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A SOCIOLOGICAL ANALYSIS OF ACADEMIC ACHIEVEMENT:
AN INTERNATIONAL PERSPECTIVE

By
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A DISSERTATION

Submitted to
Michigan State University
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ABSTRACT

A SOCIOLOGICAL ANALYSIS OF ACADEMIC ACHIEVEMENT:
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By

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This is a sociological analysis of the state of equality of educational opportunity, with a major focus on the status of inequality of academic achievement among members of various social groups. The main purpose was to look analytically at the theory and research and determine the social correlates of children's cognitive learning in societies around the world. The assessment of the state of the research in the field was the other major purpose.

The study is basically a historical and international survey and examination of the existing theoretical literature and research evidence in the fields of sociology, education, anthropology, psychology, and economics on the relationship between some family- and school-related social factors and scholastic performance.

Chapter one includes descriptions of the investigator's purpose in conducting the study, the study's significance, the methodology, and the assumptions underlying the study.

Chapter II is a discussion of the individual's need for and right to education, the importance of education in people's lives, and criticism of education, and examination of

the evidence on the existence of worldwide inequality of educational opportunity in terms of access to and success in education as regards various social groups.

Chapter III is devoted to a theoretical discussion of learning and academic achievement, particularly sociological and social-psychological explanations of human learning with focus on symbolic interactionism.

In chapter IV, international studies of social factors and academic achievement of primary, intermediate, and secondary school students have been examined, and in chapter V, the same task has been undertaken for twenty selected developed and developing countries of both, capitalist and socialist, worlds.

In the last chapter, synthesis of the main conclusions reached on social factors and academic achievement, discussion of sociological research on achievement, and suggestions for viewing the human's learning potential, for teaching practice, for teacher training, for further research, and for educational-social policy, are given. A final comment concludes this chapter and, thus, the dissertation.

Some of the major conclusions reached could be summarized as follows:

(1) In essentially all countries, regardless of the country's political and economic structure and cultural context, children of lower socio-economic status groups, and of those racial, ethnic, and religious minorities and majorities who are politically powerless, females, and rural area

residents generally have less access to and success in education.

(2) In most developed countries, generally, a student's family background has more influence upon academic achievement than school quality. However, the effect of school is greater for students of lower social classes.

In less developed countries, the impact of school factors on scholastic performance is greater than in developed ones. In many cases, the school's influence on achievement has been found to be even stronger than that of family background.

(3) In most countries, research on academic achievement is usually carried out within the traditional framework of psychological theories of learning. Sociological and social-psychological theories, particularly symbolic interactionism, for studying school social systems' effect on achievement, have been utilized to a noticeable measure only for the past fifteen to twenty years and that mostly in the few highly industrialized capitalist countries. Also, not many longitudinal or ethnographic studies, even for the industrialized and capitalist countries, are available.

Dedicated to Mrem and Nishtmaan



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Many people have, at different times and in different ways, contributed to the author's education, including this work. It is impossible to name all of them here. Sincere appreciation and gratitude are extended to every one of them.

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CHAPTER I

INTRODUCTION

A Preliminary Statement of the Problem

Education is viewed by many people as a basic human need and equal access to it is considered by most people to be a fundamental human right and a principle of social justice. The (1948) Universal Declaration of Human Rights has specifically stated that every individual has equal right to education and the Constitution of the United Nations Educational, Scientific, and Cultural Organization has included as one of the Organization's objectives the provision of equality of educational opportunity for all. Today almost no government challenges this principle and essentially all governments give a high priority to education, politically and also in national development plannings. A certain percentage of every country's annual budget is allocated to education. This is in addition to the cost every individual getting an education has to pay directly.

As a consequence, particularly since the end of World War II, there has been a worldwide educational expansion. This expansion has helped many individuals, groups, and

societies.*

But equality of educational opportunity for all, not only in terms of success in schooling, but also as regards access to it, has not materialized anywhere in the world and rate of expansion of educational opportunities, even in terms of the provision of basic literacy and numeracy, varies within countries significantly between and among regions, and racial, ethnic, religious, urban-rural, and gender groups. According to the existing research evidence, essentially everywhere those who remain uneducated or undereducated mostly are members of lower socio-economic classes; politically powerless, excluded, and oppressed racial, ethnic, and religious groups; females; and residents of rural and remote areas; and poor communities.

It is claimed by many people, including many educators and social scientists, that what accounts for inequality of educational achievement and attainment--that is, vast differences in the level of cognitive performance and number of years of schooling completed--between individuals and groups is mainly the individuals' personal, family, and group (social) backgrounds. Those who make such a claim believe that in relation to these (nonschool) factors, the school

*Also, the educational systems--as one of the most important social institutions of every society--regardless of their unique structures and properties, have been very successful for the better or for the worse in nationalistic, religious, and political indoctrination; in transmitting certain cultural values from generation to generation; and in contributing to the maintenance of the nation states. (We are not dealing with these functions of educational systems in this work, however.)

factors make little impact upon students' learning. They contend that there is not much that schools can do to eliminate differential cognitive achievement of individuals and groups or to reduce the level of inequality of such achievement.

Contrary to the claims mentioned above, there are some, though relatively fewer than the group making those claims, who maintain that schools do and could make academic achievement, at least to a large extent, independent of students' personal, family, and group backgrounds. The relative importance of school and home has been a major topic in recent research and discussions of determinants of scholastic achievement and inequality of cognitive outcomes.

The Purposes in Conducting This Study

This is a sociological analysis of the state of equality of educational opportunity, with a main focus on the status of the theory and research on the relationship between social--school and nonschool--factors and academic achievement of primary, intermediate, and secondary school students in different societies around the world. The purpose is to determine what are the main deciding factor(s) and relative contributions of school- and family-related variables to student learning and inequality of academic achievement among students, in countries with different social, political, and economic structures.

The major purpose is to review, analyze, and synthesize the available studies which have looked at the relationship

between family- and school-related factors (including, particularly, school social systems characteristics) and student learning--success or failure in school. The study is basically a survey and critical assessment of the existing literature and research studies in the fields of sociology, education, anthropology, psychology, and economics which have dealt with the question of in-school and out-of-school influences upon student scholastic performance. Of particular interest here are those studies which have employed multivariate statistical techniques and regression analysis, and experimental and ethnographic research designs and reported the interrelationships between and relative effects of non-intellectual and pedagogical factors on student learning.

The other purpose in doing this study is to evaluate the studies in terms of their theoretical and methodological orientations and point out the extent to which more recently developed theories of school learning--sociological and social-psychological learning theories--have been employed by the studies under examination. This evaluation would lead to the recommendations the investigator will make for future studies of social factors and academic achievement.

It is also the purpose to make recommendations for new thinking about the human potential for learning, for teaching practice, for teacher training, and for educational-social policy making.

The Need for and Significance of the Study

The need for this study and its significance lie in the investigator's belief that the value of our knowledge of social factors which influence academic achievement of students depends to a great degree upon the extent to which we have accumulated, analyzed, and synthesized the research evidence in support or rejection of theories which are advocated and assumptions which are held regarding school learning and differential achievement of students.

Particularly, increasing the level of student performance and decreasing the magnitude of inequality of schooling outcomes through manipulating social factors, especially school factors, appear to this investigator to have a much greater chance of success if they are based on not only one or just a few studies, or on conventional wisdom, or individual knowledge and experience, but on the results provided by the integration of all or most available studies as well. The findings provided by a comprehensive research review could add an important new dimension to pedagogical decision making.

Why is it important to be concerned with improving student learning and reducing the level of inequality in academic achievement among students in the first place, and, thus, why is it worthwhile to investigate what the research says about factors influencing academic achievement of children? Some of the assumptions to be mentioned in the following pages (in this chapter) and the argument (along with the

documentation provided) in the next chapter, will answer this question in detail. Here it will suffice to say that:

In today's world, (1) academic achievement--in terms of both learning and credentials (quality and quantity of schooling)--is indeed important in the lives of individuals: psychologically, socially, and economically; the amount and type of one's education has tremendous impact upon an individual's life chances, and (2) academic underachievement of an individual is a great loss, not only to the individual concerned but also to the society (particularly in less developed/more dependent societies). Then there is a need to know what social factors, particularly what manipulatable factors, influence the educational achievement of individuals. Such a knowledge could help those involved and concerned to increase the academic performance of students and reduce the degree of variation in student achievement.

While some sociologists of education, sociologists of knowledge, and curriculum theorists have begun to question why and how it happens that some school subjects are offered, the fact that what is offered is learned in varying degrees by individual students and groups of students remains, if not more than, at least as vital and important for study and scrutiny as ever.

In addition to the importance mentioned above, there are other important aspects in knowing particularly the impact of some school factors on student achievement which require an increasingly greater use of national resources.

For example, is university education, or teacher training in special subjects, which need a large percentage of public funds, contributory to reducing inequality of educational achievement? Or is smaller student-teacher ratio, which means more cost to the country, conducive to higher school achievement? Review and critical examination of knowledge accumulated so far could help educational planners concerned with enhancing the level of student achievement and reducing inequality of learning among school populations make more appropriate decisions.

For budget allocation purposes and for educational planning in general, the planners have to know not what one or two or a few studies show as being efficient and effective, but what all or most studies indicate. The present study's significance is in providing such a knowledge base.

The other significant aspect of this investigation lies in the fact that it has an international/multinational scope. Despite an apparent international concern for provision of equal educational opportunity for all, there still exist vast differences between content and levels of educational achievement of the children of the poor and the rich, of the minority and the majority, of rural residents and urban residents, and achievement of females and males.

If societies accept that they have to deal with the question of equal distribution of knowledge, then since no society is racially, ethnically, religiously, and economically homogenous, it would be important to know what the re-

search indicates regarding the solution to the problem of inequality of educational achievement in various countries. Such a knowledge would be particularly valuable since we assume that individuals, peoples, and societies are, despite their unique characteristics, more or less similar as far as the learning ability is concerned.

The knowledge of what social factors, particularly what pedagogical factors, and to what extent they have been effective in a particular society(ies) in reducing the impact of family background on academic achievement and in making such achievement less dependent on one's economic, racial, ethnic, and religious background, and gender and area of residence could be of great importance for other countries.

In today's world, educational theories and practices are transferred from industrially developed countries, mostly the United States, the Soviet Union, England, France, and Germany, to developing countries and in many of these countries the policies and practices are accepted uncritically and without knowledge of their effectiveness or lack of it in the country of origin. Also teaching methods are adopted based on a single or only a few studies' results carried out in merely one or a few countries. The importance of the present survey is that, due to its comprehensiveness and international coverage, it provides those interested with an examination and synthesis of results of numerous studies carried out in every part of the world--in more developed and less developed countries, and in capitalist and socialist-communist countries.

Knowledge of the kind of research carried out in other countries could help one to make more informative decisions with respect to research efforts. In some cases, particularly for poor countries, this would reduce the research expenditure. These countries could gain tremendous insight from research that has been done in countries with basically similar economic and political structures, social and cultural contexts, and with similar educational problems.

This study, the first of its kind, could be a significant work for the following additional reasons also: (1) it treats both the questions of equality in access to and equality of success in education; (2) it includes a fairly comprehensive theoretical discussion of learning and school achievement from psychological, anthropological, sociological, and social-psychological perspectives; (3) it includes all available and attainable one- and multi-country empirical, ethnographical, experimental; cross-sectional and longitudinal studies; (4) it covers socialist-communist countries, usually excluded from consideration in similar or other sociological-educational works; (5) it has an international, as well as a historical perspective; and (6) it also includes those investigations which have studied the effects of some components of school social systems upon student achievement and the relative influences of school- and home-related variables.

The survey also provides the educational researchers, policy makers, practitioners, and scholars in the sociology of education and international and comparative education with

a comprehensive international bibliography and with knowledge on the availability of the research or lack of it and the nature of what is available for different societies.

Finally, if anything, this work could challenge the generally taken for granted notion that the existence of wide variations in learning and academic achievement among individuals and groups is due mainly to heredity and family factors.

Methodology

This dissertation is a descriptive and exploratory study in sociology of education with an international perspective. It is a sociological analysis of the state of the equality of educational opportunity with a major focus on the status of inequality of academic achievement as regards different economic, racial, ethnic, linguistic, religious, and residential groups, and the two genders in societies around the world.

The study's main conceptual framework is sociological and social-psychological learning theories. The research method employed is historical review and qualitative analysis. That is, the investigator utilizes the existing sociological-educational literature including one-country and multi-country empirical, experimental, and observational studies (primary and secondary sources) and makes an analysis from sociological, social-psychological perspectives to answer the question: what is the nature of the relationship between certain social factors and academic achievement? Particularly, what are the relative influences of school-related and family-related variables on student achievement?

Before dealing with this question, however, the nature of inequality of educational opportunity and the extent to which it has been resolved within nation states is treated in a separate chapter.*

The data for the study, that is, the research evidence for chapter II on the state of in/equality of educational opportunity, and for chapters IV and V on the relationship between social factors and academic achievement of primary, intermediate, and secondary school students were located and collected through different means and from several sources. Two ERIC computer searches were run at Michigan State University after a careful selection of appropriate descriptors; and one computer search was done at the request of the researcher at the International Bureau of Education in Geneva, Switzerland.

Though these searches were somewhat useful, none of them provided major help. The researcher's personal knowledge of the field and his preliminary manual search done prior to the computer searches convinced him that the searches might have excluded many studies which could have altered the conclusions reached when the study was completed. Thus an attempt to gather the data through other information retrieval systems was made with more rigor than originally had been planned.

*As will be mentioned in The Structure of the Dissertation section (last in this chapter), a historical and international perspective is also kept in mind in chapter III, where psychological and sociological theories and conceptions of learning and assumptions underlying academic achievement are discussed.

An extensive and systematic library and bibliographic search was conducted at Michigan State University and the University of Michigan. This effort included going through the arduous process of searching manually many indexes and all volumes of many academic journals. Among these were: Sociology of Education Abstracts, Sociological Abstracts, Psychological Abstracts, Education Index, Social Science Citation Index, Indexes of Dissertation Abstracts International (1861-1982), Sociology of Education, Comparative Education, Comparative Education Review, International Journal of Sociology, International Studies in Education, International Review of Education, Studies and Surveys in Comparative Education, International Yearbook of Education, International Social Science Journal, World Survey of Education, Prospects, Sociology and Social Research, Slavic and East European Review, Journal of Developing Areas, Education in Eastern Africa, West African Journal of Education, Education in Asia and Oceania, European Journal of Education, Latin American Research Review, Philippine Sociological Review, Soviet Education, British Journal of Educational Studies, Harvard Educational Review, Soviet Sociology, Australian and New Zealand Journal of Sociology, Review of Educational Research, Chinese Education, Social Forces, American Journal of Sociology, Polish Sociological Bulletin, Canadian and International Education, Economic Development and Cultural Change, Sociological Quarterly, Interchange, and Current Sociology.

For certain materials and/or for any additional relevant data (publications) and bibliographies they could provide, correspondence was carried on with many educational organizations, associations, and agencies, among them: World Council of Comparative and International Education Society; International Sociological Association; International Bureau of Education; United Nations Educational, Scientific, and Cultural Organization (and its Institute of Education, International Institute for Educational Planning, and its regional offices in Africa, Asia and Oceania, Europe, and Latin America and the Caribbean); the Education Department of the International Bank for Reconstruction and Development (the World Bank); International Development Research Center (of Canada); the University of Stockholm's Institute of International Education; Organization for Economic Cooperation and Development, East-West Center (in Hawaii).

Correspondence was also carried on with many scholars and authorities in the fields of sociology of education and international-comparative education in different countries. Some of these--institutions and individuals--did reply and sent useful materials. Others either replied but provided no help, or did not reply at all.

The Interlibrary Loan Service of Michigan State University's library was used frequently for obtaining those research reports and publications which had been selected by the investigator in the search process as relevant but were not available in the University's library. Also the same

service was used for those needed (relevant) studies which were not available in the library and it was not possible to obtain in the United States and could be provided only by libraries of universities and institutions of other countries.

The time consuming search process and data collection procedures mentioned above enabled the investigator to embark on the long process of reviewing, analyzing, and integrating the large body of research and information using a variety of published and unpublished materials--books, journal articles, computer printouts, research papers, dissertations, and study reports.

As was mentioned, this study is an international study. Its geographical coverage is not confined to a particular area of the world. But for two chapters--IV and V--some explanation should be made in this regard. Chapters IV and V are devoted to the presentation, analysis, and synthesis of the evidence on academic achievement of elementary, intermediate, and secondary school students. In chapter IV, multinational studies of academic achievement will be examined. Thus, this reviewer has made no selection of the countries included in each of these studies; consequently there is no balance as far as the representation of each region or continent, capitalist and socialist-communist countries.

However, for chapter V, the investigator purposefully made an arbitrary selection and inclusion of the countries, twenty in all, for more detailed examination of research evidence on the relationship between some social

factors and student academic achievement. The main selection criteria, in addition to the availability of the data (in the English language) were: (1) to have countries from all parts (regions/continents) of the world, and to have countries with markedly different economic and political structures, religious outlooks, cultural contexts, sex role prescriptions, and educational systems (with respect to mode of control, financing, curriculum, pedagogical theories, and the like).

Therefore, countries are included with different societal ideologies, at different stages of independence and development, and with different rates of illiteracy. We have developed countries and developing countries, countries with capitalist governments and countries with socialist-communist governments, small countries and large countries (geographically and demographically), poor and rich countries, countries with centralized educational systems and those with decentralized educational systems, and countries with different patterns of child socialization in the home and in the school. Finally, and more importantly, countries are included in which their government officials and scientific, research, and education communities generally believe in individual differences in ability to learn and those who reject individual differences and believe in basically equal possession of learning potential essentially by all of their population.

It should be pointed out that some countries which the reviewer had intended to include in this, the fifth, chapter

for having a better representation and balance of socialist and capitalist countries, particularly because of their unique characteristics (such as China, Cuba, East Germany, and North Korea) were excluded from inclusion due to the lack of data. For these countries (except North Korea), as was also done for the twenty selected countries, letters were sent to their respective embassies in Washington, D.C. for any studies they could provide directly or through their country's institutions. This effort resulted in receiving some information from some of the countries, but no research studies were provided. (In the case of North Korea, which has no embassy in the United States, the letter was sent to that country's Ministry of Education in the capital city of Pyongyang. No answer was received, however.)

Also, it should be mentioned that the criteria for inclusion of the studies in chapters IV and V were for them to seem to be a valid and well executed study, and to include at least a family or school related independent variable and at least one measure of the dependant variable -- student academic achievement -- such as course grades, grade point average, a result of performance on a test (such as school leaving examination or college entrance examination). There was not any restriction as far as the time period during which the studies reviewed were carried out or published.

The social factors--the home and school related variables--whose impact (absolute or relative) on the cognitive achievement of students are under review and examination in

chapters IV and V are the following:

-- Out-of-school factors: The student's gender; the student's language (mother tongue); the student's racial, ethnic, and religious backgrounds; the socio-economic status of the student's family (parental occupation, parental income, parental level of education); the student's parental judgment of his/her learning ability; the student's parental expectation of him/her to achieve in school; the student's parental encouragement for his/her academic achievement; and the student's area and place of family residence (urban-rural, community type).

-- In-school factors: The teacher's socio-economic background, the teacher's level of (formal) education, the teacher's preservice training for teaching, the teacher's cognitive ability and knowledge of special subject field, the teacher's experience in teaching, the teacher's inservice training (upgrading), the teacher's subjective evaluation of student's learning ability, the teacher's expectation for student's achievement, the teacher's use of "mastery learning" techniques, the teacher's practice of ability grouping and curriculum grouping, and the teacher-student ratio.

Finally, while no claim is made that all studies relevant for chapters IV and V have been located, it should be emphasized that an attempt was made to exhaust all known possibilities in collecting the data, and considering the search strategy and data collection procedures mentioned above, it seems unlikely that any important relevant study has been

omitted.

Delimitations of the Study

-- This is a study in equality of educational opportunity, but more than that, it is a study in academic achievement. Thus other important--nonacademic/affective--influences of the family and of the school (such as social sensitivity, self-confidence, creativity, critical thinking, problem solving ability) are not dealt with here. Particularly, the study does not deal with the effects of schooling, as opposed to no schooling, upon individuals.

In short, the work is about the effects of some family and school characteristics upon cognitive achievement of students.

-- Even though in chapter II (the chapter on in/equality of educational opportunity) and chapter III (the chapter on theories of learning and school achievement) no specific age group or school level and type is particularly excluded from consideration, in chapter IV and V (the chapters on the academic achievement research) the examination is limited to the children of primary, intermediate, and secondary schools, and only for those of government (publicly funded) schools.

-- As was mentioned in the previous section, the review is limited to English language materials obtainable through search procedures described above.

-- The study is mainly a multinational one, not a comparative study; it is on disparities within countries, not

on differences between them. Thus, providing no firm inter-societal generalizations is intended (or is possible in any real sense due to existing differences between educational systems as regards their school organizations, curriculum offerings, teaching practices, their different systems of examinations and grading, and different forms of promotion and so forth; and also because of different research methodologies employed and different concepts used in the studies included in chapters IV and V). However, interpretations are made and wherever characteristics and similarities of countries permit, some general conclusions are drawn.

Definition of Some Terms

Some of the terms used in this dissertation have a specific meaning. For an easier understanding of the discussion they are defined below.

Education: By education, here, is meant formal education, or what is also referred to as schooling, which is provided by organizations such as schools and colleges, institutions of technical and professional training, and universities.

Primary school: Also called elementary school. First level school--an educational institution which usually provides five or six years of education (schooling) to children of five years and older.

Intermediate school: Also called middle school or junior high school. First level of secondary school

which usually provides three or four years of education to those children who complete primary school.

Secondary school: Also called (senior) high school. Usually provides education to those who completed the first stage of second level of schooling (i.e., intermediate school).

College: Third level educational institution. Normally provides two or four years of education to secondary (high) school graduates--those who usually have completed twelve years of schooling.

University: Third and fourth level educational institution. Its undergraduate school provides third level education to (secondary) high school and two-year college graduates. Its graduate and professional schools provide fourth level education to (4-year) college graduates.

Learning: The knowledge and academic skill acquired in educational institutions.

Academic achievement: Also referred to in this study as cognitive achievement, educational achievement, scholastic achievement, school achievement, student achievement, academic performance, cognitive performance, learning, academic learning, cognitive learning, school learning, student learning, academic outcomes, cognitive outcomes. Performance of a student in academic subjects such as science, economics, mathematics, and language, as measured or indicated by a school mark, course grade, a test score, a teacher's subjective evaluation, grade point average, or the like.

Educational attainment: Defined here as the number of

years of schooling and type and quality of education one has received. In this sense educational attainment encompasses educational (academic) achievement as well. (This definition for educational attainment is rather a narrow one since it does not encompass achievement in the affective domain.)

Equality of educational opportunity: Unless otherwise specified, defined in this study as equality of educational attainment (as defined above). Thus, two individuals would be considered as having had equal educational opportunity if they have had the same number of years of education and of relatively the same type and the same quality. This would apparently become possible if the two presumed individuals could have equal chance of access to (enrollment in) school, equal chance for staying (survival) in school, and equal chance of participation in school's academic activities (including curriculum offering).

Equal income and equal professional success are excluded here as part of the definition for equality of educational opportunity.

Developed, developing countries: Also called more developed, less developed countries. By a developed country, here, is meant a scientifically, technologically/industrially, militarily, and economically (based on annual per capita Gross National Product) advanced country. Then, a developing country would be a country, as compared to a developed one, less advanced scientifically, technologically/industrially, militarily, and economically. (Of course there are variations

and subcategories within the categories of developed and developing countries.)

No other dimensions of development other than those mentioned, particularly no classification with regard to human intelligence and people's learning ability, are implied.

Assumptions Underlying the Study

The investigator has made certain assumptions in doing this study. They are as follows:

-- An international study on the equality of educational opportunity and factors which influence academic achievement is, considering the following additional assumptions and the role educational systems play in perpetuating social stratification of the societies, a needed and worthwhile effort.

-- Education (learning in formal educational institutions) is important in the lives of most individuals. It could provide them with knowledge, skills, and attitudes and values to have a healthier and happier life.

-- Education, as one of the important social institutions of every society in the present age, contributes through development of human minds to the development of societies and the world. Thus we assume that, derived from this assumption, our answer to the question of knowledge for what? is for individual, societal, and world development.

-- The importance of educational institutions--schools--is because they are or should be, mainly places for learning academic subjects.

-- In today's world, people's life chances depend to a

large degree on the educational chances they have. We assume that in tomorrow's world this dependency will be even greater.

-- Deschooling societies is not practically possible. If it occurs at all, however, some educational institutions will be established which will be basically the same thing-- schools.

-- Illiteracy, academic underachievement and unused talents of individuals (of any social group) are a loss to the individual, to the society, and very possibly, in the final analysis, a loss to the world.

-- Essentially all people have both need and desire (motive) for learning in general and for formal education in particular, not only for its social and economic advantages, but also for its psychological and intrinsic values.

-- Essentially all people have the ability and merit to learn. The individual's ability to learn and individual differences in learning ability (and academic achievement) are mainly shaped by social forces, events, and circumstances, rather than by genetic inheritance (as is widely believed). We assume that it is the social systems of the society which mainly determine one's success or failure in education and other aspects of one's life.

-- Equality of educational opportunity for all, regardless of gender, language, economic status, social class, race, ethnicity, and religion is a fundamental human right

and a principle of social justice.*

-- If (formal) education sometimes and in some places has led to or is associated with urban migration, unemployment and underemployment due to high number of diploma holders and surplus in manpower, and also if it has had other undesirable and unwanted individual and societal consequences, first, there could be social causes which have created these problems rather than the institutions of education, and second, these would still not justify discrimination against certain individuals and groups in having equal chance to educational opportunities. We assume that, at least on the basis of "merit," all should have an equal opportunity (in real terms) to all educational resources available in a society and financed by public funds.

-- Regarding studies and reports used as background information, as research evidence, and as data for this study, the assumption is that they are valid and reliable; that they are accurate reflections of the situation reported. Particularly, it is assumed that figures mentioned are correct measures of dependent variables (educational attainment including educational achievement) and of independent variables

*If some do not consider it as such they could ignore this assumption and only look at the evidence presented in this dissertation regarding the extent to which equality of educational opportunity, despite claims by many people and by virtually all governments that they consider it as a human right and a principle of social justice, has been achieved. If some have not given thought to it at all, then they may take this opportunity and in light of the fact that consideration of this--ethical--question is long overdue, evaluate its achievement or lack of it as regards different individuals and groups within countries of the world.

(socio-economic status, teacher ability, and so forth).

Structure of the Dissertation

The dissertation, as the table of contents indicates, is organized into six chapters. Chapter I is coming to an end by writing and completion of this overview section.

Chapter II is a historical and international discussion of the questions of: right to education, demand for education, educational expansion and the outcomes of this expansion for individuals, groups, and societies, and criticism of education. Also a critical assessment of the status of equality of educational opportunity within countries is made as regards different social groups.

In chapter III, theories and hypotheses of learning, both psychological and sociological, are discussed. In particular social-psychological conceptions and models of school achievement are described in the last section as a promising addition to or substitute for the psychological explanations of student failure and success. As in other chapters, here too the discussion has international and historical perspectives.

Chapter IV is devoted to the description and analysis of international empirical and review studies of school achievement which have included one or more measures of family and/or school characteristics in relation to one or more measures of student academic achievement. The studies are treated chronologically starting with the oldest one to show the trend of educational-sociological research development

and the nature of the relationship between home-school and achievement in historical perspective.

In chapter V a similar task is undertaken for national studies of twenty selected countries, that is, studies which have included one or more independent variables and the dependent variable mentioned in the methodology section.

For each country in chapter V, each study is examined wherever provided, by citing the methodological characteristics of the study, the sample, the variables included, the findings and main conclusions and unique feature(s) of the study, if any. In every instance the investigator's own assessment, analysis, and discussion is kept separate from conclusions and judgments of the author(s).

In chapter VI a summary of the main findings of chapter IV and V's studies are presented; some general conclusions are drawn, especially as they relate to the relative effects of school and family on academic achievement in different societies, particularly capitalist and socialist, and industrially advanced and less advanced countries.

A discussion and further analysis follow, with focus on the limitations of the studies as they relate to their theoretical framework, their research methods, and their scope of coverage (of variables), pointing out the problems and questions related to research on social factors and academic achievement which remain unanswered or unresearched. This leads the researcher to make suggestions and recommendations for necessary changes to be made in educational

thinking, particularly regarding human potential for learning, for pedagogical theories, for educational practice (teaching), for teacher training programs, for social-educational policy making especially with respect to reducing the inequality of educational achievement (and attainment) among social groups, and for future research.

Some final comments from the investigator conclude the dissertation followed by an extensive list of references and a general bibliography.

Therefore we turn now to chapter II--the statement of the problem--the question at hand and its nature.

CHAPTER II

THE PROBLEM

Right to Education

Education is viewed by many people to be a human need and equal access to it is considered by most people and in virtually all societies as one of the fundamental human rights and a principle of social justice. The Universal Declaration of Human Rights, adopted unanimously by the United Nations General Assembly on December 10, 1948, whose first article declares "all human beings are born free and equal in dignity and rights" has stated explicitly that "education is a universal human right." In addition to this basic right, the Declaration stipulates other rights of individuals: the right of everyone to freedom of thought, conscience and religion, opinion and expression, association and movement; the right to participate freely and actively in the political life of the city, the region, the country, and the world (either directly or indirectly, through freely elected representatives); the right to equal treatment before the law; the right to a guarantee of a decent standard of living; the right to enjoy leisure; and the right to culture.

The principle that every citizen of every country--regardless of race, ethnicity, gender, language, religion, national origin, socio-economic status, place of residence

or birth--has the right to become educated implies that education enables the individual to become a truly mature person and well prepared for exercising his/her other rights. It is clear that practically it becomes impossible to fulfill other rights (and needs) without having access to a proper education, one of the most important human necessities.*

Aims of Education

The (1948) Universal Declaration of Human Rights defines the aims of education--in addition to the full development of the human personality--as preparing people to have respect for human rights and fundamental freedoms, to have a clear and well informed civic sense, to value understanding and friendship among all racial or religious groups and among all nations, and to be concerned with the welfare of the nation and world peace. Therefore, for any individual's right to education (and his/her other human rights and needs) to be

*It should be pointed out that by referring to education as a human necessity, a human need, we mean a "basic" human need. As Galtung (1980:59-60) writes, it is a modest claim and also it makes sense to talk about certain classes of needs, such as 'security needs,' 'welfare needs,' 'identity needs' and 'freedom needs,' as basic human needs. "The term 'basic'...serves to further qualify the notion of a need as a necessary condition, as something that has to be satisfied at least to some extent in order for the need-subject to function as a human being" (ibid.:60). In today's world, education--formal education (schooling)--could clearly be considered a basic human need.

Two points should be added here, both also mentioned in some form by Galtung; one is that some people may have some needs (e.g., "need to dominate") which obviously are not "basic," and, of course, such needs are excluded from our discussion here. The other point is that no assumption is made that all people are conscious of their needs.

recognized and respected, everybody should, by definition, become educated.

To achieve the above mentioned aims, Article 26 of the Declaration elucidates that education shall be free at least in the elementary and fundamental stages, elementary education shall be compulsory, technical and professional education shall be made generally available, and higher education shall be equally accessible to all on the basis of merit.*

Therefore, education as a right/end in itself and as a means to achieve other human rights and needs, especially since World War II, has increasingly been regarded as a necessity for achieving a humane standard of living for individuals and for having a peaceful world.**

Equality of Educational Opportunity

The Constitution of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) mentions the promotion of equality of opportunity in education as one of the

*It is our assumption and even our belief that essentially everybody can have/acquire the merit to receive, even, higher education if provided with educational opportunities including proper learning conditions. In many countries, social policies and societal arrangements including educational systems discriminate against certain individuals and groups of individuals and do not give them a real equal chance to receive education on the basis of their merit.

**It should be pointed out that the stand that everyone has (should have) equal right to education is essentially a moral one. Also, as it will be documented in the following pages and in chapters IV and V of this dissertation, this principle, like many other principles adopted by international bodies, in this case the United Nations, has not turned into administrative reality.

Organization's objectives (UNESCO, 1979:371). And in 1959, with the Declaration of the Rights of the Child, clear statements were voiced on the need of the child to education throughout his life and for his right to free education on a basis of equal opportunity (UNESCO:IBE, 1980:5-6). On December 14, 1960, the General Conference of UNESCO adopted a Convention and a Recommendation Against Discrimination in Education* which also dealt with the concept of "equality of opportunity" in education (JuVigny, 1962:17-18).** According to the Convention, situations which are not as a rule the result of deliberate discriminatory intention on the part of the state or of certain groups nor even due to the persistence of prejudices concerning particular sections of the society would be regarded as inequality of opportunity (ibid.:20). In any country the provision of equality of educational opportunity would require the absence and abolition of both discrimination and inequality of opportunity.

*The United Nations Conference on the Eradication of Prejudice and Discrimination had already adopted a number of resolutions in 1955 with regard to eradication of discrimination, including and particularly discrimination in education (Ammoun, 1957:154).

**For the (UNESCO) Conference, among the policies and practices which would be considered discrimination (in education) are any distinction, exclusion, limitation, or preference which, based on race, color, gender, language, religion, political or other opinion, national or social origin, economic condition or birth, has the purpose or effect of nullifying or impairing equality of treatment in education and in particular of, for example, (a) depriving any person or group of persons of access to education of any type or at any level or (b) limiting any person or group of persons to education of inferior standard (JuVigny, 1962:17-18).

Finally, the General Conference of UNESCO in October 1981 adopted a resolution calling for guaranteeing the free access of all to education and equality of educational opportunity--in terms of education policies, content, methods, and structures (United Nations General Assembly, October 6, 1981). The significance of this resolution lies in the fact that it goes beyond "free" access to (enrollment for) education and calls also for equality in educational conditions and treatment.*

Today no country in the world challenges the basic premise of the idea of equal educational opportunity for all (Deble, 1980: preface). In most countries the national constitutions embody provisions for the education of all children and formal statements of the aims of education in most countries throughout the world include the promotion of equality of educational opportunity (see Lanford and Fiala, 1981). All governments, everywhere, give a high social and/or political priority to formal education. And a growing

*In addition to equal right to education, in recent years some educators and social scientists, especially sociologists of education, have started calling for the provision of equal right to intelligence. As an example, one could mention Luis Alberto Machado (Venezuelan Minister of State for the Development of Human Intelligence, still the only such minister in the world). Machado (1980) in his The Right to be Intelligent, rejects the notion that intelligence is innate and fixed and believes that the difference between a primitive man and a civilized one is not biological, it is educational. Also, Husen (1972:38) writes that there should be equal chance in the preschool institutions or in the regular school for all children to acquire intelligence. (emphasis in original.)

Clearly, without having equal right to intelligence, it is impossible to enjoy equal right to education, even if equal education is offered.

percentage of Gross National Product is devoted to education, particularly in developing countries (Carceles, 1979: 147).

Now, more than three decades have passed since the unanimous adoption of the Universal Declaration of Human Rights including equal right of individuals to education. What has been the result of this and other universal declarations and national proclamations as regards demand for and provision of equality of educational opportunity?

Educational Demands

Since the 1950s, but especially since the beginning of the 1960s, millions of people throughout the world who have been excluded historically from participation and involvement in institutions which shape and in many cases even control their lives have started claiming their rights, including the right to education so that they could become prepared for life in the new world system. As Elsasser and John-Steiner (1977: 355) note, people have recognized that oral communication is inadequate to meet the requirements of the modern world and that written communication is necessary for social and economic well being.

It has become clear for people that in today's societies, which are rapidly changing and becoming modern, formal education has become a prerequisite and a means for occupational mobility and wealth, for gaining a high social status, and also a source of power.

Finally, people have come to the realization that they

have been manipulated mainly by most of those who have received formal schooling; schooling has enabled many individuals to impose their wishes on other people.*

Therefore, it would appear, for people not to be of a lower class, and have high prestige, and not to be controlled and manipulated by others, they have to equip themselves with proper and necessary education.

Expansion of Educational Provisions

It is clear that there has been, especially since the 1950s, an educational expansion at the global level. (Of course, depending upon the economic, social, and political structure of each society, this expansion has had various forms and degrees.)

Virtually all modern and traditional societies have made efforts to provide education to more people. Now in most societies, children start schooling at a younger age and the time they spend in school has been expanded; in industrialized/developed and in many developing countries, in both the socialist-communist and capitalist worlds, there has also been a continuous rise in the number of those attending institutions of secondary and higher education. (The evidence in

*This does not mean, however, that people are, have to, or should become interested in education because it could enable them to manipulate or control other people's lives. Rather, one assumes and only hopes that people want education so that they could bring to an end a situation (of illiteracy) which has provided some of the educated (the schooled) a means to become manipulators. If not the only way, certainly the best way to end oppression of some (the oppressed) by others (the oppressors) is for the oppressed to remove their condition by becoming (truly) educated.

this regard is overwhelming. Only one source will be mentioned here: Nica and Birzea, 1973.)

Effects of Education

Educational expansion has had, in many countries, at the individual level, at the group level, and at the societal level, positive and enduring effects. (cf. Psacharopoulos, 1981; Ramirez and Meyer, n.d.--1981 or 1980; Colclough, 1980; Howe, 1980; World Bank, August 1980; Heyneman, 1979; Jencks et al., 1979; Musgrave, 1979; Słomczyński, 1978; Bereday, 1977; Currie, 1977; Meyer et al., 1977; Schultz, 1977; Silvert and Reissman, 1976; Vasil'eva, 1976; D'Aeth, 1975; Hyman et al., 1975; Nollen, 1975; Petrovskii, 1975; Court and Ghai, 1974; Jallade, 1974; Lowe et al., 1973; Szyliowicz, 1973; Blaug, 1972; Psacharopoulos, 1972; Nelson and Besag, 1970; Eckstein and Noah, 1969; Coleman, 1965; Harbison and Myers, 1965, 1964; Schultz, 1963).

At the individual level, education has in virtually all countries, though in varying degrees, positively resulted in individuals having a higher level of knowledge and cognitive skills than their unschooled counterparts. It has also helped many individuals to have a more scientific and rationalistic attitude toward life, gain political authority, and achieve a higher social and economic status.

In all countries, including Latin American, Asian, and African countries, education has resulted in enormous social, economic, and political success for many individuals. And it is clear that in the present modern and changing world,

in all societies with a few exceptions such as Tanzania, Sri Lanka, and China (see Unger, 1980 and Dore, 1976a) where new employment policies--not so much dependent upon educational degrees--have been introduced, and in which the final outcomes of those policies remain to be seen, educational success is increasingly becoming, if not the main condition, certainly an important prerequisite for occupational and social success.* Education is viewed by most individuals to be a major factor affecting people's ability for access to life chances.

At the group level, education has to some degree helped lower socio-economic status groups, powerless national and religious minorities, and women and rural populations. At the national level it has resulted in increases in the rates of economic growth and rapid progress of the scientific-technological revolution, although the distribution of rewards, within and between countries, has been inequitable.

*"In order to become a member of the elite in most African countries ten years ago, secondary-level studies were sufficient; five years ago, a university degree became necessary; the only studies that count today (1972) are post-graduate ones" (Faure et al., 1972:59 footnote).

Stimson and LaBelle (1971:335) write that in Paraguay at all levels of the educational hierarchy, nepotism and favoritism form the foundation for the selection of educational personnel and political alignment, and familial connections outweigh knowledge and skill as criteria for the appointment of teachers and administrators. What these writers point out is practiced in many countries and not just in educational appointments but in other governmental, and in non-governmental appointments as well. However, one must add, this fact, while needless to say is unjust, does not diminish the importance of formal schooling as a prerequisite for employment and occupational mobility in most cases. For the poor and other disadvantaged groups, it is the only means to social success.

Criticism of Education

Of course there are many among educationists and other social scientists, who criticize the formal educational system and believe, for example, that formal education has antieducational effects in that it stifles curiosity, enslaves people and limits their control over their own lives, socializes people into apathy and political subordination, and weakens the consciousness of people. They say education certifies people rather than educates them, does not lead to upward occupational mobility, and frustrates those schooled who cannot find jobs or appropriate jobs. The critics claim that education serves the ruling class and the elite and is used by them to maintain the status quo; it is an obstacle rather than a help to development and it functions as a mechanism for social differentiation rather than for social equalization (see Altbach and Kelly, 1978; Iverson, 1978; Barbagli and Dei, 1977; Bowles, 1977; Yanowitch, 1977; Dore, 1976a; Dube, 1976; Illich and Verne, 1976; Delgado, 1975; Hanf et al., 1975; Neelsen, 1975; Schafer et al., 1975; Boudon, 1974; Carnoy, 1974; Curle, 1973; Freire, 1973; Raskin, 1972; Illich, 1971; Paulston, 1971; Young, 1971; Freire, 1970; Anderson, 1961).

However, as was mentioned, education has helped many individuals and groups, but it has also deprived many individuals and groups. It is this question, i.e., the inequality of educational opportunity, in terms of access to and

success in school, but particularly inequality in learning,* that this investigator is mainly dealing with in this study.

Inequality of Educational Opportunity and its Persistence

It should be pointed out and emphasized that while educational expansion has had many advantages for many individuals and higher social and economic classes, and somewhat for some lower status groups, for excluded minorities and majorities,** for women, for those of rural and remote areas, and for societies at large, it has not resulted in equality of educational opportunity, even equality of access to educational provisions (enrollment in school and other educational institutions); and although there are substantial differences and dissimilarities in different countries, the problem of inequality of educational opportunity--both in terms of educational participation and educational outcomes--has not been solved anywhere and remains a worldwide phenomenon, whatever the reasons--ideological, philosophical,

*The sociologist Parsons (1951:203) defines learning broadly as that set of processes by which the learner acquires "new elements of action-orientation, new cognitive orientations, new values, new objects, new expressive interests." In the present work, as was mentioned in the Definition of Terms section of the previous chapter, by learning we mean the student's cognitive achievement in school as indicated by performance on a test, by a course grade, by Grade Point Average, or by other measures of academic performance.

**Even though it is usually the minority groups of the country which are oppressed, deprived, powerless and so forth, sometimes and in some countries the majority (alone or along with the minorities) are deprived, powerless, and discriminated against. In this work our concern is not just the minorities or only the majorities; rather it is all the people, all groups of individuals, and everywhere.

conceptual, or practical.

Wastage in education--the failure of a society to provide opportunity of access to education for all and on an equal basis, in keeping children within its school system until they graduate, and in effectively and efficiently teaching all children enrolled in the school--is widespread and pervasive in all societies (see Simmons, 1980; Tazi, 1980; Holmes, 1979; Goldstone, 1975; Schiefelbein, 1975; Thomas, 1975; United Nations, 1974; Babansky, 1973; UNESCO-IBE, 1972; Brimer and Pauli, 1971; Levy, 1971; Coombs, 1968; Floud and Halsey, 1961).

Not even the two Germanys (Germany was the first to develop compulsory education in the first part of the eighteenth century [Brim, 1958:36]) have eliminated the problem of wastage in education by providing educational opportunities (educational outcomes included) for all. In Dahomey, only one pupil in five entering school reaches his fifth year; in Zaire, 80 percent of children at primary school do not get as far as the primary school-leaving certificate; in Belgium the rate of failure and repetition is about 28 percent for primary education as a whole; in France this proportion is nearly 50 percent for the last two years of this (primary) educational level (Thomas, 1975:21); in Brazil's poor rural northeast region, in 1974, while the enrollment rate was 46% (less than half the national urban average) nearly two-thirds of the students dropped out before the second year and only about 4 percent completed four years of schooling (World

Bank, August 1980:47).

Even in the United States of America, the pioneer of "mass schooling" which "is also foremost in the world in total school enrollment" and which accommodates about one half of its post secondary education age group--fully 10 percent more than the nearest countries--Canada, the Soviet Union, and Sweden--and fully 30 percent more than England and Japan--there are two million children or 7 percent of the school age population who do not attend any schools (Bereday, 1980:193). And, according to a recent study supported by the U.S. Office of Education, 20 percent of adult Americans are functionally illiterate (Gilbert, 1978:232).

A UNESCO (1955) study on the basis of data covering 109 countries and territories estimated that at least 50 percent of the world's children of school age (5-14 year old's) were not receiving any kind of formal education in the year 1952 (pp. 16-17). Today, three decades later, while the situation has improved to a large extent in developed societies and to some extent in developing ones, only a little more than half of school-age children of the developing countries can enter school; of those who do enter, only four out of ten complete the elementary grades (UNESCO: IBE, 1980:6). Over 250 million school-age children and 600 million adults of developing countries lack basic education; they have had only limited access or no access at all to formal schooling (World Bank, 1980:72).

Inequality of Educational Opportunity and
Social Class, Race, Ethnicity, Religion,
Gender, and Area and Place of Residence*

What is even more important and alarming, however, is the fact that, in general, educational expansion or what is referred to as "democratization of education," "massification of education," or "schooling explosion," as will be shown in the pages which follow, has not, in group terms, helped all people equally. It has helped those of lower economic status, dominated racial, ethnic, and religious groups (usually minorities), females, physically and "mentally" handicapped, "delinquent" children, and remote and rural areas residents much less than it has helped those of higher economic status, dominant racial, ethnic, and religious groups (usually majorities), males, "normal" children, and urban residents. In all societies, though of course in varying degrees, many individuals of the deprived groups have used education to their advantage, but these groups have, as groups, achieved less both in terms of access to educational institutions and in terms of educational outcomes, and there still exist great discrepancies in the amount and content of

*The researcher's preference was to refer to the racial, ethnic, religious, gender, and economic groups simply as human populations to de-emphasize the importance of race, ethnicity, religion, gender, and economic status in a discussion about equality of rights for all individuals. However, by doing so the specificity and explicitness of the important points of the argument and the dimensions of the problem under consideration would have been lost. By talking about racial, gender, economic and other groups no superiority or inferiority of any particular group with regard to any human quality (including learning ability) is implied.

education their children receive and the amount and content of education (higher education and education abroad included) other children, those of the "advantaged" groups, receive.*

Where a child lives and in what family he/she grows up makes a great difference as to what kind and how much education he or she will receive. In France and in the Soviet Union, for example, and in most countries where aim of equality of provision is central to the country's educational system and educational policies are formulated, adopted, and implemented to a considerable extent by the central government, rural/urban differences and housing and economic policies influence the student's learning and result in unequal schooling among the population (Holmes, 1980:6). Even where inequality of educational opportunity is comparatively small, as in the United States, the advantage of a higher-class youngster with respect to eventually completing college education can be as high as ten to one (Boudon, 1974:197).**

The existing evidence, to be presented in the following

*Difference in educational achievement and attainment by individuals of "advantaged" and "disadvantaged" groups is deplorable, not because the first group are achieving better, rather because the latter are not doing as well. In fact it is unfortunate that in many cases none of the two groups' children are doing well enough, or as well as they could.

**Of course, there are some, but very few, exceptions to this pattern. For example, several studies in sub-Saharan Africa have shown that often the first pupils in the schools have been drawn from groups somewhat marginal to or subordinate within traditional status hierarchies (Foster, 1977:218).

section, indicates that everywhere the question of equality of educational opportunity (achievement and attainment) based on socio-economic class, gender, race and ethnicity, religion and national origin and area of residence, has remained unsolved. In almost all societies, whether their educational system is characterized by "sponsored mobility" or by "contest mobility" (see Turner, 1968), and whether they favor particularistic ideology of legitimization or universalistic ideology, concerning educational selection, and whether they adhere to the individualistic form or collectivistic form of these ideologies (for description of these typologies see Hopper, 1968) and, finally, whether their educational system's high priority is educational function or selection function (see Laska's 1979 typology of school systems), social class membership and other family background characteristics, community and regional factors, and gender are having major impact upon the quantity and quality of schooling a school-age child receives.

In all societies those children who do not enter school, or do enter but drop out or are pushed out (by the school) or do stay in school and complete it but are not taught seriously and learn less, usually and mostly are children of the "disadvantaged" families. "Educational systems...are biased against students of disadvantaged background" (Husen, 1974: 135). And "disadvantaged" groups in all countries tend to be those of racial or ethnic minority status, those of low socio-economic or impoverished status, immigrants and

in-migrants (Passow, 1971).*

True, "universal," "free," and "compulsory" schooling have become a policy of most national governments and it is the official and declared objective and apparent commitment on the part of the governments to provide equal educational opportunity for all (and in practically every country of the world, education--even when it is not absolutely free--is heavily subsidized by the state on grounds of providing equal educational access for all citizens [Psacharopoulos, 1977:69]), but in practice governments may not and they usually do not pursue those objectives. A law of compulsory universal and free education does not necessarily lead to equal educational provisions, to universal enrollment in school, to universal school attendance, to universal participation in the learning process, to universal utilization of learning opportunities, and finally to equality of learning outcomes among all children, particularly among children of different social groups.

*In developing countries, "the disadvantaged are typically poor in all respects: income, health, housing, education, possessions, occupations, life expectancy" (Kiros, et al., 1975:58).

Evidence of Inequality of Educational Access, Achievement, and Attainment in Relation to Social Class, Race, Ethnicity, Religion, Gender, and Place of Residence*

The International Bureau of Education (IBE, 1971) issued a document--results of a global study based on reports by UNESCO's member states--on the social background of students and their chance of success at school (for the Thirty-Third International Conference on Education held in 1971 in Geneva). The report's conclusion was that in practice, social background of students has a very real effect on their access to education and academic success (and choice of occupation).

A widely known international report by UNESCO (Faure et al., 1972) points to the injustice of educational systems which, according to the existing literature, still to a large extent remains. According to the report, despite worldwide educational expansion which has occurred since the 1950s, "regional differences can reach such considerable proportions that figures relating to the educational situation in two different geographic sectors, for example, may vary by more than 50 percent in relation to the national average of the same item" (ibid.: 70). Concentration of educational facilities in the major cities and towns to the detriment of vast rural zones, and their concentration near

*The studies and sources to be mentioned in this section are only examples, given to illustrate the problem and its nature. More evidence, some of the same studies referred to here, will be discussed, some in detail, in chapters IV and V.

city centers and rich neighborhoods to the detriment of shanty towns and poor districts makes it impossible for many of the rural population and the poor to attend school (ibid.:71).

The UNESCO report notes that there are numerous cases of ethnic or racial inequality in equal access to educational opportunity, "which is sometimes outrageous," even in countries with ample material means to remedy the situation. "Thus, the universal right to education--in which contemporary civilization takes such premature pride--is often refused, by a complete reversal of justice, to the most under-privileged" (ibid.:71).

International studies of educational achievement (Walker, 1976) by the International Association for the Evaluation of Educational Achievement--referred to as IEA studies--testing the performance of 250,000 students in 9,700 schools in twenty-one developing and developed countries around the world (to be discussed in chapter IV), have consistently shown that, though in varying degrees for the twenty-one countries and for different subjects and different age groups within countries, children of disadvantaged/poor families achieve less than those of nondisadvantaged/wealthier families.

The reports of the International Bank for Reconstruction and Development (World Bank, August 1980, April 1980, 1980, 1975, December 1974) indicate that in developing countries, irrespective of their level of development, educational systems and policies have a regressive character favoring urban populations, middle- and upper-income groups, and males, and sometimes certain ethnic and religious groups. Such a bias

appears to enable these groups to have a definite advantage in terms of access to and promotion within the systems. This, according to the Bank's reports, is seen in the socio-economic profiles of the dropouts, the repeaters, and successful students, and in the fact that middle and upper-income groups are particularly over-represented in the institutions of higher education.* Thus, educational systems of developing countries not only fail to ensure mass participation in education, they also practice discrimination in their process of selection and promotion (and future determination of careers) (World Bank, December 1974:33).**

As stated before, according to the existing literature, essentially everywhere in the world, children of "disadvantaged" families, in general, learn less in school and attain less years of schooling than children of the "advantaged" families.*** This is true in all continents and regions and

*Most of the over 250 million children of school-going age and 600 million adults of developing countries who lack basic education (referred to before--p. 40) comprise the poor, the rural dwellers, and women (World Bank, 1980:72).

**There is additional evidence for developing countries, and for developed countries as well, which indicates the existence of inequality of educational opportunity for children of certain groups (see for example Bereday, 1980; Levin, 1976; Kiros et al., 1975; LaBelle, 1975; Lane, 1971).

***Among the few exceptions mention could be made of some countries and areas where children of the lower classes and deprived groups have, on the average, achieved high levels of school achievement (equal to or even higher than the achievement level of children of higher social classes and dominant groups) such as: Malawi (Heyneman, 1980b), Finland (Kyostio, 1980), Michigan (Brookover et al., 1979); London (Rutter et al., 1979); Chile (Schiefelbein and Farrell, 1978a, 1978b); Indonesia (Ndapatondo, 1978) and India (Satya, 1969). Some of these studies, along with a few remaining exceptions, will be discussed in chapter V.

in virtually all countries--in socialist and capitalist, and in technologically advanced and less advanced. In Africa, for example--where in most of its countries, the educational system is 'primary' for only 20 percent, or even less, of all the children and is terminal for the others; and less than 50 percent of those who start school complete the course (Porter, 1975)--social inequalities in education are very great and visible and they occur early in the educational process (Eliou, 1976:561).

In Africa, in both rural and urban areas, there exists a relationship between a family's occupation, income, power, and status and the education their children receive (Blakemore and Cooksey, 1980:92). Children of small peasants, pastoralists, landless rural and migrant laborers, the authors write, have much less chance for educational achievement than those of the richer peasant farmers. Children of semi- and unskilled workers and most petty artisans and traders have virtually no chance of educational success. Children of skilled workers and routine-level clerical and other white-collar workers and those of medium-level traders are somewhat better placed, as the authors note, but they lag significantly behind the children of higher civil servants, professional cadres and big traders and businessmen. Thus, Blakemore and Cooksey point out, there are privileged minorities in both urban and rural areas. Class inequalities and their educational consequences--variations in

access and performance--cut across the urban-rural division.

Ethnic and racial factors also influence a child's education, and there is educational inequality between ethnic groups (ibid.).* Certain (African) governments have attempted to reduce ethnic inequalities in educational opportunity by creating a disproportionate number of educational facilities in regions occupied by underprivileged ethnic groups, but often such schools have been populated mostly by students coming from already educated ethnic groups unable to succeed in the schools of their regions of origin (Clignet, 1974:258).

In the case of gender differences in access to schooling, Blakemore and Cooksey (1980:92-93) report that girls in Africa have not benefited as much as boys from the educational establishment. But what should be added is that there are a number of overlaps between gender and class inequalities. According to the authors, girls from elite backgrounds have better educational opportunities than boys from all non-elite backgrounds; girls from under-represented regional and ethnic groups and from farming/urban backgrounds have extremely low educational opportunities. In other words, Blakemore and Cooksey add, gender inequalities

*In the case of South Africa, with its official apartheid policy, Blakemore and Cooksey note (ibid.:92) that it is race and the overlap between it and stratification which is reflected in unequal education.

in access to education are affected considerably by class factors.*

In Latin America, where education has developed remarkably as compared with other regions of the world, educational inequalities have been reduced only slightly (Filgueira, 1978:332, 337). The great development of education in the region, as Filgueira notes, has been accompanied by a sizeable reduction of inequalities only in a few countries, such as Uruguay and Argentina--where there was rapid educational development.

Although almost half the population of Latin America lives outside the cities, there are no true rural schools, and rate of retention of educational institutions is particularly low in the rural regions; the peasant majority is especially affected by illiteracy and drop-out (Delgado, 1975).

In Asia, too, the literature indicates that, in general, the children of the "disadvantaged" have less educational success. Myrdal (1972: 418-419) reported that in South Asia countries the mechanism of class bias operates in educational wastage: dropping out, repetition, failure to retain children to the end of primary education and at higher levels, and failures in examinations usually happen to the children of the poor, and to the rural dwellers and the

*Also "while rural students are at a disadvantage compared to their urban counterparts, the relative importance of such a disadvantage is minimal for the pupils coming from the 'best families' of the rural environment" (Clignet, 1974:259).

girls. Myrdal updates his 1972 observation and writes three years later (Myrdal, 1975) that (in South Asian countries) formal education (still) serves the privileged few. He notes that the resulting character of education at all levels has not changed much in the independence era, least of all in India, Pakistan, or even in Ceylon where perhaps to an extent the educational system has been "revolutionized." In India, for example, "it is still true that minorities who represent no more than 6 percent of the Indian population are still much over-represented within the upper reaches of the Indian educational system" (Foster, 1977:219).

In Thailand while, according to Fry (1981), nearly all children, regardless of socio-economic or geographic background, have access to primary schooling, nevertheless, inequalities and inequities persist, particularly with regard to the uneven quality of primary education in various regions of the country. A major national assessment of primary school achievement, Fry notes, revealed significant disparities in educational achievement of students of different regions. Children in the capital city--Bangkok--scored on the average twice as high as children from the poorer, remote Northeast (p. 9). A high rank order correlation of .76 between provinces' wealth per-capita and extent of opportunity to continue to upper primary was shown.

In Indonesia, a study of educational achievement of 14,000 sixth graders, representing the ten major regions of the country, in four school subjects indicated that rural

children had learned much less than urban children (Elley, 1976).*

In China, where, according to some (e.g., Williamson, 1979:206) great success has been achieved, especially in comparison with India, in bringing education to the countryside and in achieving universalization of primary education and rapid extension of secondary education, there appear to be some real problems with regards to the equality of educational opportunity. Chen (1981:227) reports that the college entrance examinations, reinstated in 1977, have disappointed the rural youth because they give an advantage to candidates from urban areas who have attended middle schools teaching the subjects covered by the examinations, while rural students could only attend middle schools offering no specific instruction for these examinations. Also, as Chen writes, the government has started discovering the "brightest" students and giving them the best possible training in the shortest possible time which, some people say, tends to discriminate against the "ordinary" students who do not attain the highest scores in examination. "Teachers tend to concentrate their efforts on the bright students and consequently neglect those who are not considered the brightest" (ibid.: 226). And Chen reports that according to regulation

*In countries of ASEAN (Association of Southeast Asia Nations) Region--Indonesia, Malaysia, Philippines, Singapore, and Thailand--"those of the top tend to reserve favored schooling opportunities for their own children so their children's position in the upper strata will not be threatened by bright, ambitious youths from the lower levels" (Postlewaite and Thomas, 1980:12).

of examinations for admission to higher education, the candidate must support the leadership of the communist party (p. 181).

In the Arab countries, according to a UNESCO report (Tazi, 1980), 42 percent of children of both genders from six to eleven years of age (that is, over ten million children) were not attending school in 1975-76, and in all countries there exists inequality of educational opportunity as regards gender, and also between children of urban and rural areas, girls and rural children being at a disadvantage.

In Eastern European countries, the constitutions of socialist governments guarantee citizens' equal right to learn, and this is to be secured through different means including "widespread development of schools of all levels having a sufficient number of places for those who want to learn" (Kosakiewicz, 1980:174). However, the literature indicates that while, like many other countries of the world, there has been rapid educational expansion and reduction of illiteracy and even to some extent, reduction of level of inequality of education, according to Kosakiewicz, Professor of Sociology at the Polish Academy of Sciences, statistical and empirical data seem to prove that complete equality for rural and urban youth, and for youth coming from various social milieu have been achieved only up through compulsory eighth-year education (ibid.: 177).

Hungarian research, Kosakiewicz writes, shows that only

37 percent of children of skilled workers, and scarcely 18 percent of children of farm workers go beyond primary school as opposed to 83 percent of children of the managerial intelligentsia and 79 percent of children of office workers. Children of manual workers four times less than children of white-collar workers go to secondary schools (gymnasia) leading to higher education. And as in other Eastern European countries, in Hungary, the majority of students in higher education come from the managerial intelligentsia and white-collar families.

In Poland, as Kosakiewicz reports, "around 1970, the index of learning for sixteen-year-olds in rural areas in proportion to the index of learning of sixteen-year-olds in urban areas was 1:1.29, for seventeen-year-olds this amounted to 1:1.58, and for eighteen-year-olds to 1:2.03."

In the Soviet Union, the government, like that of the United States, contends that its system provides the best opportunities for real social equality (Andre Beteille, cited in Flew, 1976:49) and according to the Russian author Kuzin (cited in Kuzin et al., 1972:15), there is "a real, not formal, equal opportunity to receive an education, including a higher education, for all citizens, irrespective of sex, race, nationality or property status." But the issue of inequality in its (the Soviet Union's) educational system has not been resolved. For example, still great differences exist between educational opportunities of rural and urban areas (Williamson, 1979:108). Kosakiewicz (1980:177)

writes that in the Soviet Union, though a very high level of integration has been achieved for the first eight years of schooling, and the social composition of the pupils corresponds to that of the whole society, yet for grades nine and ten, children of working-class parents are underrepresented and children of white-collar workers and specialists are markedly overrepresented. And the greatest differentiation occurs at the level of universities and the other higher educational institutions.

In the Soviet Union, as in the capitalist world, the position of one's parents in the society has much influence on the probability of one's school success and there is a strong tendency for the children of the intelligentsia to do better than other children in school (Chiot, 1977:237).

In Western European and other capitalist developed countries (the United States, Australia, Japan and Canada included), too, there is a lack of equality of educational access, achievement and attainment. In these countries, children of lower socio-economic status families and excluded ethnic minority groups (whether they happen to be aborigines of Australia, blacks of England, or natives of the United States and Canada) achieve less than children of higher socio-economic status parents. One valid evidence are the IEA studies (Walker, 1976; Husen, 1967) in which eighteen industrialized countries (most of them capitalist) participated.

Of course, prior to and after the IEA studies were carried out, similar conclusions had been and were reached by

many researchers in many Western European and other capitalist developed countries. At the European Seminar on Sociology of Education held in the Netherlands in September 1968, it was declared that numerous investigations have indicated the existence of a very strong correlation between the level of achievement of children and the social class to which their parents belong; there have been disproportionately few achievers from lower social classes (Maris, 1969:67). Banks (1976:55-58) reports that in Western European countries, working-class children are less likely than middle-class children to enter more academic types of secondary education and even if they do so, they are less likely to complete the course. There are also considerable social class differences in access to and within universities, Banks notes. Those from working-class families are less likely to enter higher education; when they do, they are more likely to go to the technological institutions rather than a prestigious university; they are also less likely to go on into graduate education.

Some (e.g., Boudon, 1974, and Boudon and Lagneau, 1980) indicate that in most industrial societies, inequality of educational opportunity has, in varying degrees, slowly but steadily decreased in recent decades but unequal education still exists. A number of reports and documents on the state of inequality of educational opportunity in OECD (Organization for Economic Cooperation and Development) countries (Hake, 1975; Emmerij, 1974; OECD, 1971a, 1971b) show that while

universal compulsory schooling has in all OECD countries, except in Portugal and Turkey, been achieved and gender, social class, and regional origin of children are no longer obstacles to school participation to the extent that the school attendance is enforced, large inequalities persist between social groups insofar as educational achievement is concerned.

At the educational levels beyond compulsory schooling, according to these (OECD) reports, despite some slight improvement in the majority of the countries, there remains considerable social selection; children of lower socio-economic background show low achievement quite unrelated to their measured ability, and despite a rather broad selection of academic fields by students of all classes, these students usually study a field closely related to their social background.

As an example of the state of inequality of educational opportunity in Western European countries, a study of Irish primary schools conducted yearly from 1973 to 1977 (Martin, 1980) could be mentioned which has shown that rank order of students' mean reading scores has always been the same: Group one, the children of professionals, white-collar workers, and owners of large farms, consistently earned the highest mean scores; next came group two, the children of skilled workers; children of unskilled workers, owners of small farms, and the unemployed were always in third place. The study has also given some indication of a progressively widening reading gap between social class groups in Ireland.

Another example is West Germany. According to Hearnden (1976:109), while those who are in favor of radical changes do accept that the growth of the network of the country's gymnasium (academic secondary school) and the real-schulen (intermediate school) has brought a more equitable representation of the various social groups into the early classes of these schools, still a higher proportion of working-class pupils tend to leave the gymnasium early, generally in order to transfer to vocational schools. Also "while manual workers accounted for some 57 percent of the working population, the proportion of university students from such origins was 4 percent in 1950 rising to 7.5 percent in 1970" (ibid.: 49).

In the case of the United States, a country where "the principle of equal rights for all citizens is deeply embodied in its ethos" (Tesconi and Hurwitz, 1974:2), and while its "experiment in public schooling" is considered to be "the most successful occasion of mass education in recorded history" (Edmonds, 1981:1), it may also be considered "the most indefensibly inequitable system of schooling among the great nations of the world" (ibid.). In this country, too, those who are born into the more affluent communities have a far better chance of receiving a good education than do those who are born among the poor and near poor (Tesconi and Hurwitz, 1974:16).

The pattern of class differences in the United States is much the same as in Europe; high school completion,

college attendance and college graduation, and graduate education all are related to socio-economic status (Banks, 1976:58-59). In addition to social class, ethnicity also affects academic achievement. It has been shown that American Indians, Negroes, and Mexican Americans, for example, do, on the average, poorly in school even when the effect of social class is controlled for (Epstein, 1972:202).

The comprehensive study of Equality of Educational Opportunity (EEOS) of elementary and secondary schools (of the United States) by Coleman and his associates (1966)--the largest study of its kind--showed that the socio-economic background variable was the most important variable in accounting for academic achievement. The study also showed that children of ethnic minorities--native Americans, Oriental Americans, Blacks, Puerto Ricans, and Mexican-Americans--scored, on the average, distinctly lower than white pupils.

Also, the EEOS results showed great differences for children with different parental education level. For example, according to calculations based on the data, it was found that white high school seniors whose parents were in the top education decile were, on the average, well over three grade levels in measured scholastic achievement ahead of those whose parents were in the bottom decile (Bowles and Gintis, 1976:32).

There have been one hundred or more additional analyses and new studies of the EEOS data and/or critiques of it--the most important one Harvard Seminar (Mosteller and Moynihan,

1972); the general findings of the study have not been disproved (Brookover, 1981:11).

The findings of EEOS have been shown to be supported by numerous other studies at the national and district levels and by studies on individual schools. For example, the National Assessment of Educational Progress very recently reported that the inequality of educational achievement between black and white students still remains (Burton and Jones, 1982:19).*

*There is more evidence, for many other countries, indicating the persistence of inequality of educational opportunity (in terms of access to school, staying in school, and learning in school) as it relates to socio-economic status, racial and ethnic background, religion, gender, and area of residence than what has been so far presented. For the sake of brevity they, particularly the most recent ones, will only be cited here:

For Kenya, Nkinyangi (1980), Prewitt (1974), Olson (1972); for Zaire, Lanzas and Kingston (1981); for Nigeria, Balogun (1976); for Jamaica, McLean Anderson (1977); for Mexico, Estrada and LaBelle (1981); for Guatemala, Waggoner and Waggoner (1971); for Paraguay, Winkler (1980); for Australia, Rosier (1979), Bessant (1978), Broom and Jones (1977), Willmott (1975); for the Philippines, Smith and Gheung (1981); for Sri Lanka, Niles (1981); for India, Naik (1979), Seshadri (1976), Naik (1971), Gusfield (1970); for China, Hawkins (1981), Price (1977); for the Soviet Union, Dobson and Swafford (1980), Zajda (1980), Dobson (1977), Price (1977), Yanowitch (1977), Ivanov (1976), Jacoby (1974), Matthews (1972), Yanowitch and Dodge (1968), Figueroa (1963); for Yugoslavia, Juhas (1978); for Hungary, Andorka (1976); for Poland, Liberska (1979), Zagorski (1977); for West Germany, Williamson (1977); for France, Wanner (1974); for Britain, Bagley (1979), Essen et al. (1978), Banks and Finlayson (1973), Douglas et al. (1971), Peaker and C.B.E. (1971), Plowden Report (1967); and for the United States, Wolf (1977), Cordasco et al. (1973).

Later in chapters IV and V, where the investigator will be strictly dealing with the question and discussion of the relationship between some in-school and out-of-school social factors and academic achievement of students, more evidence on inequality of educational opportunity--inequality in learning--for many more countries, will be presented.

In the preceding pages some references were made to the existence of inequality of educational provision for and academic achievement and attainment of females. The importance of the issue warrants further treatment:

In 1970, an international report on the status of equality of access of women to literacy (UNESCO, 1970) concluded that where-ever illiteracy prevailed, the percentage of illiterate women was always higher than that of men. In 1975, UNESCO's study for the occasion of the International Year of Woman showed that although the law in most countries no longer discriminated against women, and despite the advances made towards improving their status, both subtle and overt discrimination still existed in many forms and inequality of educational opportunity (as well as other types of inequalities) still characterized the position of women in most societies (UNESCO, 1975:9, 103).

A recent report (Epskamp, 1979:1) by the Center for the Study of Education in Developing Countries in the Hague indicates that women still form a socially disadvantaged group in the field of education; women in developing countries still have an unequal chance of access to education compared to men. Also, the World Bank (April 1980:24) reports that aggregate data for 1977 for developing countries as a group show wide disparities between male and female enrollments, females being at a disadvantage.

A few examples of individual countries indicate the

seriousness of the problem with which females of developing countries are faced as far as educational opportunities. In 1976, of all the children enrolled in the first grade, the percentage of females was 45 percent in Pakistan, 29 percent in Chad, 22 percent in Nepal, and it was 16 percent in Afghanistan (World Bank, April, 1980: 24). Of course adding factors of socio-economic status of the family, ethnicity, regional origin and so on to the picture would result in a revelation of the existence of more inequity for certain groups of individual females, those of lower socio-economic background, powerless ethnic groups, and those residing in rural areas being at a disadvantage.

Carceles (1979), in his "Development of Education in the World" based on data for 1960 and 1976 reports that although the percentage of total girl enrollment increased at all levels in all regions, the gap between the two genders measured in absolute terms increased in several cases, namely at the third level in the developed countries, at all levels of education in Africa and Asia, and at the third level in Latin America (pp. 157, 165).

A descriptive and explanatory discussion of the participation of women in education in the Third World (Bowman and Anderson, 1980) indicates that although schooling of girls in some sub-populations exceeds that of boys in others, girls rarely have more schooling than boys and virtually without exception, social selectivity into schools tends to be greater among girls, gender disparities being more pronounced at

higher levels of the education systems. Bowman and Anderson point to the "relative sex equality in education over much of Latin America" (p. S32).

Smock (1981) has looked at some differences in opportunities for schooling in five countries--Pakistan, Ghana, Kenya, Mexico and the Philippines. She concludes that the data confirm the existence of considerable differences in opportunities for schooling in favor of men in the five countries, the Philippines being the exception. Females' access to education is most consistently a problem in Pakistan. In Ghana, Kenya, and Mexico, gender differences in access to schooling, as Smock notes, range from slight variations in enrollment ratios at the primary level to far more significant disparities in entrance to secondary and higher education.

Generally, Smock reports, girls living in rural areas in less developed regions and who belong to poorer families tend to have the lowest chance for access to secondary and higher education. However, even females residing in urban centers and from wealthy families have less opportunity to attend secondary and tertiary educational institutions than comparably situated males. But in the Philippines, Smock points out, the situation is different. Females, in the Philippines, have attained parity of enrollment at all levels of the educational system and recently have come to dominate registrations for college and graduate education.*

*In Hungary, according to Kádár-Fülöp (1973:111), the data for 1961-1971 period have indicated that the proportion of girls in secondary schools has exceeded the value expected from demographic data by approximately 10%; and even in higher education the percentage of females hardly has fallen below the proportion of women in the age cohort.

Also, according to Smock, in Mexico, Ghana, Kenya, and Pakistan, a higher proportion of females than males drop out of school within each cycle of the educational system. In the Philippines, with lower rates of retention of its educational system, sex differences are not significant. (However, even in the Philippines, which--as Smock reports--is characterized by virtual equality between the two genders in educational opportunities, there exist sex biases in the curriculum, standards and program options offered, as there are in the other four countries.)

The situation is, of course, better in developed countries. But in these countries too, females have had less educational opportunities and success than males. For example, in the member states of the European community, according to a recent report (Byrne, 1978) on the equality of education and training for girls (ten to eighteen years), inequality in the education (and training) of girls still exists. According to Byrne, the disquieting rise in female youth unemployment and continuing inequalities between men and women in employment are directly related to this inequality (in education and training). Byrne points out that it is a fact that nine-tenths of those who govern and control education at the higher levels in most, if not all, countries are male (p. 6).

In the OECD countries, also, inequality still exists between females and males in terms of educational opportunity. An OECD report (Kotwal, 1975:33) shows that in all of these

(OECD) countries, except Canada, Ireland, and the Netherlands, women have less education than men with the most striking inequality being in higher education. At the primary level, according to the report, only the countries of Southern Europe show a significant difference between the two genders. In Canada, the Netherlands, the United States, and more particularly in Ireland, females have slightly more secondary education than males. In Denmark, Italy, Germany, Greece, Japan, and Turkey the male advantage at the secondary level is the greatest.

With regard to higher education, the OECD report indicates that while the difference in terms of years between the two genders is small, in the active population men have four times as much higher education as women in Spain and Turkey, three times as much in Germany, Italy, Japan, Norway, and Portugal, and twice as much in Belgium, Denmark and Greece, with the Netherlands having the smallest difference.

In the case of the United States, Hoffman (1975:110) writes that despite the fact that in an absolute sense women are more educated now than in the past, they are not more educated in comparison to the educational levels of the country as a whole. Hoffman adds that the education of American (U.S.) women has not kept pace with the trend of increase in the educational levels of the country.

Worldwide, with few exceptions, females in general are still educationally at a disadvantage compared with males--

they have less opportunities for access to schools and lower level of educational achievement and attainment (Deble, 1980; Elliott and Kelly, 1980; Finn et al., 1980; Barber, 1979; Finn et al., 1979; Saunders, 1979; Walker, 1976).

As documented in the preceding pages, there exists in every country of the world inequality of educational opportunity in terms of educational access and educational success (achievement and attainment).

Why some do not enter school, or do so but drop out, or are pulled out or pushed out, before they graduate: this could occur for many reasons--economic (such as lack of financial, physical, and human resources), social-cultural (including religious beliefs), psychological, geographical, and political (for example, ruling groups and the elite of the country deliberately discriminate against "disadvantaged" individuals and groups to prevent jeopardizing their children's or their own privileges). While it is very important and valuable to carefully discuss these reasons and analyze their relative influence upon individuals' and groups' chances of entering school and completing it, it is not the intent to deal with them in this investigation. The concern here is: why among those who finally enter school and stay there and complete their schooling--at least up to the end of primary, intermediate or secondary education, certain individuals, and certain groups of individuals, do not learn as well and as much as certain others do. In other words, what

are the forces which affect--what are the causes and correlates of--students' academic achievement?

In the next chapter different theories and conceptions of learning and school achievement will be presented. Here it will suffice to say that factors which are theorized and assumed to cause or influence students' performance could be grouped as outside-school factors (such as student's personal characteristics, student's family characteristics, student's community characteristics, and society's characteristics--political ideology and economic structure of the society) and inschool factors (such as the school's physical characteristics, the school's academic ethos, the school's student body's characteristics, teachers' characteristics).

It is commonly believed, both in the developed and developing world, that the student's personal characteristics (mainly his/her "intelligence," which is assumed by many educators and other social scientists and even by parents to be mainly inherited and fixed) and the student's family background (mainly his/her family's socio-economic status) account for most of the student's level of academic performance and for differential achievement of students in school, and it is concluded that inschool factors, in comparison with outside-school factors, are of lesser importance in the student's learning independent of his/her personal and family characteristics (see for example, Simmons, 1980; Alexander and Simmons, 1975; Tyler, 1977; Bowles and Gintis, 1976; Carnoy and Levin, 1976; Levine and Bane, 1975; Thomas, 1975; Boudon, 1974;

Jencks et al., 1972; Peaker and C.B.E., 1971; Plowden Report, 1967; Coleman et al., 1966).

As was mentioned in the previous chapter, it is the purpose here, in doing this--international and historical--study, by looking at and analyzing the available research, to determine what are the relative influences of some social factors (inschool- and outside-school- factors) upon students' academic performance in primary, intermediate, and secondary schools.

The Chapter in Brief:

-- Education is accepted by many people as a basic human need.

-- Equal access to education is considered by most people and by virtually all governments as a fundamental human right and a principle of social justice.

-- Since the 1950s many people have started claiming an education and since the 1950s there has been a worldwide educational expansion.

-- Education has, in different ways--economically, psychologically, and socially--and in varying magnitudes, helped many individuals, groups, and societies.

-- Many individuals throughout the world, particularly those of lower socio-economic status, deprived religious, racial, and ethnic groups, rural dwellers, females, and the "handicapped"--all commonly referred to as the "disadvantaged"--have not had and still do not have access to schooling

in terms of entering school, survival in school, and learning in school. The inequality of educational opportunity, in terms of both access to and success in school, persists in all societies.

-- The reason why many do not enter school or do so but drop out before they graduate could be economic, social-cultural, political, geographical, physical, or psychological.

-- Of those who enter school and complete the program, some learn less than others. Many social scientists and educators, even many parents, believe that the real causes for this--academic underachievement--are the students' personal, family, and community backgrounds. The school is usually excluded from having any responsibility for causing or enhancing low level of cognitive performance by these students.

CHAPTER III

SOCIOLOGICAL AND SOCIAL-PSYCHOLOGICAL THEORIES OF LEARNING AND ACADEMIC ACHIEVEMENT

A Few Beginning Words

Because this is a study in sociology of education, not in psychology of education, and because the concern here is why some students fail in school while others succeed, why some learn less than others, and why some do not go as far as others do in their educational careers, there is no need to go into any detailed discussion of the way learning occurs. That is, the investigator will not deal with the questions: what mental processes and developmental stages the student goes through in the course of learning subject matter in school; what are the specific biological mechanisms in human learning process; what are the special functions of different regions of the brain, the real influence of a human being's physical condition, or the exact role of the nervous system in learning; or, particularly, considering the importance of the personality's role in influencing human behavior, how this characteristic affects human learning as one of the basic operations of the human mind. These questions are the domain of neurobiology and physiological psychology.

However, there will be a brief discussion, in what follows and in general terms, of some of the psychological

schools of learning theories which have had major impact on the way the process of human learning and particularly learning of students in schools has been perceived. After that, physiological, biological, psychological, sociological, and anthropological explanations for student learning will be given. And, in the last section of the chapter, sociological and social-psychological theories and conceptions of learning and academic achievement will be discussed.

Psychological/Classical Theories of Learning

The two most influential schools of learning theory are the behaviorist stimulus-response (S-R), also called connectionist theories, and the cognitive theories.

The connectionist theories have tended to be inductive in their approach to studying learning--they have directed toward molecular study, that is, toward understanding the lawful relationships between specific environmental stimuli and responses of the organism when learning occurs (Galloway, 1976:77). The cognitive theories have tended to be deductive in their approach and study learning on a molar basis. That is, total behavioral acts, events, beliefs, and patterns are considered as important in what happens within an organism when learning takes place (ibid.).

The connectionists (behaviorists) stress the importance of: active role of the learner and his responses, the frequency of repetition and reinforcement, the practice in various contexts for generalization and discrimination, the drive conditions, and the recognition and resolution of

conflicts and frustration in the learning situation.

The cognitivists consider it essential that: the knowledge be organized (as, for example, from simplified wholes to more complex wholes), features of a problem be easily perceived and learning be accompanied by understanding, and goals be set by the learner to give direction and incentive. They also see as important the critical role of convergent thinking for logical conclusions and divergent thinking to create the novel effect, and the role of feedback in confirming accurate knowledge and correcting faulty learning.

Among the leading behaviorists mention could be made of the following:

Pavlov (1849-1936), the well-known Russian physiologist--and the first theorist of learning--who formulated the theory of conditioning;* Watson (1878-1958) who was influenced by Pavlov's work and generalized Pavlovian conditioning to human subjects; Guthrie (1896-1959) who, like Watson, was interested in an interpretation of learning from an extension of Pavlov's work and believed "what we do is what we learn"; Thorndike (1874-1949), the American psychologist and the student of William James (the "father of American psychology") who is known as the "father of educational psychology";

*In addition to the theorists' own works, five other sources (Shinkfield, 1981; Galloway, 1976; Packard, 1975; Marsh, 1973; Travers, 1972) have also been helpful and used in preparing the descriptions of pages 71-79.

The major works of the theorists, particularly those more closely related to learning, are included in the list of references (pp. 238-269).

Skinner (1904- -), famous for his operant conditioning, and a controversial behaviorist who urges the adoption of programmed instruction and teaching machines to give the learner the opportunity "to proceed at his/her own pace" and who believes that the outcome of learning is what can be observed in the individual's behavior.

Among the cognitivists, these, who have had the greatest influence, could be mentioned: Wilhelm Wundt (1832-1920) who with his followers, coming from the medical profession and also with background in philosophy, established the first psychological laboratory in 1879 in Germany (Galloway, 1976:78); William James (1842-1910) who, even though he never studied the concept of learning itself in his psychology laboratory (the first of its kind to be established in North America), had extreme interest in teaching and learning, and whose pragmatism made a great impact upon the way learning process was perceived; Max Wertheimer (1880-1943), whose first use of the German term Gestalt (meaning pattern, structure, configuration, an integrated whole) resulted in his approach to psychology to be called "Gestalt psychology" referring to the interaction of many forces on a person's behavior at any one time; Wolfgang Köhler (1887-1967) who (along with his colleague Kurt Koffka, both of Germany), like Wertheimer, became interested in Gestalt psychology and looked at learning as perceptions of problems as wholes, as gestalts; Jerome Bruner (1915- -), well known for his learning-by-discovery theory that combines an interpretation of Piaget's developmental stages theory (to be mentioned in the following) with

the Socratic idea (that learning is primarily a matter of reorganizing what one already knows) and one of the most widely recognized figures of cognitive-field theory (mentioned below), especially as it relates to school learning.

Bruner is one of those psychologists who have attempted to break away from the classical motivation theories and the theories of learning association. His work as regards learning in school has had great impact on the daily teaching-learning process in some classrooms, and especially on curriculum construction, and has made significant advances in research about concept formation and attainment.

Another authority who subscribes to the view that cognitive development occurs in a sequence of stages (as does Bruner), is Swiss psychologist Piaget. Piaget views the child as a developing organism passing through biologically determined stages--sensorimotor, preoperational, concrete operations, and formal operations. These stages, for Piaget, are more or less age-related, though the rate of progress can vary somewhat, depending upon the culture and the social environment. Piaget's developmental theory explains a child's growth in mathematical ideas in terms of the child's own action and the process of internalization of these actions.

As the principles derived from the work of Skinner have led to the powerful technology of token economics, a technique which is extensively applied in schools--and in hospitals, prisons, and therapy settings--(of the West), parts of Piaget's theory, also, have become common practice in modern lower-grade classrooms (Swanson, 1980:9). However, Piaget's notion

of universal invariant stages has been experimented in over one hundred cultures and subcultures in different parts of the world and has yielded inconclusive and often contradictory findings (Ashton, 1975).

It should be mentioned that some of the learning theorists could be identified with both traditions and be called cognitivist-behaviorists. Some theorists have attempted to bridge the gap between the two--cognitive and behaviorist--approaches to learning theories. The two "giants of learning theory," Edward Chase Tolman and Clark Hull, and also Robert Gagne (1916- -) are such people (Galloway, 1976:94, 96). Gagne is engaged in finding an alternative to an either/or interpretation of psychology of learning and in fact providing an answer to the question asked by John Dewey in 1938 and currently being asked again which is: "What are the alternatives to an either/or interpretation of learning?" (ibid.)

There are different ways of classifying learning theories, one which divides them by the two most influential families just mentioned. Another way of classifying them consists of five main categories (Shinkfield, 1981: 57-62): Stimulus-Response Association (of which behavior modification is a product), which emphasizes the importance of experience in learning; field theories (the Gestalt-field, the cognitive-field, and perceptual-field theories) which emphasize that obtaining an overview as a whole is often important in

learning; Freudian learning theories--which consider an awareness of self - one's own thoughts and feelings - to have a great importance in learning--(out of which many theories of learning have grown and are used freely by exponents of S-R associationism, the perceptual field, and the cognitive field theories); self-initiated learning theory (which in many ways is the antithesis of traditional teacher-directed learning and) which is based on the premise that self-initiated learning leads to constructively gained knowledge and to the joy of discovery; and motivation-for-learning theory which is based on the assumption that if the promise and potential are there, motivation brings development to fulfillment.

The Impact of Psychological Learning Theories Upon the Classroom Teaching-Learning Process

What has been the impact of learning theories mentioned so far upon the teaching-learning process in the classroom? Emeritus Professor of Educational Psychology at the Institute of Education, University of London, William Wall, who has prepared an appraisal in this regard for a special issue of International Review of Education (Wall, 1979), says that "classical theory of learning is often said to be useless in the complex situation of classroom learning"; and the neo-behaviorism of Skinner and his followers also does not help except marginally, in, for example, behavior modification techniques and in "the now largely exploded hopes of programmed learning" (p. 372).

Wall writes that concepts such as 'need' and 'press' and 'drive' and systematization like that of Gagne come somewhat closer to being directly applicable. About theories similar to those of Piaget and Bruner, Wall notes that, while they help to systematize and to some extent explain cognitive development and some of its aberrations, and while they clearly set limits to the kind of expectations which are built into curricula, they, however, do not provide us with "a fully adequate armoury from which to derive an effective approach either to groups of children, or, still less, to individuals" (p. 372).

Since Wall's assessment of Skinner's theory was referred to, it seems appropriate to mention the criticism which Carl Rogers (1969), one of the leading exponents of humanistic psychology, has made regarding Skinner, and Skinner's assessment of Rogers. Rogers believes that Skinner has a very limited understanding of the human mind (Postman and Weingartner, 1973: 242). Skinner considers as nonsense Rogers' belief that there should be less, not more, control in the classroom and that anything you can 'teach' to another (in the traditional sense of 'teach') is probably either trivial or harmful (ibid.).

Types of Learning in Schools

As to the types of school learning, the following classifications can be mentioned here:

Gagne, first (Gagne, 1965) suggested eight types of learning: Signal Learning, Stimulus-Response Learning,

Chaining, Verbal Association, Multiple Discrimination, Concept Learning, Principle Learning, and Problem Solving, but later (1971) he reduced them to only six types (Galloway, 1976: 112): Chains, Discrimination, Concrete Concepts, Defined Concepts, Rules or Principles, and Higher-Order Rules. In Gagne's proposed typology, each type of learning is supposed to be prerequisite for the next higher category and they primarily apply to cognitive learning and only indirectly to affective or to psychomotor learning suggested by Bloom (1956).

Bloom and his associates (Bloom, 1956), using Gagne's theory of instruction, have suggested a different learning hierarchy which includes, in addition to cognitive domain, as just referred to, affective and psychomotor domains as well. The cognitive domain has six major classes--knowledge, comprehension, application, analysis, synthesis, and evaluation--and all classes except application have several subdivisions.*

*In addition to introducing the hierarchy of learning, Bloom (1968, 1974, 1976, 1978, and Block, 1974, 1979), using John Carroll's (1963) Model of School Learning (which emphasizes the quality of instruction and the amount of time the student attends to the learning task) has developed a theory of instruction--Mastery Learning. Bloom's major thesis is that "what any person in the world can learn, almost all (95% of) persons can learn if provided with appropriate prior and current conditions of learning" (1978:7).

Bloom contends that for inequality of learning among students to reach a vanishing point, attention should be given to student's entry skills, motivation, and learning conditions (in the school). Thus it becomes essential, according to Bloom, that teaching and remedial work be started at the earliest possible time.

This theory is a rejection of the widely accepted notion of innateness of learning ability and individual differences and of the claim that the commonly used intelligence testing measures learning ability. For criticism of Bloom's theory see Cronbach (1971) and Anselmo (1981).

Watson (1930) who was mentioned earlier, has classified learning into three types: emotional learning (for which fear, rage, and love are the basis), manual habits (by which Watson is referring to the organization in the arms, feet, and so on), and laryngeal habits (the phrase used by Watson for thinking).

Lewin (1942) has suggested another form of classification of learning: learning as a change in cognitive structure, learning as a change in motivation, learning as a change in group belongingness, and learning as control of body muscles.

Finally, another kind of school learning is learning of norms suggested by sociologists and social psychologists. Dreeben (1968), for example, says that school, through its socialization process, contributes to the learning of many norms, such as norms of independence, achievement, universalism, and specificity. Dreeben believes because of the structure of the school, these norms are learned only in school.

In the preceding pages, some psychological theories of learning, some classifications of them, and some typologies of school learning, mainly because of their relevance to and/or influence on the teaching-learning processes, were mentioned. In the pages which follow, the main question--the theoretical explanations of academic behavior--will be dealt with.

As has already been pointed out, educational knowledge

which is primarily provided by schools is not equally distributed in any country among individuals or groups, neither in degree nor in kind. What are the theoretical explanations for this, and especially, what is the role which schools play in transmitting knowledge unequally? How is the distribution of academic knowledge actually controlled by schools? If we define educability as the capability to receive an education or as having ability to profit from schooling, what factors--particularly, what social factors--influence and condition this capability?

In all societies there are mainly two explanations for failure and success and differential achievement of students in school. A meritocratic explanation, according to which those who have merit (presumably composed of "talent" and effort) succeed. Those who fail, it is argued, do so because they are not "intelligent" and they do not work hard. (Those sociologists of education who adhere to the functional theory of education are among those who give this explanation.) Others, looking at the issue from an egalitarian standpoint, say that student academic behavior is the result of the belief system, value system, expectations, policies, and practices of those who run the society and its institutions, including schools. (Those sociologists of education who adhere to the radical/conflict paradigm of education are among this group.) The first explanation, of course, sees the victim at fault, the second explanation considers the society, including the school, as the cause of the problem.

In all capitalist countries, the prevailing view is the "meritocratic" one, while in socialist countries, the egalitarian outlook prevails. (One should immediately add, however, that this in no way implies that socialist countries have succeeded in abolishing the differential academic achievement of students and student failure. Rather only that the ruling authorities contend that they believe in an egalitarian belief system and in egalitarian ideology.)

In academic and educational research communities, there are usually three arguments with respect to factors associated with or causing student failure and underachievement.

The psychologists, who have been the first to attempt to provide scientific interpretations of school achievement, have usually seen the reasons of success and failure in the individual learner. They have approached the issue through their conception of "native gifts"--"intelligence" and motivation--and more recently, through theories of "developmental stages," learning patterns, and self-concept, most of which are assumed to be individual/personal/internal and nearly fixed characteristics. (Psychologists, as it is known, have been and still are at odds on the question of relative influences of heredity and environment upon the aptitude of individuals.)

Anthropologists typically believe that culture (of the home, the community, and the society) is an important factor in student learning. The home's child rearing practices and the provision of opportunity or lack of it for personality development of the child could help or hinder the child to learn

in school. According to some anthropological explanations, if a student fails, for example, it is the cultural deprivation of his/her home and/or community which have caused it. Also it is said that while in some societies cultural and sub-cultural values encourage intellectual work and academic excellence, in other societies such cultural norms are lacking.

Sociologists, however, see the characteristics of individual students and the functioning of their intellect as, to a large extent, arising out of interaction with the environment in which they live and learn. Thus they look at sociological constructs such as minority or majority status, economic and political power, gender, and ethnicity affecting school learning. Particularly, some sociologists of education see the school--its academic atmosphere, its organizational-instructional arrangements, its policies and practices--as the major cause and source of school failure and difference in student academic performance.

Very possibly school success and failure are not caused by any single factor or any single cluster of factors such as "intelligence" or socio-economic background of student or school characteristics. Rather, one could assume that school performance is the outcome of many intellectual and non-intellectual factors, many individual characteristics and social (school, family, community, society) factors. In what follows, physiological, biological, psychological, anthropological, sociological and social-psychological theories and

hypotheses of, and explanations for academic performance of students will be discussed in more detail. To do that, the investigator classifies factors which are theorized or assumed to be causing or influencing student performance into five groups:

- Characteristics of the student (personal attributes)
- Characteristics of the student's home (family background)
- Characteristics of the student's community/neighborhood
- Characteristics of the larger society
- Characteristics of the school (which student attends)

Characteristics of the Student (Personal Attributes)

The physical condition of the learner is assumed to be an important factor in school success or failure. It is said that the brain is "the great organ of learning, but species man learns with his entire body," and defects in the functioning of any aspect of the total organism may well impair the child's ability to learn (Schwebel, 1968:90). However, as Schwebel notes, not all the organs and bodily processes share an equivalent role in learning, and the brain is clearly pre-eminent, but the brain's dependence on the rest of the body is dramatically evident.

It is believed that lack of proper prenatal and post-natal care such as parental health, growth, nutrition, family planning, obstetrical supervision, malnutrition, illness, lack of (proper) medical care (which are due to poverty, social deprivation, and environmental inadequacy), result in brain

and neurological defects, auditory, visual and other sensory deficiencies. These, in turn, result in hyperactivity and inattentiveness, decrease in the child's learning ability, particularly in cognitive areas and abstract thought, and increase in the risk of school failure (Birch and Gussow, 1970, and see Clark, 1972:19).^{*} It is also said that in developing areas, parasitic diseases affect children's 'productivity,' including school performance. (However, the study findings have been conflicting and, in fact, a study [Epstein and Weisbrod, 1974] has found little evidence between these diseases and school learning independent of socio-economic background characteristics.)

Another characteristic of the individual which is assumed to greatly affect the student's performance is what is commonly referred to as intelligence. Based on the theory of biological/genetic determinism, it is assumed that (a) an individual is born with a fixed level of intelligence (learning ability) which remains entirely or almost entirely unchanged throughout one's lifetime, and (b) there are wide variations in intelligence level between individuals within groups and between groups within societies, and even between the two

^{*}While the importance of the brain and sensory equipment and the rest of the body in the learning process cannot be denied, it should be pointed out, however, that physical handicap or lack of adequate early sensory experience does not necessarily and definitely disable the child for learning. The case of American author Helen Keller (1880-1968), deaf and blind since she was an infant, is a good example of the extreme potential of an individual's ability to learn, even under severe physical handicaps and under difficult circumstances.

genders.* School failure or low performance is hypothesized to be due to intelligence-deficiency (Joncich, 1962; Thorndike, 1903; Spencer, 1895; Glaton, 1869).

Based on this--intelligence-deficiency--theory, individuals who belong to the lower socio-economic classes are assumed to be less intelligent than those of the upper socio-economic classes (Herrnstein, 1973; Eysenck, 1971), and children of certain racial groups are viewed to be genetically inferior to those of other races (Jensen, 1969).** Thus, it is theorized by these that the student's failure is caused by class and racial differences in intelligence. The theory does not explain, however, the fact that many lower class children and those of "inferior" racial groups have shown high levels of academic performance, and many children of

*The Greek philosopher, Plato, even though asserting in his Republic that "woman is naturally fitted for sharing in all offices..." and prescribing the same education for both sexes, has speculated on possible serious female weaknesses (Hunt, 1975: 282-283). Aristotle goes even further than Plato and writes that "...the male is by nature superior, and the female inferior...the inequality is permanent" (ibid.). Also, "Plato developed a theory of educability, essentially differentiating the social classes, that became a model from which we have hardly deviated" (Schwebel, 1968:17).

According to John Reis, professor of sociology at the University of Warwick, UNESCO (and a group of social scientists) have always recognized that there is ground for assuming that there is a genetic component in measured intelligence. (What they have disputed is that these differences are so great that manipulation of the environment is incapable of fundamentally altering them.) (Cited in Flew, 1976: 67).

**Jensen, who hypothesizes that 80 percent of any individual's intelligence is hereditary, in his (Jensen, 1973) Educational Differences contends that there is a large number of children with limited aptitude for academic achievement. He recommends different educational goals and curricula for (presumably) different students.

higher classes and "superior" racial groups have consistently failed in school.*

One explanation offered for the presumed inheritance basis of "intelligence," the term for which there is still no consensus as to what it exactly means, and for its presumed unequal possession by individuals and groups, is based on physical traits such as the color of hair and eyes which is believed to be genetically determined. But there exists no scientific evidence to prove the existence of a connection between intelligence and the presence or absence of a single or a group of genes. Bowen (1979), in his assessment of educational theory for the International Review of Education, writes that "even though psychologists still don't know why but believe that minds vary in their endowment and so speak of 'gifted' or 'disadvantaged' or 'deficient' children" (p. 309).**

Another explanation is based on statistical measures obtained from experimental studies of animals and humans. But

*In India, for example, even though there still exist inequalities of academic (and status) achievement, "all castes have produced persons of ample competence to acquire non-traditional education (and to engage in non-traditional opportunities)" (Dobzhansky, 1973: 31-32).

**And Beardmore (cited in Cox et al., 1975:2) writes that "the progress of biology in the next century will lead to a recognition of the innate inequality of man. This is today most obviously visible in the United States, where educational opportunities are more widespread than elsewhere." (Emphasis added.)

Beardmore is simply missing the point. It is exactly the lack of real educational opportunities (that is, in terms of equal access to and use of educational resources) which some claim is creating or at least is enhancing the level of inequality among individuals and groups.

it is not possible to control the experimental learning environment for human subjects as it is for experiments with animals. Even in studies of identical twins, it is impossible to control the social environments of the subjects completely. One other statistical reasoning given is the constancy of I.Q. scores of students taking I.Q. tests. But, despite claims that even enriched educational programs cannot increase a child's I.Q. (Jensen, 1969), it has been possible to increase I.Q. scores of some "disadvantaged" children even dramatically (15-20 points on the average) (see Gartner et al., 1974:2).

Also, all I.Q. tests are measures of the student's knowledge of something. Such an "I.Q." score is not an intelligence measure, and its constancy does not prove the inheritance of intelligence. In fact, Alfred Binet, the pioneer of intelligence testing, did not claim intelligence to be fixed.

Above all, there are many arguments against and on the fallacies of I.Q. testing (e.g., Bauernfeind, 1971; and see Vandivier and Vandivier, 1979), and there are claims that I.Q. testing is used for controlling people (e.g., Karier, 1972).^{*} There are even reports that the work of Cyril Burt, the first British psychologist, has been fraud and that Jensen has misrepresented the facts when reporting the

^{*}Maslow, the founder of 'humanistic psychology'/psychology's "Third Force," was deeply against any form of measuring or statistically analyzing people for the purpose of classifying and controlling them (Postman and Weingartner, 1973).

studies of identical twins (Taylor, 1980).

Hunt (1961), also, based on findings from experiments with animals and studies of deprived children and Piaget's work, concluded that the belief that intelligence is largely predetermined and cannot develop regardless of environment is unfounded. And Kamin (1974, and Eysenck vs. Kamin, 1981b), like many, believes that intelligence is primarily shaped by the environmental factors.

One other argument in support of the claim that "intelligence" is inherited and more or less fixed is based on observed differences in the levels of academic achievement among individuals and between groups. But these differences in no way prove to be a basis for the presence of different learning abilities (intelligence) in individuals and groups.

The danger of biological-genetic explanations of learning and school success and failure is that they reject any program or any kind of action to prevent school failure and differential academic achievement among students as being useless. The educational system, according to these theories, can be made more efficient if it recognizes the inherent individuals' differences in ability and provides each person with proper educational treatment specifically designed for that person (Tyler, 1977: 81).

Some educators and other social scientists believe, on the other hand, that there is no such thing as unchangeable inherited intelligence and individual differences in learning

ability. They believe that virtually all students, provided with proper learning conditions, can learn school subjects just as virtually everybody who is taught to talk can learn to talk and can learn to speak any language he is taught. Bloom (1978, 1976) and Brookover (Brookover, 1981, and Brookover and Erickson, 1975, 1969) are two examples of such people.

Brookover and his associate Erickson (1969: 8) reject what they call the "bucket" theory of intelligence, which gives the notion that individuals have limited and varying capacities, potentials, or qualities which can be measured in terms of scales. Of course they do not claim that genetic differences do not exist, but they say that such differences do not make a discernible difference in many cases (as many people claim they do) (Brookover and Erickson, 1975: 265).*

Enough evidence exists to lead one to maintain that, all in all, intelligence testing and its results--I.Q. scores--do not reveal anything of scientific importance about the individual's learning capacity that could justify the continuation of their widespread use. Of course, intelligence testing and I.Q. scores do serve societal-functional purposes, but to the detriment of many certain individuals and groups.

*For other critiques of the assumption that intelligence is mainly inherited, on I.Q. testing and its fallacies, and for related issues, see Block and Dworkin's (1976) comprehensive source.

Racial, ethnic, religious, and linguistic characteristics* of the student also are assumed to affect the student's level of academic achievement. For example, still in many countries, certain racial, ethnic, and religious beliefs and values prohibit sending girls to school or sending them for more than elementary education. In some cases similar values discourage and prevent girls, and boys, from learning certain school subjects. Despite acceptance by most people, some families do not consider the education of their daughters, and even their sons, a basic need. And, some parents doubt that schooling will have any positive or important effect upon their children's future job or their present and future life (World Bank, April 1980:25).

Some religious families put emphasis on predestination, but others on the individual's own control over his/her destiny through hard work. Also, some religious groups put more emphasis on the value of education and scientific work than some other religious groups do. These beliefs could affect the child's educational achievement (and attainment).**

*These factors are all family related factors and as such would be included and discussed further in the section on family characteristics (pp. 93-96), but they are mentioned here because they are also student characteristics.

**Clignet (1975) writes that it is hypothesized that a religion's central values could be inconsistent with the requirements of academic work (e.g., Catholicism's emphasis on dependence could lower the student's chances of great educational success). Or, it is said, that low achievement of certain (religious) groups could be primarily the result of the relatively low positions they have (as an ethnic group) in the larger society--the effect of religion on school achievement could be 'culturally relative' (ibid.).

Also, linguistic background of the student--that is, the quality of the language spoken at home, particularly as it prepares the child for understanding the teacher and the school materials, and the fact that whether or not the language of instruction in school and/or the teacher's native language are the student's first language (mother tongue or language which is spoken at home)--is assumed to influence, at least in some school subjects, student learning. In fact the French cognitive sociologist, Basil Bernstein (1975, 1965, 1961), theorizes that the difficulties the lower class children have in school are directly related to their language structure and usage.

Bernstein has developed a socio-linguistic theory of social learning by essentially using ideas of Durkheim and Marx at the macro-level and George Mead at the micro-level, which points to the importance of language and linguistic forms in social and school learning. According to Bernstein's theory, the process through which social and cultural factors influence student achievement is linguistic. He says while in the middle class families children learn an "elaborated code of speech" or "formal language," in the lower class families children's socialization patterns and other cultural aspects of the home enable them only to acquire the "restricted codes of speech" or "public language."

Thus, as Bernstein hypothesizes, where the school's organizational structure and content is such that formal language and elaborated codes of speech are used, a lower class child

has a handicap in learning the school material. (Obviously if the student's mother tongue/home language is not the same as the school's language, the student could have a more serious problem in school learning.)

Another French sociologist, Bourdieu (1977, 1971, and Bourdieu and Saint-Martin, 1974) also believes that language (and other aspects of the child's cultural background) influences--through school curriculum and pedagogy--his/her school performance. According to Bourdieu's theory, individuals of different social classes inherit different levels of "cultural capital"--"linguistic and cultural competence." This cultural capital and also "class ethos" affect the student's performance in school--the children of lower classes end up with a different (lower) level of performance.

Schools, Bourdieu contends, by perpetuating and promoting the culture of higher social classes, actually reproduce the cultural inequality already existent among children when they come to school and, thus, consequently produce different levels of student achievement.

Another cluster of the student's personal characteristics which may influence school performance are personality characteristics. It is hypothesized, for example, that higher levels of academic achievement tend to be associated with higher achievement motivation and achievement need (themselves, in turn, like general self-esteem and self-concept of academic ability, self-control and some other personal characteristics, are functions of family, neighborhood,

school, and societal factors).

It should be pointed out that personality characteristics' influence upon the student's school performance is hypothesized to depend on the situation and the social context in which learning takes place.* The characteristics of the student and the social setting interact and through this mechanism they affect the student's learning. Also, the influence of the student's characteristics upon his/her academic (and other) performance assumingly depends on the student's gender, age, and grade level.

Characteristics of the Student's Family

It is theorized that the student's living conditions and culture of the home--in other words, socio-economic status of the student's family--strongly affect his/her chance of success in school. Because, it is said, that, for example, prenatal and postnatal care, which are in turn greatly influenced by social class and income of the family, affect the child's physical, mental, and health status. Also, it is said that the number of books in the home, newspapers, and other reading materials, and whether or not the child has to work after school to supplement family income (which is the case in many poor and/or rural communities), and other living conditions--themselves affected by the socio-economic status of the family--influence the student's learning.

*It is important to note that human personality could change, through changes in the individual's environment and through psycho-social therapy.

Other family related factors which are assumed and hypothesized to affect the amount and kind of schooling a child receives are: the number of siblings of the child* and the intellectual capital and the resource persons in the home, and whether or not the child is helped with the schoolwork, the attitude of the parents towards schooling, the parents' evaluation of the child's ability to learn and their expectations of him/her to achieve, the child rearing practices and relationship and interaction patterns (democratic, laissez-faire, autocratic), and other cultural properties of the home--all of which are, to a large extent, shaped and indeed determined by the parents' education level, occupation and position in the social structure, and by religious, racial, and ethnic factors.

In short, the child's family background, or simply put, family socio-economic status, which is a derivative or summarizing variable, is believed--through shaping the child's characteristics such as physical, emotional, and mental conditions, personality, and study habits--to influence the student's academic performance. Based on this theory, if a student fails, the blame is usually put on the student's family background. Such an assumption is part of what constitutes cultural-deficit or cultural-deprivation theory referred to earlier. (The other part of the theory to be mentioned in

*Also, it is believed that the child's gender, age, and birth order in the family influence the family's attitude toward and treatment of the child which could affect his/her school (and nonschool) performance.

the following section regards community and neighborhood variables.) Based on the cultural-deficit theory, the child's family and home culture (and his/her neighborhood and community culture) deprives him/her of having certain "prerequisites" necessary for learning in school; if the student fails, it is due mainly to his/her deprived cultural background (see Hoggart, 1979:171-191; Hurn, 1978:132-136; Persell, 1977:75-81; Nurcombe, 1976:51-76; Maehr and Stallings, 1975; Schrag and Divoky, 1975; Maehr, 1974; Faure et al., 1972:72-73; Ryan, 1971:182-183; Stein, 1971).

The assumption that family background strongly affects the child's school success or failure results in the conclusion and the belief that to prevent the child from failing and to provide him/her with the opportunity to succeed, the child's home and family environment--its material and cultural resources--should be changed and the school can do little for the child. However, since, as documented in chapters IV and V of this dissertation, it has become possible for many students of lower social classes throughout the world to achieve, even dramatically, while many students of higher social classes have failed, it could be hypothesized that the school itself is an important source of influence in student learning.

True, in the majority of the schools of almost all societies proportionately more children of lower social classes, especially those of excluded groups, females, and rural residents underachieve or fail, but this in no way proves that

such level of school performance is necessarily due to family background, and also in no way does it disprove the hypothesis that school itself has not caused such failure. In fact, as it will be pointed out later in this chapter, it is believed that certain children's low level of academic (and other) achievement is due to the fact that they are perceived in school to have social-psychological handicaps, be "hyperactive" and "emotionally disturbed," lack motivation to learn, and have low I.Q.s. It is said that students who are viewed as such are treated and taught in such a way that they self-fulfill the prophecy of teachers and other school personnel and fail. In other words, school failure due to the school's deprivation becomes student failure.

In short, two characteristics, I.Q. deficiency and cultural-deficiency (and I.Q. difference and cultural-difference) are presumed to be the most powerful factors causing student failure (and differential school achievement). Educational-deficiency is much less discussed and much less considered as having anything to do in this process.

The Characteristics of the Community/ Neighborhood in Which the Student Lives

It is hypothesized that the kind of community and neighborhood where the student's home is located affects the student's academic performance. It is said that communities, which differ in their educational, cultural, and other social resources (such as libraries, social clubs, sport facilities, and health services) and in their type (urban-rural, rich-poor)

and the peer group they provide the children affect, in varying degrees, the students' performance level in school.

As was mentioned in the previous section, part of the blame for the student's failure and underachievement in school is attributed, in addition to his/her personal and family characteristics, to the community factors--by cultural deprivation it is meant both; deprivation in the culture of the home and in the culture of the community. There, this argument (of cultural deprivation) was discussed by providing a counter-argument. It is clear that the same reasoning applies here.

Characteristics of the Society at Large

Cultures and societies are assumed to influence school outcomes. Societies' economic structure and political ideologies shape the way that human beings, their needs, and their capacities for learning are viewed.

People learn whatever the society defines as appropriate and provides for them to learn (Brookover and Erickson, 1969: 17). And our observations tell us that societies define as appropriate different things for various individuals and groups.

Persell (1977) provides a thorough analysis of differential school achievement based on Marx and Weber's view of education, as inevitably bound up--indeed, dependent upon--other institutions of society. Persell sees "structure of dominance" and "legitimatizing ideologies" as well as

institutional level (educational structures and educational ideologies and concepts), interpersonal level, and intrapsychic level (consciousness), as factors affecting inequality of school outcomes.

Ogbu (1978, 1974) theorizes that the main reason for inequality of academic achievement and low achievement level of minorities is not biological or environmental; rather it is the social structure of societies with 'castelike minority groups.'

In short, the influence of society's ideologies and social and economic structures upon the quality and quantity of each individual's learning is assumed to be strongly operating in all societies and working, particularly, against powerless groups (including women and the dislocated).

In virtually every society, there is the assumption that a child's low socio-economic status of the family, "inferior" culture of the neighborhood and the community and low "I.Q." cause the student's low achievement and, despite the fact that still no causal relationship between social class, I.Q., and school achievement has been established, and despite the existence of some evidence from different countries and regions of the world to the contrary, it still is concluded and accepted by many that schools cannot make any substantial difference in preventing school failure and affecting school outcomes.

Schools are cleared of the charge some make that it is

their (schools') fault that many students do not learn even basic skills such as reading, writing, and mathematics; and they are relieved of any responsibility for creating and/or eliminating or reducing differential educational achievement. Such a belief and conclusion--that schools cannot reduce low level of student achievement--would in effect mean that children of the poor, of the powerless minorities and majorities, of rural dwellers, of slum residents, and also females -- who in most societies make up most of the failures and the underachievers, should have no hope that the school will remedy the situation--that it provides equality of academic achievement or at least reduces the gap between the achievement levels of high achievers and low achievers.

With this background provided, in the following section, the theories of school achievement which deal with the effect of the school's characteristics upon student achievement will be discussed, and it will be concluded that it is possible to assume that school--the school's ideological orientation, and academic ethos, and other aspects of the school's social systems--may explain most or a major portion of the variance in students' levels of achievement independent of the students' "I.Q." and family and community backgrounds.

Characteristics of the School Which the Student Attends

It is assumed that the kind of school the student attends makes a difference in the student's level of achievement, and

there are many school factors which may positively or negatively affect the student's academic performance, both in kind and in degree. Among these factors mention could be made of: the school's rural-urban location and the neighborhood in which it is located, school's student body composition (school's composite socio-economic index and racial, ethnic, religious mix of the school) and its size; whether the school is located in a centralized or decentralized school system; the school's building, and its physical resources and facilities (library and its number and kind of books and other materials, workshops, laboratories, sport and other extra-curricular activities' equipment); school's structure and instructional organization (traditional or "open" structure, practice of differentiation of students or lack of it such as ability grouping and tracking, availability of curriculum options and elective courses, time spent on teaching, teaching methods practiced, the arrangement of examinations and evaluation, the patterns of reward and punishment employed, teacher-pupil ratio, the provision and nature of school guidance and counseling); parental involvement/school-community relations; teacher's characteristics (teacher's gender, age, racial, ethnic, religious, and linguistic backgrounds, socio-economic status, level of education, teacher training, teaching experience, salary, emotional state and physical health, and interest in teaching and commitment to equality of learning among students).

Most of the above mentioned school characteristics have

been traditionally considered to influence student performance, in varying degrees, and throughout the world educational research on school's impact upon student learning has been concerned mostly with the effect of these factors. And, as has been mentioned previously, most of the studies have concluded that what mostly accounts for student learning are not school related factors, but characteristics of the student.

In the past twenty years, however, some school related factors have been viewed as having strong effects on what and how much the student learns in school. They are generally referred to as the school's social-cultural, social-psychological, social systems, and academic climate variables. Specifically, these variables are: the belief system and value system of teachers and school staff--whether they believe students are competent and able to learn or not--that is, their evaluation of students' academic ability; their expectations of students with regard to achievement; the teachers' commitment to students' learning and excellence and equality in academic achievement for all; their actual time engaged in direct instruction; the student's general self-concept or self-regard, his self-concept of academic ability, and sense of academic futility; the student's sense of powerlessness and alienation; the student's peer groups in the school; the nature of teacher-student, and student-student relationship and interaction; and students' sub-cultures.

Sociological and Social-Psychological
Theories of Academic Achievement

Since psychologists (including some social-psychologists) have always clung to the classical psychological position emphasizing the "uniqueness" of the individual and "innateness" of his/her learning ability and to the belief that a considerable portion of the individual's social-psychological makeup is unchangeable, theories explaining the causes and correlates of the student academic achievement have also been formulated, based on such a view of the individual. However, sociologists, and most social psychologists, view the individual as primarily social and reject the earlier psychological theories (which explain personality on the basis of individual characteristics and deterministic principles) and emphasize the importance of quality of social interaction in personality development, and individual and group flexibility and capacity for change.

Such a notion, which views a human being as a growing and changing creature with basically no personal traits which could prevent him/her from learning and becoming an intellectually developed person, is the main foundation of sociological, social-psychological theories of school learning. Based on these theories any situation has the resources for learning if the proper organizational structure, instructional arrangement, and pedagogical process are provided. (Academic learning is a complex social process--a process of interaction between the individual and the social context of the classroom and the school.)

Because education is clearly one of the fundamental social institutions of every society, in terms of the effect it has on both the individual and the society, the social process which operates in a school is of great importance; any comprehensive theory of school learning has to be constructed by taking this dimension of schooling/learning process into consideration, and by applying sociological, not just psychological, analysis to structure and functions of the school. In fact Durkheim, who along with Max Weber, is considered by many to be the "father of sociology," regarded "as the prime postulate of all pedagogical speculation that education is an eminently social thing in its origin and in its functions," and believed that "therefore pedagogy depends on sociology more closely than on any other science" (Durkheim, 1956:114).

In what follows, sociological and social-psychological* theories, models, and conceptions of learning related to achievement in school are briefly presented.

A major first work viewing the school as a social institution--"social organism"--has been written by Waller (1932). Waller emphasized the importance of social and cultural structure of the school and social roles of the individual within formal and informal networks of human relationships and the impact all these have had upon school outcomes.

*It is appropriate to mention here that "it was especially this (social psychology of education) which identified itself as consciously embodying a true sociology of education, as a sub-discipline of sociology" (Shimbori, 1979:402).

After Waller's pioneering work, Brookover's book in 1955 constituted the first effort in more than a quarter of a century to examine the school system from a consistently sociological frame of reference (Gross, 1959:129). Later Brookover (1959) wrote his Social-Psychological Conception of Learning and further expanded it in Brookover and Gottlieb (1964) and in Brookover and Erickson (1969, 1975).

The basis of Brookover and his associates' conception of learning are four social psychological theories: symbolic interaction theory, expectation theory, role theory, and structural effects theory.* According to these theories the social norms and the expectations of others define the appropriate behavior for persons in various social situations. With rare exceptions, every individual learns the definitions of appropriate behavior through interactions with others who are important or significant to him/her. The school learning model developed by Brookover derives from these theories and, as the author points out, is based on the observation that children learn to behave in the way that the people with whom they associate behave. Of course, there may very well be minor exceptions to this generalization, but the overwhelming evidence verifies the claim that children in all societies

*For descriptions of these theories by their original developers and elaborations on them, and for description of related concepts and constructs (such as self-fulfilling prophecy, significant others, internal-external locus of control, school climate) and, finally, for further discussion on the social-psychological conception of learning just mentioned and other social-psychological learning theories, see sources given at the end of this section (p. 107).

learn to behave, talk, and think much as their associates do.

In addition to these, and what is particularly relevant to the schooling process, is the postulate that the individual also acquires conceptions of his or her ability to learn various types of behavior (for example, taking certain courses) through interaction with others whose evaluations are important to him. (Such "others" then become "significant others" or "reference groups.") This self-concept of ability, while not sufficient, is a necessary factor in determining the behavior which the individual will learn.

If these observations are valid, then, the variations in individual behavior (e.g., school achievement) which occur within societies and groups and between societies may, the authors say, be explained in terms of the variations in the social-cultural environment (including of course the social-cultural environment of the school).

In short, for Brookover and his associates, the characteristics of the social system in which learning occurs (the classroom and the school), including interactive processes among students with peers, teachers and others, are at least as important in understanding what students learn as are the individual characteristics they bring to school.

In 1960 Getzels and Thelen (1971) wrote one of the first systematic applications of social psychology to the teaching-learning situation (McMillan, 1980:4, 12-13). By examining the individual behavior in the context of the group, these two authors constructed a model which explains factors that

affect the student's learning behavior in the classroom.

The unique characteristics of classroom groups viewed by Getzels and Thelen as important in learning are classroom goals, participants, leadership, and relationship to other groups. The classroom group is considered as a social system and the personalities of the students as personal dimensions of that system. Getzels and Thelen perceive learning behavior as being influenced by the nature of role expectations and requirements of that social system (as do Brookover and his associates) and by the individual student's personality and needs he/she brings to the learning setting.*

There are, of course, other sociological, social-psychological theories and models of learning and school achievement, generally based on some sociological, social-psychological postulates and assumptions. For the sake of brevity the investigator chooses to not discuss them here but, instead,

*Freire (1970, 1973, 1978), a Brazilian educator, has developed a theory of learning--pedagogy of the oppressed (for critical consciousness)--which he calls "conscientization" which, although it is mainly for "oppressed" illiterate adults (of the Third World), could have implications for teaching nonadults and literates, including schoolgoing children (everywhere). The theory, which is basically a social-psychological, social-philosophical one, is based on the assumption that any human being, no matter how "ignorant," could, if provided with a dialogical encounter and if respected, look at the realities around him--his personal reality and the social reality. The dialogue--the teaching-learning process--would be a human process using "generative terms" (chosen previously by a specialized educator in an investigation of "minimal linguistic universe of the learner") and giving attention to the immediate need of the learner.

For a critique of Freire's theory, and also for that of Illich's proposal for "deschooling" society, critique of Bernstein's works and, finally, of Marxist sociology of education, see Demaine (1981).

to provide the following references--a selection--of primary and secondary resources which cover the major theories and related concepts and ideas:

Cooley, 1902; Mead, 1934; Rotter, 1954; Gordon, 1957; Parsons, 1959; Charters and Gage, 1963; Mansurov, 1966; Rotter, 1966; Backman and Secord, 1968; Rosenthal and Jacobson, 1968; Merton, 1968; Shipman, 1968; Blumer, 1969; Getzels, 1969; Guskin and Guskin, 1970; Johnson, 1970; Purkey, 1970; Rist, 1970; Getzels and Thelen, 1971; Boocock, 1972; Dale, 1972; Esland et al., 1972; Boocock, 1973; McDill and Rigsby, 1973; Mischel, 1973; Edgar, 1975; Braum, 1976; Bandura, 1977; Bar-Tal and Saxe, 1978; Barton and Meighan, 1978; Boocock, 1978; 1980; McMillan, 1980; Mercer and Covey, 1980; Lezotte et al., 1980; Brookover et al., 1982; Rogers, 1982.

What is important to note is that there is a strong likelihood that different learning theories define the curriculum differently, and support varying pedagogical processes and educational practices. In consequence, schools come out delivering different types and levels of academic achievement for essentially similar-competent-students.

The Concluding Observation

In this chapter psychological, sociological, and social-psychological theories of learning were discussed and the academic achievement issue was examined from biological, psychological, anthropological, sociological, social-psychological, political, and economic perspectives. At this point it is both necessary and useful to make the following

important points:

Despite the tremendous progress which has been made in understanding the phenomenon and process of human learning, we do not know with precision how people learn, under what conditions different kinds of learning take place, what are the exact and relative influences of the causes, correlates, and determinants of academic achievement. It is still not possible to make a fully accurate prediction of academic performance of all, or even most, students and to give a complete explanation for differential achievement by students.

Of course, we now know more than at any other time in human history, even more than a decade ago, the way individuals learn, and about the effects of societal forces and social conditions, such as the social structure (for example, through its effect on an individual's personality), groups (primary and secondary), and the interactive processes, upon learning. Sociological and anthropological, and even economic theories and analyses have made great contributions to studying and understanding people's educability. But due to the complexity of the human society, because we are dealing with the human mind, and due to the fact that human beings have inner thoughts and feelings, it is not possible--and might never be--to establish a completely accurate knowledge of the learning phenomenon, a phenomenon as old as human society itself.

However, this much is certain that an individual's

personal attributes, his/her unique life-history, family, community, and society characteristics all have, depending upon the circumstances under which learning takes place, in varying degrees, important influences upon one's intellectual performance. And (1) what is also, and even more certain--and this is the most recent development in the field--is the knowledge that social systems of the learning situation (for example, school's various cultural properties) also could, to a great extent, affect the academic performance of individuals, and (2) our learning about the learning phenomenon and the attempt to understand it better and to construct a more precise educational theory is continuing. All this could enable mankind to untap and make better use of learning potentialities of essentially all human beings.

CHAPTER IV

INTERNATIONAL STUDIES OF SOCIAL FACTORS AND ACADEMIC ACHIEVEMENT

In this chapter international/multinational studies of academic achievement (review studies included) will be examined.

As was mentioned in chapter I, only those studies of primary, intermediate, and secondary school students which have dealt with one or more of the following social factors will be included.*

Out-of-School Factors

The student's gender

The student's language/mother tongue (whether the same or different from the teacher's language and/or language(s) of instruction)

The student's racial, ethnic, and religious backgrounds

The student's socio-economic status of the family/parental occupation, parental income, parental level of education)

The student's parental judgment/evaluation of his/her

*The same selection criterion was employed in selecting the studies which are examined in the next chapter--the chapter on social factors and academic achievement in twenty selected developed, developing; capitalist, socialist countries.

learning ability

The student's parental expectation of him/her to achieve in school

The student's parental encouragement for his/her academic achievement

The student's area and place of family residence (urban-rural, community type)

In-School Factors

The teacher's socio-economic background

The teacher's level of (formal) education

The teacher's (pre-service) teacher training

The teacher's cognitive ability and knowledge of special subject field

The teacher's experience in teaching

The teacher's in-service training (upgrading)

The teacher's subjective evaluation of student's learning ability and expectation for his/her achievement

The teacher's use of "mastery learning" methods in teaching

The teacher's practice of ability grouping and curriculum grouping

The teacher-student ratio (class size)*

There are not many international studies of the relationship between in-school and out-of-school social factors and students' academic achievement. Most international studies are usually two-, three-, and four-country studies which have mostly dealt with issues such as organization of the national educational system, the relationship between the education system and national (economic) development, enrollment statistics, school expenditure, and graduation requirements. Very few studies with international perspective have examined the school's social system variables and their impact (absolute or relative to the home's) upon student achievement, and those few have mainly been concerned with social input variables such as some characteristics of the students and the school personnel. School organization has also received some coverage. But social-cultural, normative-psychological variables of the school, including school academic climate variables (such as academic norms and values prevalent in the school) and their influence upon student learning have been particularly neglected in international

*Initially, for this chapter and for chapter V, the (in-school and out-of-school) factors chosen were more than these mentioned. Some of them were withdrawn from consideration when the initial stage of the literature review revealed that they had seldom been studied in most countries including the twenty countries under review here. For example, teacher's language, school staff's belief and value system with regard to student ability for learning, student's prior achievement, student's perception of teacher's subjective evaluation of his/her academic ability and of teacher's expectation of him/her to achieve, and student's self-concept of academic ability.

educational research (and also in national education research, for that matter).

In what follows some international studies--which could be considered, in one or more respects, related to our purpose in this investigation will be examined.*

In a review paper--Some Social Factors and School Failure--John Blomqvist (1957) of Stockholm, Sweden reports on some studies of social factors and student failure and success in school. He writes that Boalt of Sweden had reported in 1947 that in a comprehensive study he had found that (educationally) retarded children (that is, those who had failed or underachieved) had had more tendency to come from poor homes than had regularly promoted pupils. The correlation between retardation (underachievement) and income and social group had been +0.28 and +0.17 respectively. The former correlation had become +0.25 when the effects of report from elementary school, sex, and social group had been partialled out. The latter correlation had become -0.02 after partialing out the effects of elementary school report, gender, and

*Within the context of this investigation, some analyses of studies' coverage of variables and their findings will be made and limitations of the studies will be pointed out here. A further treatment in this regard--particularly in light of the fact that our concern in this investigation is the state of knowledge on the relative impact of home-school factors upon student achievement, and not just on the relation of one or a cluster of home-school factors to it--will be provided in the Discussion-Limitation of Studies section, in chapter VI. There, also will be some general concluding observations and assessments across studies, countries, and world regions.

income.

According to Blomqvist, Ribsskog of Oslo, Norway had reported in 1948 that of the retarded children, only 5 percent had been from homes of "good economic standing," while as many as 44 percent had come from homes regarded as poor or very poor.

Blomqvist says that in many other investigations an association has been found between failure and low economic standard, but the association between the two variables seems as a rule to be rather weak. Some research workers, he adds, have found no significant correlation between them. In comparing 86 failing students with 86 successful ones, Blomqvist himself could find no significant difference between the two groups as to the father's income, the mother's income, or the parents' combined income, and, as he notes, in American studies by Anderson and Anspaugh (no date and no further information given), no correlation between income and success or failure in school has been found.

Blomqvist concludes that parents' income seems to be associated with the child's failure or success in school, but sheer income appears to count relatively little; it is socio-economic status of the home--a conception containing much more than income and which also includes parents' education, occupation, and cultural factors of the home--that has an important bearing on the student's achievement in school.

Most studies, Blomqvist notes, have produced results that show pupils from lower social strata fail more often

than those from higher social strata. Busemann of Halle, in Belgium, has reported in 1932 that he had found among boys in elementary schools that the frequency of educational retardation in the highest social group was 24 percent, in the middle 32 percent, and in the lowest 50 percent. Frommberger of Dortmund, West Germany has noted in 1955 that 72 percent of the retarded pupils as against 50 percent of normal cases had been from the lowest social group. Sost (not clear where), Cavonius in Finland, Ribsskoy in Norway, Boalt and Blomqvist in Sweden, all have found results similar to Frommberger's findings.

In a great many studies, according to Blomqvist, it has been found that pupils who leave secondary school without completing the course and those who do not go to college come more frequently from lower strata (than do those who graduate or go to college). And, children in special classes for backward pupils often come from lower-class homes. Also, Blomqvist himself found that retarded pupils in the secondary school were living in "what may be looked upon as intellectually less stimulating environment" as compared with regularly promoted pupils. The parents of retarded students had 'lower expectations' for the children's further careers, the author adds.

In conclusion, Blomqvist writes, it may be said that many studies have shown that failure in school is caused by many factors among which the child's environment, especially the home background, is of great importance.

Blomqvist does not report any study in his review on the impact of some school factors upon the student's failure or success and also none on the relative impact of home and school factors. He also does not mention the studies' theoretical framework, methodology, target population and sampling techniques, gender, age and grade level of students.

A pilot study of school achievement--Educational Achievement of Thirteen-Year Olds in Twelve Countries--by Foshay et al. (1962) was carried out, under the sponsorship of the UNESCO Institute of Education in Hamburg and with the cooperation of research agencies from and participation of twelve countries: Belgium, England, Finland, France, the Federal Republic of Germany, Israel, Poland, Scotland, Sweden, Switzerland, the United States, and Yugoslavia.

In this study similar tests of reading comprehension, mathematics, science, geography, and nonverbal aptitude were administered to about 10,000 13-13:11 year-old boy and girl students of the twelve countries in November 1960 (except for Scotland where they were administered in June).

The result most relevant to be mentioned here, keeping in mind the difficulties the countries have had in drawing representative samples, is that the average score on each of the tests was quite clearly related to every father's level of education, and to a somewhat lesser degree, to father's occupation. Poland and Switzerland, however, were two exceptions. In Poland, the authors report, test scores showed

relatively little difference associated with level of father's education, and the scores in Switzerland had relatively little association with the father's occupation. As for achievement of boys and girls, as Foshay et al. note, on the average, over all countries and tests, boys' scores fell about a fifth of a standard deviation above the girls' scores. But the girls did best, relatively speaking, on the reading test, and least well on the test of science.

The study did not deal with the question of school variables' influence upon the students' achievement.

After the pilot study, twelve countries, Australia, Belgium, England, the Federal Republic of Germany, Finland, France, Israel, Japan, the Netherlands, Scotland, Sweden, and the United States (two of them different from those participating in the pilot study) participated in an empirical and much more scientific study--International Study of Mathematics Achievement in Twelve Countries (Husen, 1967)--conducted in 1964 by the International Association for the Evaluation of Educational Achievement (IEA).

The population for this study consisted of 133,000 pupils, all 13:0-13:11 year-olds and all (mathematics and non-mathematics) 18-year-olds (pre-university students), taught in 5,450 schools by almost 19,000 teachers. Among the findings, based on regression analysis, those relevant to the present investigation are the following:

In all countries in both populations (13:0-13:11 year

olds and 18 year-olds) significant relationship between the parent's characteristics (father's education, or father's occupational status, and mother's education) and the student's mathematics achievement was found.

In all countries and in both populations, girls achieved lower than boys. The boys did consistently better, whether the mathematics problems were largely of computational or verbal type. Although the differences in (mathematics) achievement between boys and girls in every country were not always significant, there was hardly a higher achievement level by girls. Girls did especially worse at the higher grades.

The relation of students' place of family residence (urban-rural) to achievement was as follows: Only in two countries, the United States and Japan, did the students from urban and town areas do better than the rural students in all populations. The all-countries average for rural students did not differ significantly from that of the town and urban students. In some countries the rural students tended to be superior to the other--urban--groups.

As far as the relationship between class size and mathematics achievement, at the country level, larger mean class size was associated with higher achievement by 13-year-olds. For 18-year-olds, the relationship was conflicting. Within countries, however, there was, in most cases, no significant relationship between the two variables (of class size and--mathematics--achievement); while there was no evidence that

larger classes by themselves had negative effect upon achievement, the results suggested that "the relationship of class size and student performance is not a simple one" (Husen, 1967, Vol. II:297).

Of the teacher variables, the length of the teacher's post secondary education was shown to be associated with the total mathematics score of the 13-year-olds and 18-year-olds majoring in mathematics. Also, it was found that those 13-year-olds taught by university trained teachers did better than those 13-year-olds taught by teachers trained at other institutions, if teachers had five years or more of training. However, it made no difference if teachers (from the two types of institutions) had three or less years of training.

The correlation of inservice training with mathematics scores (and with various student attitudes and interest scores) had fifty signs supporting the hypothesis in favor of useful inservice training and twenty-six signs nonconforming, though the relationship was weak.

Finally, the regression analysis revealed that students' family background had more influence upon achievement than school-teacher variables. This was true for all populations in all countries. In fact the teacher group variables were shown to have relatively small contribution to student achievement (in mathematics).

Teacher's subjective evaluation of student ability, teacher expectation for student achievement, and some other

norms and values of the classroom and the school system have not been included in the study for examining their possible effect on mathematics achievement.

In 1966, IEA began work on a six-subject survey. These six subjects were science, reading comprehension, literature, French as a foreign language, English as a foreign language, and civic education. In the survey--the largest international educational research project ever undertaken--twenty-one countries participated: Australia, Belgium, Chile, England, Finland, France, Hungary, West Germany, India, Iran, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Rumania, Scotland, Sweden, Thailand, and the United States. Not all countries participated in all subjects, however. The highest number of nations participating in any one subject area was nineteen. (It is important to note that IEA did not sample the countries included in the survey; the countries participated voluntarily, and they did so because an educational research center from that country became a member of IEA and participated in a particular subject. The research center of each country assigned one of their senior reserchers to do the day-to-day work of the IEA project in that country.)

In this IEA project (Six Subject Survey) (Walker, 1976), 258,000 students in 9,700 schools and 50,000 teachers were tested.* The students could be grouped as 10-year-olds,

*Not in all countries the sample was drawn from the national student population. In India, for example, it was drawn from only four out of twenty-three states.

14-year-olds, 18-year-olds, and the group of specialized secondary students.

The internationally validated evaluation instruments and data collection procedures were developed. Data processing, analysis, and reporting of the first three areas--science, literature, and reading comprehension--was carried out in 1970 through 1972. The reports of these three subjects were authored respectively by Comber and Keeves (1973), Purves (1973), and Thorndike (1973). Work on the other three areas--English as a foreign language, French as a foreign language, and civic education--was done during 1974 and 1975 and their reports were published by the beginning of 1976 (Lewis and Mussad, 1975; Carroll, 1975; Torney and Oppenheim, 1975; Peaker, 1975; Passow et al., 1976; Walker, 1976).

The primary analytical technique used was linear multiple regression. The purpose of the main multivariate analysis was to find the nature and magnitude of correlation between input factors and output factors as measured by tests of cognitive (and non-cognitive) outcomes. There was also an attempt to discover the input and major "process" variables accounting for variation in a given population in and between schools (within countries). No observation was made of the classroom teaching-learning process. And the study, like all IEA work, was cross-sectional and thus there was no pre- and post-testing of students and their growth in learning.

The specific findings which are of concern to us here are the following:

-- The student's gender and achievement: In most countries, boys did better in science and mathematics and girls did better in literature, French as a foreign language, and reading comprehension. In civics education, 18-year-old boys did much better than 18-year-old girls in most of the countries; 14-year-old boys did better than 14-year-old girls in many of the countries, and 10-year-olds (girls and boys) achieved at the same level. In English as a foreign language, girls did slightly better than boys.

-- The student's language and achievement: performance on tests of reading comprehension taught in the mother tongue was closely shown to be a foundation for achievement in other subjects.*

-- The teacher's qualifications (education level, knowledge of special subject field), training, and experience and student achievement: Few of these variables were shown to have a sizeable effect on student achievement.

-- Teacher-student ratio and student achievement: In five of the subjects no relationship was found between class size and achievement. In the sixth subject--literature--the 14-year-olds did better in larger classes than those in small

*Fagerlind et al. (1978) looked at the existing empirical evidence for many developed and developing countries and concluded that students are severely handicapped when the medium of instruction in the content fields of schooling is not their mother tongue.

classes.*

As to the impact of the student's socio-economic status of the family and the relative influences of home and school upon student achievement, while showing a positive relationship between both sets of home and school variables to achievement, the survey indicated that home background tended consistently (that is, in all countries) to account for more of the variance in school achievement (in the six subjects) than did the school and teaching variables.** (The same conclusion was reached by the mathematics--twelve country--study mentioned above.) As Peaker (1975:22) notes, "the immediate evidence and the external evidence agree in attributing more variation in student achievement to the family background than to the school factors."

*Among other major findings of the IEA survey the following should be mentioned here:

-- The emphasis given in the curriculum to a topic and the time available to the student to study it--the opportunity to learn--and the amount of time the teacher spends in teaching are strongly associated with student achievement.

-- The student's expected education and expected occupation predict in most subjects the student's performance.

**However, Inkeles (1977:187-188) points out that when the school variables were entered into the regression analysis first, (before the home background factors), the school variables consistently emerged as much more important than the home background variables. Inkeles attributes this to Carroll (1975) for making the issue so explicit in his analysis of the French test, and also, and particularly, to John Schwille who, "working with the civics test, showed that when home background entered first it produced an 18 percent increment in variance explained, but when entered third or fourth it added a mere 2 percent variance explained" (ibid.: 188).

One important finding of the IEA survey was that schools do make a difference with regard to student achievement and they do more so in less developed countries. Also, among the developed countries, the contribution of family background variables to achievement was shown to vary greatly. For instance, in Sweden, these variables constituted only half as much variance in student achievement as they did in the United States.

The fact that these IEA researchers have dealt with the question of the relative influence of home and school variables on student performance is in itself a significant aspect of the survey and an important progress in international educational research. As will be shown in this chapter, not many (international) studies have looked at this question. However, the IEA studies, like the majority of national and international studies of school achievement, indicated, as was mentioned, that schools make less impact on students' achievement relative to family background. This could have resulted due to the theoretical framework of, research methodology employed by, and school variables measured in these studies.

Very possibly lack of proper proxies for measuring the teaching-learning process and other related aspects of the school social system have produced such a finding. Considering the social-psychological theories of learning discussed in chapter III, the most appropriate item we can find in the IEA survey for measuring school environment is this

(from their "school behavior scale," student questionnaire):
 "Most of our teachers are very strict about homework.

A. Agree B. Disagree" (Peaker, 1975:215).*

Within the context of social-psychological theories of school achievement, questions with regard to teacher's judgment of student's ability to learn, their expectation of students to achieve, student's peer group influences, and other related academic norms of classroom and school have been neglected by IEA researchers and not included in their school behavior scale. Had they been, it would probably, or possibly, have given more weight to the school's effect upon student learning.

Many reanalyses of the IEA data and many studies using the same data have been carried out. Also, some have done critiques of the survey. In the following, those related to our work will be discussed.

-- Heyneman and Loxley (1982), in their Influences on Academic Achievement Across High and Low Income Countries: A Reanalysis of IEA Data criticize the (IEA) science achievement study which "put the data through a process of winnowing

*Another question from the same questionnaire is this: "There is a clear distinction made in our school between students who are lazy and those who are talented. A. Agree B. Disagree" (Peaker, 1975:216). From this question it appears, very clearly, that IEA researchers have accepted, like most people in and outside the scientific community, the notion that individuals are different in their ability (less talented, more talented): an assumption whose validity was questioned in the previous chapter.

to decide which variables to keep in the final regressions." Variables, they note, were allowed to enter the final regressions if they met a minimum beta coefficient criterion of 0.05 averaged across rich and poor countries alike. The criterion, the authors add, was an average across all countries because the original idea was to identify those variables which were thought to be 'important' across all countries taken together. The question which Heyneman and Loxley raise is whether this process tended to leave out school variables which may have had strong effects within one country but not across the average of many countries.

Heyneman and Loxley re-entered variables for 14-year-olds of each of the eighteen countries participating in science testing separately, using the same minimum entry criterion of 0.05 as before, but within each country separately. Using only variables which have been found to be 'important' in that particular society, they produced different results. The variance explained by school effects tended to increase significantly and this increase tended to be greatest in the 'poorer' countries.

-- Inkeles (1977:187) did calculate the ratio of variance explained by the home background block as against that explained by the educational milieu, for the science subject, and found that to be generally 1:1. In other words, he notes, even under the handicap of always following home background, age, and sex in the regression, the school qualities still accounted for proportions of the variance equal to that

accounted for by the background characteristics. Moreover, Inkeles writes, when the school variables were allowed to be entered into the regression analysis first, and thus appear before the home background variables, the school factors consistently emerged as much more important than the home background factors.*

-- One study using the IEA data is Noonan's (1976) School Resources, Social Class and Student Achievement: A Comparative Study of School Resource Allocation and the Social Distribution of Mathematics Achievement in Ten Countries. Using the IEA data bank (of mathematics survey), Noonan did an empirical study of the relationship between the allocation of resources and mathematics achievement among schools in ten countries: England, the Federal Republic of Germany, Finland, France, Israel, Japan, the Netherlands, Scotland, Sweden, and the United States.

Of the ten countries included in the study, four (Israel, Japan, Scotland, and Sweden) did not exhibit a significant relationship (in terms of the multiple correlation) between expenditure per student and socio-economic background

*Inkeles (1977) has also made some general criticisms of the IEA--six subject--survey as related to its coverage and reporting. The problems, he writes, are particularly shown in four main forms: inconsistency from volume to volume, failure to express results in accessible form, failure to analyze separate social groups, and failure to evaluate the national data gathered (which have been left seriously under-analyzed).

Also Downing and Dalrymple-Alford (1974-75) believe that the IEA reading survey (Thorndike, 1973) was not adequate for developing countries. For another criticism of the IEA survey, see Eckstein (1977).

and level of student achievement. (That is, the allocation of resources was independent of the socio-economic status and of students' achievement.) These countries were classified as having Egalitarian Resource Allocation. In the remaining countries (England, West Germany, Finland, France, the Netherlands, and the United States), schools serving higher status-higher achieving students tended to receive more resources than schools serving lower status-lower achieving students. These countries were classified as having Elitist Resource Allocation.

Noonan found that in terms of the multiple correlation, the relationship between home background and achievement was no lower in countries with Egalitarian Resource Allocation than in countries with Elitist Resource Allocation. Then, Noonan notes, whether a school system is elitist or egalitarian is not related to the level of student achievement or variation in achievement. The author suggests that societal factors have the dominating influence (on both: the school system and school outcome).

In a paper--Psycho-social Environments of Learning: An International Perspective--Marjoribanks (1973) made an examination of a set of studies (for four developed countries--Australia, Canada, England, and the United States) which had gone beyond the use of "gross classificatory environmental variables" such as social status characteristics (parent's occupation, education...class size, per pupil expenditure...) and defined the environment in terms of "more refined and

sensitive psycho-social process variables such as parental aspiration for the child, intellectuality in the home, language models, academic guidance, and home-school relations."

Using a multiple regression model, the author found that the results from the set of sub-environmental studies indicated that in general a moderate to large percentage of the variance in the cognitive scores was associated with the sub-environment scores, and in general the sub-environment scores did account for significantly more of the variance in the cognitive scores than did the social status indices.

This study is important because it reports less influence of socio-economic status and more effect of the environment variables upon academic achievement.

In a review of research on the effects of schools upon student achievement--How Effective is Schooling in Promoting Learning? A Review of Research--Simmons (1975) has put together the conclusions reached by more than 500 studies done in the United States and also in several European countries (some of the IEA studies included) in the last twenty years (1955-1975) for the developed (mostly the United States) and also for some developing countries. He identifies six types of or approaches to research (Input-Output Approach, Process Approach, Organizational Approach, Evaluation Approach, Experimental Approach, and Non-Cognitive Outcomes Approach) and classifies the studies reviewed based on the type of research method they have used. The major relevant findings of Simmons'

review are as follows:

The studies which have used input-output approach:

Simmons notes that the socio-economic status of a student's family--his parents' income, education, and occupation--invariably proves to be a significant predictor of his educational outcome achievement. Overall, the author reports, these studies provide very little evidence that school resources in general, even in developing countries, have a powerful impact upon the student's cognitive outcomes.

The studies which have used the process approach: According to Simmons, findings of studies which have used the process approach indicate that teaching approaches, class size, and the like show no consistent effect on student achievement, as measured by standardized cognitive tests. (And instructional methods, innovative or conventional, suggest no difference in terms of affecting student achievement.)

The studies' overall findings, according to Simmons, indicate that the research on the effectiveness of schools in promoting learning has not identified a variant* of the existing (school) system that is consistently related to students' educational outcomes; teachers' experience and teachers' advanced degrees, though two basic factors that determine

*"The term a 'variant' of the system," Simmons notes, is used to describe the broad range of alternative educational practices, which include changes in school resources, processes, organizations, and aggregate levels of funding (Simmons, 1975:63).

salary, are not closely related to student achievement; reduction in class size seems not to be related to student outcomes; increasing expenditure on traditional educational practices is not likely to improve educational outcomes substantially.

In short, Simmons reports that research has found nothing (no variants of the school system) that consistently and unambiguously makes a difference in students' cognitive performance. He notes that he is not saying that school does not affect student outcomes. In fact, Simmons points out that the literature contains numerous examples of educational practices that seem to have affected student outcomes significantly. But he says that there are invariably other studies, similar in approach and method, that find the same educational practice to be ineffective. "And we have no clear idea of why a practice seems to be effective in one case and is apparently ineffective in another" (p. 5).

Two points made by Simmons warrant comments: Simmons says that some studies find a practice effective in student learning, but others "similar in approach and method" find otherwise for "the same practice." One could hypothesize that these practices may have appeared to be similar, but they may in fact have been different--the academic atmosphere in which these practices have been carried out may have been different. This hypothesis also could apply to the related comment Simmons has made--"We have no clear idea why a practice seems to be effective in one case and is apparently ineffective in

another."

In a work--The Determinants of School Achievement: The Education Production Function--Alexander and Simmons (1975) reviewed nineteen studies for nine developing countries: Chile, Congo, India, Iran, Kenya, Puerto Rico, Malaysia, Thailand, and Tunisia.* They have included those studies which have looked at the impact of school input (those subject to policy control) upon student achievement and used multiple regression techniques. They report that:

-- Teacher certification and academic qualifications are not important at primary and lower secondary grades. They appear, however, to be important at upper secondary grades.

-- Teacher's experience has a positive influence on performance in primary and lower secondary grades, but not in

*As it will be noted in the few review studies discussed in this chapter, some countries have been included in more than one review. It should be pointed out that in some cases a new study(ies) for the same country has (have) been included in the review, but in some other cases the same study(ies) has (have) been included for the same country in the review.

the upper secondary grades.*

Alexander and Simmons' overall conclusion, then, is that factors which have traditionally been considered essential to better education, such as higher quality teachers and more expensive facilities, do not seem to increase achievement at lower grade levels, even in the poorest countries. (Indeed, the authors note, the greatest gains occur simply because the student moved from the home into a school environment.) The authors also report that there seems to be general consistency that the student's socio-economic background is the major determinant of the student's academic performance at all levels of schooling, though it becomes less important in the upper secondary grades and in developing countries.

*The authors also report that school expenditure does not affect student achievement, but textbook availability at the primary level is important in achievement.

The importance of textbook availability is also reported by Neumann (1980). Neumann, after doing a survey for the World Bank--Publishing for Schools: Textbooks and the Less Developed Countries--concluded that (for primary and secondary school students) textbooks, teacher editions, and allied materials are the most consistent factors in upgrading academic achievement, especially for poor schools with less qualified teachers. He notes that a well prepared school book, tailored to the needs of the child, is a powerful tool in pursuing the goal of equity, particularly in developing countries, where wide differences exist among different groups of children (and for pursuing the educational goal of efficiency in educational systems).

The author points to the lack of effective publishing industries and of acceptable textbooks in practically all of the developing nations. He writes that in a developing country the development, production, and distribution of textbook materials should not be carried out in isolation and without professional competence, institution building, teacher training, long-range government commitment and a total look at the book industry of the country.

This could be interpreted to mean that, basically, schools in developing countries, just as in developed ones, do not make much difference, independent of students' family background, in reducing inequality of academic achievement among students.

The fact that some studies have concluded that some teacher variables, at least at some levels (and a school variable, textbook availability), appear to have some impact upon school performance is promising. But the conclusion that schools in developing countries seem to be basically the same as in developed nations, that their impact on students' achievement is less than the impact of student's socio-economic background, could lead one to speculate, as was done for the previous review, that this conclusion may have been arrived at due to the research approach and the kind of school variables included and excluded in the studies reviewed. The authors have selected only those studies which have used the production function approach (an economic model) and as such no process variables and no school academic climate factors have, as a possible source of effect on student achievement, been included in the studies reviewed.

In fact, the (above) conclusion of Alexander and Simmons' review (with respect to home-school effects on achievement) has been challenged by Heyneman and Loxley (1981), to be mentioned later in this chapter.

A special issue of Education in Asia and Oceania--a publication of UNESCO Regional Office for Education in Asia and

Oceania (1978)--is a review of recent publications and studies on educational attainment in Asian primary schools. Those conclusions which are related to this investigation could be synthesized as follows:

-- Studies in the region reveal large differences in achievement between students of varying family backgrounds and from different localities. Much of what has been found is consistent with findings elsewhere; in all studies, the child with the material and human advantages of a prosperous home tends to achieve well. There are, however, some important differences. The contribution of schooling to learning seems to be greater in Asia than in Europe and the United States. For those who survive in school to the secondary level, the positive association of a prosperous home with achievement is even less marked.

-- The surveys do not give much certain information on differences of achievement that can be attributed to differences of schooling factors, such as the effect of teacher education (and increased expenditure on books) except that (1) a number of studies have shown that children from larger classes seem to be achieving higher academic levels; (2) while, broadly speaking, better qualified and more experienced teachers have students who attain higher academic standards, in many countries the differences, especially at the primary level, are not great; but (3) motivation and teacher's "positive attitude" towards students is always associated with better achievement by the students; and (4)

there is evidence that inservice teacher education in association with the dissemination of new courses and learning material is more effective than the sum of the two activities.

-- Finally, in many countries (of the Asian region) the variation in levels of achievement between regions in the country is quite large. In mathematics tests, children in one region may score on the average less than half the score in the capital city. However, although in general high achievement is associated with greater expenditure on education and with overall family prosperity, there are, in many countries, areas where prosperity and expenditure are relatively low, and yet achievement is relatively high. (The greatest discrepancy between regions in these--Asian--countries, is often in the numbers of young people proceeding to the tertiary level. There can be as much as a 100 to 1 variation in the chances of tertiary education between regions.)

The review does not provide information on the studies' methodologies, populations, and the like. Despite this, some of the findings of the report are noteworthy and consistent with a few promising conclusions mentioned earlier, which, contrary to the general trend, have been reached. For example, the finding that the contribution of schooling to learning in Asia seems to be greater than what has been widely reported to be the case in Europe and the United States, and that teacher's "positive attitude" toward students is always associated with higher student achievement.

In a research review--Teacher Training and Student Achievement in Less Developed Countries--Husen et al. (1978) did "critically" look at all available research in less developed countries which has investigated the effects of teacher training variables on student achievement. Altogether, thirty-two "legitimate and valid" empirical studies were included for nineteen developing countries (Botswana, Chile, Congo, El Salvador, Ghana, Guatemala, Hong Kong, India, Indonesia, Iran, Kenya, Malaysia, Mexico, Nigeria, Philippines, Puerto Rico, Sierra Leone, Thailand, Uganda). For some of the countries, only studies of primary school students, for some of them studies of secondary level, and for some, studies of students of both school levels have been included.

The reviewed studies are of three types: studies which have used simple correlation using non-experimental data, multi-variate studies using nonexperimental data, and experimental studies.

The authors report of complex and mixed relationships between teacher characteristics and student achievement. But their general assessment of the thirty-two studies indicates that trained teachers do make a difference in student achievement in less developed countries. In particular, it seems clear that teacher qualifications (teacher's credentials), experience, amount of education, participation in teacher

upgrading programs, and knowledge (of subject matter) are positively related to student achievement.*

According to the authors, there has been only a slight support for the notion that teachers from higher status backgrounds are more successful than those from lower status origins. But certain attitudinal variables of teachers, especially their positive expectations of students, have been shown to be highly important in overriding negative student self-image, and in positively affecting students' performance.

Another study which reports the importance of teacher expectations of students in school performance is A Review of Teacher Effectiveness Research in Africa, India, Latin America, Middle East, Malaysia, Philippines, and Thailand: Synthesis of Results by Avalos and Haddad (1981).

This review itself is a synthesis of seven other regional reviews, done for the International Development Research Center of Canada. In the original reviews correlational and experimental country studies have been included, as well as some case studies and observational ones; published and unpublished studies have been reviewed.

Among the countries represented in the reviews for which studies of some teacher-student variables have been reported are Brazil, Egypt, India, Iraq, Kenya, Malaysia, Paraguay,

*As for the influence of teacher's gender and age, the authors report that the studies' results have indicated mixed effects, but the emergent patterns have suggested that older teachers are more successful with secondary school students and male teachers are more successful in science and mathematics.

Philippines, and Thailand. The related findings could be summarized as follows:

-- Teacher's socio-economic status: The results have indicated the tendency for existence of association between higher social background of teachers and student achievement.

-- Teacher's experience: Teaching experience of teachers has emerged as a relatively important factor for pupil outcomes. However, it interacts with other factors in its influence. For example, in schools with less qualified staff (staff with less formal education), the effect of experienced teachers has been noticeable, while it has not been so when teacher qualification has increased.

-- Teacher's education (qualifications): For some countries, there have been studies indicating the effect of higher level of formal education (graduate versus teacher college certificate or number of years of study) at the secondary level for science subjects, but not for the primary level in some countries. The results of Latin American research, "all of reasonably good quality," have shown a non-linear type of relationship: negative effect--of teacher's education upon student performance--in the first year of primary school, positive in the upper levels, but ceasing to have an effect

toward the end of secondary school.*

-- Teacher's knowledge (of special subject matter): For student achievement in some scientific subjects such as chemistry, biology, physics, and mathematics and for attainment of some cognitive objectives, subject matter specialization has appeared to be important.

-- Teacher training (certification): Teacher training of teachers has been shown to have positive effects on student outcomes, although it is not known how permanent this effect is and what the optimum level of qualification is.

-- Teacher's expectations of students" The studies have indicated that "positive teacher expectations provide positive results in students." Several studies have shown negative effect upon achievement of prejudgment of students, previous knowledge of student's ability, subjective evaluation of their intelligence, and other similar evaluations.

-- Teacher-student ratio: There has been inconclusive evidence on the effects of this variable (upon student learning).

The fact that this review reports a few studies which

*The authors conclude that obviously other factors interact with level of qualifications and produce differential results; for example, experience as shown in a Malaysian study, or school level (possibly different pupil characteristics at different levels), as shown in the Latin American studies. Or, they note, higher qualifications may produce a higher level of aspiration in teachers that is not met by the existing system of incentives or the social prestige of the profession; this may contribute (as indicated in some of the studies reviewed) to job dissatisfaction and to negative teaching attitudes which in turn affect teaching behavior and student performance.

have dealt with the question of the effect of teacher expectations on student performance is important. However, as was the case with most studies and reviews so far discussed in this chapter, this--Avalos and Haddad's--review too reports only studies that have sought merely to identify the relationships between some teacher-school variables and student achievement, and not any which have studied the interrelationships of school and home variables and their relative influences upon students' academic achievement. Clearly, it is important to know the nature of relationship or lack of it between teacher-school characteristics and student achievement. However, what is also, and perhaps even more important, is to know what is the effect of those characteristics relative to the effect of student's family characteristics on student learning.

Schiefelbein and Simmons (1981)--The Determinants of School Achievement: A Review of the Research for Developing Countries--reviewed twenty-six multivariate studies of cognitive achievement for more than thirty--developing--countries including Argentina, Congo, Ecuador, El Salvador, Tunisia, Kenya, Malaysia, Mexico, Paraguay, and Thailand. They have drawn also upon recent reviews which have examined dimensions of the school system such as the effect of class size (and textbooks) on achievement.

The authors have divided the possible--theoretical--determinants of student performance into three categories:

school resources and processes, teacher attributes,* and student traits. The major conclusions of the review, given the scope of our investigation, are the following:

-- School resources and processes: In nine of fourteen studies relating the effects of class size to student performance, larger class size was associated with higher performance or did not affect it.**

-- Teachers' characteristics: In nineteen out of thirty-two studies, teachers without certificates in educational training had students who scored as well as those who had certificates. Teacher's experience was a significant determinant of achievement in only seven of nineteen studies. More years of training were not related to higher student achievement in five out of six studies.

-- Student traits: Out of a total of thirteen observations, socio-economic status of the family was a significant predictor in ten of them, favoring those of higher socio-economic background. In several studies family background was the single most important determinant of school outcome.***

*This investigator believes that the "teacher attribute" variable could simply have been included in the "school resources and procedures" category.

**Of ten studies looking at the effect of textbooks on student achievement, seven demonstrated a positive relationship.

***Related to socio-economic status of student's family, the authors note, are malnutrition, body weight, and health conditions which all have been shown to be associated with student performance (in eight of eleven cases). Also, studies which had examined the relationship between student repetition and achievement had concluded that the more repeating a student did, the lower his score. Finally, kindergarten attendance has been shown to have a significant impact upon student performance measured six or twelve years later.

It is significant that this review includes studies which have looked at the relative impact of some family- and school-related factors on school learning. But since this report was published in 1981, one would expect that some of the studies, even a few, would have investigated the impact of parental attitudes and some of the school's academic norms and values upon achievement. But it appears that school achievement studies in developing countries are still heavily conditioned by traditional/classical theories of student learning. This assessment, also referred to before and which will be discussed in the discussion section (chapter VI), is supported by other observations this investigator has made in the course of doing this research.

Heyneman and Loxley (1981) have drawn together as much of the survey information as they have been able to on school and teacher quality and science achievement of 13- and 14-year-olds in twenty-nine high and low income countries (eighteen of the twenty-nine countries have participated in the IEA project mentioned before [pp. 119-124], and eleven others were: Argentina, Bolivia, Botswana, Brazil, Colombia, Egypt, El Salvador, Mexico, Paraguay, Peru, and Uganda). They have put the results of their analysis in their paper, The Impact of Primary School Quality on Academic Achievement Across Twenty-nine High and Low Income Countries. The measure of academic achievement has been science scores except for Uganda, Egypt, and Botswana, for which mathematics scores have been

used.

The important conclusions the authors reached which have relevance to this investigation are two: (1) the power of socio-economic status* to determine science achievement of 13- and 14-year olds included in the analysis is substantially less, the lower the (national per capita) income of the country, and thus (2) the lower the income of the country, the greater the power of school and teacher quality** to determine that achievement. For example, the authors report that the proportion of the explained achievement variance due to schools and teachers is 90 percent in India; 88 percent in Colombia, and 81 percent in both Thailand and Brazil. This compares with 22 percent in Australia, 26 percent in Scotland, and 27 percent in Sweden. Italy, Heyneman and Loxley add, is the only industrialized country on which data are available where the major proportion of explained achievement variance (55 percent) is due to school and teacher quality.

The authors have not specified what they mean by teacher quality and have not clarified if teacher expectations of students are part of it, and if yes, what is the magnitude of its

*In all the twenty-nine countries, the authors report, these variables have been used as a measure of student socio-economic status: mother's education, father's education, father's occupation, the number of books available in the home, and some other measures of consumption.

**By school quality the authors mean both monetary (school budget/pupil, books/pupil, and the like) and non-monetary elements (hours of homework, frequency of parent-teacher conferences, and so forth).

effect on learning. Despite this, what they have found--the more the influence of school-teacher quality on student achievement, the lower the country's level of income--is significant. Especially, the authors' conclusion that in some countries, schools have even a greater effect upon student performance than family background is indeed important and promising for policy decisions. We reported in the previous pages the contradictory conclusions reached by some (e.g., Husen, 1967; Simmons, 1975; Noonan, 1976; and Schiefelbein and Simmons, 1981) for both developed and developing countries, indicating less impact of school variables on student cognitive performance relative to family factors' impact.

Summary Conclusions

The conclusions reached by (empirical and review) studies examined in this chapter are summarized as follows:

Out-of-school factors and academic achievement:

-- Male students usually do better than female students particularly in mathematics and science and especially in higher grades. In reading, literature, and sometimes in the second language, however, females usually do better.

-- Instruction in the student's mother tongue has a positive influence upon student learning.

-- Family socio-economic status has almost always positive and in many cases strong relationship to student performance.

-- Parental expectation of the child and encouragement affect, positively, the child's cognitive achievement.

In-school factors and academic achievement:

-- Teacher's socio-economic status has in some cases no relationship to student achievement. Sometimes, the higher socio-economic status of the teacher has appeared to be associated with higher student learning.

-- Teacher's education is either insignificant or has positive impact on the achievement of students of higher secondary school.

-- Teacher's training has been shown to be inconsistent in its effect on student's cognitive achievement.

-- Teacher's knowledge of subject matter is particularly important for some subjects and for higher grades.

-- Teacher's teaching experience has either no impact, or has positive impact, on the achievement of primary school students.

-- Teacher's inservice training (upgrading) is usually positively related to student achievement.

-- Teacher's attitude toward student and expectation of him/her is always associated with higher achievement.

-- Class size has either no relationship to student achievement or a larger class is associated with increased achievement. Its effect appears to interact with the kind of subject matter taught, amount of instruction, and student's family socio-economic status.

Relative influences of home and school on achievement:

The student's family background has been shown to have, in most cases, more impact upon academic achievement than school quality. Some studies have found this effect to be less in developing and in low-income countries. In some cases, particularly in less developed countries, school factors have emerged as having equal or even more impact than family factors even when school factors have, as is usually done, been entered into the regression analysis after home and other student variables.

CHAPTER V

THE RELATIONSHIP BETWEEN SOME SOCIAL FACTORS AND ACADEMIC ACHIEVEMENT IN TWENTY SELECTED DEVELOPED, DEVELOPING; CAPITALIST, SOCIALIST COUNTRIES

Introduction

In this chapter the relationship between some social factors and academic achievement of primary, intermediate, and secondary school students derived from the available research will be critically examined for twenty selected developing, developed; capitalist, socialist-communist countries. The factors (mentioned before in the methodology section, chapter I) and the countries are as follows:

Out-of-School Factors

The student's gender

The student's language/mother tongue (whether the same or different from the teacher's language and/or language of instruction)

The student's racial, ethnic, and religious backgrounds

The student's socio-economic status of the family (parental occupation, parental income, parental level of education)

The student's parental judgment/evaluation of his/her learning ability

The student's parental expectation of him/her to achieve

in school

The student's parental encouragement for his/her academic achievement

The student's area and place of family residence
(urban-rural, community type)

In-School Factors

The teacher's socio-economic background

The teacher's level of (formal) education

The teacher's (pre-service) teacher training

The teacher's cognitive ability and knowledge of special subject field

The teacher's experience in teaching

The teacher's in-service training (upgrading)

The teacher's subjective evaluation of student's learning ability and expectation for his/her achievement

The teacher's use of "mastery learning" methods in teaching

The teacher's practice of ability grouping and curriculum grouping

The teacher-student ratio (class size)*

*As previously mentioned, the (in-school and out-of-school) factors which had been chosen were more than these mentioned. Some of them were withdrawn from consideration when the initial stage of the literature review revealed that they had seldom been studied in most countries including the twenty countries under review here. For example, teacher's language, school staff's belief and value system with regard to student's ability for learning, student's prior achievement, student's perception of teacher's subjective evaluation of his/her academic ability and of teacher's expectation of him/her to achieve, and student's self-concept of academic ability.

The Twenty Selected Countries

Botswana, Cameroon, Kenya, Uganda

India, Iran, Japan, Australia

Hungary, Poland, Rumania, the Soviet Union, Yugoslavia

France, Sweden, West Germany

Chile, El Salvador, Paraguay, the United States

In the previous chapter, where the international/multi-national studies of academic achievement were examined in the context of theoretical framework of this investigation, some of the twenty countries in relation to some of the variables were covered. In Blomqvist's (1957) paper the relationship between some social factors, such as family income and social class, and school failure and underachievement were discussed for, among other countries, Sweden and West Germany.

In Foshay et al.'s (1962) study of educational achievement of 10,000 13-14-year-old students of both genders, the relationship between father's occupation and education and student performance on tests of reading comprehension, mathematics, science, geography, and nonverbal aptitude were reported for twelve countries, including Poland, Yugoslavia, France, Sweden, West Germany, and the United States.

The impact of parental education and occupational status on the achievement of all (133,000) pupils of 13:0-13:11 year-old and pre-university mathematics and nonmathematics students of twelve countries (Husen, 1967) was discussed. Some of the twelve countries--Japan, Australia, France,

Sweden, and the United States--are among the twenty countries under review in this chapter.

Of the twenty selected countries, eleven--India, Iran, Japan, Australia, Hungary, Rumania, France, Sweden, West Germany, Chile, and the United States--have participated in the six-subject survey of International Association for Evaluation of Educational Achievement (IEA studies) for some school age groups in some subjects. In reviewing the survey in chapter IV, the relationship of some of the out-of-school and in-school factors under consideration here to students' (boys' and girls') achievement were examined. Also, Noonan's (1976) study of the effects of school resources upon student achievement, using IEA data, was discussed in the same chapter for ten countries including four countries of our twenty countries--Japan, Sweden, West Germany, and the United States.

Also, Marjoribanks' (1973) examination of some studies of psychosocial environment of learning for, among other countries, Australia and the United States, was discussed.

Simmons' (1975) review of research on the effects of schools upon student achievement covered more than 500 studies done in the United States from 1955 to 1975 for the developed countries, mostly the United States, and for some developing countries including India. This review, too, was discussed in chapter IV. There, the influence of some factors such as socio-economic status of the student's family, teachers' experience and advanced degrees, and class size upon student achievement was reported.

In Alexander and Simmons' (1975) review of nineteen studies for nine developing countries, including Kenya, India, Iran, and Chile, mentioned in the previous chapter, the effects of students' family background (SES), teachers' academic qualifications and experience on students' academic performance were analyzed.

Husen et al. (1978) have critically looked at the available (and attainable) research on the effect of teacher variables such as socio-economic status, education level, teacher training, and teacher's experience upon student performance in elementary and secondary schools of nineteen developing countries, among them Botswana, Kenya, Uganda, India, Iran, Chile, and El Salvador. The conclusions of the study (review) related to the present investigation were presented in chapter IV.

The effects of teacher's education level, teacher training, teacher's expectation of students, and teacher-student ratio for some countries including two of our twenty selected ones--Kenya and India--reported by Avalos and Haddad (1981) were discussed.

Schiefelbein and Simmons (1981) have put together the results of thirty-eight research studies on the effects of some factors such as socio-economic status of the family, teacher's characteristics and class size upon student achievement for about twenty developing countries, among them Kenya, Uganda, India, Iran, Chile, and El Salvador. The results of this study were also reported in the previous chapter.

Finally, the study by Heyneman and Loxley (1981) mentioned in chapter IV was an analysis of as much of the survey information as these authors have been able to draw together, including IEA data on science achievement. There, the impact of socio-economic status of students' family and "school and teacher quality" upon students' science achievement for twenty-nine countries including Botswana, Uganda, India, Iran, Japan, Australia, West Germany, Hungary, Chile, El Salvador, and the United States was reported.

In this chapter national studies of the relationship between the above mentioned social factors and student cognitive achievement for the twenty selected countries will be examined.

Out-of-School Social Factors and Academic Achievement *

The student's gender

In a study of secondary school entrance examination of students in Cameroon, Cooksey (1981) studied about 7,000 pupils attending Class 6 in primary schools of Yaounde, the capital of Cameroon and of the Centre-South province, in 1974-75. Yaounde and the Centre-South, the author notes, are areas of high primary school enrollment.

*It should be mentioned that not all social factors we are concerned with in the present investigation have been covered by (included in) all national/country studies, and that not all country studies are country studies in the sense of being national. As it will be noted many of the studies, in fact most of them, even the IEA studies discussed in chapter IV, have drawn their samples from one or some areas/regions of the country only.

Cooksey made a 50 percent random sample of the 130 classes, and all pupils in sampled classes completed questionnaires on their home, social, and educational backgrounds. In all, information was collected from 3,197 pupils, that is, 46 percent of the Class 6 population under study. The author contends that there was little doubt that this was a highly representative sample of the classes and pupils. At the end of the school year the pupils took secondary school entrance examination consisting of equally weighted papers in French and mathematics.

The examination scores indicated that, with very few exceptions, boys outperformed girls. Girls constituted 54 percent of both the Class 6 sample and those who actually sat for the exam, and although the sexes were almost identical on all major background characteristics, the pass rate for boys was over twice that for girls, suggesting that, as Cooksey adds, being female there constitutes a major educational disadvantage. However, somewhere else Blakemore and Cooksey (1980:64-65) report on the same study and note that the study showed that sex was closely related to social background: girls from farming families performed very badly, whereas girls from elite and large trading families had higher pass rates than all the boys. In this case, the authors note, the disadvantage of being a girl was outweighed by the advantage of coming from a "privileged" background.

In a study of the relationship between (academic self-concept), the teacher's perception, and pupil's background variables and grade attainment (academic achievement) in

rural Kenya, Arap-Maritim (1979) computed t-test, zero-order correlations, partial correlations, and stepwise multiple regression program for 432 seventh graders from 13 rural primary schools serving a highland tribe of Western Kenya. It was found that (self-concept and) the teacher's perception were the strongest predictors of grade attainment.

Of interest to us here is the relation of gender to student's grade attainment. According to Arap-Maritim, among the selected background variables, sex was the only variable showing a consistent relationship with (pupil's self-concept, teacher's perception) and pupil's grade scores in English, mathematics, and general paper (knowledge). The significant differences found between boys and girls showed that girls did not do as well as boys did in all the achievement variables.

In Uganda, according to Heyneman (1980a: 131), for the 2,293 primary-school students sitting for national Primary Leaving Examinations in 1972, gender was by far the most powerful predictor of performance on the examinations. The examination results showed that males were doing better than females. Also, William Cummings reports that among Japanese students taking university entrance examination in 1970, gender was the most important of the measured background variables favoring males, having influence even more than that of parental education or income (cited in Heyneman, 1980a:131).

In a study of Indian (and Chilean) students, Husen et al. (1978: 66a-92), using IEA 1970 science data (for 14-year-olds), found that girls showed lower achievement levels than

boys.

A report of Australian surveys of primary school achievement (Western Australian Education Department, 1976) given every five years from 1955 to 1970 to approximately 1,000 fifth-grade and 1,000 seventh-grade students, as representative sample, indicates that girls have outperformed boys on a majority of tests, overall scores for all years being higher for girls. But Cuttance (1980a) found contradictory results: Australia, as mentioned in chapter IV, is one of the countries where all its students of 14:0 to 14:11 year-old participated in IEA six subject survey for science, the results showing boys generally doing better than girls. Two years after this survey (carried out during 1970), the Australian Council for Educational Research which had collected the data for IEA, conducted a follow-up study of those who had participated in the IEA project. Both groups were included: those who were still in school and those who had left school. Cuttance (1980a) reports the results for those who were still in full-time schooling at the time of the follow-up study which indicates, again, the general superiority in performance for boys.* (Cuttance's finding confirms those of the initial IEA survey.)

Academic achievement of girls in Hungary appears to match that of boys (Kádár-Fülöp, 1973). But the author points out that the system of achievement evaluation is

*Cuttance believes this is because of social attitudes toward the role of women in Australian society (ibid.: 93).

suspected to bias the picture in favor of girls because school progress is reported in averages of subject semester marks and conformity to daily school requirements such as doing homework regularly, good behavior during class, and so on, which are highly appreciated in awarding semester marks. Thus girls, who tend to conform better in adolescent years, are often awarded higher average school progress marks than the "equally gifted" male peers.

In the Soviet Union, according to Kashin (1966), the materials obtained from a large number of schools of RSFSR (Russian Soviet Federated Socialist Republic--the biggest republic of the Soviet Union with a population of more than 130 million) for the 1953-54, 1958-59, and 1963-64 school years indicate that the proportion of boys among the students left behind for a second year is about 70 percent, though this percentage is not the same for different grades. In the first and second grades the number of repeating students among boys and girls is generally the same. Beginning with the third grade, the author notes, the predominance of boys among the students having to repeat grades becomes even more marked and more so in the fifth and sixth grades. In the upper grades, however, there is practically no difference.

Vasil'eva (1976) put together data from three surveys for Russia's Leningrad--two surveys carried out in 1967 and 1968 of nearly 5,000 pupils in grades three through ten in seven schools and more than 4,000 young people who had graduated from secondary schools between 1963 and 1967, and a

third survey conducted in 1970 of more than 1,000 young workers employed in seven machine-building plants. In comparing girls' and boys' performance at various stages, the author found that the girls outperformed the boys in academic (and other school) behavior.

A single factor analysis of reasons for failing performance of 3,000 pupils, 2,000 grade repeaters, and 1,000 pupils who had failed during one school quarter, in 260 urban and rural schools in four districts of the Rostov Region of the Russian Republic was carried out (Babansky, 1973). The analysis--based on "systematic investigation" (observation, talks, checking work, home visits, and so forth) by the school principal, the deputy principal for curriculum, the senior grade-level teacher, and the teacher of the corresponding subject during the school year--indicated that "among the serious failures" in the schools, 79 percent were boys and only 21 percent were girls.

According to Babansky (ibid.:48), approximately the same picture (of more failure among boys than among girls of the Rostov Region) has been found in the proportions of failure of boys and girls in other regions and throughout the Russian republic and the Soviet Union as a whole. Based on the figures for the 1969-70 school year, up to 70 percent of the grade repeaters (due to failing in performance) in grades five through eight throughout the nation have been boys.*

*As Babansky points out, the trend toward a higher incidence of failure among boys as compared with girls has also been evidenced in data on the performance of school children in some of the other socialist countries, such as the German Democratic Republic, Czechoslovak Socialist Republic, and Bulgarian People's Republic (ibid.).

For Sweden, Bulcock (1977) using data on 2,490 14-year-olds randomly selected as representative of the national population in this age cohort, originally collected by the Swedish National Center for IEA as part of the stage two surveys in reading, literature, and science conducted in 1970-73, found that boys had net advantage in science and girls had net advantage in literature.

In the study using IEA 1970 science data for 14-year-olds, Husen et al. (1978) found for Chilean (and Indian) students, girls achieving less than boys (in science). Also, Schiefelbein and Farrell (1978a, 1978b, 1980), who did a national longitudinal study (from 1970 to 1977) of 3,469 students of 353 eighth-grade classrooms of Chile, selecting from each classroom a random sample of ten students, found girls scoring, on the average, about two points lower than boys on primary school leaving national achievement test of verbal and mathematics knowledge. But the authors note that in regression analysis on test scores, gender did not show to be a significant predictor and did not survive "preliminary screening to identify the 12 best predictors to include in a final regression equation" (1980:S166). When the authors specified the analysis by social status, they observed no important changes in this pattern. Then the authors concluded that sex factor had no significant independent effect on achievement at the end of primary schooling.

However, the authors report that, even though gender was shown not to be a powerful independent predictor of university

entrance, females scored significantly lower than males on the university admission test administered at the end of secondary schooling. Thus, the authors point out, this is the first point at which a noticeable 'negative' educational result among females is found.*

In El Salvador, according to Heyneman (1980a:131), results of national achievement examinations in basic education have indicated that male students have had higher test performances.

*Schiefelbein and Farrell speculate that since there was "no difference between the sexes in educational 'quality' variables such as class size and textbook availability during secondary school" and between the academic ability of females and males (based on their own estimate and the extent of enjoyment of various academic subjects by males and females), thus the evidence does not suggest that women have been provided with a "systematically inferior quality of education" at the secondary level. A plausible explanation for the low average test scores among females, the authors suggest, "relates to anticipatory socialization, to a perceived low need to achieve high test scores in order to be admitted to those university programs in which most women enroll" (1980:S168). Based on other data the authors note that there is a clear tendency for lower admission standards to be associated with those fields which enroll mostly women, such as education and nursing.

This investigator, while not arguing the authors' point with respect to the importance and negative effect of the "anticipatory socialization," does point out, however, that there could also have been some other factors of school quality, other than class size and textbook availability, which have caused low score levels of girls on the admission test; for example, the school's academic climate variables such as teachers' subjective evaluation of girls' ability to do well on the test. Class size and textbooks, while very important, particularly for some students (perhaps of lower socio-economic class) and in developing countries, could result in different learning outcomes for individual students depending upon the kind of classroom (and school) academic ambience within which textbooks and classrooms are used.

For the United States, Ahmann (1976) reports the results of National Assessment of Educational Progress (NAEP).^{*} He writes that female respondents generally achieve at higher levels than male respondents in many learning areas with the exception of science and mathematics. There has been little difference in citizenship and social studies. In some areas, Ahmann notes, the female superiority in achievement has been more pronounced at the school ages than for young adults.

In science, according to the author, male respondents have achieved at a consistently higher level, the advantage increasing with age. In mathematics, females have had a better command of the computational aspects of arithmetic at age thirteen, but have failed to achieve as well as men when young adults. In consumer mathematics, the level of achievement of males has surpassed that of females at all ages, with the smallest difference at age 13 and increasingly larger differences at ages 17 and young adult.

Boocock (1980:85) writes that, in the United States, each

^{*}The specific goal of NAEP is to obtain census-like data on the knowleges, skills, concepts, understandings, and attitudes of 9-year-old, 17-year-old, and young adult (26-to-33-year-old) Americans in reading, writing, mathematics, science social studies, citizenship, music, art, literature, aareer and occupational development, and to measure the growth or decline of those achievements that occurs over time. Since 1969-70 school year, NAEP has drawn annually national samples of most or all of these age groups and measured their levels of achievement in one or more of the learning areas mentioned (ibid.).

"National Assessment does not develop or use scores for individual respondents. Rather, it determines how each age level performs on specific exercises and, within each age level, how groups of individuals (based on demographic and sociological variables) perform" (Martin, 1979:2).

gender tends to outperform the other at some phase of the school career. Girls have the tendency to have an initial academic advantage. At the elementary level, girls tend to do better than boys in almost all academic areas, and boys are six times as likely to have reading problems. Girls, at least through the high school years, achieve, on the average, better grades and are more likely to gain academic honors.

However, looking at achievement in different subjects, it appears that there are some male advantages right from the beginning, adds Boocock. While girls do better than boys in reading, writing, literature, and music, boys have higher performance level in mathematics and science from the beginning of school, and the sex differences increase with age (National Center for Education Statistics, 1976:42-49, cited in Boocock, *ibid.*). Similar results were shown by the International Study of Mathematics Achievement of students in twelve countries (Husen, 1967).

The Student's Language

A study has been carried out in 1976 for the Botswana National Commission of Education (Husen, 1977) of that country's educational system. The performance on mathematics and reading comprehension of 1803 seventh graders and students of third and fifth year in secondary school was evaluated and information on 72 school physical resources, 373 teachers and principals were gathered (the instruments all were adapted from the original IEA scales). Here we deal with the

relationship between the student's (home) language and the school's language and the student's school performance.*

The study indicated that language spoken at home and the frequency with which it was spoken, had a significant relationship to student's achievement. It was found that in homes where English was spoken, the student's mean reading score was higher than score of students from homes where Setswana was spoken. Also, for those from homes where English was spoken, the higher the achievement, if English was spoken habitually. Finally it was found that at least for the first five years of schooling, acquiring a certain mastery and self-confidence in reading and writing the mother tongue would help to learn the second language.

The results of Cooksey's (1981) study of students taking secondary school entrance examination in Cameroon indicated a positive relationship between the most frequently used language in the home--the French--and its quality and passing the examination.

In Australia, a study of early school leavers looked at the social processes implicated in the transition from school to work or to further education (Williams et al., 1980). Data

*About eighty percent of the people of Botswana communicate orally in a single language, Setswana, which is considered a national language, twelve-fifteen percent use Kalanga and the rest speak other languages. English is the second national language; it is the dominant language of the elite, and is used for official and business transactions and also is the language of instruction from Standard 3 on in the primary school (Husen, 1977:12, 1-45).

were obtained by mail questionnaire during 1978-79 from an Australia-wide sample of 4,919 individuals of 17:00-17:11 year-olds. About half of the sample had left high school before year twelve and the rest were in their final year of high school.

The study revealed that, among other things, students from migrant families whose native language was not English--the national language, and, of course, the language of instruction--were also disadvantaged in academic achievement.*

An experimental study of Finnish immigrant children in Sweden was conducted at the preschool level and at the junior level of elementary school between 1972 and 1980 (Lofgren, 1981). The initial group size varied between eleven and fifteen, and the objective was to make children functionally bilingual in an educational context equivalent to that provided for Swedish children.

The results indicated that instruction in the first language did not have a negative effect on proficiency in Swedish.

*In Nigeria, Ehindero (1980) did an experimental study of 120 elementary school children randomly selected from eight elementary schools of Oyo state. The two experimental and control groups were taught science; the experimental group in the mother tongue, Yoruba, and control group in the English--second--language. The author found no significant difference between the two groups in their performance on a test of science concepts which required "low-level (recall) cognitive skills." But students in the experimental group score significantly higher means ($p < .001$) than students in the control group on tests of science concepts which required the use of "high-level cognitive skills."

The author concluded that "science instruction in the mother tongue, advocated and currently being operationalized in some primary schools..., is an efficient tool for bringing Nigerian primary school children closer to the reality of the world as it is presently constituted" (p. 288).

The student's racial, ethnic, and religious backgrounds

In Cameroon, Cooksey's (1981) study of primary school children discussed before, showed that the ethnicity factor had very little independent effect and was not significantly correlated with performance on secondary school entrance examination.*

For Uganda, Heyneman (1976c, 1977) did a study using Primary Leaving Examination (PLE) scores from a random sample of 67 schools in five economically diverse districts of the country (North and South Karamoja, West Buganda, Bugisu, and Toro) and the three largest urban areas (Kampala/Entebbe, Mbale/Tororo, and Jinja). The 67 schools represented 10.7 percent of all the schools and 12.6 percent of all the pupils from the sample districts. With respect to the achievement of different ethnic groups, he found a non-uniform tendency. Using Currie's (1974) secondary school selectivity ratios (in Uganda) as a proxy measure of the opportunities for primary schooling available to the five Ugandan ethnic groups, Heyneman found that the Batoro ethnic group which had the same secondary school selectivity ratio as the Buganda group, averaged more than ten points higher in mean PLE achievement. The two ethnic groups most poorly represented in secondary schools (Bakonjo and the Karamojong) had markedly higher levels of

*This finding and the one which follows--on Uganda--and a few others to be mentioned later are in contrast to findings reported by Foley (1977) and by others as well, indicating that recent anthropological studies are increasingly finding that schooling in developing countries reinforces ethnic, linguistic, and class inequalities of the society.

performance on the PLE test. The author concluded that the higher an ethnic group's proportional representation, the lower the average examination performance.*

In an Australian survey (De Lemos, 1980), 1244 aboriginal students, about 80 to 90 percent of all aboriginal children enrolled in the primary and secondary schools of Victoria (in South Australia), were tested. Seventy-five percent of students who were attending state schools were schooled in rural areas. The students' attendance was regular but they had more extended absences than non-aboriginal students. The study found that at the primary level these (aboriginal) students performed consistently lower than non-aboriginal students on academic achievement tests. At the secondary level, lower achievement by aboriginals was especially evident in mathematics and reading.

Marjoribanks (1978a) studied the relation between family environment and measures of academic achievement of 800 11-year-old children from different Australian social groups--children of lower social status families from Anglo Australian (250), Greek (170), recent English immigrants (120), Southern Italian (120), and 140 children of middle social status families from Anglo-Australian social group. The author found, among other things, that the Anglo-Australian and English groups scored higher on the achievement measures.

*Perhaps some would interpret this as being the consequence of some "low ability" students or students of low socio-economic status entering the population while, in fact, it could very well be due to teacher-school inadequacies.

Max Weber, following his thesis on Protestant Ethic and the Spirit of Capitalism, claimed that educational conduct was in line with his general thesis (Halevy and Etzioni-Halevy, 1974: 193). Weber's thesis--in the area of education--was expanded and elaborated on by Nicholas Hans (ibid.). Hans claimed that Protestants lead in the level of education, Catholics were second, the Orthodox lagged considerably behind, and last were the Muslims. Applying this theory to the Soviet Union, according to these authors, Hans had said that the Protestants take first place in educational development and are followed in order by the Orthodox, the Catholics, and the Muslims.

Halevy and Etzioni-Halevy (1974) examined the validity of Hans's theory, using the Soviet Union as an example. For their examination they used the data for the early years of the Soviet regime and also the latest data as revealed in the U.S.S.R. census of 1970 for the largest nationalities (according to the 1970 census). They did not include the Jews and the Armenians because their religions would not fit into Hans's theory, they say, and the Germans because there were insufficient data on them for 1970. Literacy rates and rate of university attendance for 1926, and rate of secondary and university attendance (rate of graduates in each group and rate of scientists in each group) for 1970 were used; rate of literacy for 1970 would not serve to distinguish between groups, since nearly universal literacy had been achieved.

The authors concluded that data from 1926 indicated that Hans, and Weber, seem to have been correct, since Protestants were indeed found to exceed all other groups examined in educational achievement. Catholics followed, the Orthodox came next, and the Muslims a poor fourth. In 1970, however, there were considerable changes and the situation was no longer as outlined by Hans. The Protestants (Latvians and Estonians) fell to places three and four. The Orthodox, some moved up and some fell. Among Catholics there was an abrupt fall; and the greatest rise was amongst the Muslims.

In the United States, Strodbeck (1958, and cited in Lavin, 1965:131) compared a group of Jewish high school students with their Italian Catholic counterparts, both groups residents of the United States for the same length of time, and found the Jewish students to outperform the Italian Catholics. However, the achievement difference between these two groups disappeared when the effect of socio-economic factor was partialled out.

With respect to the relationship between racial and ethnic factors and academic performance in the United States, the widely known Equality of Educational Opportunity Survey (Coleman et al., 1966), the largest sociological study of education in this country, has indicated that children of different racial and ethnic groups differ in their academic performance. Coleman and his associates studied more than 645,000 students of 1st, 3rd, 6th, 9th, and 12th grades in about 4,000 public schools throughout the country. All teachers, principals, and district superintendents in these schools

did participate also and the information about the students' socio-economic and other family background and school facilities and programs were also obtained. The data were gathered in September and October of 1965. Standardized achievement tests of reading, writing, calculating, and problem solving were administered to all students, and sophisticated research design and statistical techniques, mostly regression analysis, were employed.

The study specifically indicated that with some exceptions--particularly Oriental Americans--the average student from minority groups--black, Indian Americans, Mexican Americans, and Puerto Ricans--scored distinctly lower on all the tests at every level than the average white pupil. What is significant is that, as the study indicated, the minority children, while having a serious educational deficiency at the start of school, had an even more serious deficiency at the end of school; they regressed in academic performance while attending school. Despite this, the authors note that the vast differences between academic achievement of minority students and middle class children were not due to school factors; rather they were largely contributed by the students' family background.

Coleman et al.'s study received much attention in the United States and in many other countries. An entire issue of the Harvard Educational Review was published about the study and a year-long faculty seminar at Harvard University was devoted to the reanalysis of the data with the results

published as a book edited by Mosteller and Moynihan (1972). More than a hundred other reanalyses of the data have also been carried out. However, the basic conclusions of the survey have not been repudiated. In fact Smith (*ibid.*: 230-243) found that an error which had been made in the study's calculations, due to inclusion of wrong variables and mixing-up of several variables by accident, had actually underestimated the significance of the family background variables and over-estimated the importance of school characteristics. (There will be more discussion of the Coleman et al. study, particularly on criticism of it.)

Mayeske et al. (1973), using Coleman et al.'s data, did a study of student achievement and found that the race/ethnicity variable accounted for 24 percent of the variance in achievement if socio-economic variables were not controlled. But when socio-economic factors were controlled, race/ethnicity accounted for only one percent of the variance.

In a review of the literature of student performance in the United States for the State Education Department of New York (University of the State of New York, 1973), almost 100 studies, most of them published since the middle 1950s, have been reviewed. Race has been a significant variable in all of the cognitive output studies in which it has been used. (Among the ten non-cognitive output studies it has been significant 60 percent of the time.) The larger the proportion of white students in the school, the higher has been the level of school output.

The results of National Assessment of Educational Progress (NAEP) (Ahmann, 1976), referred to earlier, indicate that achievement levels for blacks typically fall below the national average, while those for whites are above. This pattern, Ahmann reports, is very pronounced in science, writing, reading, literature, social studies, and mathematics, less extreme but still notable in citizenship and music. Burton and Jones (1982), based on previous and most recent-- 1979, 1980, 1981--NAEP data, report the achievement of 9- and 13-year-old white and black students in five learning areas-- reading, writing, mathematics, science, and social studies. According to the authors, the differences between black and white students are decreasing, but whites in general still outperform blacks.

The student's socio-economic status of
the family (parental occupation, parental
income, parental education level)

The study of Botswana's national evaluation of primary and secondary schooling (Husen, 1977) indicated that students' family background had strong relationship to school achievement. Students whose parents were in administrative and professional occupations did significantly better than those with parents in agriculture. Children of parents with more than seven years of education scored better than those of parents with less than seven years of education. Overall, however, the relationship between home background and student's achievement was not shown to be as strong as has been found in highly industrialized countries.

The study of 7,000 primary school pupils in Cameroon (Cooksey, 1981) indicated that elite children outperformed all others, and children from white-collar and trading backgrounds had better pass-rates than those from farming and manual backgrounds, with the exception of small farmers' children who had the third-best pass-rate overall. None of the children from unskilled manual backgrounds passed the exam.

The study also showed that with the exception of other white-collar workers' and small farmers' children, performance on the examination improved with father's education, in all occupational groups.

Olson (1972) did a comparative study of nearly all Kenyan students of form-four (grade 12) in 1961 and form-four (now grade 11) in 1968 and concluded that the same general pattern regarding the relation of father's education to student's achievement holds for both 1961 and 1968--the higher the educational level of a student's father, the more likely a youth was to reach form four of secondary school. However, another study of Kenyan primary schools (Mwaniki, D., 1973), found no relationship between mother's education and achievement scores of pupils in tests of English, mathematics, and general knowledge (cited in Heyneman, 1980a:136).

Mwaniki, M. (1973) also did a study of Kenyan students with the sample population of 208, 51 males and 35 females from two rural schools and 82 males and 40 females from two urban schools; the four schools representing the basic

population were located in predominantly Kikuyu communities with similar vernacular-linguistic backgrounds. The author found father's occupation correlating positively with school achievement for the two urban schools; the finding suggested that "the home background of the subjects has a substantial influence on subsequent activities of students." Court and Ghai (1974) write that although the Kenyan school system has been a remarkably open one in that the bulk of students have come from illiterate peasant backgrounds, "family background factors and preschool experience appear to be having an increasing influence upon recruitment and subsequent performance" (p. 18). But Olson (1975) reported low or random correlation between socio-economic status and Kenyan Cambridge School Certificate Performance (Heyneman, 1980a:135).

In a small Ugandan study, Silvey (1963, cited in Heyneman, 1976a:43) found a 'marked tendency for sons of high socio-economic parents to perform well on a test of mental alertness.' However, Silvey asserted that parental education was not related to scholastic achievement performance in 'any meaningful way.' Somerset (1968) reported of a study in progress which indicated that "in Uganda low socio-economic status is not consistently correlated with poor academic achievement as it is in Britain and America" (p. 65).

Also, Heyneman's (1976a) study of Ugandan primary school children found no relationship between any of a child's socio-economic background factors (parents' education, father's occupation, and the number of possessions of "modern" consumer

items at home) and student's total academic achievement score on the National Primary Leaving Examination. According to Heyneman, the correlation between academic achievement and paternal educational attainment was only .07; between achievement and maternal educational attainment .02; with paternal occupation only .06.*

Currie (1974) found the relationship between the family socio-economic status and academic achievement of Ugandan secondary school students to be nearly random for years 1954, 1959, and 1964. But Durojaiye (1974), who studied 540 girls and boys of rural and urban secondary schools (of Uganda), found that children from low socio-economic level did better than children from high socio-economic level. This was more so for rural than for urban subjects, and for boys than for girls.

*Blakemore and Cooksey (1980:64) and Cooksey (1981:404) question the validity of Heyneman's findings by arguing that first, Heyneman had no information on class background of the pupils, and second, comparing the examination results of pupils coming from areas of "highly varying enrollment levels" constitutes a serious methodological error. They say that "it is mainly the able children who manage to survive the primary course in areas of low overall enrollment and children from often atypically high social backgrounds who go to school in these areas in the first place." The authors point to their own Cameroon study (Cooksey, 1981), discussed previously, and say that where enrollment levels are high and dropout levels low, family background has a very marked effect on examination performance.

However, it appears that Heyneman himself has dealt with this question (Heyneman, 1976a:45 f.n. and 1980a:135). He notes, "because less than 10 percent of the age cohort reaches grade seven in the Karamoja Districts and more than 90 percent in the capital of Kampala, one might wonder if this wouldn't influence the findings. But no relationship (between performance and SES) emerges either within Karamoja or within Kampala."

In India, Mathur (1963) has found the family socio-economic status of secondary school students to be significantly correlated with educational achievement (Dave, 1974: 319).

Chopra (1964) studied a sample of 1359 secondary school students of Class 10 with the age range from 14 to 27 (sic), studying in 19 urban and 16 rural schools of Lucknow district. Multiple correlation and analysis of covariance method were used. With measured intelligence held constant, the author found, on the basis of father's education and occupation, family income, (type of lodging, size of the family, and "cultural level of home"), students belonging to the highest categories showed significantly higher mean achievement than students coming from lower categories. Student academic achievement for different castes was significantly different at the .05 level.

Rao (1965), too, studied the relationship of a number of variables including socio-economic status with academic achievement of 500 boys of 12 high schools of Delhi (sic) in India, and found, while the intelligence, study habits, and attitudes of pupils towards school accounted for 66 percent of the predictability of scholastic achievement, socio-economic status came out to be not significantly related. And Barial (1966), studying two different samples of 503 and 1005 students of 14 years of age in the Indian city of Patna, controlling for the effect of intelligence, found no significant differences in the educational achievement of students belonging to various

social classes.

In another Indian survey, a sample of 433 grade 10 science students (age range 15-17) randomly selected from 16 boys' secondary schools (in Lucknow), was studied by Chopra (1969). The author found that the mean marks scored by students in the higher socio-economic group were significantly higher than those of the students from the middle and the lower socio-economic groups. However, there was no significant difference between the achievement of students from middle and lower socio-economic groups.

In a study of 575 boys studying in Class 9 of 32 Delhi higher secondary schools, Metha (cited in Satya, 1969:VII) found the 'n' achievement level of the children of parents belonging to semi-professional groups to be consistently higher than achievement of those belonging to any other group. The study also found that sons of fathers having low education and those of fathers doing some kind of skilled or unskilled work appeared to have higher 'n' achievement than those whose fathers had secondary education and those whose fathers were petty shop-keepers. The students from the upper middle class (semi-professional occupations) and those from the working class (skilled and unskilled workers) were the highest in 'n' achievement. The boys from the upper class and the lower middle class (clerical occupations) were at the lower level of achievement.

Finally for India, Samue (1975) reports the results of three Indian studies--Trivandrum, 1965; Bennur, 1966; Pavitran

and Ferose, 1968--all indicating positive relationship between higher socio-economic status and academic achievement of high school students.

Cummings (1980) has studied and witnessed the Japanese schools and reports that while the findings of an impressive body of research in advanced societies indicates a significant association between a child's family socio-economic status and his achievement in school, and although some of the available research suggests similar associations for Japan, the strength of that relation (in Japan) is often weaker (p. 77). Cummings (ibid.: 161-162) writes that there exists notable equality of cognitive achievement of Japanese pupils at primary level. Only as Japanese young people advance in their school careers, "variables of home circumstances become more predictive of differential performance," and "studies show significant class effects for high schoolers" (ibid.). These conclusions support the IEA findings for Japan which showed a significant class effect for fifth graders and for eighth graders.

Cummings notes that in the early years of schooling in Japan, the curriculum is not demanding and the child does not need that much help from his parents when he reviews each day's lessons. But by the latter years of the primary school, a "well educated mother" who is concerned with her child's school performance proves to be an indispensable aid in the daily study routine. Providing such help is most common in middle- and upper-class families; "It is not surprising that

class background begins to have a stronger relation to cognitive achievement" at the latter years of primary schooling (ibid:163). As students go beyond the primary school level, Cummings adds, the curriculum becomes so difficult that most mothers find that they are no longer able to provide direct assistance to their children and many families, for example, find special tutors to provide instruction at home; and, needless to say, the higher a family's class position, the more it is likely to be able to spend on this and other instructional aids. Thus, the author concludes, after the early years of primary school, class position becomes a factor in cognitive achievement;* in Japan, class effects on academic achievement appear to increase with grade level.**

In Australia, the Cuttance (1980a) study of 14:0-14:11 year-olds found socio-economic status of the family (as measured by employment of family head) to have only a small influence on cognitive achievement of students at time 1

*The increase in the effect of class position on achievement in the upper grades could also be due to the increasingly different treatment these children receive in higher grades--based on their increasingly different family status.

**In contrast to what Cummings reports for--developed--Japan, Alexander and Simmons (1975) found that in developing countries class effects on school achievement tend to be stronger in the lower grades. One could speculate that this could be due to more variation in family background of primary school students and, thus, varying degree of intellectuality and help they receive with school work. However, in the upper grades, in these (developing) countries, students become more similar, in comparison with Japanese students, in their family background and thus they receive increasingly less different intellectuality and academic help in the home.

(1970); but parental education was found to have a moderate influence on achievement. Both socio-economic status and parental education were found to have no significant influence on achievement at stage 2 (1972--follow-up study) once the enabling conditions and achievement at time 1 were controlled for.

In another Australian study, mentioned before, De Lemos (1980) found the father's occupational ranking to be the most important factor affecting academic achievement of both aboriginal and non-aboriginal students.

For Poland, Wisniewski (1970), based on marks of 7587 secondary school graduates who had taken competitive college entrance examinations for the school year 1965-66, found that the largest proportion of students assessed as "being well prepared for higher education" were among those from the intelligentsia, whereas the "worst prepared" ones were in the peasant category (pp. 143-144).

Rumania was one of the countries which participated in the IEA survey (Walker, 1976), but only its 14-year-olds and specialized secondary education students and that only for the subject of French as a foreign language. The survey concluded that "student background factors" were a relatively large contributor (to students' achievement in French) (p. 188).

In the Soviet Union, as Lane (1971) reports, schools are unstreamed and comprehensive, and in theory, the intention is to raise all children's achievement up to a common average standard" (p. 115). Therefore, it might be thought that children from poorer home backgrounds would benefit most from the

system. But, as Lane writes, there is considerable difference in the attainment of children. The author adds that Aganbegyan et al. (1966) have shown that success at school is correlated with parents' education and social position, and Musatov (1967) has found the offspring of parents with "higher educational qualifications" to have done much better than those of other social groups (ibid.:116).

Also, Jacoby (1974:137) writes that the top two Soviet classes--a tiny top class consisting almost entirely of the most important (communist) Party members, and a second class of managers, bureaucrats, technicians, and intellectuals--are much more likely to produce young people who succeed in the Soviet educational system than the bottom two classes--the class of white-collar and skilled blue-collar workers, and the class of unskilled farm laborers and urban workers.

Vasil'eva (1976:xiii) reports that the Soviet children from "socially advantaged families" get higher grades; (not only that, they are also as a rule more likely to go on to the next step on the educational ladder than are lower status youth with comparable levels of performance. This clearly has been seen, the author adds, at two important junctures--the point of graduation from the eighth grade and following completion of the tenth grade.) Also, Yanowitch (1977:65) points out that there is abundant evidence in the Soviet literature that in the early grades (through grade 8) pupil performance among children reared in intelligentsia families is superior to that of working-class children.

Finally, Dobson and Swafford (1980) did a case study of the educational attainment process in the Soviet Union. For their analysis, they made use of data on 15,000 eighth and tenth graders in general education schools in a city of about 170,000 inhabitants located in Central Russia. The authors' analysis indicated that social background plays a role in the educational attainment process; it was found, among other things, that children of "high-status origin" earn higher average grades in school than the "less advantaged" (p. 267).

Also, for the Soviet Union, Dobson (1977) reports the results of a 1967 survey of 2,417 pupils in grades 7 through 10 in 20 schools in the towns of Ufa and Beloretska and in the neighboring rural districts in the Russian Republic. He writes that children from "culturally more well-endowed families are more likely to get good grades in school, while being less likely to repeat grades because of poor performance" (pp. 257-258).

Yugoslavia was among the twelve countries which participated in the study of educational achievement of 13-year-olds (Foshay et al., 1962). The total sample of students (of Yugoslavia) was 685 girls and boys of rural and urban areas. The results of the study showed that the average score on each of the tests--reading comprehension, mathematics, science, geography, and nonverbal aptitude--was clearly related to every father's level of education, and to a lesser degree, to father's occupation. Poland, too, participated in Foshay et al.'s survey. The student population selected to take the

test consisted of 1,000 boys and girls of urban and rural schools. The results for Poland were different, however. In Poland, the test scores showed relatively little difference associated with the father's level of education.

In France, as Halls (1976:162-165) writes, "it is more acknowledged that the preponderant determinant in educational attainment is the quality of the home background"; it has been shown that children of industrial workers are more frequent "grade-repeaters" than others. One survey, Halls adds, has reported (in 1965) that by the end of primary school 35 percent of such children had already been kept down at least one year, and 16 percent two years. "Indeed, the success of pupils at the end of primary education correlates highly with social class" (p. 163).

French research, Halls points out, has also established that the extent of parental income as such affects a child's educational success less than does the "cultural or educational qualifications of the parents." The child's level of attainment, the author adds, depends on the help he can receive in the home--not so much upon the amount of help, as upon its quality, which, of course, is dependent upon the level of parents' education.

In Sweden, according to Blomqvist (1957:71-72), the frequency of working mothers was almost the same for successful and unsuccessful students of age 11 years or more. The mothers of the failures have, however, been working somewhat more before the child became seven years old. Blume-Westerberg (ibid.) compared achievement of 322 children of

working mothers with 1023 children of nonworking ones. The first group had worse achievement in lower grades, equally good in middle grades, and significantly better than the second group in higher grades.

A fairly large-scale study of the reading and writing abilities of 2,600 Swedish students of comprehensive and upper secondary years, aged 7 to 19, was conducted from 1971 to 1975 (Grundin, 1977). The findings of the study showed that there was a substantial correlation between socio-economic status of a pupil's family and the pupil's reading and writing performance. For example, the working-class children seemed to lag three academic years behind the upper-middle-class children in terms of reading performance.*

A longitudinal study of patterns of educational inequality in the eleven states of Germany was carried out by Williamson (1977), the state being the unit of analysis. The results of simple correlation analysis indicated a very strong relation between the "measures of social class background" and the "attainment measures" (apparently including academic achievement as well).

The Schiefelbein and Farrell (1978a, 1978b, 1980) national longitudinal study of 8th graders (random sample drawn in 1970) found a positive, though not strong, association between social class (father's occupation and education) and performance

*Grundin says "to what extent this is a genuine handicap in reading ability and to what extent it reflects the fact that middle-class values and norms largely dominate the (Swedish) school system cannot be determined on the basis of the test data available [to him]" (p. 7).

on tests of verbal and mathematics achievement. However, in multivariate analyses of factors affecting test performance, it was found that "socio-economic status was not the most powerful predictor" (1978a: 333).^{*} The authors note that "it appears that children who do well in school at the primary level are highly likely to continue to do well at the secondary level, independent of the effect of socio-economic status" (1978b: 71).

In a nationwide survey of pupils in El Salvador conducted in 1973 (Loxley and Heyneman, 1981), fifty percent of all students--some 55,000 in all (drawn from about 20 percent stratified sample of all urban and rural schools)--were tested in science, reading comprehension (in Spanish), mathematics, and social studies. Loxley and Heyneman used the data on a five percent representative sample of the 55,000 students (about 2,500 from 140 schools) and collected some first-hand, additional information on parental income, occupation, and education, (amount of money spent on children's education and other family information). The authors note that the subsample chosen was representative of the nation and also precautions were taken to ensure that comparable numbers (a minimum of 200) of pupils had been drawn for each grade in urban and rural schools.

^{*}Schiefelbein and Farrell found that "other variables measuring personal characteristics of the student not related to SES, and characteristics of the student's immediate peer group, were better predictors, and several clearly pedagogical variables (such as teacher characteristics and textbook availability) had standardized regression coefficients very nearly as large as that associated with SES" (ibid.).

Loxley and Heyneman then calculated the effect of pre-school and inschool variables upon students' achievement through regression analysis by first regressing preschool factors. They found that the influence of the set of pre-school variables (consisting of student's age, sex, parental education, annual expenditure on child's education, number of rooms and books found in the home) seemed to increase as a child progressed through the school cycles and from rural to urban settings (from 1 percent to 11 percent). But there was a tendency for the effects of preschool characteristics to be consistently outweighed by the influence of school-teacher quality, whatever its particular combination in a given cycle or geographical area.

For the United States, Rossi (1961) did a review of studies of social factors and academic achievement of elementary and secondary schools. His survey of a large number of studies concluded that while "between 40 and 60 percent of the variation among students' achievement could be accounted for by variations in IQ levels" (p. 269), part of the remaining variation was taken up by socio-economic status of the students. The higher the occupation of the breadwinner in the student's family, the greater was his level of achievement. And, after reviewing studies of student academic performance at all educational levels (300 studies in all), almost all published during the period 1953 through 1961, Lavin (1965) reported that thirteen studies of elementary and secondary schools (and colleges) had concluded that socio-economic

status of the family had been positively related to student's performance. (A few studies comparing college performance of graduates of public and private schools had found inverse relationship between socio-economic status and academic achievement.)

The Equality of Educational Opportunity Survey (Coleman et al., 1966), discussed previously, found the family background variables, particularly economic status and educational level of the parents, to be the only factors to explain the variation in cognitive achievement within each racial, ethnic group. The family background influence accounted for much more variation in achievement than did school differences. What is significant, as pointed out before, is the fact that according to the authors the strong relationship between family economic and educational background and cognitive achievement did not diminish over the period of school, and even increased over the elementary years. And this suggests that school could be, at least partially, responsible for and contributing to the increment in the gap between the achievement of students of different backgrounds.

It should be pointed out, however, that while strong influence of family background on achievement was particularly true for northern whites, was true to a lesser degree for southern whites and northern blacks, it was actually reversed for southern blacks. For blacks in the south the characteristics of the school accounted for more of the variance in achievement than family background variables, another

indication that schools could indeed have impact (a positive one, in this case) upon students' achievement.

Among the criticisms that Coleman et al.'s study has received is on the way they put the family background variables into the regression equation which the critics claim did not allow for school characteristics to account for their actual influence. McPartland and Karweit (1979) write that Coleman et al. have assumed that the nonschool (family background) factors were causally prior to the school factors. Thus in estimating the relative importance of school and nonschool variables, all of their shared or confounded variation was assigned to the nonschool factors and this resulted in estimates of the amount of variance attributable to school factors to be conservative. This problem, McPartland and Karweit write, was recognized and the subsequent reanalyses of the original data employed alternative techniques for attributing the shared variance and used different assignments of the confounded variation. However, as these authors also point out, and, as we mentioned previously, none of the reanalyses of the data have been successful in altering the general picture of weak school effects relative to nonschool effects (on academic achievement).

Coleman et al.'s study was not a longitudinal one, neither was it an experimental study with control groups who had not attended school at all. Above all, the authors gathered little data on the social systems (including academic climate) of the schools, and did no observation of actual

teaching-learning processes going on in the classrooms. Thus, the studies' findings could be not completely accurate.

Karabel and Halsey (1977:20) write that the structure of the survey did not permit adequate explanation of inequalities of performance between classes and races despite the imaginative analyses of those quantifiable variables that were included. These authors believe that collection of qualitative data on interaction in the school might have been needed.

Jencks and his associates (1972), using data collected by others at different times, including Coleman et al.'s (1966) data, did an analysis of the impact of student and school characteristics on student achievement and also summarized many previous studies, and concluded that family background characteristics of the students, mainly socio-economic status of their family, is more important than school characteristics in their school achievement.* They say that variations in what children learn in school depend largely on variations in what they bring to school, not on variations in what schools offer them (p. 98).

It should be mentioned that Jencks et al., like Coleman et al., have not reviewed and analyzed data on the internal working of the school which could have indicated possible school effects upon student's academic achievement. In fact, the authors themselves write (p. 13) that their study did not look at the attitudes, values, and "internal life of schools."

*Later in this chapter, in the section on teacher's effect on student achievement, some evidence will be presented, for some countries including the United States, indicating the greater importance of some school variables over family background variables in student's academic achievement.

Averch et al. (1972) did a review of the literature for the United States and synthesized the research findings. They concluded that the student's socio-economic status of the family--parental income, education, occupation--proved to be significant predictors of his or her educational outcome. (But Averch et al. say (p. 148) that the studies reviewed have failed to show that school resources do [emphasis in original] affect student achievement.)

The review of the State Education Department of New York (University of the State of New York, 1973) revealed that socio-economic status of students appeared to have been a consistent affector of school output. Overall, socio-economic status was found to be a significant variable in 88 percent of the 67 (correlational and regression) studies in which it had been included.

A component of family background is parents' education. The United States National Assessment of Educational Progress (Ahmann, 1976), mentioned before, has shown that the education level of the parents of the students is clearly an influential factor in the students' level of achievement--the higher the parents' education level, the higher the achievement of the students (particularly in the basic skills in mathematics, writing, and reading).

White (1976) did a meta-analysis of about 100 studies of socio-economic status and academic achievement for the United States. The results of the analysis indicated that there exists a "definite relationship" between the family's socio-economic status and academic achievement, with frequently

obtained correlations ranging from about .10 to .70.

The student's parental evaluation,
expectation, and encouragement

Only for the United States and two other countries, Uganda (Durojaiye, 1974) and France (Hout and Garnier, 1979), of the twenty selected countries, have the effects of variables of parental evaluation, expectation, and encouragement upon student's achievement been reported. Both Ugandan and French studies report positive and strong influence of these variables upon student's academic behavior.

For the United States, a careful study of mathematical talent found that young students who showed "unmistakable evidence of superior mathematical abilities" had parents who would carefully supervise 'their children's study habits and require or lovingly encourage the students to complete their assignments well in advance of each class meeting' (Stanley et al., 1974, cited in Grambs, 1978: 39).*

Kaminski and Erickson (1979) write that the fact that approximately 10 percent of American scientists are women is in part the result of females' under-representation in elective high school science courses. This is, as suggested by the evidence provided by the authors' analysis of longitudinal

*Brookover and Erickson (1975), who write that parents' (positive) evaluation of their children's learning ability and their (high) expectation for the children's high school performance positively influence children's academic achievement, point out that parental evaluation and expectation per se might not be enough, and it should be accompanied by class surveillance of students' academic work and school behavior (pp. 309-311).

data on 548 high school students, at least partially the result of earlier socialization in the family--parents' differential expectation of and encouragement for their children, based on the child's gender.

In another analysis of longitudinal data on a cohort of 500 students of junior- and senior-high schools, Kaminski et al. (n.d.) concluded that one of the reasons fewer females than males concluded that one of the reasons fewer females than males elect (take) high school mathematics courses (an important prerequisite for entry into many careers) is the result of early socialization in the family--during the time of middle school years females tend to perceive low parental evaluations of their mathematical ability and expectation for their mathematical achievement.

The student's area of residence

The study of Botswana's schools (Husen, 1977) found a lower level of achievement for rural children compared to that for children of urban areas.

The result of Cooksey's (1981) study of Cameroon's children indicated that while small farmers' children did pass secondary school entrance examination, none of the children from unskilled manual backgrounds managed to pass, suggesting that, in Cooksey's words, "lowly urban origins constitute a greater educational handicap than rural origins" (p. 407). However, all other rural children did worse on the test than all other urban students taking the test.

For Kenya, Mwaniki, M. (1973) found, in his study of 51

male- and 35 female-rural pupils and 82 male- and 40 female-urban pupils, significant performance differences between rural and urban pupils on tests of English, mathematics, and general knowledge, urban pupils having higher scores than rural pupils.

In his already discussed Ugandan study, Heyneman (1977) defined those schools located within a town of 10,000 people as urban (which included 12 schools in all), those schools situated within a 10-mile radius of a town of 10,000 as semi-rural (these were 16 schools altogether), and those schools located more than a 10-mile radius from a town were designated rural (which were 39 schools). Heyneman found that the mean achievement on the Primary Leaving Examination (153.8), to be highest in rural schools and lowest (139.1) in urban schools. Semi-urban schools ranked in the middle (with mean achievement of 147.7 on the examination). The author notes that this pattern was not limited to 1972 and examination scores of the sample schools for the previous years had yielded similar results.

In India, Chopra (1964) studied the achievement of 1,359 secondary students studying in 19 urban and 16 rural schools of Lucknow district, and found, among other things, that the percentage of failures among children of the professional, administrative, executive, and managerial groups (presumably, the urban children) to be 27, while for the children of agriculturalists (apparently the rural children) (and of skilled workers) to range between 59 and 61.

Also in India, Aaron et al. (1969), using a combination of systematic area sampling, stratified sampling, and cluster sampling, studied 394 boys and 118 girls from rural areas and 216 boys and 138 girls from urban areas. The students were studying in medium sized, favorably new schools and those which were not run by religious organizations. The authors found no significant difference in achievement scores of rural and urban boys of the same socio-economic status. The authors do not mention the differences, if any, between rural- and urban-girls' achievement, or between achievement of boys and girls, or those of different socio-economic status in urban and rural areas.

For Australia, the study of 1,000 fifth-grade and 1,000 seventh-grade students selected as a representative sample of Australian school children (Western Australian Education Department, 1976) revealed that overall scores for all years were higher for students of metropolitan areas. But for the 1970 year group, according to the test performances, there did not, in general, exist a clear and consistent pattern of results favoring either metropolitan or country students.

In a 1976 conference of educationists, politicians, farmers, and rural townspeople held in Victoria, Australia to discuss problems in small rural high schools, one of the many problems specifically mentioned under the title of 'country disadvantage' was "low levels of literacy and numeracy" (Bessant, 1978: 129).

In Poland, Z. Kwieciński (in Kosakiewicz, 1980: 179),

studying a large sample of 7,000 pupils, found that in a test of the Polish language, while 30.7 percent of the pupils of urban areas achieved 'low and very low' results, 56.3 percent of the children of the countryside achieved such results. Also, while 15 percent of those in towns obtained 'good, very good, and excellent' results, only 4.9 percent of pupils of the village achieved such results. The results were similar in biological, mathematical, and other tests.

A study of grade repeating (presumably due to low level of academic achievement) of students of grades one through eleven in the Russian Republic of the Soviet Union (Kashin, 1966) revealed no great difference in the number of students left behind in the schools of the city and the countryside, with the exception of students of lower grades of the rural schools who were left behind in higher numbers compared with their counterparts in the city.

Williamson (1979: 108) writes that Mervyn Matthews has reported that Soviet sources have expressed "great concern at the state of rural schooling in the Soviet Union." One such source, Williamson adds, has, according to Matthews, reported that "a significant number of children taught in rural eight- and ten-year schools, in their level of development, breadth of outlook, and depth and quality of knowledge, are still behind urban school learners." And "a markedly lower level of school knowledge on the part of rural school pupils was also found by Soviet sociologists" (Kosakiewicz, 1980: 179).

The performance of 2,476 sixth grade students of 150

classes (of compulsory schools) in 7 small towns and 21 rural municipalities of Sweden on standardized achievement tests of reading, writing, mathematics, and English, and Uppsala tests in history, geography, and nature studies was studied (Marklund, 1969). For each school the performances of all students for all subjects were taken together. It was found that in small classes (16-20 students), the rural schools attained as good results as urban schools. The same was the case in the somewhat larger classes (21-25 students). However, with a further rise in size of class, the urban schools were superior. The conclusion the author has reached is that "with small classes, students' intelligence, the curricula timetables of the schools and, to a certain extent, the teacher factors being equal, rural schools provide as good an environment for the students' acquirement of knowledge as urban schools" (p. 311).

A study of the relation of social, economic, and cultural factors and national achievement examination results in El Salvador indicated that in that country, rural schools and rural children outperformed those from urban areas (Heyneman, 1980a: 143).

In Paraguay, as Winkler (1980) reports, while, in contrast to 48 percent of grade one pupils in urban areas who completed grade six, only 15 percent of grade one pupils in rural areas did so; for those pupils in grade six, reading achievement of urban pupils was double that of rural pupils.

In the United States, the results of the Coleman et al.

(1966) study indicated that with few exceptions, all children of urban groups scored higher than all children of country groups of similar race/ethnicity and religion.

The most recent results of the (United States') National Assessment of Educational Progress (Martin, 1979) indicate that the performance of rural students in subsequent assessments of the same learning areas appear to be narrowing the gap between them and the national level of performance at each of the age levels. However, their performance is still generally below that of the nation.

In-School Social Factors and Academic Achievement

The teacher's socio-economic background

In his Ugandan study of 2293 seventh graders, Heyneman (1976b) found that the educational level of the teacher's mother and father combined and averaged by school, had zero-order correlation coefficient of $-.135$, a weak but statistically insignificant relationship, with mean school achievement. Farrell and Schiefelbein's (1974) study of Chilean eighth graders concluded that there was a small positive but significant relationship between the teacher's aggregate socio-economic background and individual student achievement in mathematics and language.

In the U.S. Equality of Educational Opportunity Survey (Coleman et al., 1966), it was found that teacher's level of parental education was one of the most important correlates of student performance. The parents of teachers of minority

students, who, as mentioned before, achieved less than children of ethnic majority, had a lower level of education than parents of teachers of white majority students.

The review of the University of the State of New York (1973) revealed that of the more than 100 studies of student performance (of the United States) six studies had used teacher socio-economic variable, generally defined in terms of teacher's parental level of education. According to the results of these studies, teacher socio-economic status has been significantly and positively related to student cognitive (and non-cognitive) level of achievement.

The teacher's level of formal education

The teacher's formal schooling was not found to be significantly related to reading achievement of (869) seventh graders in Botswana, but to have a significant relationship with their mathematics achievement (Husen, 1977).*

A study of 3,405 students of 89 Kenyan primary schools (a 20 percent random sample of all primary schools of two counties of Central and Eastern provinces) concluded that the formal qualifications of the teaching staff appeared to have no significant effect on students' performance on the Kenyan Preliminary Examinations in English, mathematics, or general papers in 1967 (Thias and Carnoy, 1972: 147-172). Thias and Carnoy aggregated and analyzed the data for their study at the level of the individual school.

*Husen et al. (1978) believe that "this distinction seems to support the notion that skills such as science and mathematics may be more related to teacher ability than reading, which in turn may be more related to background factors" (p. 20).

Also for Kenya, Sifuna (1978) found that there was no significant relationship between the degree of schooling of teachers or their performance in academic and educational subjects and achievement of primary school pupils (reported in Avalos and Haddad, 1981: 29).

For Uganda, in his study of seventh graders, Heyneman (1976b) summed the total years of schooling for each teacher and then calculated a school mean. He found the zero-order correlation between that figure and mean level of pupil achievement to be actually a negative ($-.112$) but statistically insignificant.

In India, according to Lulla et al. (1966), "inadequate knowledge of teachers /has been/ responsible for pupil backwardness in mathematics," and according to Dhian Chand (1970) there has been a positive relationship between teacher qualifications (teacher educational attainment and knowledge) and pupil academic achievement at both primary and secondary school levels (cited in Avalos and Haddad, 1981: 29-30). In El Salvador, teacher education was shown to have a positive impact on the achievement of first, second, and third graders in rural areas (Loxley and Heyneman, 1981).

According to Babansky (1973) of Russia, the assessment of the work of 821 teachers by school principals in the Rostov Region and the observation of the quality of teachers in two other regions of the republic of Russia--Millerovo and Sal'sk--have indicated that insufficient scientific training (apparently low level of educational level) of teachers is associated

with school children's poor school performance (school failure).

In Paraguay, there is a partial support for the hypothesis that "if the teacher-student bond weakens along the school cycle, the teacher qualification variable (teacher educational attainment and knowledge) fails to stay as a determinant of educational performance at the end of secondary school" (Rivarola and Corvalan, 1976, cited in Avalos and Haddad, 1981: 29).

For the United States, the Coleman et al. (1966) survey found teacher's level of education to have, after teacher's verbal ability, the strongest, though small, positive relationship to pupil achievement.

A United States review of teacher effectiveness research (Guthrie, 1970) includes 19 studies which have been done, using a variety of sample subjects, input and output measures, and control for what are commonly presumed to be out-of-school influences upon pupil performance. Fifteen of the studies have shown that, among other teacher characteristics, "academic preparation" and "degree level" are significantly associated with one or more measures of pupil performance.

The review of about 100 research studies published since the mid 1950s on student performance (The University of the State of New York, 1973) was reported before. This review's findings indicate that "the more highly educated the teacher was, or the higher the average level of teacher education in a school, the more impressive was student performance" (p. 100). All of the correlational cognitive output studies (and

all of the noncognitive output studies) supported this finding. In the regression cognitive output studies, this conclusion has been reached 67 percent of the time.

After a review and reassessment of the research on school effectiveness, Madaus et al. (1980) concluded that teacher qualifications (presumably including teacher's education) have not been found to explain consistently much of the variance between schools in scholastic achievement as measured by students' performance on standardized tests.

The teacher's (preservice) training

Three negative findings have been reported regarding the impact of teacher training upon student achievement for Uganda: Somerset (1968), Silvey (1972, mentioned in Husen et al., 1978: 23), and Heyneman (1976b).*

The empirical study of the effect of teacher training on student science achievement in India (and Chile) was done by Husen et al. (1978), using the IEA 1970 data. The authors edited the sample for their study and it included 2760 students of 14:00-14:11 age who were above the fifth grade in 156 public schools. The number of teachers included was about 151. The student was the unit of analysis and the effect of

*In the case of Heyneman's findings, it should be pointed out that Heyneman does not contend that teacher training is unrelated to student achievement. He believes that the reason for no significant (null) relationship in his study (at the school level) lies in the fact that the teacher quality between schools has been distributed evenly, and leaves little difference between schools with regard to teacher training and, as such, the teacher training factor does not show a significant relationship to student achievement (Heyneman, 1976b: 49).

other than teacher training variables was controlled. The study results suggested that if the mean level of formal teacher training in India were raised to "the level of the most highly trained 50 percent of teachers today," mean student science achievement, as measured by the IEA test scores, would rise from 8.3 to 8.7 (p. 67). Stating it differently, "if investment was made in teacher training programs, there will be a return on the investment in terms of increases in the level of student cognitive outcomes of schooling" (p. 68).

Another Indian study (Raijiwala, 1975) indicated better achievement in physics by secondary school students when taught by trained teachers (as compared to teachers without specialized training) (Avalos and Haddad, 1981: 30).

For Rumania, for 14-year-olds and specialized secondary students, the IEA survey (Walker, 1976) showed that the amount of teacher's university training did not appear to make any difference in achievement in French as a foreign language (p. 197).

Babansky (1973) reported for three regions of Russian Republic of the Soviet Union that low level of pedagogical training of teachers such as little "knowledge of educational-psychological principles of instruction and scientific principles, operational management of the education and upbringing of schoolchildren" to be strongly associated with failure of schoolchildren.

In Chile, Schiefelbein and Farrell (1978b) found that level of previous training was not associated with academic

achievement of eighth graders. Teacher training was found, however, to have an important effect upon students' chance of completing secondary schooling. Husen et al.'s (1978) empirical study of science achievement in Chile (and India), mentioned above, indicated results for Chile similar to those for India--positive impact of teacher training upon students' science achievement. The (Chilean) sample (taken from IEA data) was 1250 students of 14:00-14:11 age studying in 147 primary or secondary schools above the fourth grade. The teachers numbered about 302.

The review of research on the relationship between social factors and academic achievement of American elementary and high school students (Rossi, 1961) indicated the existence of a small correlation between student achievement and "quality and amount of teacher training." Some of the studies reviewed had indicated that the more hours of college training a teacher had had, the higher had been the levels of his students' achievement (p. 270). Katzman (1971), after reviewing about ten major studies of educational production, concluded that, among a substantial number of other school measures, teacher training may have significant effects on student achievement.

Teacher's ability and knowledge of special subject field

In the Ugandan study of seventh graders, Heyneman (1976b) found that of the six measures of teacher characteristics, among them total years of schooling, teacher training, teaching

experience, and parental education, the teacher's English language ability had an association stronger than all other teacher characteristics combined. Mean scores of teachers' English competence (each teacher's response to a seven question multiple choice test) for each school, when compared with mean school achievement, resulted in a zero-order correlation of 0.307 ($P = .01$). Similarly, in India, Husen et al.'s (1978) empirical study found the teacher's "verbal IQ" to show "by far the strongest total effect on student achievement" (p. 67).

A study of the relation of educational resources to scholastic outcomes of 797 second grade students attending 66 rural public schools in three governorships of Iran was carried out by Ryan (1974). The conclusion was that zero-order correlation between teacher ability (measured by the average of results of official secondary examinations) and pupil achievement, based on the first and second grade reading and arithmetic textbooks, to be 0.14, and as such, not impressive (cited in Husen et al., 1978: 25). However, when multiple regression analyses were performed on the separate regions covered by the study, it was found that the importance of teacher ability was most pronounced in the most rural and poorest areas (ibid.).

The relationship between teacher's "verbal IQ" and student achievement in Chile is similar to that mentioned for India. It showed the strongest total effect on student achievement (Husen et al., 1978: 67).

For Rumania's 14-year-olds and specialized secondary education students, the IEA survey (Walker, 1976) indicated that teacher's competence in French, as measured by the teacher's self-rating, "proved a good predictor of student scores" (in French as a foreign language) (p. 196).

The Equality of Educational Opportunity Survey in the United States (Coleman et al., 1966) found, among those teacher characteristics measured, teacher's verbal ability (score on the verbal skills test) to have the highest relationship to pupil achievement. This teacher characteristic as a component of teacher quality had stronger input upon the achievement of children of minorities than on that of the children of the majority.

Guthrie's (1970) review of 19 studies, previously discussed, also concluded that fifteen of the studies reviewed indicated strong (positive) relationship between teacher's verbal ability and one or more measures of pupil performance. And Katzman's (1971) review concluded that teacher's verbal ability has been one of the school resources that may have significantly--positively--affected student performance. Finally, the review of the University of the State of New York (1973) found that the few studies which had measured teacher's verbal ability ("may be a proxy for a combination of the teacher's socio-economic background and intelligence," (p. 104) had found significant positive relationship between this variable and the student's cognitive (and noncognitive) achievement.

The teacher's experience in teaching

The Botswana study of seventh graders (Husen, 1977) showed teaching experience to be an important and positive factor in student achievement in mathematics and reading. Mean scores in mathematics came out to be consistently rising with increasing number of years of teaching experience. In Reading Comprehension, however, in spite of a significant relationship, there was less consistency.

In Kenya, according to Thias and Carnoy (1972), considering seniority for experience, it (experience) was found to be even more influential than teacher's formal qualifications upon the performance of primary students on final leaving examination.

In the Ugandan study, Heyneman (1976b) found a zero-order correlation of $-.03$ (not significant) between mean school teacher experience and mean school achievement. In the case of Chile, Schiefelbein and Farrell (1978b) point out that age can be read as a proxy for experience; they found teacher's age to have important (positive) effects on test scores of eighth graders.

For the United States, Rossi's (1961) review concluded that "indexes of teaching experience correlated with student academic achievement around $+0.2$ at the maximum and are often zero or slightly negative" (p. 270). Coleman et al. (1966) found that teacher experience benefits children of minorities in high school but has little influence upon achievement of children of the white majority.

Guthrie (1970) found in his review of nineteen U.S. studies of teacher effectiveness that fifteen of the studies reviewed had found teacher's amount of experience, like some other teacher characteristics (for example, degree level), to be strongly associated with one or more measures of pupil performance. And Katzman's (1971) review of about ten major studies, also, found that teacher's experience may significantly affect student achievement. However, the University of the State of New York (1973) review of about 100 studies showed inconclusive results. Altogether twenty three of the studies had included this teacher variable which fourteen of them had investigated the relation between teacher experience and students' cognitive achievement. In 43 percent of the regression studies and in 50 percent of the correlation studies, a positive significant effect of teacher experience upon student achievement had been found.

Teacher's in-service training (upgrading)

The more participation in in-service programs by Botswana's teachers, the higher the achievement of the students in reading and mathematics (Husen, 1977). In India, Dave (1974) investigated the effects of a short task-oriented training programme in the mother tongue, with emphasis on specific objectives and detailed activities (cited in Avalos and Haddad, 1981: 31). He found that compared to those teachers who had not participated in the programme, those who had participated had produced improvement in pupils' language skills that affected overall achievement. According to Avalos and

Haddad, another similar study by Dave (1976) with physics teachers resulted in "improved pupil achievement in recognition and recall (and to a limited extent, in higher mental processes)."

However, Avalos and Haddad (1981: 31) report that in Chile, Schiefelbein and Farrell (1971) found a negative correlation between teacher's attendance of in-service courses and performance of eighth graders in Spanish and mathematics. The Chilean study of those eighth graders who had reached the secondary school, by the same researchers, revealed the variable 'in-service training' to be tenth in importance among more than one hundred variables, but to be the sixth in significance for students of high socio-economic status (ibid.).

Using data of the 1970 science survey of IEA, Wilson (1977) studied the performance of students of 36 Australian junior secondary schools to examine the effects of school variables upon science achievement for six schools rating highest "above expectation" and six schools rating lowest "below expectation." The author found the former schools appeared to have, among other things, science staff with less post-secondary training but more in-service training and felt a greater need for further refresher courses than did the staff in schools with achievement below expectation.

The teacher's subjective evaluation of students' learning ability and his expectation for students' academic achievement

A study of the role of noncognitive factors in school learning of 540 boys and girls of rural and urban secondary

schools of Uganda was carried out by Durojaiye (1974) which was discussed before. Durojaiye found that zero-order correlation coefficient between Teachers' Rating of Pupil Behavior, including projected academic progress, and a composite variable of school performance (measured by a Scholastic Aptitude Test) to be 0.162 (significant at the 0.05 level of confidence) for rural boys, 0.140 for rural girls, 0.113 for urban boys and 0.146 for urban girls.

In Japan, teachers "are confident in the learning potential of all children" (Cummings, 1980: 159-161). In other words, teachers' subjective evaluation of students' ability to learn is positive and they expect all students to achieve in high school. According to Cummings, the teachers' belief and expectation influences students' achievement positively. He reports that a large proportion of Japanese pupils perform very well academically and there is a high average level of cognitive achievement with little variation around the mean.

In Australia, Wilson's (1977) study concluded that in the six schools rating highest above expectation, teachers were demanding "high academic standards."

For France, Halls (1976: 163) notes that statistics have shown that the success of more fortunate pupils (with fathers employed in the liberal professions and the intermediate and higher cadres) confirms strikingly the "teacher's opinion of such children's abilities." Also, Hout and Garnier (1979) report a strong effect of teachers' expectations on "curriculum placement upon the completion of primary school" and note

that "curriculum teaching in France increases the variance of educational outcomes." Hout and Garnier's conclusions are based on analysis of data on 15,601 students of a stratified sample of all primary schools (1,805 in all) collected by the Institut National d'Etudes Demographiques (INED) of Paris.

In Chile, Bravo and Salas (1976) found a close correlation between teachers' subjective evaluation of pupil intelligence and the number of failures (mentioned in Avalos and Haddad, 1981: 26). Also, "teachers' opinion about parents, projected on students and vice versa" was found to affect students' failure.

In the United States, the widely known experimental study of Rosenthal and Jacobson (1968) of elementary school children, concluded, particularly for first and second graders, that teacher's expectations (in this case based on prior and subjective knowledge of students' IQ) affect students' achievement. While this study's validity has been challenged by some (e.g., Thorndike, 1968 and Elashoff and Snow, 1971), other studies, while not totally supporting the findings of Rosenthal and Jacobson, have indicated similar results. Rist (1970) observed a class of ghetto children during their kindergarten, first grade, and second grade years and found that teacher's expectation of students affected student achievement; "the child came to act out within the class the very expectations defined for him by the teacher" (p. 446). Rist also reviewed the research on teacher's expectation and student achievement and concluded that it does influence student

performance (ibid.).

Also, Brookover and his associates conducted a study of 24 high and low achieving elementary schools, attended by white and black students from high and low socio-economic families of urban and rural communities in Michigan (Brookover and Schneider, 1975). The researchers collected their data during the 1970-71 school year. The results of the linear regression analysis indicated that after controlling for the effects of socio-economic status, race, and urban-rural community type (by putting them into the regression equation first), among other school variables, higher teacher perceived future evaluation-expectation was significantly related to the variance in school achievement.

Also, Hess (1974) studied a sample of 481 native American children enrolled in grades three through eight of five elementary schools located on a large reservation on the Plains of the United States. (The sample included the total enrollment of these grades in the five schools.) The five schools represented the three types of schools attended by reservation native American children--two mission schools, two day schools operated by the Bureau of Indian Affairs, and one public (county) school. The theoretical framework of Hess's study was symbolic interactionism. Hess found significant positive correlations between perceived expectations and evaluations of teachers (and others) and (self-concept of academic ability and) academic achievement.

After an extensive review of the research, Persell (1977) concluded that, in the United States, teacher expectations

(for pupil achievement) affects students' cognitive performance even when pupil I.Q. and (prior) achievement are controlled.* Persell further notes that teachers are more likely to hold negative expectations for lower-class and minority children than for middle-class and white children.** Thus, "given the less powerful position of lower-class and minority children in (American) society, they appear to be more influenced by teacher expectations" (ibid.: 132).

A review of within-school explanation of differences in school performance of American students was also done by Hurn (1978). The author concluded that it simply cannot be said "that if schools had higher expectations for the performance of lower class students that the performance of such students would improve" (p. 163).

In another Michigan study, of 91 randomly selected high- and low-achieving elementary schools, Brookover et al. (1979) found that school learning climate, a measure of evaluation of students' learning ability, teachers' expectations for high academic performance, (the students' perception of teachers' expectations and evaluation, and the consequent "student sense of academic futility"), explained mean school achievement as

*Persell (ibid.) points out that personality characteristics of pupils, including sensitivity to verbal communication of emotions, internal locus of control, and self-expectations, seem to interact with teacher expectations with attendant consequences for cognitive gains.

**According to Persell, "teacher expectations are affected by testing and tracking, procedures which are themselves biased against lower-class and minority children..." and "it is precisely such negative information that...is more potent in its consequences than positive expectations" (ibid.: 132).

much as did the school's racial mix or socio-economic status of the school's student body. This study, similar to what Persell (1977) found, showed that teacher expectation has greater effect on low income and/or minority students than on middle-class students.

An ethnographic study of "carefully selected" 21 pairs of elementary schools of California from a population of 4,000 schools was carried out (Law, 1981), to identify school factors which are significantly related to students' school success. The schools were, according to Law, virtually identical in size, type of location, racial makeup and students' parental income. The schools were different "in that students in one pair had sixth grade achievement tests very significantly higher than those that would normally be predicted for them, while the other schools had scores significantly lower" (p. 4). Each school was visited by a four-person team who observed, interviewed and recorded in a "fairly classical ethnographic way what was occurring in the school."

The study indicated that teachers' expectations for and beliefs about the children they were teaching often seemed to influence pupils' performance.*

*Law writes (ibid.: 10) that teachers' expectations of their pupils were reflected in various ways: in the teachers' perceptions of the students and their abilities, in their selection of curricular material for the pupils, and in the standards the teachers would set for performance. For example, in schools where the teacher viewed the students as having poor oral language skills and many problems, the students did poorly; while in a school where the teacher referred to non-English speaking children as being bright and learning quickly, the students performed well.

Finally, for the United States, after reviewing the research on the self-fulfilling prophecy and teacher expectations, Brophy (1982) concluded that a minority of teachers have major expectation effects on their students' achievement.

The teacher's use of "mastery learning" techniques

Among the twenty selected countries, the only country about which research on the effects of "mastery learning" techniques on student achievement is available is the United States where, as mentioned in chapter III, the formal theory of mastery learning was initially formulated. The (U.S.) research indicates that the application of this theory results in improved and positive student attitudes toward learning and higher cognitive achievement (Block, 1974; Bloom, 1976; Block, 1979; Lezotte et al., 1980).*

*The present researcher has been able to locate research on the effectiveness of mastery learning techniques for only one developing country (not among our twenty countries)--South Korea (Kim, 1975).

The Korean Project was initially started with only one subject--mathematics--in the seventh grade in a middle school in the capital city of Seoul in 1969. As of 1974, it has been used for teaching mathematics, English, and science to about 600,000 7th to 9th graders (one third of the total student enrollment in the middle schools of Korea) and has been shown to be effective for most students, of both "below-" and "above-average I.Q."

Also, Fedigan and Gay (1980), after reviewing fifty-one studies for Alberta Department of Education (of Canada) on the effects of educational and environmental factors on student achievement in Britain, Canada, and the United States, found that mastery learning is "conducive to student success and efficient learning."

It should be pointed out, however, that putting the instructional techniques of mastery learning into practice needs more time (10 to 20 percent --Bloom, 1976:5) over the classroom scheduled time. And also it requires additional preparation and work (see Horton, 1979). Of course this does not diminish the importance and usefulness of this method, and certainly considering the long term objectives of student learning, it is worth utilizing.

The review and observation of Japan's educational system by Cummings (1980), discussed before, led him to reach the conclusion that the way Japanese teachers teach--working as best they can to help all the students complete the curriculum--is actually the application of mastery theory. Cummings writes that the (mastery learning) theory helps "to explain why Japanese school children do so well in mastering the curriculum" (p. 146).

Cummings points out (ibid.: 150-151) that mastery learning as such has not been introduced in Japan, but traditional Japanese educational philosophy shares many precepts with mastery learning; Japan's educators have never paid much attention to the innate abilities of learners and have shown almost no interest in the currently popular American books that examine the heredity-intelligence-school achievement link.

The teacher's practice of ability grouping and curriculum grouping

Of the twenty selected countries it was possible for this investigator to locate only for two developed non socialist-communist countries, Australia and the United States, and for no developing and no socialist countries, studies which included the grouping practices as a variable affecting academic achievement of students.

For Australia, the results of the Australian Survey of Primary School Achievement (Western Australian Education Department, 1976) indicated no consistent gain of higher test scores on average for pupils in classes streamed according to

"general ability" than for those in unstreamed classes. For the United States, the available research generally supports the conclusion that ability grouping and curriculum grouping (tracking) is not effective in teaching and raising the level of academic achievement of all or even most students; it may even be detrimental for the students of "average" and "low" ability groups; and that heterogeneous grouping may help children of average and low ability without lowering "high ability" students' level of academic performance (Coleman et al., 1966, and see Johnson, 1970: 184-186; Jencks et al., 1972; Brookover and Erickson, 1975: 330-339; Rosenbaum, 1976; Persell, 1977: 85-99; Hurn, 1978: 155-157; Bryson and Bentley, 1980; Cuttance, 1980b: 47-48; Rosenbaum, 1980: 361-401; Brookover et al., 1982: 109-121).

The teacher-student ratio (class size)

The study of Kenyan education by Thias and Carnoy (1972) indicated that the teacher-pupil ratio in primary schools apparently had no impact upon the students' performance on examinations, "not even when disaggregated into partial ratios based on teacher qualifications" (p. 171).

In Australia, the results of that country's surveys of primary school achievement given every five years from 1955 to 1970 (Western Australian Education Department, 1976) indicated that overall scores for all years were higher for classes of 40 or more students--pupils in the larger classes gained on average higher scores than pupils in smaller classes (p. 38). However, Keeves (1972) found for the lower level

of secondary schooling in Australia, class size to be a significant influence on changes in both mathematics and science achievement (reported in Cuttance, 1980b: 58).

A study of "size and homogeneity of class as related to scholastic achievement" in Sweden by Marklund in 1962 has indicated that class size has not been an important factor in student achievement (cited in World Bank, 1978:6). And, as it was mentioned before (pp. 194-195), where rural-urban differences in achievement for Swedish students were discussed, in Sweden, in the small classes (16-20 students), the rural schools had attained as good results as urban schools (Marklund, 1969: 310-311). The same conclusion applied to somewhat larger classes. However, the urban schools were shown to be superior as the size of the class rose.

The results of the longitudinal study of apterns of educational inequality in Germany (Williamson, 1977), discussed before, indicated smaller classes and lower teacher-pupil ratio (suggested, according to the author, by high teacher expenditure) were correlated with high student performance on all the "attainment measures," presumably including some measure of academic achievement as well.

For Chile, Farrell and Schiefelbein's (1974) study of eighth graders, using the average size of an 8th grade class in each school as a measure of class size, found that students of larger classes tended to perform better on the (national) test than students of smaller classes. The authors also found that for students whose parents had only basic

education or less, class size had a strongly positive impact on achievement. The impact upon the achievement of other children (with other parental background) was in most cases random.

In the United States, Rossi's (1961) review found a complicated relationship between class size and student achievement. In some subjects students had done better in small classes than in larger classes, but in some other subjects the larger classes had been more conducive to student achievement. According to Coleman et al.'s (1966) study, after controlling for racial and socio-economic background of students, teacher-student ratio--like many other inschool factors--was shown to have no significant impact upon student achievement: smaller classes seemed to be slightly more effective.

After studying 18,258 elementary and secondary school classrooms at all grade levels of the United States, Olson (1970) concluded that in both elementary and secondary schools, smaller classes result in higher student achievement than large classes. However, after a review of the research, Lindbloom (1976) reported that the studies of class size and pupil achievement have been conducted over a very short period of time, and reveal inconclusive results. In terms of educational process, the review indicated that small classes have been superior to large classes.

The review of the University of the State of New York (1973) found class size not to be a significant affector of student performance. In about fifteen studies which had tested cognitive performance, class size (or teacher-student

ratio) had been found to be significant less than half the time. Extremely small or large classes may have made more difference, however.

Also in the United States, according to the Educational Research Service of Virginia (1978), within the mid-range of about 25 to 34 pupils, class size seems to have little if any decisive impact on the academic achievement of most pupils in most subjects above the primary grades (p. 69). But Glass and Smith (1978), after doing a meta-analysis of fourteen studies of class size and academic achievement, concluded that it can be expected that small classes clearly increase students' academic achievement.*

Finally, Glass and others (1982) reviewed and synthesized the results of many books, dissertations, and research reports on the relationship between class size and academic achievement (in the United States) and concluded that class size does, in fact, affect student achievement. The authors write that smaller classes improve pupil performance.

*Glass and Smith's analysis has been criticized by Educational Research Service (ERS) of Virginia (1980a). Glass (1980) has rebuttled ERS's critique and conceded no points. ERS (1980b) has responded to Glass's rebuttal and indicated that it remains convinced that Glass and Smith's meta-analysis contains no new evidence on class size, and it would be a mistake for educational decision-makers to rely on Glass and Smith's conclusions when formulating class size policy.

Summary Conclusions

The relationship of home and school social factors to student learning for the twenty selected countries, derived from the research evidence examined in this chapter, could be summarized as follows:

Out-of-school factors and academic achievement

-- Student's gender and achievement: In most countries, both developed and developing, boys do better than girls, particularly in subjects such as science and mathematics, and at the upper school levels. In socialist countries, however, girls generally do better or as well as boys in most academic subjects.

-- Student's language and achievement: In almost all countries, students taught in their mother tongue do better in other subjects, including the second language.

-- Student's racial, ethnic, and religious backgrounds and achievement: These variables, in almost all developed countries, are usually associated with achievement--being from a racial-ethnic majority is positively related to achievement. In less developed countries, while the same relationship exists, the evidence is not as consistent as it is in developed countries.

-- Student's socio-economic status of the family and achievement: In most countries, being from a higher socio-economic status family is usually associated with higher achievement. Some evidence from some developed countries and more evidence for some developing countries, indicate

that family background is not associated with achievement. Some studies have even found higher achievement levels by children of lower socio-economic status families than those of children of higher socio-economic status families. In either case, the relationship of family background to achievement is weaker in less developed countries than in developed ones; the relationship is also weaker for children of lower socio-economic and other disadvantaged groups (in both developed and developing countries).

-- Parental expectation and encouragement and achievement: These factors have been shown to be almost always associated with achievement: the higher the parent's expectation and the greater his/her encouragement, the higher the child's school achievement.

-- Rural-urban factors and achievement: In most countries, being from an urban area is, generally, associated with higher achievement.

In-school factors and academic achievement

-- Teacher's socio-economic status and achievement: Higher socio-economic status of the teacher is usually associated with higher student achievement.

-- Teacher's education level and achievement: This factor either has no effect on student achievement or, the higher the education level, the higher the student achievement.

-- Teacher's training and achievement: Almost the same relationship pattern for this factor and achievement has

been found as for teacher's education and achievement; it either has no effect on achievement or has positive influence. (In some cases it has been shown to be more important than teacher's education level in student achievement, however.)

-- Teacher's verbal ability and knowledge of subject matter: These two factors are usually associated with increased student learning.

-- Teacher's teaching experience and achievement: Teacher's experience has been found to be important in student learning, particularly for some subjects (e.g., science and mathematics). Some studies have found it to not have any effect, however.

-- Teacher's inservice training and achievement: Teacher's upgrading is associated most of the time with improved student learning.

-- Teacher's evaluation of the student and expectation for his/her achievement: In most studies, particularly for less developed countries, these factors have emerged as being positively associated with achievement; the more positive the teacher's evaluation of the student's learning ability and the higher the teacher's expectation of him/her, the higher the student's achievement level.

-- Teacher's practice of "mastery learning" techniques and achievement: This practice has been shown to have positive influence upon achievement level of all students.

-- Teacher's practice of ability and curriculum-

grouping and achievement. Homogeneous grouping of students and tracking have been found to have negative and sometimes no effect on student's (perception of his/her learning ability and) achievement. Heterogeneous grouping has been shown to have either no effect or to have positive effect on achievement.

-- Teacher-student ratio and achievement: This factor's relationship to achievement is conflicting. It usually does not affect student learning. In some studies, the higher class size has been found to be associated with improved achievement, and in other cases smaller classes have resulted in increased student learning.

The Relative Influences of Home and School to Achievement: In all countries, in most cases, home-related variables explain more of the variance in achievement than do school factors. However, it is less so in developing countries, and less so for lower social classes (in developed and in developing countries as well). Thus, the school's characteristics are usually more important in developing countries, and for lower social class children. In some cases in developed countries, and in more cases in less developed ones, school quality is even more important than family background in student achievement.

CHAPTER VI

SUMMARY AND CONCLUSIONS; DISCUSSION, LIMITATIONS OF THE STUDIES, STATE OF THE RESEARCH; RECOMMENDATIONS FOR LEARNING THEORY, FOR TEACHING PRACTICE, FOR TEACHER TRAINING, FOR SOCIOLOGICAL-EDUCATIONAL RESEARCH, FOR EDUCATIONAL-SOCIAL POLICY; A FINAL WORD

Summary and Conclusions

The purpose of this study was to make a sociological analysis of the state of equality of educational opportunity with a major emphasis on the status of inequality of academic achievement. The other purpose was to examine the research evidence on the relationship between some family and school related social factors and academic achievement of primary, intermediate, and secondary school students in societies around the world. Also it was the purpose to assess the status of sociological-educational research in academic learning.

The methodology employed was historical review and qualitative analysis. An extensive library (manual) search was conducted and other information retrieval methods, such as computer search, international interlibrary loan service, correspondence with scholars in the field and research organizations, were utilized. Only English language materials were included in the investigation and there was no restriction as far as the time period during which the studies had been carried out or published.

In the first chapter, a preliminary statement of the problem, the researcher's purposes in conducting the study, the rational for and importance of the study, the methodology, the procedures used for collecting the data, the delimitations of the study, some definitions of terms, the assumptions underlying the study, and the structure of the dissertation were stated.

In the second chapter, the argument was made and documented that, despite the fact that most people and essentially all governments accept education as a basic human need and a human right, and despite an apparent international concern for the provision of equality of educational opportunity, at least in terms of access to (enrollment in) formal educational institutions, and finally, despite worldwide educational expansion, still in every country, though in varying degrees, a great many individuals remain uneducated (unschooled) or undereducated. These are mostly members of lower social classes and politically powerless racial, ethnic (including linguistic), and religious groups, and those who live in poor neighborhoods and in remote and rural areas, and the physically handicapped and females; many of the school-age children of these groups remain out of school. It was concluded that the question of inequality of educational opportunity has not been solved anywhere in the world. In fact it was argued that the education system itself is contributing to educational inequality (and thus to social inequality).

In chapter III, the theories and assumptions of learning

were presented and some psychological, sociological, and anthropological, economic, and medical explanations for academic behavior were discussed. Also in chapter III, some relatively recent sociological and social-psychological conceptions and models of learning and school achievement were discussed. It was learned that many, or perhaps most, people (including educators and educationists and parents) still believe in innateness of "intelligence" and individual genetic differences in learning ability; clinical-psychological theories of human learning are still having an overwhelming impact upon educational thinking and pedagogical process in most societies, though less so in the socialist countries.

It was also found that despite the tremendous progress in the development of learning theories, particularly sociological theories, and although we now know more than at any other time in human history, even more than a decade ago, but perhaps due to the complexity of the human being and human society, we still lack a powerful theory of the learning phenomenon.

Chapter IV was devoted to a review and examination of international-multinational studies of school achievement which had looked at the relationship between some social factors of concern to us and academic performance of students. The major conclusion of chapter IV was that, except in some rare cases, and to a lesser degree in developing countries, the family background of the student is found to be the main factor affecting learning and to be more influential than

school variables. In a few less developed countries, school characteristics have emerged as more powerful in explaining student learning than family characteristics.

In chapter V, an extensive body of research was critically reviewed and analyzed for twenty selected countries. While some exceptions were found, particularly for less developed countries, the kind of factors studied and the general conclusions reached for these twenty countries did not differ in any significant way from what was just mentioned for studies reviewed in chapter IV.

The major conclusions reached from the examination of studies in chapters IV and V and from the examination of other evidence can be synthesized as follows:

Out-of-school factors and academic achievement:

-- Student's gender and achievement: Male students usually outperform female students, particularly in some school subjects such as science and mathematics, and in upper secondary grades. However, female students outperform male students in certain subjects such as reading and language. In socialist countries, girls generally do better than or as well as boys in most school subjects.

-- Student's language and achievement: Learning the mother tongue and instruction in it greatly influence (positively) school learning, including learning the second language. Teaching in the second language has been shown to handicap the student's ability to learn.

-- Student's racial, ethnic, and religious backgrounds

and achievement: In almost all developed countries and in most developing countries, these factors explain variance in student learning; generally, being from a racial-ethnic majority is associated with higher achievement. In a few less developed countries, children of ethnic minority groups have done better.

-- Student's socio-economic background (intellectuality in the home included) and achievement: In most countries of the world, regardless of the country's political and economic structure and cultural context, and whether they believe or do not believe in individual differences in learning ability, higher socio-economic status of the family is associated with higher achievement. However, some studies for some developing countries, and a few studies for some developed nations, have found children of lower social classes to achieve more than those from higher social classes. But in any event, social class has less effect on achievement in less developed and poor countries than in more developed and rich ones.

-- Parental positive attitude toward student's learning, high expectation and encouragement, and achievement: These factors virtually always affect, positively, student performance.

-- Urban-rural location and achievement: In most countries, students living in a rural area have, in general, achieved less than those of urban areas.

-- The student's prior achievement, the help which the

child receives with schoolwork in the home, the amount of homework done after school, and achievement: Most of the time, the higher degree of each of these factors is associated with higher performance.

In-school social factors and student achievement:

-- Teacher's socio-economic status and achievement: In most cases, the higher socio-economic status of the teacher has been found to be associated with improved academic performance of students.

-- Teacher's education level and achievement: In some studies, teacher's (formal) education has been found to have no influence on student learning. Other studies have found it to be positively related to achievement.

-- Teacher's training and achievement: A non-linear relationship has been found for teacher's (preservice) training and student learning.

-- Teacher's verbal ability and knowledge of subject matter and achievement: These two teacher factors have been found to be usually associated with higher student achievement, particularly for some subjects and for higher grades.

-- Teacher's experience and achievement: In some studies, teacher experience has emerged as having no effect on learning. However, in other cases it has been found to be important, especially for teaching some subjects such as mathematics.

-- Teacher's inservice training and achievement: Teacher's participation in upgrading programs has been shown

to positively affect student learning.

-- Teacher's positive evaluation of student's ability and expectation of him/her, and achievement: In almost all countries, in most cases, these factors have positive, sometimes strong, effects on student learning.

-- Teacher-student ratio and achievement: This factor either does not affect learning, or the larger class size is associated with higher achievement. In some cases a smaller class has resulted in higher achievement.

-- Textbook availability, time devoted to direct instruction, opportunity available to student for academic participation, and achievement: Each of these factors usually results in higher student achievement. Textbook availability has been shown to be particularly important for children of lower social classes, and in developing countries.

The relative influences of family and school:

In most developed countries, family characteristics have a stronger effect on student's achievement than school characteristics. For lower social class children, and in developing countries, the relationship of family related factors to learning is not as strong as it is for higher social class children, and in developed countries. In some cases, family factors have emerged as equal to or even less powerful than school factors in their effect on performance.

Discussion, Limitations of the Studies, State of the Research

The reason why school factors are more important in student achievement in developing countries than is the case

in most developed countries, or why the school's effect is in some cases even stronger than that of family socio-economic status, could be due to less variation in the status of the families (home conditions and qualities such as reading materials) and more variation in school qualities. It could also be due to the importance of other factors such as culture of the society, or racial-ethnic-religious subcultural values which could diminish the effect of socio-economic status on children's achievement. These factors--ethnicity, race, religion, and cultural values--have not been studied, particularly in developing countries; their effect and interrelationships with other factors in affecting learning remains to be investigated.

Also, almost everywhere, studies of school achievement have dealt with the effect of traditional factors such as teacher's salary, class size, and per pupil expenditure. Only in the last ten to fifteen years in the developed, mostly capitalist, countries, particularly the United States, England, and, to some extent, Canada and Australia, studies of academic achievement have sought to identify the relationship of some variables of school social systems (such as academic norms and values prevalent in the school) to student achievement. Based on the available evidence, it appears that the developing countries and socialist developed ones have just started employing such a research approach.

Additionally, except for the developed countries mentioned above, particularly the United States, not many

multivariate, experimental, and longitudinal studies, and ethnographic ones (which examine the real teaching-learning situation and processes) are available, especially for less developed and for socialist countries. Even though we now know that studying the process of schooling and measuring the academic outcome is the best way to learn about the effectiveness of a school, it has not been possible to develop a complete scientific, universal or national, instrument to assess a school's quality and to identify with enough precision those school characteristics which produce high or low student performance. Thus, the findings reported and conclusions reached here should be viewed and interpreted with caution and with the consideration of the fact that application of a research result could have a strong effect upon people's lives.

If most studies, particularly for developed countries, have found home factors to explain more of the variance in student achievement, it could be due to the research methodology and the kind of proxies they have used to measure school quality. Even the comprehensive international studies of academic achievement (IEA work) have not examined, for example, the effect of students' perception of teacher's evaluation of their learning ability (on achievement). Studying school culture remains a real lack of possible source of explanation for the relative effects of school-home factors on achievement. If, for example, class size, teacher training, and some other school factors do affect learning in some

cases, but not in other cases, it is caused, perhaps, by the way these qualities are utilized in teaching-learning situations. (For example, a larger class could result in higher achievement if there is cooperation between students and students tutor each other. Class size and other school-teacher properties could affect student learning if the proper learning atmosphere is established, not just in the classroom, but also in the school and even in the whole educational system.) Also a student's academic achievement, as it is known at this time, is a function of the interaction of all personal, family, school, and societal factors; no factor or cluster of factors independently determines student's academic and other behavior.

Recommendations for Learning Theory

Obviously, the necessary physical conditions for learning have to be provided. Indeed, in developing nations--apparently at least until the difference of home and school in physical conditions diminishes as in the developed countries--the school facilities, including library, study hall, and reading materials are very important and needed. But what is as much as or even more important are the school's academic values and norms, role expectations, teacher-student and student-student interaction patterns, communicative factors, educational belief systems and the like, that interact with material factors and influence student learning.

Provision of learning materials is not enough. What is also important and necessary is change in educational

thinking, in viewing learning potential of students. The strong and one-sided adherence to classical/psychological learning theories should be re-evaluated and the belief in innateness of learning ability and individual differences in such ability has to be reconsidered. Teachers and other school people should view and judge the student as inherently able to learn, and believe in the strong effect of "significant others" and other social forces on student's performance.

Recommendations for Teaching Practice

Derived from the above recommendations, and based on the findings of the available research, it could be suggested that in the school a general academic climate of positive evaluation of students' learning ability and expectations for high achievement by all students should be established. This is particularly important for students of lower socio-economic background who usually have little or no academic help at home, and not even proper living conditions. Under such circumstances, a teacher's confidence in the learning ability of these students and high expectations for their achievement could be a great psychological help and result in higher performance.

A school's teachers should not label students as slow learners, low ability children, and the like, and should avoid homogeneous ability grouping. Using mastery learning techniques and cooperative learning methods could greatly improve achievement of students. Also, students should be

instructed in their mother tongue (as suggested by the available research evidence).

What is very important is not only belief in the learning ability of all students and high expectations of them, and commitment to excellence and equality in learning, but also the teacher's involvement in direct instruction. In other words, learning environment should be provided in all its dimensions.

Recommendations for Teacher Training

In teacher training programs everywhere, perhaps even more so in those countries with not enough school facilities and instructional materials, the importance of nonmaterial, contextual-cultural-social properties of learning environment, and use of mastery learning techniques, should be emphasized in the curriculum. It is necessary that psychological theories of learning and belief in the existence of a wide variation in the aptitudes of students be de-emphasized, particularly in light of the recently emerged powerful sociological, social-psychological explanations of learning supported by empirical evidence. It is important that sociological theories of learning also be given a place in the curriculum of teacher training institutions.

Recommendations for Sociological-Pedagogical Research

Research on factors affecting student learning should (more than before) apply social-psychological theories of

school learning discussed in chapter III. This in no way is saying or implying that other (psychological) theories should not be used. It means, however, that the social learning theories also should be employed in educational research as a means to some possible source of explanation for school failure and the persistence of inequality of academic achievement. The school's academic climate variables should be identified and their contribution to learning should be studied.

Ethnographic, experimental, and longitudinal research methods should be employed. Studying the influence of self-concept of academic ability; parental evaluation, expectation, and encouragement; ethnicity; and mastery learning techniques on achievement are indeed necessary. In fact, for all home factors examined in this work and for all countries, more research is needed.

Recommendations for Educational-Social Policy

It is very important that the suggestions given for change in educational thinking, in teaching practice, and in teacher training programs be implemented. However, because of the impact of home conditions on achievement, and since many, or most, people (including teachers and parents) still believe in the importance of family background in student learning (higher social class, higher achievement), and since this usually affects children of low social classes

and results in lower achievement by them, thus educational-social policy is needed to prevent such achievement levels. Perhaps this could be accomplished through temporary positive discrimination policies such as, for a period, admitting proportionately more children of lower social classes to higher education and providing them with financial aid. Members of "disadvantaged" families should have equal chance of entering into the job market and real opportunity to occupy high social positions. These families need to be provided with economic well-being and proper social-educational arrangements which could result in high level of academic performance by their children.

True, the society (any society!) needs different functions to be performed by "different" people (and this affects the society's ideology about people's learning ability and results in certain educational policies and practices) and the educational system itself contributes to the allocation of individuals to occupations. But why should only individuals of certain (lower) social groups end up doing low-paying jobs? If a society believes in the principle of social justice, the least it should do is to distribute inequality equally among various groups.

Teachers, also, should be given financial incentives. Even though teachers may not be able by themselves to lower the level of inequality of learning among students very much, they could at least lower it to a certain point. However, they need and deserve social recognition and enough

material support to become interested and remain interested in teaching for equality of learning by essentially all students.

A Final Word

(1) While academic learning is very important, other -- affective -- learnings in school (as a social institution) are at least as important.

(2) If strong emphasis on equality and excellence in academic achievement for all has undesirable consequences (for example, suicide as reported for some Japanese students), if supported by hard research evidence, then the question of excellence and equality in learning has to be reconsidered.

(3) Finally, while the student's equal right to learn should be respected, even more importantly the student himself/herself should be respected as a human being. This could result in self-confidence and even help the student to perform better academically.

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