liberal education leading to a degree. New programs of vocationalization and diversification will meet the same fate unless remunerative job opportunities are available on completion of these courses. The answers to these problems ultimately lie in the politico-economic structure and relevant policy decisions (Kamat, 1985:117).

5.3 Problems and Issues of Vocationalization of Secondary Education in India:

Repeated attempts to vocationalize the curriculum of secondary education in India have been made in the past, in the belief that this will prepare students better for employment. During the British period, the little vocational education that was provided was limited in scope, in quality,

and in effectiveness. The economy remained substantially underdeveloped and undiversified and only a small percentage of the population came to depend on wage labour for their livelihood. The situation changed slowly and

> developments in technical education were concomitant with the modernization and industrialization of the Indian economy.
> (Crane, 1965:167)

Several factors influenced the slow development of vocational and technical education in the colonial period. One problem was the vacillation, uncertainty, and aimless compromise, both in the making of policy and in its execution. (This problem appears to be present in 1990 too.) Second, the government departments of education were frequently staffed and administered by men with purely literary/academic training and funds were scarce and budgets limited. Further, technically trained Indians were employed at jobs well below the level for which they had been trained. There was little contact between education and industry and the system of vocational and technical education was loosely related to the industrial world whose needs were to have been served. Government-dominated and service-oriented, the technical education and research system was largely devoted to its own ends (Crane, 1965:192). At the same time, mention must be made of the tendency of the educated Indian to seek a white-collar job which did not need specific technical skills or manual labour. In a bureaucratic setting, this had a negative

effect on interest in vocational education. The "diploma mentality" which was deeply entrenched was largely responsible for acting as an internal limitation on the development of vocational education. Besides, Indian education, during the period under discussion, was inherently theoretical and unpractical with the exception of instruction in a native craft which was not contributory to the modernization of the economy. In summary, until after World War I, vocational education and training received little attention or recognition and suffered from neglect as the Indian economy remained singularly undeveloped (Crane, 1965:193). De-industrialization during the colonial period has already been discussed in an earlier section of this chapter.

In the post-1947 period, proposals to reform the education system included giving greater emphasis to technical and practical skills rather than theoretical instruction by vocationalizing the curricula of academic schools. Increased emphasis on vocational education and the creation of diversified multi-purpose schools which could provide technical and vocational as well as general, academic education soon became the target of criticism in the context of international evidence and debate among researchers. The controversy over the "Vocational School Fallacy" in the 1960s and recent World Bank studies have made the whole issue of vocationalized secondary education re-emerge as an important

issue in India as in other advanced and developing countries.

The questions being asked are similar to the ones asked in other countries. Should the system of secondary education be vocationalized on the pattern introduced in other countries where it has not proved successful in solving problems? Will diversification of curriculum help solve educational and economic problems? Should vocational education and training be given outside the system of formal education? Is it purely an educational issue? Does it need to be linked to changes in the social fabric and economic structure?

In an attempt to answer these questions, the main arguments put forward in favour of vocationalized or diversified secondary schools are similar to the ones which support the "new vocationalism". Vocational education will encourage positive attitudes towards practical, manual work, increase the supply of technical trained manpower and reduce unemployment caused by unreal aspirations and expectations. Second, vocational education will reduce the excess demand for higher education and by improving the links between education and the labour market, diversified secondary schools will offer a higher rate of return than academic schools. Third, vocational education will increase students' cognitive and non-cognitive skills. Fourth, vocational education will contribute to equality of educational opportunity by giving access to education in diversified

secondary schools to students from disadvantaged social and economic groups (Woodhall, 1988:97).

Critics of vocationalized secondary education, on the other hand, argue that in a rapidly changing labour market, vocational education alone cannot reduce unemployment and job-specific vocational education may actually reduce rather than increase the chances of school-leavers finding jobs. Second, vocational education is more expensive than general education and its cost-effectiveness is questionable. Third, implementation problems hinder the imparting of high-quality vocational skills. Finally, vocational streams lead to dead-end rather than high-status jobs and they have acquired low status as pupils from poor families are concentrated in them (Woodhall, 1988:99). The hypothesis that diversified secondary schools will increase equality of opportunity for different social and economic groups is not supported by cross-national evidence and by evidence in India (discussed below) where the educational system is a highly elitist and exclusive system geared to maintaining the socio-political hierarchical status quo.

In India, particularly, expansion of vocational education is favoured because it is felt that vocational education can produce the kind of manpower required by modern technology - fewer highly qualified middle and lower level skilled personnel. Second, it can develop "skill-culture" in contrast to pure "academic-culture". Third, it can meet

regional needs in a better way as the costs of wrong forecasts of manpower needs can be minimized with vocational education planned at regional or micro levels instead of national levels (Varghese, 1983). But available data indicates that enrolment in vocational education does not constitute more than 10% of total secondary enrolments (See Appendix 2) and second, this proportion is consistently declining (Tilak, 1988b:247) (See Appendix 3). Moreover, enrolment patterns are not related to employment opportunities. Students continue to pursue those careers they perceive as having the highest social and economic payoffs (for example, engineering, and technological fields and business administration). Attempts to impose quotas on admission to certain institutions and facilities are frequently met by well-organized political-group protest and student disruption. In spite of the recommendations of the Education Commission Report (1966) and the National Policy on Education Resolution (1968), the rate of growth of vocational education in India since 1965 has been declining. Public expenditure on vocational education has been remarkably low compared to other developing countries. Between 1970 and 1975, allocations for vocational education, as a proportion of expenditure on total secondary education as well as per student, have declined (Tilak, 1988b:249).

There is little recent empirical evidence on vocational programs in the different states of India to examine whether

vocationalized secondary education yields higher private and social rates of return than general secondary education, to evaluate the programs on the twin criteria of economic efficiency and social equity, and to address the issue of providing it in the formal system of secondary schooling. Cross-national research on these issues does not totally disfavour vocationalization of secondary education for all countries or for all times (Tilak, 1988a:55). It may be successful in some countries because of favourable economic conditions, or at a particular point of time or in certain sectors of economic activity.

> In the initial stages, technical and vocational instruction is the cart rather than the horse in economic growth, and its development depends upon real and perceived opportunities in the economy.
>
> (Foster, 1965:153)

At the beginning of the 1990s, the issues remain the same. Can vocationalization be viewed as one of the essential requirements of modernization and economic growth? Is there any justification to give high priority to vocationalization and diversification of education when resources are limited? Does it provide a second-class education and track some disadvantaged groups away from academic education and access to jobs of high pay and status? When the demand for such second-class education is low, is it justified to expect vocationalization of secondary education as a program to create employment, enhance the quality of education and

improve economic efficiency in terms of returns to education and equity objectives?

Despite these unanswered questions, vocationalization is being emphasized in India as an effective strategy to link education and employment and diversification is being considered as an effort to respond to the needs of a changing society. But the program is being implemented perfunctorily without adequate preparation and provision of resources; the traditional concept of "pursuit of knowledge" continues to dominate the scene and the issue of vocationalization remains essentially a question of accelerating rapid economic development which would create adequate opportunities in the labour market.

As in other countries, in India too, vocationalization is a recurring educational policy theme. It is "a political response to poor articulation of schooling with the labour market" (Lauglo and Lillis, 1988:3). Youth unemployment, which is on the increase, provides the political momentum for the desire to vocationalize.

The policy, as documented in the government resolutions mentioned earlier, seeks a closer link between the content of schooling and the application of skills, attitudes and knowledge in the world of work, both in obtaining employment and in contributing to productivity in the work obtained. The contemporary vocationalization program in India remains essentially a political response to the labour market

realities in which school-leavers are unable to find suitable jobs. Its promotion rests on the unrealistic hope that teaching vocational skills in secondary schools will alleviate the problem. Further, egalitarian goals are invoked in support of the trend towards vocationalization - the egalitarian demands of nation-building. But the implementation issues regarding curriculum goals, trained teachers, organization and management, assessment and evaluation, resource materials and equipment continue to stall the expansion of vocational education. Thus the issue of its rapid and large-scale implementation under political pressure remains an issue in the current national education policy which is rooted in deep political, ideological, economic and educational perspectives. The future of the program of vocationalization of secondary education in India remains uncertain. Systematic research, which in turn requires initiative and financial resources, and long-term monitoring of the programs in different states of India are both needed before assessing the place of vocational education in the overall national education policy.

Related to the problems and issues of vocational education and its relationship to economic development and growth (discussed above) is the recent issue of private and social demand for education. Goel (1974) investigates the relationship between the levels of educational development and economic growth. According to him, this relationship is

not a cause-and-effect relationship but a "seed and flower" relationship. Education is an effect of income and less a cause of economic growth. To substantiate this point, he puts forward the following arguments, drawing heavily from educational and economic development in post-independence India. Education is but one subset in a complex of factors like natural resources, labour, physical and human capital, which bring about economic growth. The formation of human capital itself depends on several factors like education, health, etc. Further, the fact that education contributes to economic growth directly and indirectly does not mean that provision of more education brings about an accelerated rate of growth. Quantitative rather than qualitative expansion of education at all levels is one of the internal constraints on the development of education. The other is the capacity of the economy to absorb the educated manpower (Goel 1974:147).

Goel puts forward the hypothesis that as long as the private returns from investment in education in the form of higher wages and cultural satisfactions are higher than the monetary and non-monetary benefits from investment in physical or share capital, at the point of time when the decision to acquire education is taken, an increase in per capita income will inevitably lead to an increase in the demand for education. Second, since the demand for education grows with an increase in per capita income, the rate of its growth depends on the distribution of incomes. Education as

an economic good is unique in so far as the market will offer it in a limited quantity only and spread over a period of time. Other things being equal, the demand for education will grow faster when the flow of incomes is more in favour of the poorer sections of the community. As a corollary of this, the demand for education will increase faster in the less developed regions (Goel, 1974:149-150).

If we apply this to educational developments in India for the period under review, it can be observed that with the rise in per capita income, the demand for education has grown at all levels. The demand for secondary education has grown more than that of primary and middle education and the demand for higher education has grown more than the demand for secondary education. But even though the social demand for primary education is high (it is free and compulsory in some states), yet the private demand for it has lagged behind. To explain this, Goel points out that the social demand for primary education seems to be based on the assumptions regarding enrolment targets laid down in the plan documents, keeping in view the constitutional directive of free and compulsory education up to the age of 14. On the other hand, the Five Year Plans which relate to enrolments in the secondary and tertiary sectors, are often worked out through generalizations like the vocationalization of secondary education to make it an effective terminal point or to change its uni-linear character. The Plans do not take into

consideration the effect of the growth and distribution of income on the private demand for education and the complementary nature of the different levels of education (Goel, 1974:155). As succinctly put by Sundrum (1987:219), expansion of the Indian education system in the post-independence years showed evidence of the dominant influence of private demand. Since private demand for education was stronger in urban areas, for higher levels of education, and from the affluent sections of society, there was correspondingly, expansion of education in these areas. This led to a number of problems, chief among them being a continuous inflation of educational requirements of jobs. The demand for higher education continued in spite of large numbers being unemployed. This was because private demand for higher education was in response to expected incomes.

To illustrate this further, Goel points out that the First Five Year Plan (1951-1956) laid emphasis on the need to reorganize secondary education so as to make it serve the practical needs of the state and the economy and the need to curb the tendency to multiply universities on local or regional grounds. The Second Five Year Plan (1956-1961) advocated expansion of primary education, development of a system of secondary education that would offer openings in a number of different directions, reduction of wastage and stagnation at all levels of education. It also drew attention to the problem of rapid expansion of general education at the

tertiary level and proposed increasing the provision for scientific and technological education in the universities. The latter was consequently dropped from subsequent plans in view of the increasing unemployment among engineers and technicians in the 1960s and 1970s (Goel, 1974:156).

The Third Five Year Plan (1961-1966) provided facilities for elementary education of all children in the 6-11 age group. In the Fourth Five Year Plan (1969-1974), there was a change to give higher priority for expansion of elementary education. The Fifth Five Year Plan (1974-1979) proposed to provide universal education for all children in the 6-14 age group by the end of the Sixth Five Year Plan (1980-1985) and vocationalize secondary education to make it more meaningful in the context of planned development in the country. But financial and other constraints on the private and social demand for primary education indicate that India faces serious problems even after the Seventh Five Year Plan (1985-1990) to make primary education universal (Goel, 1974:156).

Similarly, vocationalization of secondary education and the need to make it relevant to the economy has been emphasized repeatedly in the Five Year Plans. But owing to lack of private demand, some of the polytechnic and industrial schools had to be closed down in the 1960s. The provision of vocational courses in the curriculum of the multi-purpose schools did not make school education terminal. In the 1970s, relatively more students proceeded to higher

education from the stream of secondary education than in the earlier period. It was clear that secondary education had become less effective as a terminal point. The explanation for this, according to Goel, lies in the increasing incomes of the upper middle and richer classes. At the same time, the demand for technical education at the lower levels of certificate and diploma comes from the relatively lower income groups, whose decisions do not have a material effect on the demand for higher education (Goel, 1974:156). We can safely conclude from this that vocationalization of secondary education can be made relevant and effective only if it is based on proper and correct estimation of private demand.

In summary, education has not played its part in promoting the development of the country and has been an important cause of the slow growth of the economy. If education has to be instrumental in promoting greater equality and development, educational facilities have to be expanded until more persons are educated to the limit of their ability. Moreover, education has to be combined with other measures relating to infrastructure and economic institutions before it can contribute to rapid economic growth (Sundrum, 1987:221). Further, educational development is needed to help poor people overcome their poverty, by taking advantage of better technology and improving their productive capacity, and by making better use of existing market opportunities and overcoming many of the institutional

obstacles in their way.

5.4 CONCLUSIONS, CONCERNS AND NEW DIRECTIONS FOR VOCATIONALISM IN INDIA:

From this review of pre-1947 and post-1947 developments in the education system and the economy of India, certain conclusions can be drawn. These are analyzed for the purpose of addressing the concerns for the future and examining the new directions for vocationalism in the country.

First, the old pre-independence system and structure of education have, by and large, been maintained and continued. This can be explained by the fact that whatever marginal economic gains were made after independence have been unevenly distributed among classes. There has been little change in the more basic institutional factors affecting poverty and income distribution. Although there is considerable inequality in incomes derived only from labour, the main source of income inequality is the ownership of assets. Productive assets such as land and capital are scarce and their ownership is concentrated in a few hands. The interaction between unequal distribution of assets and income is a powerful force for the cumulative increase of inequality (Sundrum, 1987:177) The incidence of poverty declined in India during the 1970s and early and mid-1980s, according to World Bank studies. There has been a gradual decline in the incidence of poverty in rural and urban areas, and average

daily earnings in rural labour markets have risen in real terms in most regions. Nevertheless, the number of low income families remains very large and the poor continue to be subject to malnutrition, ill health and under-consumption of education and other key social services (World Bank, 1989:79). The movement towards socialism and the capitalist transformation of the economy has been slow and lopsided. Although higher growth rates in independent India as compared to colonial India have been accompanied by some technological development and some rise in the standard of living, a large part of the agricultural sector suffers from low levels of technology. The increasing balance of trade deficit and a massive foreign debt indicate India's movement away from a path of self-reliant economic growth. In the absence of overall development, the feudal ethos once again pervades the country. Increasing fanaticism and communalism also indicate retarded development. State policies remain largely oriented to safeguarding and promoting the interest of the elite (Prasad, 1990:29).

Second, as a result of a considerable quantitative expansion, education has reached those social strata which had hitherto remained untouched. For instance, secondary education has almost fully covered the middle sections and is now approaching the lower social segments. But adult education is still neglected and primary education has a slow-paced growth in a country where illiteracy remains a

major educational and economic problem. As Kamat points out, having taken place in the old framework, educational expansion has accentuated the basic contradictions inherent in the system and has further intensified them (Kamat, 1985:127). In this context, vocational education is seen as a tool of evolutionary change, designed to provide skills and knowledge for students to fit into existing economic and social structures and to make them work more effectively. It is seen as a second chance for disadvantaged youth, preparing them to play productive roles in the society (Arnove, 1984:397). But critics view it as a rationalization for an inferior education for the masses, while elite groups gain the advantages of a formal system that provides credentials for a limited number of jobs in the modern sector of the economy (Di Bona, 1977:615).

Third, qualitative improvement has been seen only at the high-level institutions of training and research and for the modern sector in the economy (Kamat, 1985:128). The children of socially disadvantaged groups, such as the economically poor, the scheduled castes and scheduled tribes remain on the periphery of the school system and these groups will become more marginalized if the present economic policy continues (Bhattacharya, 1989:162). In the words of Myrdal, "radical egalitarian reforms are a necessary condition for sustained growth and development" (Myrdal, 1972, cited by Bhattacharya, 1989:162).

Fourth, the expansion of the education system, in general, and the introduction of vocationalization in secondary education, in particular, has not advanced towards achieving equality of educational opportunity which is the goal of social justice in education in India (Kamat, 1985:131). This is because the class basis for a socialist strategy of economic development does not exist in India, for pro-capitalist elites retain substantial power. India's political leaders continue in their efforts to gain popular support by projecting a socialistic image, but education plays its role in strengthening and perpetuating the status quo with some marginal modifications as may be necessitated from time to time (Kamat, 1985:135). Changes in education have taken place within the framework of more or less the same social structure. This has led to contradictions and confrontations (like the problem of educated unemployment) which cannot be resolved without a restructuring of the political economy and existing social system.

It is worthwhile at this juncture to review the future prospects of vocational education and training in solving educational and economic problems in the context of the Eighth Five Year Plan imperatives. The Planning Commission in its paper "Eighth Plan: Perspectives and Issues" prepared for the October, 1988, meeting of the Commission states that

> a more rapid rate of employment generation, the fulfilment of basic needs and a greater emphasis on social development will require a substantial increase in the overall growth

rate of the economy. (Adiseshiah, 1990:2)

Further, the objectives of the Plan have been outlined as growth and modernization aimed at: (1) reducing poverty, (2) reducing regional disparities, (3) annual employment growth of 3%, (4) international competitiveness in exports, (5) a minimum needs program to provide food grains, universal elementary education, eradicate illiteracy in the 15-35 age group, provide clean drinking water, contain major communicable diseases and a comprehensive health scheme to attain "health for all" by the year 2000, and (6) greater decentralization , making for people's participation in the Plan (Adiseshiah, 1990:3).

A higher rate of economic growth than the trend of the Seventh Five Year Plan (1985-1990) is needed and the debate is on whether it should be 6% or 7%. But if the present socio-political structure remains in place, no matter what growth rate is set, the problems of massive poverty and unemployment will continue. This is so because growth rate measures the expansion of the size of the economy over a given period of time, not its development, not the measure of the well-being or ill-being of the mass of its people. It ignores the distribution of the national income between different classes (Adiseshiah, 1990:3-6).

Employment generation in the Seventh Plan has been slow and low. For the Eighth Plan, increased gainful employment will not be possible within the industry, the infrastructure,

the public administration and the organized sector which can take on only 10% of those seeking employment. Hence employment perspectives for the Eighth Plan involve further agricultural intensity, carefully planned, developed and expanded allied activities of fishing, animal husbandry, forestry, village and small-scale industries and the generation of rural assets. This is the crucial sector in terms of development for the masses (Adiseshiah, 1990:14-15). The program of vocational education and training needs to be geared to serve the needs of this sector. Unfortunately, after seven Five Year Plans and two annual plans, a power structure has developed which is vast, varied and diversified and covers both the urban and rural areas, both industry and agriculture, - a power structure in which the well-to-do minority are decision-makers in political, social and economic matters. Poverty eradication, employment generation and the egalitarian goals are not a priority for these elites (Adiseshiah, 1990:15-16).

What is needed is an intensified and effective employment program in which opportunities are built right into the development programs. However, development in India these days, is equated with economic growth and economic growth with the dominance of the market which is in the hands of the elite minority and modernity is equated with consumerism. In India, the current fascination with market orientation and dominance is anti-developmental in character

because the majority of the people do not have the purchasing power to operate in the market and industrial expansion is limited because of the narrowness of the market (Adiseshiah, 1990:17). The issue of the role of vocational education and training in providing adequate and relevant skills for economic growth and social development is difficult to sort out without linking this discussion to the broader political and structural determinants of poor economic growth and poor employment opportunities.

In this context, the process of building up of a cadre of scientific and technical personnel in India as part of human resource development is being questioned. Over the years the economist has raised questions about this build-up from the viewpoint of either return from investment or in terms of what specific social benefits have been achieved as a result of this investment in science and technology. The educationist has argued that this is a long-term investment. But even as the concept of bringing science and technology into economic planning has been gathering slow momentum from Plan to Plan, the situation of unemployment of engineers and diploma-holders has deteriorated notwithstanding the high cost of technical education. There is also a mismatch between training and the kind of jobs that the degree and diploma-holders are doing. Added to this is the problem of drop-outs at the secondary stage. To check this in semi-urban and rural areas, it is necessary to improve skill-

training for future employment. Vocationalization of secondary education, it is argued, will reduce the requirement of resources for higher education and minimize the wastage by way of over-education or over-qualification, as in the case of doctors required to serve in rural areas. Therefore, manpower planning should start at the school stage, particularly in rural areas, so that people can get into employable jobs (Lavakare, 1990:197-204).

It is now widely recognized that employment generation should form a central element in the strategy of development planning during the 1990s and employment growth has, therefore, to result primarily from economic growth. But experience has shown that economic growth by itself does not automatically result in a proportionate sharing of the benefits for all. While education by itself cannot pave the way for equality in an inegalitarian society, the question of how far the education system is contributing to the realization of this social goal will remain an important issue in the years to come.

New directions for vocationalism in India must be reviewed in the context of the recent government efforts toward political liberalization of the economy. As Kohli (1989) points out, India's industrial growth has been slowing down over the last two decades and this deceleration has generated extensive debate on the subject. Policy changes, as reflected in the Indian Government's attempts to liberalize

the economy in the 1980s, were not objective responses to an objective situation (namely an economy whose industrial sector is not doing well). They were basically political choices. Indira Gandhi's new economic direction of virtual decontrol by the government on the expansion of twenty important industries was par and parcel of her overall political shift. It involved a move away from India's left or populist values of secularism and socialism toward the package hitherto offered by the right wing parties. She sought to build her support in the Hindi-speaking heartland and with the business communities, and industrial and commercial groups. A movement toward liberalizing the economy, while maintaining some rhetoric of socialism and some of the anti-poverty programs, was likely to strengthen her politically. Her attempts to liberalize the economy did not draw sharp political reaction from the forces of opposition. The tension between the pursuit of economic rationality and the rationality of democracy during her last few years was kept within manageable bounds (Kohli, 1989:311).

Her son, Rajiv Gandhi pushed liberalization harder and drew considerably more political opposition. Within India's "muddle through" model of economic policy making, the general trend since 1987 has been one of the policy makers being committed to economic liberalization. But political considerations have necessitated the renewal of populism; and

economic policy fluctuations can be best explained by political factors. The shift, in the political arena, to a more accommodating and compromising set of policies toward the Punjab and Assam was matched by a shift in the economic arena. Rajiv Gandhi's government's approach was summed up in his own words as "a judicious combination of deregulation, import liberalization and easier access to foreign technology (Quoted in the Times of India, January 6, 1986 and cited by Kohli, 1989:312). This was a definite shift from Nehru and Indira Gandhi's rhetorical emphasis on socialism. It lies outside the scope of this study to outline in detail the policy fluctuations and changes under Rajiv Gandhi's government (1985-1989). For our purpose, it is sufficient to note that as his popularity declined in the wake of the opposition that criticized him for neglecting the farmers and the poor, the drive toward economic liberalization slowed down. The government had few options for stimulating growth other than liberalizing the economy but such a policy trajectory cost the government popular political support (Kohli, 1989:323).

Conclusion:

The case for vocational education has received much support in India because it is viewed basically as the solution to educational and economic problems. Government policy, particularly, has favoured diversification of courses

at the secondary stage and vocationalizing the two years of higher secondary education after ten years of general education. Many academic schools that concentrated for a long period on preparing students for entry into institutions of higher education, have become multi-purpose schools to serve a broad spectrum of students and their needs.

From the scanty evidence available from studies on the program in India and by relating it to international empirical research, it is clear that even though it may not be viable from the economic efficiency viewpoint, vocationalism continues to have a powerful appeal as an ideology which orientates education to achieving its economic and social goals of development. Where it should be given (within or outside the formal system of secondary education), or how it should be imparted, or who should finance it, have remained controversial issues among researchers, planners and policy-makers. It has been realized, however, that in order to achieve the objectives set for it, the vocational education program needs to be planned carefully and should be accompanied by a restructuring of the economy.

CHAPTER 6

CONCLUSION

The issues of unemployment of youth and the role of education in providing skills for economic and social development have dominated research in the field of economics of education and have motivated researchers and policy-makers to find ways of forging closer links between schooling and the labour market. This thesis has attempted a critical examination and analysis of theoretical positions taken by economists and sociologists on the relationship between education and work. These indicate that different viewpoints have different implications for educational policy.

The human capital theorists argue that investment in education is investment in the productive capacity of people. Investment in human beings gives return which is reflected in the earnings of the educated. Schooling imparts skills to individuals which, in turn, increases their productivity as workers who are paid wages according to their contribution to the total national product. Hence, according to the human capital theory, those who are educated earn more than their less educated counterparts. Further, the theory forms the basis for rate of return studies which compare the net present value of costs of and benefits from education. These in general conclude that investment in education is profitable, private rates of return are higher than social rates of return

for any given level of education, rates of return tend to be higher in primary education than in secondary education and higher in less developed countries than in more developed countries. (UNESCO, 1988:12)

The Screening Hypothesis questions some of the postulations of the human capital theory. The strong version implies that education has no direct effect skill training and does not improve the individual's productivity. The weak version suggests that education acts as a convenient screening device or filter which enables the employer to identify those with positive attitudes toward skill training and work.

Technological changes have resulted in structural changes in the production process which may result in displacement of labour and structural unemployment. When there is unemployment and underemployment, the workings of the labour market and educational planning and their incorporation in related policy formulations assume importance. Preferential hiring practices of employers have a direct influence on the social demand for education. According to another version of the labour market theory, trainability of an individual is valued highly in the labour market; hiring educated people reduces the training costs and therefore education becomes important for entry into the labour market. In segmented labour markets, according to the Marxist view, class origins and educational qualifications determine job entry into primary or secondary sectors of the labour market.

In this thesis, these theoretical perspectives on the relationship between education and productive work are outlined in Chapter 2 and are interlinked with an analysis of the interdependence between education and human resource development which in turn is dependent on the operation of the labour market. The need to link education and productive work, as emphasized by the research, has led to different methods and strategies among which one in particular has become the focus of international debate. Vocationalization by schooling systems is a global attempt to equip students with adequate and relevant skills to enable them to enter into the labour market. Researchers who put forward arguments in favour of vocationalization invoke the objectives of economic efficiency and social equity. On the other hand, critics point out that on these two criteria alone, vocationalization has proved to be unsuccessful and ineffective.

Chapters 3 and 4 indicate that a review of the empirical evidence from a number of industrialized and developing countries on the potential of vocationalization as a solution to education and economic problems confirms that the results have not been encouraging. Yet, in spite of these negative results, particularly from World Bank studies, vocationalization has re-emerged since the 1970s as a major theme in international research on the relationship between education and work. As a strategy to link education and employment, vocationalism occupies an important place in the

formulation of educational policy in many countries. In response to rapid technological changes in production sectors, many countries find it essential to make their educational systems provide the changing skill needs by diversification of curricula in the post-compulsory stage of general education. At the same time there appears to be a shift in emphasis from economic imperatives to political and ideological imperatives. This is clearly seen in the case of India, as discussed in Chapter 5.

This thesis attempts to understand the rise, growth, decline and re-emergence in importance of vocationalization of secondary education in international research by studying these developments in the historical perspective and on the basis of cross-national experiments and experiences. As outlined in Chapter 3, in the advanced industrialized countries, the beginning of the 20th century witnessed a general rise in the number of vocational schools and an increase in the number of students in secondary vocational schools. As a result of the restructuring of national economies under industrial and corporate capitalism, vocational training became an essential element of instruction in public schools. In industrialized countries on the continent of Europe, vocational/technical education became an integral part of their education systems. The Smith-Hughes Act of 1917 paved the way for federal funding and support of vocational education in the United States of America. As

discussed in Chapter 4, by the middle of the twentieth century, newly independent and developing countries, convinced of the political and economic merits of vocational education and impressed by its growth in the European countries, began an unprecedented expansion of post-primary education with vocational training programs at the secondary level. By the 1960s, international agencies, concerned with development in the Third World, made vocational education in developing countries the focus of their educational policies and funding programs. This assistance helped many countries in Africa, Asia and South America set up vocational education programs within a dual secondary education system with separate tracks for academic/general and vocational education.

This historical growth of vocational education occurred at least partly because economic requirements for skilled labour increased individual returns to investments in vocational education (as propounded by human capital theorists). Second, the development of vocational education was a natural outcome of the eagerness of modern states to integrate and socialize citizens and because of its appeal to "progressive" educators who saw in it the way to keep problem students longer in school and postpone their entry into the labour market. Third, it served the purpose of training a loyal and disciplined work force in emerging corporate capitalist economies (Benavot, 1983:66).

The growth of vocational education in public schools

coincided with the development of theories of human capital and human resource development and manpower planning which elaborated the link between economic and educational growth. Vocational education developed in newly independent countries of the Third World in response to industrialization and expansion of secondary education. The Balogh-Foster debate in the 1960s initiated an international questioning of the role and effectiveness of vocational education programs. There was a sharp decline in enrolments in vocational education programs, particularly in developing countries, because of the lack of a strong and expanding economic base to support the superstructure and the relatively high cost of vocational education. The global trend in the 1970s indicated a preference for comprehensive schooling rather than a stratified and differentiated organization of secondary schooling. It was increasingly viewed that secondary schools with diversified/vocationalized curricula tend to reproduce occupational stratification through inequalities in educational outcomes and are therefore inimical to the egalitarian ideology of equality in educational opportunities and outcomes.

The 1980s have witnessed a re-emergence of the dilemma of vocationalized secondary education as developed and developing countries attempt to solve the global problem of youth unemployment. Research has shown that governments and state educational authorities use education as a tool for

achieving economic and social goals by invoking ideologies that provide the rationale for vocational education to bring about the over-all development and complete socialization of the individual. A review of case studies of the "new vocationalism" in industrialized countries like England (in Chapter 3) and the "new educational vision" in developing countries (in Chapter 4) has shown that current ideology ostensibly stresses the need for uniformity and homogeneity in secondary education and access to equal opportunities in post-secondary education. But the criticism levelled against the new trend argues that the school-based programs increase inequities in societies with relatively differentiated occupational structures. Notwithstanding the increasing evidence that vocationalization is ineffective as a solution to economic and educational problems, it is clear that vocationalism has surfaced once again as an important ideology and strategy in the formulation of national policy.

In India, among its myriad economic, social, and educational problems, the problem of youth unemployment has become critical and the need to interface schooling and work has become urgent. The dilemma is not one of whether to vocationalize or not. Nor is it one of evolving a system relevant to the needs of a changing society or continuing the one implanted by its colonial heritage. Research indicates that the dilemma in India lies in different points of view about the relationship between education and work. At one

extreme is the view that vested interest plays a dominant role in using the education system to maintain the status quo in a relationship which is artificially imposed by society, thus perpetuating social hierarchy, discrimination and segmentation in the society. At the other end is the view that vocational education in a reformed education system and restructured socio-economic system can provide skills to meet the social and economic development needs, as well as meet the individual aspirations and expectations for upward mobility.

The tussle between economic, political and ideological perspectives on general and vocational education need to be given more scholarly attention in India as in other countries of the world. As this century goes through the last decade, major trends will have an influence on the future of vocationalization. Policies and planning of vocational education and training will need to be better integrated with economic policy planning and become more responsive to labour market forces. Governments will need to evolve and play an important role in financing, restructuring and providing vocational education and training even as they commit themselves to egalitarian goals. The phenomenal expansion of comprehensive public schooling will mean systems of secondary education that guarantee greater formal equality for all social classes in line with the egalitarian demands of nation-building. Finally, the challenge to vocational education and training will lie in its capacity to be flexible, efficient

and of high quality so as to be successful in solving educational and economic problems. It is hoped that this thesis has helped to revive the interest of researchers in the recurring theme of vocationalized/diversified education as a vital component of education's contribution to economic growth and development in the context of historical and cross-national perspectives.

BIBLIOGRAPHY

Adams, R.J., et al. (1979) Education and Working Canadians: Report of the Commission of Enquiry on Educational Leave and Productivity. Ottawa: Labour Canada/Public Relations Branch

Adiseshiah, M.S., ed. (1990) Eighth Plan Perspectives. New Delhi: Lancer International

Aggarwal, J.C. (1984) Landmarks in the History of Modern Indian Education. New Delhi: Vikas Publishing House Private Limited

Allmendinger, J. (1989) "Educational systems and labour market outcomes." European Sociological Review, 5(3):231-250

Althusser, L. (1971) Lenin and Philosophy and other essays. New York: Monthly Review Press

Amin, S. (1973) Neocolonialism in West Africa. London: Penguin Books

Apple, M., ed. (1982) Cultural and Economic Reproduction in Education: Essays on Class, Ideology and the State. London: Routledge and Kegan Paul

Apple, M. (1979) Ideology and Curriculum. London: Routledge and Kegan Paul

Arnove, R.F. (1984) "A comparison of the Chinese and Indian education systems." Comparative Education, 28(3):378-401

Arrow, K.J. (1973) "Higher education as a filter." Journal of Public Economics, 2:193-216

Ashton, D.N. (1986) Unemployment under Capitalism. Brighton:

Wheatsheaf Books

Bacchus, M.K. (1988) "The political context of vocationalization of education in developing countries." pp. 31-44 in J.Lauglo and K.Lillis, ed. (1988) Vocationalizing Education: an International Perspective. New York: Pergamon Press.

---------- (1981) "Education for development in underdeveloped countries." Comparative Education, 17(2):215-227

---------- (1979) "Structural transformation as a pre-requisite for the success of nonformal education in economically less developed countries." Canadian and International Education, 8(2):83-91

Bagchi, A.K. (1982) The Political Economy of Underdevelopment. Cambridge: Cambridge University Press

Bates, I., et al. (1984) Schooling for the Dole? London: Macmillan

Becker, G.S. (1967) Human Capital and the Personal Distribution of Wealth. Ann Arbor: The University of Michigan Press

---------- (1964) Human Capital: a Theoretical and Empirical Analysis, with special reference to Education. New York: Columbia University Press

Benavot, A. (1983) "The rise and decline of vocational education." Sociology of Education, 56:63-76

---------- (1989) "Education, gender and economic development: a cross-national development." Sociology of Education, 62:14-32

Bhagawan, M.R. (1987) "A critique of India's economic policies and strategies." Monthly Review, 39(1):56-79

Bhatt, V.V. (1988) "Growth and income distribution in India: a review." World Development, 16(5):641-647

Bhattacharya, D. (1989) "Growth and distribution in India." Journal of Contemporary Asia, 19(2):150-166

Blackman, S.J. (1987) "The labour market in school: new vocationalism and issues of socially ascribed disc[illegible]ation." pp. 27-56 in P. Brown, (1987) Sch[illegible] Ordinary Kids: Inequality, Unemployment an[illegible] New Vocationalism. London: Tavistock Pub[illegible]tions.

Blaug, M. (1987) "Economics of education in developing countries: current trends and new priorities." pp. 73-83 in M. Blaug, (1987) The Economics of Education and the Education of an Economist. New York: New York University Press.

--------- (1980) "Common assumptions about education and employment." pp. 145-152 in J.Simmons, ed. (1980) The Education Dilemma: Policy Issues for Developing Countries in the 1980s. New York: Pergamon Press.

--------- (1973) Education and the Employment Problem in Developing Countries. Geneva: ILO Office

--------- (1968) Economics of Education: selected readings. Harmondsworth: Penguin

Bowman, M.J. (1972) An Introduction to the Economics of Education. Baltimore: Penguin Books

---------- (1966) "The human investment revolution in economic thought." Sociology of Education, 39:111-137

Bowles, S. and Gintis, H. (1976) Schooling in Capitalist America. London: Routledge and Kegan Paul

Brown, P. (1987) Schooling Ordinary Kids: Inequality, Unemployment and the New Vocationalism. London: Tavistock Publications.

Brown, P. (1987) "Schooling for inequality? Ordinary kids in school and the labour market." pp. 7-26 in P. Brown and D.N. Ashton, ed. (1987) Education, Unemployment and Labour Markets. London: Falmer Press.

Calhoun, C.C. and Finch, A.V. (1982) Vocational Education: Concepts and Operations. Belmont, California: Wadsworth Incorporated

Cantor, L. (1989) "The re-visioning of vocational education in the American high school." Comparative Education, 25(2):125-132

Carnoy, M. (1980) "Can education alone solve the problem of unemployment?" pp. 73-83 in J.Simmons, ed. (1980) The Education Dilemma: Policy Issues for Developing Countries in the 1980s. New York: Pergamon Press.

---------, Levin, H. and King, K. (1980) Education, Work and Employment - II. Paris: UNESCO:IIEP

---------, (1974) Education as Cultural Imperialism. New York: David McKay Company

Central Intelligence Agency (1989) The World Factbook. Washington, D.C.: Public Affairs: Central Intelligence Agency

Chakrabartty, S. (1973) Twenty Five Years of Independence in India: 1947-1973. New Delhi: People's Publishing House

Chiswick, B.R. (1973) "Schooling, Screening, and Income." pp. 151-158 in L.C.Solmon and P.J.Taubman, ed. (1973) Does College Matter? New York: Academic Press.

Collins, R. (1979) The Credential Society. New York:

Academic Press

Coombs, P.H. (1985) The World Crisis in Education: the View from the 1980s. New York: Oxford University Press

---------- (1968) The World Education Crisis: a Systems Analysis. New York: Pergamon Press

Crane, R.I. (1965) "Technical education and economic development in India before World War I." pp. 167-201 in C.A.Anderson and M.J.Bowman, ed. (1965) Education and Economic Development. Chicago: Aldine Publishing Company.

Cumming, C.E. (1988) "Curriculum costs: vocational subjects." pp. 137-150 in J.Lauglo and K.Lillis, ed. (1988) Vocationalizing Education: an International Perspective. New York: Pergamon Press.

Dale, R. (ed) (1985) Education, Training and Employment. Oxford: Pergamon Press

Das Gupta, R. (1974; 1975)) "Colonialism and underdevelopment in India: an overview." Part I; II. Marxist Miscellany: a Collection of Essays. New Delhi: People's Publishing House.

Deem, R. (1988) "Educational work and the state of education." Work, Employment and Society, 3(2):249-260

Dewey, J. (1916) Democracy and Education: an Introduction to the Philosophy of Education. New York: Macmillan

Di Bona, J.E. (1977) "The development of underdevelopment in India." Asian Profile, 5(6):607-619

Diwan, R. (1977) "Development, education and the poor: context of South Asia." Economic and Political Weekly, 12(9):401-408

Dore, R. (1976) The Diploma Disease: Education, Qualification and Development. London: George Allen and Unwin Limited

Dreeben, R. (1968) On What is Learned in School. Reading, Massachusetts: Addison Wesley

Edwards, E.O and Todaro, M.P. (1974) "Education, society and development: some main themes and suggested strategies for international assistance." World Development, 2(1):25-30

Foster, P. (1987) "Technical/vocational education in the less developed countries." Comparative Education, 19(1):89-107

--------- (1965a) "The vocational school fallacy in development planning." pp. 142-166 in C.A.Anderson and M.S.Bowman, ed. (1966) Education and Economic Development. Chicago: Aldine Publishing Company.

--------- (1965a) "The vocational school fallacy in development planning." pp. 356-365 in J.Karabel and A.H.Halsey, (ed) (1977) Power and Ideology. New York: Oxford Press.

--------- (1965b) Education and Social Change in Ghana. London: Routledge and Kegan Paul

Frank, A. (1978) Dependent Accumulation and Underdevelopment. New York: Monthly Review Press

---------- (1967) Capitalism and Underdevelopment in Latin America. New York: Monthly Review Press

Gallart, M.A. (1988) "The secondarization of technical education in Argentina and the vocationalization of secondary education in Brazil." pp. 203-217 in J.Lauglo and K.Lillis, ed. (1988) Vocationalizing Education: an International Perspective. New York: Pergamon Press.

Gaskell, J. (1984) Conflict and Change in Education: a Sociological Introduction: Unit 30 - Schooling, Work and Employment. Milton Keynes/Philadelphia: Open University Press

Ghosh, R. and Talbani, A.S. (1989) Educational Policy in India: Its Evolution and Content. Montreal: McGill University/ Administration and Policy Studies in Education

Ghosh, R. and Zachariah, M. (ed) (1987) Education and the Process of Change. New Delhi: Sage Publications

Goel, S.C. (1974) "Education and economic growth in India." Comparative Education, 10(2):147-158

Goodlad, J.I. (1984) A Place Called School. New York: McGraw-Hill

Government of India, (1986) National Policy on Education. New Delhi: Ministry of Education

---------- (1986) Program of Action for Implementation of National Policy on Education. New Delhi: Ministry of Education

---------- (1985) Challenge of Education: A Policy Perspective. New Delhi: Ministry of Education

---------- (1985) Seventh Five Year Plan: Chapter 10 - Education, Culture and Sports. New Delhi: Government of India Publications. pp. 246-256

---------- (1977) Report of Iswaribhal Patel Committee to Review the NCERT document "The Curriculum for the Ten Year School". New Delhi: Ministry of Education and Social Welfare

---------- (1966) Report of Education Commission. New Delhi: Ministry of Education

Grubb, W.N. (1985) "The convergence of educational systems and the role of vocationalism." Comparative Education Review, 19(1):59-71

Grubb, W.N. and Lazerson, M. (1982) "Education and the labour market: recycling the youth problem" in H.Kantor and D.B.Tyack, ed. Work, Youth and Schooling. Stanford: Stanford University Press

---------- (1981) "Vocational solutions to youth problems: the persistent frustrations of the American experience." Educational Analysis, 3(2):91-104

---------- (1974) American Education and Vocationalism: a Documentary History. New York: Teachers College Press, Columbia University

Haddad, W.D. and Conly, S. (1987) Diversified Secondary Curriculum Projects: a Review of World Bank Experiences. Report # EDT57. Washington D.C.: Education and Training Department, World Bank

Halsey, A., Floud, J. and Anderson, C. ed. (1961) Education, Economy and Society. New York: The Free Press of Glencoe

Hanson, J.W. and Brembeck, C.S. ed. (1966) Education and the Development of Nations. New York: Rinehart and Winston, Incorporated

Hanson, J.A. and Lieberman, S.S. (1989) India: Poverty, Employment, and Social Services: a World Bank Country Study. Washington D.C.: The World Bank

Harbison, F. (1973) Human Resources as the Wealth of Nations. New York: Oxford University Press

Heyneman, S.P. (1987) "Curricular economics in secondary education: an emerging crisis in developing countrie ." Prospects, 7(1):63-74

Hicks, N.L. (1987) "Education and economic growth." pp. 101-106 in G.Psacharopoulos, ed. (1987) Economics of Education: research and studies. New York: Pergamon Press

Hirst, P. (1974) Knowledge and the Curriculum. London: Routledge and Kegan Paul

Holt, M. and Reid, W.A. (1988) "Instrumentalism and education: 14-18 rhetoric and the 11-16 curriculum." pp. 15-31 in A. Pollard, et al., ed. (1988) Education, Training and the New Vocationalism. Philadelphia/ Milton Keynes: Open University Press.

Huq, M.S. (1975) Education, Manpower, and Development in South and Southeast Asia. New York: Praeger Publishers

Husen, T. (1964) "Societal determinants of the comprehensive school." International Review of Education, 9:158-173

Hussain, A. (1976) "The economy and the educational system in capitalist societies." Economy and Society, 5:413-434

Inkeles, A. (1966) "Social structure and the socialization of competence." Harvard Education Review, 36:265-283

Irizarry, R. (1980) "Overeducation and unemployment in the Third World: the paradoxes of dependent industrialization." Comparative Education Review, 24:338-352

Ishumi, A.G.M. (1988) "Vocational Training as an educational and development strategy: conceptual and practical issues." International Journal of Educational Development, 8(3):163-174

Jallade, J.P. (1987) "Youth unemployment and education." pp.

166-172 in G.Psacharopoulos, ed. (1987) Economics of Education: research and studies. New York: Pergamon Press

Kamat, A.R. (1985) Education and Social Change in India. Bombay: Somaiya Publications Limited

Koehl, R. (1975) "Cultural imperialism as education: an indictment." Comparative Education Review, 19:276-285

Kohli, A. (1989) "Politics of economic liberalization in India." World Development, 17(3):305-328

Kotovsky, G.G. (1984) "Certain trends in India's socio-economic and socio-political development." Asian Survey, xxiv(11):1131-1142

Krahn, H.J. and Lowe, G.S. (1988) Work, Industry and Canadian Society. Scarborough, Ontario: Nelson, Canada

Kumar, K. (1987) "Reproduction or change? Education and elites in India." pp. 27-41 in R.Ghosh and M.Zachariah (1987) Education and the Process of Change. New Delhi: Sage Publications

Lapp, J. and Mote, C. (1915) Learning to Earn. Indianapolis: Bobbs-Merrill

Lauglo, J. and Lillis, K. (1988) Vocationalizing Education: an International Perspective. New York: Pergamon Press

Lauglo, J. and Narman, A. (1988) "Diversified secondary education in Kenya: the status of practical subjects and their uses after school." pp. 235-256 in J.Lauglo and K.Lillis, ed. (1988) Vocationalizing Education: an International Perspective. New York: Pergamon Press.

Lauglo, J. (1983) "Concepts of 'General Education' and

'Vocational Education' curricula for post-compulsory schooling in Western industrialized countries: when shall the twain meet?" Comparative Education, 19(3):285-304

Lavakare, P.J. (1990) "Development of human resources." pp. 197-204 in M.S. Adiseshiah, ed. (1990) Eighth Plan Perspectives. New Delhi: Lancer International

Layard, R. and Psacharopoulos, G. (1974) "The screening hypothesis and the returns to education." Journal of Political Economy, 82(5):985-998

Lazerson, M., et al., (1985) An Education of Value: the Purposes and Practices of Schools. Cambridge: Cambridge University Press

Leighbody, G. (1972) Vocational Education in America's Schools: Major Issues of the 1970s. Chicago: American Technical Society

Leonor, M.D. (1985) Unemployment, Schooling and Training in Developing Countries: Tanzania, Egypt, the Philippines and Indonesia. London, New Hampshire, U.S.A.: Croom Helm.

Levin, H.M. (1987) "Work and education." pp. 146-157 in G.Psacharopoulos, ed. (1987) Economics of Education: Research and Studies. New York: Pergamon Press

----------, Carnoy, M. and King, K. (1980) Education, Work and Employment - II. Paris: UNESCO:IIEP

Lillis, K. and Hogan, D. (1983) "Dilemmas of diversification: problems associated with vocational education in developing countries." Comparative Education, 19(1):89-107

Mehmet, O. (1988) Human Resource Development in the Third World: cases of success and failure. Kingston, Ontario: Ronald P. Frye and Company

Mertens, D. and Gardner, J. (1983) "The long-term effects of vocational education." Journal of Vocational Education Research, 8(2):1-21

Metcalf, D.H. (1985) The Economics of Vocational Training: Past Evidence and Future Consideration. Washington D.C.: World Bank Staff Working Paper #713

Meyer, R.H. (1981) An Economic Analysis of High School Vocational Education - IV. The Labour Market Effects of Vocational Education. Washington, D.C.: The Urban Institute

Middleton, J. (1988) "Changing patterns in World Bank investments in vocational education and training: implications for secondary vocational schools." International Journal of Educational Development, 89(3):213-225

Mincer, J. (1980) "Human capital and earnings." in A.B.Atkinson ed. Wealth, Income and Inequality: selected readings. Oxford: Oxford University Press

---------- (1970) "The distribution of labour incomes: a survey." Journal of Economic Literature (VIII)

Musson, A.E. (1982) "Technological change and manpower." History, 67:237-257

Naik, J.P. (1978) Educational Reform in India: a Historical Review. Pune: Gokhale Institute of Politics and Economics

---------- (1975) Policy and Performance in Indian Education (1947-74). New Delhi: Orient Longman

NCERT, (1984) Vocational Education at the +2 Stage. New Delhi: NCERT Publications

----- (1976) Higher Secondary Education and Its Vocationalization. New Delhi: NCERT Publications

----- (1975) The Curriculum for the Ten Year School. New Delhi: NCERT Publications

Neuman, S. and Ziderman, A. (1989) "Vocational secondary schools can be more cost-effective than academic schools: the case of Israel." Comparative Education, 25(2):151-164

OECD (Organization for Economic Co-operation and Development) (1964) The residual factor and economic growth. Paris: OECD

Nyrop, R.F. et al. ed. (1985) India: a Country Study. Washington, D.C.: Foreign Area Studies: The American University

--------- (1962) Forecasting educational needs for economic and social development. Paris: OECD

Panchamukhi, P.R. (1983) "India: a century of effort." pp. 89-120 in J. Simmons, ed. (1983) Better Schools: International Lessons for Reform. New York: Praeger Publishers

Parsons, T. (1959) "The school class as a social system: some of its functions in American society." Harvard Education Review, 29:297-318

Patrinos, H.A. (1988) "Educational innovation: diversified secondary education in Colombia." pp. 89-96 in O.Mehmet (1988) Human Resource Development in the Third World: Cases of Success and Failure. Kingston, Ontario: Ronald P.Frye and Company

Pollard, A., et al. ed. (1988) Education, Training and the New Vocationalism. Philadelphia/Milton Keynes: Open University Press

Prasad, P.H. (1990) "Political economy of India's retarded development." Economic and Political Weekly, 25(2):29-34

Psacharopoulos, G. (1988) "Editorial introduction." International Review of Education, 34(2):143-148

---------- (1987) "To vocationalize or not to vocationalize: that is the curriculum question." International Review of Education, 33(2):187-211

---------- ed. (1987) Economics of Education: research and studies. New York: Pergamon Press

---------- and Arriagada (1986) "The educational composition of the labour force." International Labour Review, 125:561-574

---------- and Loxley, W. (1985a) Diversified Secondary Education and Development: evidence from Colombia and Tanzania. Baltimore: The John Hopkins University Press

---------- and Woodhall, M.(1985b) Education for Development: Analysis of Investment Choices. New York: Oxford University Press

---------- (1981) "Returns to education: an updated international comparison." Comparative Education, 17:321-341

---------- (1979) "On the weak versus the strong version of the screening hypothesis." Monthly Economic Letters, 4:181-185

---------- (1973) The Returns to Education: an International Comparison. Elsevier: Amsterdam

Ranson, S., et al. ed. (1986) The Revolution in Education and Training. Harlow: Longman

---------- (1984) "Towards a tertiary tripartism: new codes of social control and the 17+" in P.Broadfoot, ed. (1984) Selection, Certification and Control. Lewes: Falmer Press

Regan, R. (1980) Vocational Education is for Learning a Living. Vancouver: Mitchell Press Limited

Reynolds, D. (1986) "Education and training at the periphery: paper presented at a conference at St. Hilda's College, Oxford." cited by Blackman (pp. 27-56) in P.Brown and D.N.Ashton, ed. (1987) Education, Unemployment and the New Vocationalism. London: Tavistock Publications

Rumberger, R. and Daymont, T. (1982) The Economic Value of Academic and Vocational Training Acquired in High School. New York: American Education Research Association

Sacheti, A.K. and Ray, S. (1986) Vocational Education Conference. 7-9 May, 1986. New Delhi: NCERT Publications

Saha, S.K. (1989) "Rural household industries and poverty in India." Journal of Contemporary Asia, 19(2):119-149

Saini, S.K. (1980) Development of Education in India: Socio-Economic Perspectives. New Delhi: Cosmo Publications

Schultz, T.W. ed. (1972) Investment in Education: the Equity-Efficiency Quandary. Chicago: Chicago University Press

---------- (1964) The Economic Value of Education. New York: Colombia University Press

---------- (1961) "Investment in human capital." American Economic Review, 51(2):1-17

Selvaratnam, V. (1988) "Limits to vocationally-oriented education in the Third World." International Journal of Educational Development, 8(2):129-143

Sen, K.N. (1970) Education and the Nation: an Indian Perspective. Calcutta: University of Calcutta Press

Shukla, S. (1983) "Indian educational thought and experiments: a review." Comparative Education, 19(1):59-71

Simmons, J. (1974) Education, poverty and development. World Bank Staff Working Paper #188. Washington D.C.: International Bank for Reconstruction and Development.

Sundrum, R.M. (1987) Growth and Income Distribution in India: Policy and Performance since Independence. New Delhi: Sage Publications

Taubman, P. and Wales, T. (1974) Higher Education and Earnings: College as an Investment and a Screening Device. New York: McGraw-Hill

Tilak, B.G. (1988a) "Economics of education: a review of evidence." Canadian and International Education, 17(1):45-62

---------- (1988b) "Vocational education in South Asia: problems and prospects." International Review of Education, 34(2):244-257

Todaro, M.P. (1983) Economic Development in the Third World. New York: Longman

UNESCO, (1988) Intensive Training Course in Education, Employment and Work. Paris: UNESCO (IIEP)

------,(1986, 1980, 1975, 1969) Statistical Yearbook. Paris: UNESCO

------, (1984) Technical and Vocational Education in India. Bangkok: UNESCO Regional Office for Education in Asia and the Pacific

------, (1983) Technical and Vocational Education in the World, 1970-1980, a statistical report. pp.7-9

------, (1983) Policy, Planning and Management in Technical and Vocational Education: a Comparative Study. Paris: UNESCO

Varghese, N.V. (1983) Vocationalization and the Job Market: Paper presented in the National Seminar on Vocationalization of Education at the +2 Stage. Coimbatore

Verma, G.K., et al. (1980) Illusion and Reality in Secondary Education. Westmead, England: Saxon House/ Teakfield Limited

Watts, A.G. (1988) "Education and employment." pp. 9-22 in R.Dale, ed. (1985) Education, Training and Employment: Towards a new Vocationalism? New York: Pergamon Press.

---------- (1983) Education, Unemployment and the Future of Work. Milton Keynes: Open University Press

Wellington, J. (1987) "Skills for the future? Vocational education and the new technology", in M.Holt, ed. (1987) Skills and Vocationalism: the Easy Answers. Milton Keynes: Open University Press

Wilms, W.W. (1988) "Captured by the American dream: vocational education in the U.S." pp. 81-93 in J.Lauglo and K.Lillis, ed. (1988) Vocationalizing Education: an International Perspective. New York: Pergamon Press.

---------- (1984) "Vocational education and job success: the employer's view." Phi delta kappan, 65:347-350

Wirth, A.G. (1986) "Work, vocational studies, and the quality of life", in G.H.Copps, et al., ed. (1986) Re-visioning vocational education in the secondary school. St.Paul, Minnesota: University of Minnesota Research and Development Centre for Vocational

Education

Woodhall, M. (1988) "Vocationalization of secondary education." Intensive Training Course on Education, Employment and Work. Paris: UNESCO (IIEP)

---------- (1987) "Human capital concepts." pp. 21-23 in G. Psacharopoulos, ed.(1987) Economics of Education: research and studies. New York: Pergamon Press

Zymelman, M. (1985) Training and Development in Brazil: vocational education: aspects of economic policy and planning. Boston: Centre for International Higher Education Documentation, Northeastern University, Boston

APPENDIX 1

EXPANSION IN SECONDARY EDUCATION 1950-66

INDIA

	1950-51	1955-56	1960-61	1965-66
No. of Schools	20,884	32,568	66,920	120,950
No. of Students on roll	5,232,009	8,526,509	18,122,356	25,805,739
Percentage of total population	5.6	7.9	11.1	18.0
No. of teachers	212,000	338,188	641,689	-
Expenditure (in millions)	397.4	502.2	1119.3	-

Adapted from -
Source: Gajendra Verma, Christopher Bagley, Kanka Mallick (ed) (1980) Illusion and Reality in Indian Secondary Education. Westmead, England: Saxon House. p. 123.

APPENDIX 2

EXPANSION IN VOCATIONAL AND TECHNICAL SCHOOL EDUCATION

INDIA

	1950-51	1955-56	1960-61	1965-66 (estimated)
No. of Institutions	2,339	3,074	4,145	3,260
No. of Students	187,194	262,465	401,274	290,000
No. of Teachers	11,598	16,597	27,152	18,500
Direct Expenditure (in millions)	36.9	54.5	114.1	82.2

Adapted from -
Source: Gajendra Verma, Christopher Bagley, Kanka Mallick (ed) (1980) Illusion and Reality in Indian Secondary Education. Westmead, England: Saxon House. p. 123.

APPENDIX 3

ENROLMENTS IN SECONDARY EDUCATION (PERCENTAGE)

INDIA

YEAR	VOCATIONAL	GENERAL
1950	7.3	92.7
1965	6.0	94.0
1975	0.7	99.3

Adapted from -
Source: J.B.G.Tilak, (1988) Vocational Education in South Asia: Problems and Prospects. International Review of Education, 34(2):247