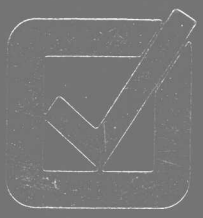
WORLD EDUCATION ENCYCLOPEDIA

Volume I

George Thomas Kurian



Facts On File Publications

WORLD EDUCATION ENCYCLOPEDIA

Edited by
GEORGE THOMAS KURIAN

Volume I
Major Countries
Algeria—Hungary

Facts On File Publications
New York, New York • Oxford, England

World Education Encyclopedia

Library of Congress Cataloging in Publication Data

Kurian, George Thomas.
World education encyclopedia.

Bibliography: p.
Includes index.
1. Education—Dictionaries. I. Title.
LB15.K79 1984 370'.321 82-18188
ISBN 0-87196-748-0 3 Vol. Set
ISBN 0-8160-2052-3 Vol. I
ISBN 0-8160-2053-1 Vol. II
ISBN 0-8160-2054-X Vol. III

British CIP data available on request

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

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Contributors

Ezzat Abdel-Mawgood		Jordan, Syria
Raymond S. Adams	Dean of Education Massey University Chairman of the New Zealand Council for Education Research New Zealand	New Zealand
Pat Alston	Department of History Bowling Green State University	World Education and World History
Phyllis Brady	Program in International Education Department of Education University of California, Santa Barbara	Mozambique, Sierra Leone
Antonio L. Buron	Department of Romance Languages Bowling Green State University	Guatemala
P. H. Butterfield	Department of Education University of Witwatersrand Johannesburg, South Africa	Botswana, Lesotho, South Africa, Swaziland
Michael Cassotakis		Greece
José Cintrón	University of California, Santa Barbara	Ivory Coast, Puerto Rico
John J. Cogan	Fulbright Research Professor in International Education Department of Education Hiroshima University Hiroshima-shi, Japan	Jamaica
Ana Goicoa Colbert	Research Fellow Center for International Higher Education Documentation Northeastern University	Spain
Josefina R. Cortes	College of Education University of the Philippines The Philippines	The Philippines
Richard Cummings	University of Wisconsin–Milwaukee	Brazil, Malawi
Wynn M. DeBevoise	Research Associate University of Louisville	Ecuador
Lionel Desjarlais	Professor Faculty of Education University of Ottawa Ottawa, Canada	Haiti
Julie Donnell		Austria
Denis Driscoll	Faculty of Education Queen's University Kingston, Canada	Canada
John P. Driscoll	University of Washington	Madagascar, Sierra Leone

Mikel G. Edwards	Columbia University	China
Everett Egginton	Associate Professor School of Education Univesity of Louisville	Ecuador
Paul-Albert N. Emoungu	Professor of Education School of Education Howard University	Zaire
Erwin H. Epstein	Professor University of Missouri at Rolla	Cuba, Peru
Irving Epstein	Assistant Professor of Education University of Missouri at Columbia	Hong Kong, Taiwan
Joseph P. Farrell	Department of Adult Education Ontario Institute for Studies in Education Toronto, Canada	Chile
George Flouris		Greece
John Georgeoff	Professor Department of Education Purdue University	Bulgaria, Yugoslavia
Margy Gerber	German/Russian Department Bowling Green State University	East Germany
Joaquim Ferreira Gomes	Faculdade de Psicologia de Ciencias de Educacao Universídad de Coimbra Coimbra, Portugal	Portugal
Hernando V. Gonzales, II	Department of Agricultural Journalism University of Wisconsin-Madison	Indonesia, Malaysia, Philippines, Singapore
Samir A. Jarrar		Egypt, Lebanon, Tunisia
Jin Eun Kim	Assistant Professor Educational Administration Catholic University of America	South Korea
Bragi Josepsson	Head Department of Education Teachers University of Iceland Stakkahlid, Reykjavik, Iceland	Iceland
Wajeha Kadom	Kansas State University	Iraq
Victor N. Kobayashi	Professor College of Education University of Hawaii	Japan
Botho von Kopp	Deutsches Institut für Internationale Pädagogische Forschung Frankfurt, West Germany	Czechoslovakia
Friedrich Kuebart	Institut für Pädagogik Arbeitsstelle für Vergleichende Bildungsforschung Ruhr-Universität Bochum Bochum, West Germany	Soviet Union
Clio Launiger		Antigua & Barbuda

Margaret A. Laughlin	Assistant Professor of Education University of Wisconsin- Green Bay	Costa Rica
George A. Male	Professor and Director Comparative Education Center College of Education University of Maryland	United Kingdom
Byron G. Massialas	Professor of Education College of Education Florida State University	Algeria, Cyprus, Egypt, Greece, Jordan, Lebanon, Libya, Morocco, Sudan, Syria, Tunisia
James E. Mauch	School of Education University of Pittsburgh	Papua New Guinea, Venezuela
Scott F. McNabb	Assistant Professor Postsecondary and Continuing Education University of Iowa	Thailand
Robert Meisner	Professor International Education College of Education Kansas State University	Iraq
Claudine Michel	Program in International Education Department of Education University of California, Santa Barbara	Dominican Republic, Ivory Coast, Puerto Rico, Senegal, Togo
Jamileh F. Mikati		Algeria, Lebanon, Syria
Paulos Milkias	Marianopolis College Montreal, Canada	Ethiopia
Wolfgang Mitter	Der Direktor der Abteilung und Vergleichende Erziehungswissenschaft Deutsches Institut für Internationale Pädagogische Forschung Frankfurt, West Germany	Hungary
D. G. Mulcahy	Professor of Education, University College Cork, Ireland	Ireland
Marie Neag		Romania
Carol Ann Preece		Antigua & Barbuda, Barbados, Dominica, Grenada, St. Lucia, St. Kitts-Nevis, St. Vincent and the Grenadines
Onny S. Prijono	Centre for Strategic and International Studies Indonesia	Indonesia
Richard R. Renner	Professor College of Education University of Florida	Colombia
Val D. Rust	Associate Professor School of Education University of California, Los Angeles	West Germany, Netherlands, Sweden

Taha Sabie	Saudi Arabian Educational Mission Houston, Texas	Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates
Kim P. Sebaly	Comparative and International Education Kent State University	India, Nepal, Sri Lanka
Roy Shuker	Lecturer in Education Massey University New Zealand	New Zealand
Daniel Sifuna	Faculty of Education Kenyatta University Nairobi	Kenya
William A. Spencer	Associate Professor Auburn University	Bolivia
Jacob L. Susskind	Pennsylvania State University	Switzerland
Joyce Thompson	Territorial Education Officer Port Maria, St. Mary Jamaica	Jamaica
Janusz Tomiak	Senior Lecturer in Russian/ Soviet Comparative Education Institute of Education University of London London, United Kingdom	Poland
Carlos Alberto Torres	FLACSO Facultad Latinoamericana de Ciencias Sociales Mexico City, Mexico	Argentina
Solveig M. Turner	Director Center for International Higher Education Documentation Northeastern University	Spain
Ipek Ural	University of Witwatersrand Johannesburg, South Africa	Turkey
Henk Van Daele	Secretary Comparative Education Society in Europe Brussels, Belgium	Belgium
Yee Sze-Onn	Institute of Education Singapore	Singapore
Yueping Sun	Woodrow Wilson School of Public and International Affairs Princeton University	China
Jules Zimmer	Program in International Education Department of Education University of California, Santa Barbara	Mozambique, Uganda

ACKNOWLEDGMENTS

Every large reference work is a triumph of collaboration. Compilation of *The World Education Encyclopedia* has involved the labors of over 100 men and women—many of them the most outstanding scholars in the field of comparative education—of varying national backgrounds, all yoked together in a long-drawn-out and difficult project. I acknowledge a deep debt of gratitude to these fellow workers who so cheerfully and patiently bore the importunities of a nagging editor and the pressures of changing schedules.

A special word of thanks goes to Professor Patrick Alston of Bowling Green University, who served as editorial adviser to this project. A true polymath whose interests cut across many disciplines and one who is as much at home in education as in linguistics, history, philosophy and military science, Pat also is a warm and unpretentious human being who never takes credit for the things he does or the help he gives. He was as much an asset to this project as a native scout would have been to a hunting expedition in an unexplored forest.

Within Facts On File, Edward W. Knappman, publisher, was a source of unfailing strength, inspiration and encouragement. Kate Kelley brought to the project a truly Yalian ebullience, and Joe Reilly a professional competence and integrity that has gained my respect over the years. William D. Drennan did an excellent job of line editing and copyediting. Michael Laraque, Eleanor Wedge and Lorna Stebbins made valuable editoral contributions to the project.

INTRODUCTION

The World Education Encyclopedia is designed as a descriptive survey of the national educational systems of the world. It is a global report on the state of education in the closing years of the bimillennium. It describes not so much educational theory (which is of interest only to educators) but the actual working of the systems, which concerns all educated people. In doing so, it defines the levels and characteristics of the systems; their growth, especially since World War II; their legal, political and social foundations; their contributions to national welfare; their bases and their biases, their problems and their performance. The encyclopedia compares but does not evaluate; it informs but does not criticize; it analyzes but does not pass judgment.

Education is the largest single activity in the world, involving over 700 million students and 31 million teachers at all levels, not counting millions of others in educational support activities. But its importance stems not merely from its size but also from its role as institutionalized knowledge—the principal repository, producer, disseminator and transmission belt of all forms of knowledge. The most significant feature of global education in the 20th century is not so much what the French call *l'explosion scolaire* ("pupil explosion"), but the knowledge explosion, which has expanded the catchment areas of learning so fast that it takes only a decade now for the state of the art in any field to become obsolete. The modes of communicating that knowledge are also changing and becoming more sophisticated; knowledge now can be dispensed technologically and electronically. Teachers and formal school structures are becoming less important, and the conventional age limits on the learning process are becoming blurred. Change is not only becoming the only constant in educational systems, but also adjustment to change and the upgrading of skills are being incorporated into the very fabric of instruction. A second notable feature of education is the growing homogenization of curricular materials and standardization of teaching techniques. It is proper in this sense to speak of a global village school. Education is functioning as a major promoter of the migration of ideas across borders. It is possible now for a student from, say, Papua New Guinea to go to France or the United States and continue his or her schooling without having to relearn or unlearn anything. Certain educational philosophies have become universally accepted, and when one speaks of innovation, it does not imply so much a radical break with the past or convention as a gradual refinement and an incorporation of ideas whose worth has been proved in other countries. The third significant feature of global education is that it is becoming the cause as well as the result of a growing egalitarianism and democratization in all countries. It is generally accepted that education is an engine of modernization; it can break barriers and raise consciousness in politics and society. Education has spin-offs and ripple effects whose influence extends beyond the classroom—horizontally across all layers of society, and vertically across layers of time. While enhancing individual worth and dignity, shared learning also can become a strong bond among individuals, creating new social and professional castes or classes.

Education has long been recognized as the central element in the development of human personality. But in the 20th century, it has acquired a new range of functions. It is no longer merely one of the sectors of national life—like agriculture or industry—but a multidimensional process that energizes and pervades all other sectors. As the 1948 UNESCO Declaration put it, "Man is both the end and the instrument of education."

In almost all countries, education is designed to fulfill three well-defined functions:

- *As a basic human need.* People require education not only for the structured information in the core subjects of the curricula but also as a tool for gaining attitudes, values and skills on which they can build later. The former may be called surface learning and the latter deep learning. Deep learning triggers learning potentials and enables students to respond to new opportunities without formal guidance, to participate in society and to respond to change.
- *As a means of meeting other basic needs.* Education influences and is in turn influenced by other basic needs, and it also serves as a catalyst in creating needs where none existed before. This is the upward pull or mobility that raises a country's level of aspirations and expectations. A country's quality of life is the sum total of these aspirations and expectations, and it is directly related to its quality of education.
- *As an activity that sustains and accelerates economic development.* Education prepares and trains skilled workers at all levels to manage capital, technology, services and administration

in every sector of the economy. Economists believe that long-term returns on investment in education exceed returns on alternative kinds of investment, and these returns are not subject to cycles and recessions. Second, through trained personnel, developed methodologies and institutional settings, education facilitates the advancement of knowledge in pure and applied fields. Third, rapid economic growth, technological advancement and social change tend to tear down traditional social and religious support systems. Education enables individuals to make the transition to new social orders by providing self-understanding, better knowledge of the choices available and a critical appreciation of the nature of change itself. Thus education becomes a kind of future-shock absorber.

Education, however, operates in every country under a variety of constraints, the most powerful of them being political and economic. Education is certainly most effective in settings in which there is a general climate of freedom as broadly understood, a composite of political, academic and economic freedoms. But experience suggests that even in the absence of such freedoms, education does not necessarily act as an agent for maintaining or reinforcing the status quo. On the contrary, widely diffused educational activities provoke and facilitate change in prevailing sociopolitical conditions by sowing seeds of discontent, by suggesting alternatives and by generating a clearer understanding of political and social rights. When it does so, education can become an explosive force in its own right. Through the ages, the enemies of freedom have echoed the words of Governor Sir William Berkeley of Virginia in 1671:

> I thank God there are no free schools, and I hope we shall not have them these hundred years, for learning has brought disobedience and heresies and sects into the world ... and libels against the best government.

State of Educational Development

The ideal education has always remained elusive in both theory and practice, even more so in the latter. Because education is by its nature diverse and responds to the varying needs of learners, it resists neat categorizations. But the key word appears to be "responds," and many efforts have been made in recent years to make education more "responsive" or "relevant" to the needs of changing societies. Many of these efforts were merely trendy and have withered on the vine; the few that gained roots in the system concentrated on modes of delivery rather than on content or format.

Models of delivering education—formal, informal, nonformal—are conceived today not as alternatives but as complementaries. Formal education—the institutionalized, graded and hierarchically structured system covering primary, secondary and tertiary levels—is the most prominent mode of delivery. Informal education—the unorganized, lifelong process by which everyone acquires knowledge, skills and attitudes through experience, contacts, reading, watching, etc.—is coterminous with life itself but cannot function as a surrogate for formal training and instruction. Its major disadvantage is the lack of a corrective or evaluative mechanism. Nonformal education—systematic learning activity carried on outside the formal system—provides a second chance to those who have missed formal schooling. It enables the rural and urban poor to acquire a wide array of skills either directly associated or not associated with their work. It provides minimum rather than maximum education and often is associated with development rather than education.

All governments acknowledge their responsibility to provide basic education to children within certain age limits. Universal, free and compulsory primary education remains the watchword of all ministries and departments of education, and in many countries this goal is an attained reality. But even in countries where education is neither compulsory nor free nor universal, this goal remains enshrined in the constitution and the statute books. The nonschooling gap—the differential between the school-age population and the actual enrollment—has narrowed worldwide during the past four decades, except in the case of the least developed countries. According to World Bank figures, lower-income and lower-middle-income countries achieved only a 65% enrollment ratio by 1985.

Even where education is universal and compulsory, it is not equal. A large percentage of children throughout the world are enrolled in private—many of them elite—schools. Data on private education are incomplete because of the diversity of definitions of private institutions. There are at least five countries where the proportion of students in private primary schools was 50% or more, and 14 countries in which the relative proportion was 25% or more. Similarly, seven countries had 50% or more private enrollment throughout the system and 28 countries had 25% or more. There are also marked variations among regions. Private education is strong and flourishing in Latin America and Africa, while it is only marginal in Asia, Europe and the Middle East.

Quality of Education

Statistics describe only one dimension of the educational system. There is another one, which may properly be described as an extension of the national

psyche. Education is one of the most intensely national of activities, with lateral roots in the country's culture, religion, society and politics. Because this aspect of education also is the one most susceptible to manipulation, it has become one of the pet hobbyhorses of educational planners.

Implied in this assertion of educational nationalism is the concern that education must produce good citizens and must be relevant to national needs. The issue of relevance is derived from the function of education in identifying and sustaining the historical, cultural and religious ethos of a country. It therefore involves rethinking the substance of education to assert the national character in the direction of authenticity. The concept of relevance sometimes is extended to define the educational needs of particular groups within a country, such as women, handicapped and ethnics.

In countries where a foreign and colonial language has become the medium of instruction, national pride requires the use or reactivation of native vernaculars in at least the lower primary grades. Although the issue is a culturally sensitive one (as in India, where 14 native languages compete as much with one another as with English), the use of native languages has generally been counterproductive in an educational sense, denying the student access to the vast corpus of learning mainly in Western languages, such as English, French and German. It is interesting to note that only a handful of the former colonies in Asia and Africa have succeeded in replacing Western languages with native ones in the educational system even after the lapse of several decades. Linguists go so far as to suggest that many hundreds of African and Asian native tongues will totally die out within the next century as a result of their exclusion from the classrooms.

The belief continues to prevail that relevance can be engineered into the educational system through the designing of new curricula and syllabi, the production and distribution of new learning materials and the training of teachers in new techniques. Periodically, government commissions are appointed—as most recently in the United States—to formulate new goals and guidelines for educational development. Whether the reports of these commissions are ever implemented, they provide the educational and comparative historian with thoroughgoing descriptions and analyses of the systems they survey.

Educational Problems

Despite substantial and impressive quantitative and qualitative progress over the past 40 years, education in all countries is beset with five major problems: inequalities in educational opportunities, internal inefficiencies, external inefficiencies, management capabilities incommensurate with the complexities of the system and insufficient finance. These issues are further explored as follows:

Inequalities in Educational Opportunities

In 1948 the United Nations adopted the Universal Declaration of Human Rights. Article 26 of this document stated: "Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. . . . Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit." For the first time in history, education was elevated as an inalienable right of every human being. No government has ever contested this right.

According to available statistical data, at least 1 billion people, including 300 million children, are unable to exercise, or have never exercised, this right. In developing countries, less than 68% of children between the critical ages of six and 11 are enrolled in school and, of them, only 50% reach the fourth grade. The enrollment ratios of the 12-to-17 and 18-to-23 age groups are 42% and 12%, respectively. Seven Latin American countries, 28 African countries, and 14 Asian nations are among the least educationally developed nations in the world. In addition, there are unequal educational opportunities within countries, based on gender, socioeconomic status, ethnic background and geographic region. Of all the disparities, none is more glaring than discrimination based on gender. Aggregate data show wide disparities in male and female enrollments in developing countries compared with virtual parity in developed countries. For the age group six to 11, the rate was 72% for boys and 56% for girls; for the age group 12 to 17, the relative rate was 44% and 32%; and for the age group 18 to 23, it was 11% and 6%, respectively. There are individual countries where the rates are much lower. Of all the children enrolled in the first grade, the percentage of females was 16% in Afghanistan, 22% in Nepal, 29% in Chad and 34% in Pakistan.

The effect of other factors on enrollment, such as regional differences, urban or rural location, socioeconomic status and ethnic background are not always clearly distinguishable, since they tend to coexist. A detailed distribution by age level shows a gap of at least 40 percentage points between urban and rural children in countries such as Brazil, Nigeria and Indonesia.

Efforts to expand and equalize educational opportunities face many constraints. The most obvious one is the lack of financial and human resources. Next, geographic conditions—vast distances, low-density population, harsh environment, and poor communi-

cations—make the construction of schools, the supply of books and equipment, and the provision of qualified teachers a difficult task. Cultural and religious prejudices may restrict the education of females, especially in Muslim countries. Sometimes, for social or economic reasons, some groups are apathetic toward education and consider it not worth the opportunity costs involved.

Equal access to educational facilities does not necessarily ensure equal use of those resources. Many factors influence the achievement of specific kinds of learning outcomes. Some of them are related to the school environment—curriculum, instruction, teachers, instructional materials, extracurricular programs and physical facilities. But there are extramural factors as well, such as the student's family, health and economic status. Disadvantaged children suffer other handicaps for which they are directly compensated only in few countries.

Internal Inefficiencies

The problem of efficiency deals with the flow of students through the system with a minimum of waste and the quality of learning achieved within the classroom. Wastage in the flow of students is manifested quantitatively in the form of dropouts and repetition, while the quality of learning is determined by the inputs and outputs of the education system.

UNESCO statistics indicate some improvement in the survival rates—the percentage of pupils enrolled in the first grade who reach higher grades—but, even so, only 40% of the first-grade cohort in developing countries reach the fifth grade, the point at which UNESCO assumes that permanent literacy may have been achieved. The rest simply drop out of school, constituting the detritus of the educational system. The ripple effects of dropping out are felt not only throughout the remaining years of the dropout, but also cumulatively on the job market, where it exerts a downward pull on the general achievement level of job seekers. Even more serious is wastage caused by repetition, estimated to be between 15% and 20% of primary enrollment. It has been said that the number of children admitted to primary school could be increased by the same percentages with no increase in costs if repetition could be reduced in school systems. Because there is a rough correspondence between the per capita income of a country and the internal efficiency of its educational system, the poorest countries pay most dearly for inefficiency.

Economic profiles of dropouts and repeaters show that these failures are most common among students from low socioeconomic backgrounds. Similarly, they are more prevalent in rural than in urban areas, and among females than among males. Inefficiencies in student flow are also accompanied by inefficient use of scarce teachers and student space. Many other factors also influence the ratio of students to teachers, such as the size of classes, the load—the weekly contact hours—of teachers and the weekly class periods. There are wide variations in student–teacher ratios even within a country, ranging from 19 to 69 in primary schools and nine to 39 in secondary schools. Likewise, there is wastage in the use of space when physical facilities are assigned to classes that are smaller than the norm, or when facilities are used only part of the time during which a school is open.

The second aspect of efficiency involves the evaluation of the quality of learning, and hence is more controversial. It is necessary to start with a definition of the three terms most often used in a discussion of quality of learning: input, output and outcome. Input refers to factors such as size of class, qualifications of teachers, material facilities and years of schooling. Output refers to the learning achieved—knowledge, skills, behavior, attitudes—most commonly measured by tests and examinations. Outcome refers to total value added by the educational system to a country's productive capacity. In short, there is a distinct relationship between what goes into the educational system and what comes out of it, and by enhancing the former, it will be possible to upgrade the latter.

Recent studies draw three conclusions on what types of input produce optimal learning:

- Learning is influenced by both out-of-school variables—educational level of parents, socioeconomic status, nutrition, health care, child-rearing patterns and preschool education—and in-school variables, such as textbooks and teachers.
- School variables are more influential in this regard than out-of-school variables.
- Positive effects of school input frequently are greater on children from lower socioeconomic background than on those from higher backgrounds.

Improvement of school efficiency thus is seen as a direct consequence of improvements in school inputs, particularly curriculum, teaching styles, instructional materials and the use of audiovisual and nonprint materials.

Curriculum development is considered a principal element of educational reform, although it has not always resolved educational problems. Where it fails, usually it is because it is confused with revision of syllabi or updating of the outline of topics. Because curricular innovations frequently are misunderstood by the consumers of the educational system, they are either resisted or ignored. Often, changes in curricula consist simply of replication of programs in other countries. The transition of pilot curriculum projects

to nationwide adoption is made without providing for the necessary complementarities, such as teachers, textbooks and physical resources. Frequently they do not include monitoring and evaluation procedures to enable necessary revisions to be made.

Proper curriculum development involves an assessment of educational objectives, sophisticated analysis and organization of content, and the design and preparation of corresponding textbooks, instructional materials, training courses and educational facilities. The content of curriculum should reflect the structure of knowledge—that is, the principal concepts, relations and theories of various disciplines. It also should incorporate the dynamics of the generation of knowledge, such as observation, measurement, classification, induction, deduction, verification and appreciation. The level of presentation should match the stage of development of the learner. It should draw on the environment of the learner for the demonstration and application of its content. Finally, it should be uniform for a given territorial unit, giving all students equal opportunities to advance to higher levels.

Curriculum reform also extends to improvements in the processes and styles of teaching and learning, involving discovery, experimentation and practical activities. A sound curriculum maintains a balance between theory and practice, permits learners to interact with physical objects, stimulates curiosity and implants motivation. It also provides the learner with conceptual structures to assimilate information and a means of communicating and interpreting that information. The expository method is just as effective in imparting knowledge as the discovery method, although the latter is more useful in the development of higher cognitive faculties. A well-devised curriculum also permits learners to proceed at their own pace, neither slowing down, nor being slowed down by, other learners.

Teachers constitute the second major school input. Teaching skills are positively related to student performance. Although teacher qualifications—certification, credentials, educational attainment and knowledge—are the most frequently used measures of a teacher's classworthiness, skills in specific subject areas are just as important. Students have positive expectations of their teachers, and the personality traits of teachers should meet and fulfill these expectations. Despite the known effects of teachers on educational efficiency, most developing countries have a high percentage of unqualified teachers and have poorly designed and equipped teacher-training and in-service programs. In many countries, the professional self-image of teachers is adversely affected by their low salaries relative to the remuneration of those who perform comparable work. The profession, therefore, suffers from high turnover, particularly among male teachers.

Textbooks have been found to be the third most consistently positive determinant of academic achievement. It is also one of the most expensive items in the educational budget. In the more advanced countries, textbooks are provided free to all students, but in the less developed ones, students have to buy them or share copies with other students. It has been determined that students with textbooks perform 12% to 15% better in tests than those without them. A number of conditions make for an efficient program in producing instructional materials: consensus on curricula and syllabi; expertise in the design, editing and evaluation of materials; frequent revisions; and the training of teachers in the use of these materials. Other factors, such as printing and production capability, availability of printing paper and means of distribution also are important.

The fourth school input is the use of media, including audiovisuals such as radio, television and cassettes. The media improve educational efficiency by improving the quality of instruction in traditional subjects, by providing instruction in subjects for which qualified teachers are not available, by supplementing the curricula and by reducing repetition among slow learners. Media also can reduce education costs or provide more instruction for the same cost.

External Inefficiencies

The external efficiency of an educational system involves the interface between academic and vocational education and between school and work. It looks at education as a tool rather than as an end in itself, as a feeder into the economic stream rather than as a reservoir of knowledge, in terms of earning potentials rather than learning potentials.

First, it is universally acknowledged that there can be no economic growth without a trained labor force. The "power" in manpower comes from education. One of the functions of education is to determine, even to forecast, the types of skills required in an economy, to design the best processes of transmitting those skills and to ensure that, once acquired, those skills are properly deployed and used. The percentage of unemployment in a country is, therefore, a reflection not only of its industrial system but also of its education. Somewhere, the educational planners had miscalculated the absorptive capacity of the job market and had failed to turn off the faucets. As long as diplomas and certificates are passports to jobs, there must be a logical parity between the two; otherwise, education becomes externally inefficient, leading to an enormous waste of human resources.

In a deeper sense, the linkage between work and education performs a more significant function. Work experience and skill acquisition help to form productive habits and attitudes. They introduce students to the fulfillment of work schedules, the discipline of

work goals, the demands of subordination to a hierarchy of authority and the budgeting of time. The school occupies an intermediate place between home, with its intensely personal affections and value systems, and the office or factory, with its depersonalized work ethic; the school's job is to mediate between the two. Education also creates and perpetuates the artificial distinction between blue- and white-collar jobs, granting managerial work a superior imprimatur than manual work. The greater the number of years spent in a formal academic setting or the higher the professional degree, the more the status, the greater the recognition and salary.

There is strong evidence that education increases the productivity of a national work force. A study of 20 countries has shown that the social rate of return on educational spending is 26.2% in primary education, 13.5% in secondary education and 11.3% in higher education. Educated workers are more achievement-oriented, more self-reliant, more adaptive to new situations, and above all more trainable. It is only fair to assume that these qualities were imparted directly by the educational process.

In an effort to provide preemployment training in broad categories of skills before the majority of students leave school at the end of compulsory education, many governments have diversified the secondary curricula by introducing practical or occupational subjects into an otherwise completely academic program. Two models are prevalent. The first introduces practical subjects—industrial arts, home economics, agriculture—at the lower secondary level to provide prevocational orientation and to develop a positive attitude toward work. The second model includes a general academic stream, plus one or more specialized occupational streams, usually at the upper secondary level. Diversified schools have been a popular alternative to purely academic ones, but their track records have been patchy because they are complex and expensive, requiring new teachers, new curricula, and additional physical resources. If diversified secondary schools are inappropriate for training middle-level skilled manpower, can technical and vocational schools do better? Experience has not resolved the controversy about the formation of skills within the formal system, called, by its opponents, "the vocational school fallacy." Part of the problem lies in the difficulty of forecasting accurately the requirements for specific skills in the economy. The viability of the industrial and technical school depends to a large extent on the pace of industrial growth. It also depends on the vigor of relationships among schools, employers and government planners. Sometimes, employers provide on-the-job, project-related training in which the trainees are also employees, thus reversing the usual order of training first, job later. A different approach is followed in some countries in Latin America, where the government itself sponsors apprenticeship programs in cooperation with industrial firms. Appropriately, many of these programs are administered by the Ministry of Labor and not the Ministry of Education.

Management Incapabilities

Educational management is not much different from other forms of management: It is subject to the same personnel and financial constraints and must be subject to the same kind of scrutiny and standards. Education is the largest public-service establishment in all countries, but the responsibilities for management often are dispersed horizontally among an increasing number of agencies and vertically among central, state and local authorities, while operational responsibilities devolve on school and college principals, presidents or rectors of universities, and directors of other types of institutions. On the macro level, eductional management is determined by considerations of public administration and politics; on the micro level, it is affected by prevailing educational management philosophies, bureaucratic inertia and community values. Educational management has a high degree of visibility and accountability; on one end of the spectrum from the legislature and the local elected representatives, and on the other end from the parents and concerned religious and social groups. These checks and balances keep the administrators of the educational system on their toes in most countries; unlike other sectors, education is not subject to a sudden or scandalous loss of efficiency through management lapses. Among all sectors of national life, it is also the least subject to political interference on the administrative level, even where educational issues are politically sensitive. Education manages to survive even the worst misgovernments.

The problems of educational management are of a different order. Simply, there is too much management and too little planning. In many instances education develops as an isolated activity and has not yet found a place in the mainstream of policymaking. The knowledge base for policymaking has also been skimpy and often unreliable. Inadequate information on economic, demographic, cultural and political conditions and constraints, and on the dynamics of the educational system as well, has been lacking. Often, goals are set without any regard for clear-cut strategies for achieving them. Too much attention is being devoted to quantitative expansion and too little to qualitative change. The core of the educational system appears to be highly resistant to change, and most innovations introduced periodically in modern times have been either transitory or cosmetic or both. Like social engineers, educational planners are among the

most frustrated people in the world.

One unmistakable trend in many countries is the growing centralization of educational policymaking. Originally education was a local responsibility, and most federal constitutions in the world treated it as such. Since the end of World War I, the process has been reversed; the central governments have appropriated more and more educational functions formerly exercised at the state and local levels. Even in the United States, where the Constitution delegates educational powers to the states, a federal Department of Education was established in the closing years of the Carter Administration, thus formally signaling the acknowledgment of federal ascendancy in this field. In some countries, central government involvement is necessary to preserve the national character of the educational system and to hold back divisive local and parochial interests. The central hegemony over education is moderated to some extent by intermediate links in the chain of educational management, such as school inspectors and school boards. They monitor the educational system and are responsible for their smooth functioning. Institutions of higher education are semiautonomous in the vast majority of the countries, and their management is subject to fewer public controls.

Financial Insufficiencies

Money makes the mare go. Education is no exception to this adage. Despite its obvious primacy in the councils of nations, education has to compete with other national sectors for its share of the public budget, and more often than not, it loses out to other ministries, such as defense, industry or health. Educational funds are also among the first to be pruned in times of financial crises, because educators tend to be less vociferous lobbyists than representatives of other sectors.

Financial resources allocated to education are not restricted to public revenues. They include expenditures borne directly by parents for books, clothing, etc., and contributions from local communities, donations from philanthropists and foreign aid. In some countries, particularly in Latin America, the private and religious education sectors, supported by fees and occasionally by supplementary government subsidies, generate a substantial portion of educational funds. As a result, it is difficult even to estimate the total outlay on education in any one country, let alone the world. But in most instances, it will be safe to assume that public funding covers between 80% and 90% of all educational funds.

The most common yardsticks of educational expenditures are as percent of GNP and as percent of the national budget. UNESCO has recommended a figure of 4% for the former but has no recommendation for the latter. Between 1960 and 1985, both percentages rose steadily, but the averages mask wide variations among countries. Data compiled by the World Bank show a variation between 0.5% and 12% of GNP and between 3.8% and 36% of aggregate public expenditures. There is a cost escalation factor in any effort to improve the quality of education, and a corresponding rise in per-student or per-unit costs. Generally, educational expenditures represent a disproportionately heavier burden on the treasuries of low-income countries, even though richer countries spend more per student and provide a much better education. Educationally as economically, the rich get richer and the poor get poorer.

The variation in the pattern of expenditures among individual countries is so great that no consistent trend can be discerned. Developing countries spend a larger proportion than developed countries on primary education, a smaller proportion on secondary education and about the same proportion on higher education. Low-income countries spend a higher percentage on primary education and a lower percentage on higher education than middle-income countries. The proportion of expenditures on primary education ranges from 23% to 71%, that on secondary education from 8% to 60% and that on higher education from 2% to 57%. Per-pupil expenditures rise with each level of education and account for the wide disparity in budgetary allocations.

Education is a labor-intensive activity where economies of scale are not possible. Finance, therefore, is likely to prove the major constraint in educational development in the future. Such a constraint will operate more stringently in postprimary or postuniversal, free and compulsory education. It will make education in the 21st century even more of a pyramid than it is now, with clearly marked echelons of educational achievement. Primary education will be for all, secondary education for the many and higher education for the few.

Compilation of *The World Education Encyclopedia* has taken over three years and the dedicated collaboration of close to 100 people. Together we have made every effort to make this encyclopedic survey of global education as accurate, authoritative and useful as possible. Nevertheless, inadequacies and shortcomings are inevitable in a work of this size, and I must assume full responsibility for them. If they are brought to my attention, it will be possible to correct them in the next edition.

George Thomas Kurian

ORGANIZATION

The way information is organized in a reference work is as important as the information itself. It makes the work, in computerese, user-friendly. The structure itself—the way information is sliced or the pieces of it reassembled—can provide new insights to the reader. It can add value to and make usable what otherwise would be a mass of disorganized facts. In a comparative work such as this, this principle is even more important, for it provides a framework for comparison, deduction and analysis.

The chapters in this encyclopedia follow a standardized but not rigid format. It should, however, be borne in mind that information is so skimpy and sparse in the case of certain countries that it cannot be stretched to conform to the outline. The authors and the editor have made every effort to fill in the gaps wherever possible, but even so, there are gaps in some chapters corresponding to gaps in the original sources of information.

The statistical numbers in the Basic Data are taken from the UNESCO Statistical Yearbook 1984 and assembled by the editor. The data in the chapters themselves sometimes are of a different vintage, depending on the authors' sources. There might be some discrepancies between the two sets of data because they refer to different time frames.

The countries themselves are divided into major, middle and minor. There are no strict definitions of these terms; in the case of this encyclopedia, the availability of information was the only criterion used to make the divisions. In the case of countries such as Vietnam and Kampuchea, where very little educational information is available even within the countries, there was no choice but to include them in the category of minor countries. All major countries follow the information schedules closely, middle countries follow the outline rather loosely and minor countries generally present the information in no particular order.