Empirical Studies on the Quality of Primary and Secondary Education:

An Annotated Bibliography

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This publication series serves as an outlet for background products from the ongoing work program of policy research and analysis of the Education and Employment Division in the Population and Human Resources Department of the World Bank. The views expressed are those of the author(s), and should not be attributed to the World Bank.
This annotated bibliography was compiled as a background document for the forthcoming World Bank policy paper on primary education, "Improving the Quality of Primary Education in Developing Countries".

The main emphasis of the data base is on empirical research at the primary level, rather than on theoretical work. It includes studies that provide examples, case studies, and original data to illustrate points made in the policy paper. The main priority is given to articles, books, and reports on primary education, but research on secondary and tertiary education is included, particularly when relevant to earlier levels of schooling.

As this data base constitutes a useful research tool on primary and secondary education, it is being released in the present annotated bibliographical format to increase its circulation and accessibility. All documents have been assembled in the primary education library of the Education and Employment Division, to which call numbers refer; copies of non-confidential documents may be requested from PHREE. A diskette version of the data base is available that can be read and searched using the commercial software "Procite" on an IBM PC. Documents are also, for the most part, available in the Bank's libraries or in other public libraries. Those marked "processed" refer to mimeographed, non-published, reports whose distribution may be more restricted.

Each entry provides a complete citation to the reference, index terms and -- for most entries -- an abstract. When useful, a note is added on the methodology of the study or on its geographical focus. The subject and country indexes reference the citation by its page number.

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Macroeconomic policies have a direct impact on the ability of a nation to provide vocational education and training efficiently.

call number: 286.

vocational education and training/policy/earnings/salary structure.


(The study used individual clinical interviews to identify the strategies used by 48 Nigerian schooled children from grades 1-4 and 47 Nigerian unschooled children from ages 7 through 14 years to solve a broad range of addition and subtraction problems.)

The results revealed that the performance of schooled and unschooled children was similar, although unschooled children used the more advanced strategies at older levels than schooled children. As age or grade level increased, solution strategies of both groups of children moved from direct modeling strategies to number of facts learned, both at the recall level and derived from other facts. Children performed significantly better when problems were presented in their native language than when they were presented in English.

call number: 254.

mathematics/educational benefits/second language learning/research report.


Most of this paper deals with statistical analysis issues. However, the paper also examines several large-scale studies of school effectiveness done in Britain. The assessment of school effectiveness is considered from the viewpoint of statistical modelling. A variety of models are applied to a set of data. The authors argue for the general use of variance component or "random parameter" models for the analysis of studies involving clustered observations. For the data examined, the model which regresses school mean outcome on school mean intake (i.e. the "means on means" model) is shown to give estimated school effects considerably different from those produced by other models.

call number: 108.

(48 primary school teachers from Nigeria were involved in the study. The study was designed to investigate the causes of teachers' apathy towards equipment and to verify possible links with technophobia.)

Results yielded only inconclusive evidence of technophobia. The subjects demonstrated lack of knowledge of educational technology (equipment) and mere traces of technophobia. More rigorous research is suggested in this area.

call number: 86.

teacher training/primary education/technology/research report.


(The findings are based on an ethnographic study of one secondary school in Nigeria, which included the development and administration of a questionnaire to 153 students. The study also used data generated from a survey of 17 Chemistry teachers in four different schools in the city of Ibadan, Nigeria.)

This paper summarizes results of a study of the influences of examination policies on chemistry teaching practices in Nigerian secondary schools. The study reveals ineffective communication about educational goals among ministry officials, administrators, and teachers; lack of supervision; autonomous choices of content by teachers, irrespective of published syllabi and a paucity of resources for instruction.

call number: 68.

chemistry/examinations/policy/teaching practices/teaching conditions/research report.

Alexander, Leigh; Simmons, John (1975). The Determinants of School Achievement in Developing Countries: The Educational Production Function. Washington,

(This paper reviews the literature on educational production functions for developing countries and suggests policy implications. While the limitation in the estimation procedures suggest caution in interpreting the results, the results indicate that few school inputs have the effect on achievement test scores they were thought to have had. Full paper filed under "School Effects on Achievement".)

call number: 102.

academic achievement/socioeconomic status/educational policy/input output analysis/school characteristics/research report.


(Nine countries participated in the study, which focused on activities in classrooms, grade 5 through 9: Canada, Australia, Germany, Hungary, Israel, Korea, Netherlands, Nigeria, and Thailand.)

Six generalizations were derived from the study: 1) Within countries, teachers differ greatly in what they teach relative to what is tested; some students had the opportunity to learn the content related to test items two or three times more often than other students, 2) Teachers are inconsistent in their practices from day to day, 3) The nature of classroom teaching is similar in all countries, 4) Few if any variables can compensate for or overcome the effects of poor prior learning and attitudes on future achievement and attitudes, 5) Students perceptions of their classrooms influence their achievement and attitudes, and 6) Classroom activities and teacher behaviors tend to exert virtually no influence on student achievement and attitudes.

call number: 14.

academic achievement/classroom activities/student attitudes/teacher behavior/research report.


(This paper compares practices in grade 5 classrooms in Thailand, Korea, Australia and Hungary.)

call number: 98.

class size/class activities/student characteristics/teacher student relationship/teaching practices/academic achievement/research report.

(This document reviews research on access to schooling in Africa, Latin America and Asia.)

call number: 209.

school enrollment/school attendance/efficiency/family-community characteristics/sex differences/educational equity/economic development/rural-urban factors/student characteristics/research review.


(This paper examines the use of instructional hardware in primary school classrooms in countries throughout the world. Descriptions of the use of radio are particularly complete.)

call number: 197.

technology/learning/radio/television/teacher behavior/family-community characteristics/computers/computer assisted instruction/costs/teacher training/research review.


(The sample consists of nearly 2,000 employees from the wage-labor force of Nairobi.)

A comparative cost-benefit analysis of private (harambee) and government lower secondary education is conducted as a means of assessing the efficiency and equity implications of subsidies of secondary education in Kenya. Private returns are shown to be substantially higher for those educated in government schools: costs are lower than in harambee schools due to subsidies and returns are markedly higher. The higher earnings of government than of harambee-leavers is shown to be due to their higher levels of cognitive skills. Simulations with the cost-benefit model indicate that to eliminate the excess demand for places in government schools user fees would have to be raised markedly. The revenue implications are shown to be substantial. Though a simple profit model shows the subsidies to be highly regressive, a uniform increase in user fees in government schools would have an adverse effect on the enrollments of students from relatively low income backgrounds suggesting a need for a scholarship or loan program to accompany any increase in fees.
call number: 186.

private schools/educational efficiency /educational equity/ comparative analysis/cost analysis/socioeconomic status/test performance/rates of return/income/research report.


(Educational plans from the following countries are reviewed: Botswana, Burundi, Comoros, Kenya, Lesotho, Mauritius, Senegal, Sierra Leone, Swaziland, Tanzania, Tunisia and Zambia.)

call number: 213.


(The study uses a sample of 1323 5th grade students in 41 schools in urban areas of Columbia.)

call number: 121.

academic achievement/private schools/preschools/teacher characteristics/facilities/school management/school resources/ research report.


(The sample consists of 709 sixth grade students in 43 different schools in Peru.)

The study found high heterogeneity in Peruvian primary schools: a lack of predictive power of school location itself when school quality indicators are taken into account; and a net impact of different school factors on achievement: school management, teachers and physical facilities. Although the data show differing impacts of school inputs on achievement, they also indicate that educational investment in improving school management may be as beneficial as traditional investments in facilities and teacher training.

(The sample consisted of 100 industrial, commercial and specialized state technical schools in Chile.)

call number: 74.

input costs/efficiency/vocational technical schools/teacher supply/resource utilization/class size/expenditure per student/research report.


(This article reviews teacher-related research in British and North American contexts and examines trends in relation to research on teaching found in third world or developing countries. It specifically looks at findings relevant to the design of pre-and-in-service teaching.)

call number: 12.

in-service training/pre-service training/trends/teacher behavior/teacher characteristics/research review.


(This synthesis integrates 7 previously conducted reviews of research on teacher effectiveness undertaken by scholars from each of the countries listed in the title. A total of 588 studies were examined.)

call number: 31.

teacher effectiveness/teacher student relationship/teacher background/teaching practices/academic achievement/teacher training/research review.

call number: 61.

examinations/student testing/curriculum/research report.


(This study is based on three sets of data: INCAP's longitudinal data covering a sample of 543 children born between 1969 and 1971; Rand's data on family economics and children's activities covering a sample of 552 children 7 years of age or older; and INCAP's school performance data covering 714 children born between 1962 and 1968.)

call number: 246.

school enrollment/school attendance/family-community characteristics/student characteristics/nutrition/research report.


call number: 303.

mathematics/curriculum/school quality/achievement.


The Peer Assisted Leadership (PAL) program is a professional development program for principals. It teaches principals how to "shadow" and how to conduct "reflective interviews" with another principal which they have selected as a partner. At the end of the year, each participant presents a model of the instructional leadership behavior of his or her partner.

call number: 304.

headmasters-principals/teacher training/school management/planning/inspector role/professional development/research report.

(The study used data provided by a variety of public and private agencies in Japan and the U.S.)

call number: 8.

salary structure/teacher rewards/teacher salaries/teaching conditions/research report.


(This article uses the Mincerian regression model applied to investments in quality of education, and deals with the example of Brazil.)

call number: 276.

school quality/rates of return/educational improvement/income/rural-urban factors/educational equity/research report.


(The sample consists of males from Brazil, age 15 to 65. The data are from the Brazilian 1/10,000 Public Use Sample of the 1970 census.)

The impact of cohort size and other cohort variables on earnings functions for Brazilian males is estimated. Cohort variables are shown to affect earnings functions by shifting labor demand and labor supply. Results indicate that omission of cohort variables is likely to mislead the effects of schooling and experience on earnings. For example, in this sample, individuals born in large cohorts receive significantly higher returns to schooling and early years of work experience, apparently because the demand for schooled and skilled labor increases with population growth. In contrast, the underskilled are better off if born to a small cohort.

call number: 161.

income/labor market/educational benefits/rates of return/research report.

(This document consists of a compilation of statistics on African education and socioeconomic indicators available as of 1986.)

call number: 244.


(The letter accompanies tables describing average annual instructional time at the primary and secondary levels for various groups of LDCs in the 1980s.)

There appears to be little evidence of a strong economic development effect on instructional time.

call number: 297.

time on task/economic development/research report.


(This case study traces the preparation and successive revisions of the educational section of the Uganda Second Five-Year Plan (1966/67 - 1970/71), with major emphasis on the role played by cost analysis.)

call number: 70.

planning/input costs/cost analysis/manpower development/educational improvement/research report.


(This case study traces the planning of Makerere University College in Uganda from 1964 to 1968.)

call number: 72.

planning/input costs/cost analysis/manpower development/research report.)

(This document contains preliminary cost-benefit analyses of the Primary Education Project in the Republic of Niger. Beneficiaries of the project would be 175,000 primary children and their families.)

call number: 255.

cost analysis/primary education/rates of return/income/research report.


(This paper reviews research from studies throughout the world.)

call number: 168.

school attendance/family-community characteristics/fertility/income/rural occupations/urban factors/employment/educational attainment/research report.


(In this analysis, information about male and female teachers is collected using a 1% sample of the 1970 Brazil census.)

call number: 233.

teacher salaries/sex differences/teacher characteristics/family-community characteristics/teacher training/research report.


High fertility strains budgets of poor families, reducing available resources to feed, educate, and provide health care to children. Conversely, many characteristics of poverty contribute to high fertility -- high infant mortality, lack of education for women, too little family income to invest in children, inequitable shares in national income, and inaccessibility of family planning. Experience in China, Indonesia, Taiwan, Colombia, Korea, Sri Lanka, Cuba, and Costa Rica shows, however, that fertility can fall rapidly in low income groups and countries when health care, education, and family planning services are made widely available. It appears that adequate delivery and targeting of these services -- services that most governments already play a major role in providing to their citizens -- are a key to breaking the nexus between \[\text{\ldots} \]
poverty and high fertility, and reducing the negative effects of both on
the lives and prospects of children.

call number: 290.

fertility/infant-child mortality/educational outcomes/research review.


This book, written by a former French "cooperant" in Mauritania, covers
the educational issues facing the primary school teacher at the school
level, and gives anecdotal evidence of what makes for effective
teaching. It is more a collection of educational recipes than a
theoretical work. The author believes that, in spite of the shortcomings
in terms of educational inputs in sub-Saharan Africa, "active" pedagogy
is possible.

call number: 326

primary education/problems/input output analysis/evaluation/teacher
characteristics/teacher effectiveness/teacher role/teacher student
relationship/teaching conditions/teaching practices/effective schools

Block, Clifford, H (1985). Interactive Radio and Educational Development: An

(This document provides descriptions and research about radio projects
in Nicaragua, Kenya, the Dominican Republic, Africa, and Thailand.)

call number: 91.

radio/mathematics/language arts/science/academic achievement/
evaluation/costs/research review.

Boissiere, J. B.; Sabot, R. H (1985). Earnings, Schooling, Ability and
Cognitive Skills, *The American Economic Review*; 75(5); 1016-1030.

(The sample consists of a total of 2,000 employees from Kenya and
Tanzania.)

call number: 160.

income/academic achievement/student ability/educational
benefits/research report.

(This report of the Commission on Education in Botswana identifies major problems affecting education, describes goals of education, assesses the current state of affairs in the country and makes recommendations. The Annexes in the back of the document provide extensive data.)

call number: 222.

economic development/employment/primary education/school attendance/facilities/school quality/problems/curriculum/examinations /cational technical schools/teacher supply/ teacher training/academic achievement/research report.


(The sample consists of 300 individuals with education ranking from "baccalaureat" to two years of higher education, with or without the corresponding degree, who are still students or have been working for less than 8 years.)

The study found that the number of teachers willing to accept another job is already large at present salary levels and is extremely elastic. Any drop in relative teachers' salary will thus imply a substantial loss in terms of teaching quality. Such a drop would encourage more people to search for some time before accepting a teacher job.

call number: 6.

educational finance/salary differentials/teacher salaries/ teacher supply/research report.


call number: 55.

examinations/student testing/research report.


call number: 314
human development/management/poverty/labor market/educational finance/aid.


(This article contains data on China, India, Africa, the Middle East, Europe, Latin America, and the Caribbean.)

call number: 44.

economic development/educational expansion/educational finance/fundraising/school quality/educational spending/educational reform/research review.


(This study is based on a sample of 1286 Queensland, Australia grade 12 students attending different types of schools.)

The issue of the possible contribution of single-sex schools to girls' academic achievement is part of an historical debate about relations between the sexes within the education system and of interest to policy makers. The present paper examines the relationships between the social origins of girls, their views of their own abilities, their high school curricula, their teachers' encouragement and their actual academic achievements within single-sex and mixed high schools. Complex patterns of relationships among these variables are found which appear to operate differently in each school type. Of particular interest is the impact of a working mother upon her daughter's achievements within different types of schools.

call number: 151.

academic achievement/coeducational-single-sex schools/social-economic status/teacher behavior/student attitudes/curriculum/research report.


(The subjects in this study were 4 boys and one girl, aged 9-15 with a mean age of 11.2, ranging in level of schooling from grades 1 to 8. They were all from Brazil.)

An analysis of everyday use of mathematics by working youngsters in commercial transactions in Recife, Brazil, revealed computational strategies different from those taught in school. Performance on mathematical problems embedded in real-life contexts was superior to that on school-type word problems and context-free computational
problems involving the same number and operations. Implications for education are examined.

call number: 118.

mathematics/academic achievement/student behavior/teaching practices/research report.


(This paper describes reform in primary, secondary and post-secondary education in Chile during the early 1980s.)

call number: 128.

educational finance/costs/decentralization/vocational technical schools/private schools/expenditure per student/research report.


(This article analyzes the developmental role of central banks and the problems of harmonizing it with their monetary, regulatory, and prudential functions. Data are provided on the promotional techniques of 11 Asian countries.)

call number: 250.

economic aid/economic development/research review.


(This paper examines a subset of data from The Improved Efficiency of Learning (IEL) study which involved a total of 40 primary schools in Liberia. The paper specifically examines mathematics and English achievement among 1063 third, 765 fourth, and 629 fifth grade students in 45 rural schools.)

call number: 115.

programed instructional materials/academic achievement/sex differences/educational equity/student ability/research report.

(A sample of 6,000 households in Indonesia is drawn from the 1978 National Socioeconomic Survey and the 1977/77 Village Social Facilities Survey.)

The study shows that education in Indonesia, especially beyond the primary level is very much an income-related phenomenon. It is also strongly influenced by attitudes as implied by the evidence that the relatively rich and well-educated shun vocational training, even though it appears to yield a comparable return in the market to general training. In addition, that girls do not receive more schooling may be related to parents' attitudes, although their behavior may also be influenced by the lower market returns to girls' education. The data clearly show that availability of facilities promotes school attendance and educational attainment. Yet, household considerations must not be disregarded. In the case of primary schools, which are almost universally available, parents decisions are critical. Thus policies to increase enrollment may have to deal with parents' attitudes as well as the opportunity cost to the household of children's schooling.

call number: 38.

school enrollment/socioeconomic status/income/educational benefits/costs/cultural factors/facilities/research report.


(The study is based on data gathered from 2,253 children in the 6-18 age group in rural Botswana.)

call number: 34.

socioeconomic status/school attendance/school enrollment/costs/educational benefits/research report.


(A sample of 11 schools geographically distributed throughout Uganda was used.)

The case study focuses on the behavior of expenditure controlled by the school. Teacher salaries are not controlled by the schools.

(This report contains two articles. The first one, School Feeding Programs: Myth and Potential, by Beryl Levinger, is a summary of her own USAID report (call number: 295). The other one is called Using Available Data to Monitor the Educational Outcomes of a School Feeding Programme in Niger, and is written by Richard Sack.)

Sack's paper deals with a school feeding program in Niger. According to the author, the analysis shows that there is a statistical association between SFP and educational outcomes, and that this association can be demonstrated by educational statistics which are generally available and regularly collected by educational authorities.

call number: 296.


(The sample consisted of approximately 1,700 parents and their children (n=4,300) in Egypt.)

The analyses in this study indicates the important effects of parental educational aspirations on children's participation in schooling, and to a lesser extent the years of school attended by those who participate. It is through these aspirations that the effect of region of residence seems to operate in rural areas. Parents own education also affects participation through aspirations, but has an independent effect as well. Access to school in rural areas acts through aspirations and has direct effects as well on participation in school, but not in years of school attended.

call number: 175.

(This paper reviews research on countries throughout the world.)

The author reports: The higher the level of parents' education, the lower the mortality of children. While fertility decreases uniformly with education in some environments, in other situations, there appears to be a threshold level of education and only at levels beyond primary school does fertility decrease with increases in education. Parental education is inversely related to child mortality. This relationship is somewhat stronger for women's education than for men's education, as has been previously found. The more urbanized a country, the more likely education is to be uniformly inversely related to fertility.

call number: 165.

fertility/rural-urban factors/education/sex differences/research report.


(The sample consists of about 400 farm households in 22 villages of the Chiang Mai Valley in Thailand. Data is examined on individuals as young as 5 years old and as old as 60.)

This chapter examines the effect of individual, household, and community characteristics on educational attainment and other individual characteristics on the numeracy and literacy of adults in rural Thailand.

call number: 236.

educational attainment/academic achievement/family-community characteristics/school attendance/school enrollment/expectations for success/research report.


(World Fertility Survey data on 25 countries is used in the study.)

call number: 78.


(The study examines distance and open education at all levels in Commonwealth Africa, Commonwealth Asia, India, Australia, Canada, the Caribbean, the Commonwealth islands of the South West Pacific and the United Kingdom.)

call number: 18.

distance education/open learning/manpower development/internal efficiency/costs/collaboration/research review.


This paper provides a review of research on effective schools for both developed and less-developed countries, discusses some methodological questions, and then offers a few guidelines for educational policy in less-developed countries. It is argued that, with the exception of a few areas, such as text books, educational media, or teacher training, no fundamental differences in school effects have been found among more or less developed countries. Proposals for reform are joined, however, with the admonition that countries must not blindly follow the results of research without close scrutiny of their economic and cultural foundations.

call number: 49.

educational improvement/school effectiveness/change strategies/ research review.


(Data from countries throughout the world are used.)

In recent years a number of donor agencies have increased their lending to primary education in developing countries. However, some characteristics of primary schooling make it unsatisfactory for capital aid support, and arguments to increase recurrent funding are always controversial in aid policy circles. Nevertheless, this paper argues that this support should be further strengthened. It briefly reviews the economic case for such an emphasis. It analyzes the typical problems faced in primary education and the policy choices facing national
governments. The final section outlines the main opportunities and priorities for increased donor agency support to the primary sector.

call number: 52.

primary education/donors/efficiency/economic development/ research review.


(This document provides an overview of papers prepared for a Commonwealth of Education Ministers conference. The overview deals with information in papers from Australia, the Bahamas, Bangladesh, Barbados, Bermuda, Botswana, Britain, Brunei Darussalam, Canada, Cyprus, the Gambia, Guyana, India, Jamaica, Kenya, Kiribati, Lesotho, Malawi, Malaysia, the Maldives, Malta, Mauritius, New Zealand, Nigeria, Papua New Guinea, the Seychelles, Sierra Leone, Solomon Islands, Sri Lanka, Swaziland, Tanzania, Tonga, Uganda, and Zambia.)

call number: 43.

cost effectiveness/costs/fund raising/resource allocation/ resource utilization/facilities/comparative analysis/research review.


(The sample consisted of 550 households in 18 villages in Peru.)

call number: 163.

nonformal education/efficiency/technology/education/rural-urban factors/implementation/school quality/research report.


(This paper is somewhat general and does not contain many statistics).

call number: 229.


The sample consists of 1,471 secondary school students from Columbia and 1,024 secondary school students from Tanzania.

The authors estimate quality differences between private and public secondary schools in Columbia and Tanzania. Quality is measured by student performance on standardized achievement tests. The authors focus on the sample selection aspects of making quality comparisons. Estimated sample-selection effects suggest a sorting for Columbian students, but indicate a hierarchy for Tanzanian students. These effects are consistent with the different institutional frameworks for educational choice in these countries. For both countries, private schools offer an achievement advantage. Standardizing for differences in student and school attributes, private school students have higher achievement test scores.

call number: 181.

private schools/academic achievement/school quality/school characteristics/teacher student ratio/teacher salaries/student characteristics/family-community characteristics/research report.


(Although the research reviewed covers developing countries in general, abstracts of specific studies are provided for research conducted in Soweto, Zaire, South Africa, and Fiji.)

Research on in-service education and training of teachers (INSET) and on the effects of examinations on classroom practice is reviewed. The main trends with INSET are emphases on the professional development of teachers and increased attention to school-focused INSET. No firm conclusions from the research evidence can be drawn. Review of the literature on examinations concludes that it is a necessary but not sufficient condition that attempts to change classroom practice should not be incongruent with teachers' and pupils' perceptions of the requirements of any public examination system.

call number: 15.

in-service training/teacher training/student testing/examinations/teaching practices/research review.

The sample consists of 252 students from co-educational and single-sex schools who entered the University of Wales in 1965-6, 1966-7, and 1967-8, and Swansca 1968-9.

A comparison of the first-year progress of university students from co-educational and single-sex schools was made by a matched pair procedure. Variables matched or separated were Arts/Science, sex, population of school area, social class, university institution, and aspects of A-level attainment, namely number of subjects taken, best subject, average grade and number of attempts. In Arts there was virtual equality, but in science the co-educated made slightly better progress, significantly so by comparison of failures.

call number: 154.

coeducational-single-sex schools/academic achievement/Arts/science/students characteristics/school characteristics/research report.


This paper describes the process used to introduce objective testing of primary school students in Mauritius. It also discusses the results of the tests. It appears that 25,000 students were tested. The cost effectiveness of using computers to score the tests is also discussed.

call number: 64.

student testing/primary education/computers/cost effectiveness/research report.


(The sample consisted of 32 rural and urban primary schools from the Morogro and Iringa regions of Tanzania).

The study examined the quality of textbooks and teachers' guides in geography, science, mathematics, English and Kiswahili. The nature of the fit between the texts and syllabus requirements were also examined. Assessments of quality were made by researchers and users of books. The findings were: 1) The textbook-syllabus match was high for all subjects; 2) The textbook quality was high for all geography, English and mathematics texts, and high for 1 of the 3 science texts and 3 of the 5 Kiswahili texts; 3) The quality of pictures and illustrations was low in geography and Kiswahili, but high in other subject areas; 4) The exercises in the texts were not adequate; 5) The language level was generally appropriate to the grade level; 6) Incompleteness of the textbook series apart, the books for the various levels displayed a high
degree of continuity; 7) Researchers and book users disagreed about whether the old or new books were of higher quality; 8) Teachers were not familiar with the teachers' guides, while researchers considered them to be of fair quality; 9) There were no significant differences between urban and rural schools with regard to distribution or quality of texts.

call number: 226.

textbooks' evaluation/rural-urban factors/research report.

Devahastin, Wallapa; Methakunavudhi, Pateep (1986). *Achievement in Written Composition in Thailand (Grade 11)*. (processed).

(The sample consisted of 1321 students in 65 eleventh grade classrooms in Thailand.)

call number: 111.

academic achievement/teacher effectiveness/language arts/student characteristics/teacher characteristics/sex differences/research report.


(This report is based on data about primary education from 121 countries throughout the world.)

call number: 37.

grade retention/school dropouts/educational efficiency/trends/costs/sex differences/primary education/educational expansion/research review.


call number: 307.

ethnic differences/multicultural education/minority language/literacy/bilingual education/research report.


(This article reports on a community development project in rural Pakistan.)

(A number of different data sources are used in the analysis.)


(This study examines examination systems in England, the Federal Republic of Germany, France, Japan, the People's Republic of China, Sweden, the U.S.S.R. and the U.S.A.)


This study concludes that teachers' salaries, in terms of income per capita, are higher in less developed countries than in more developed countries. It is argued that this is not a sign of differences in real wages but that it reflects the differences in income per capita across countries. The question of teachers' salaries being too high or too low relative to the wages of equally qualified persons, has to be answered in the context of each country's conditions. A framework to analyze this question is developed and the conditions under which teacher's salaries could be altered through policy measures are analyzed.

call number: 77.

input costs/teacher salaries/salary differentials/comparative analysis/teacher characteristics/private schools/expenditure per student/research report.


call number: 301.


Elley, Warwick, B. Research and Language Policy in Educational Development. Paper presented at the 9th Annual Conference of the IAEA, June 13-17, Blantyre, Malawi (processed).

(The author describes research activities involving 1) a sample of primary children in 54 schools in Fiji, and 2) a sample of 110 students at the fourth grade level in New Zealand.)

call number: 132.

second language learning/English/academic achievement/ facilities/school resources/implementation/teacher behavior/ reading/research report.

(The study is based on data collected from 147 schools, representing nearly 50% of all private secondary schools drawn from all the Provinces of Kenya.)

call number: 180.

private schools/academic achievement/curriculum/student behavior/examinations/sex differences/school effectiveness/facilities/textbooks/teacher background/research report.


The paper examines the factors that influence performance in examinations, the use of them in improving the quality of education, and improvement in the examinations themselves.

call number: 124.

examinations/student characteristics/school characteristics/teacher characteristics/socioeconomic status/grade retention/school dropouts/research review.


(The sample consists of 166 first grade children in rural Morocco.)

call number: 80.

second language learning/literacy/academic achievement/Quranic schools/research report.


This paper reports on the 6-year primary school project with Yoruba as a medium of instruction undertaken by the Institute of Education at the University of Ife. The project was based on the assumption that the child would benefit culturally, socially, linguistically, and cognitively when his mother tongue -- rather than English -- is the medium of instruction, and that his command of English would improve considerably if it was taught as an entirely separate subject. The results of the project showed that the experimental group performed above the remaining groups in all the school subjects at the end of
primary education. According to the project managers, this proved that the medium of instruction, Yoruba, had helped the children and that the new curriculum they had devised had been effective. There was, however, no statistically significant difference between the performances of experimental and control children at the national public examinations.


(This article describes a longitudinal study of Chilean children. The initial sample consisted of 3,469 8th grade students. Follow-up data were collected from 1,205 individuals in the original sample.)

Fend, Helmut (n.d.). Determinants of School Achievement Levels: How Important are the Teachers? Tubingen: Institute for Scientific Cooperation.

(The study is based upon 144 learning groups (classes) in their 9th year together with the respective teachers who instruct them in English.)


(This paper provides a variety of statistics covering many different aspects of education in China.)

examinations/school enrollment/textbooks/preschools/post-secondary education/school characteristics/educational finance/science/technology/research report.

(This study describes sex differences in science and reading achievement and attitudes for nation-wide samples of 14-year-old children. Subjects included 5,193 students from the U.S., 2,324 students from Sweden and 2,777 students from England.)

There are largely the same sex differences in all three countries. Male and female pupils have similar reading skills, while girls have more positive reading habits. Males outperform females in science, with the smallest difference observed for biology. Males have more positive attitudes toward science, except that females believe science to be at least as important a topic as boys do. There is noteworthy increase in sex distinctions with one more year of schooling, from grade 8 to 9. However, in English coeducational schools, girls show a deceleration in science and vocabulary achievement relative to their male peers. Girls in English one-sex schools exceed their male counterparts in reading and several science subjects. It is hypothesized that the role of successful female teachers and peers, and the absence of social pressure from boys, may facilitate girls' learning in these areas.

call number: 153.

coeeducational-single-sex schools/sex differences/academic achievement/science/reading/student attitudes/research report.


This letter relates the first analysis of the evaluation data for the first-grade mental arithmetic course. The mean posttest scores are compared for three groups of first-graders, including a traditional group, a textbook and a radio group. The use of new textbooks had a significant effect on scores, with an increase from 34.3% to 43.7%. The use of radio lessons further increased scores, to a mean of 51.9%. All of these differences are highly significant.

call number: 316.

primary education/textbooks/radio/evaluation/research report.


(This paper reports on primary school quality among 118 low-and-middle-income developing nations for the 1970-1980 period.)

Quality has declined among the poorest developing nations. Yet, quality has improved among middle-income nations in terms of school expenditures per student and in the ratio of pupils to teachers. The influence of
contextual factors is reported. A nation's wealth strongly predicts quality among developing nations. In addition, after controlling for economic effects, state size also positively affects school quality. Third world countries with higher enrollment rates in 1970 were more able to improve quality through 1980 than countries which experienced rapidly expanding enrollments during the 1970's.

call number: 11.

educational efficiency /school quality/trends/research review.


(This paper reviews evidence on the importance of school quality in raising literacy and influencing economic development.)

call number: 10.

academic achievement/economic development/educational efficiency /input output analysis/school quality/research review.


call number: 312

examinations/non-formal education/ achievement/radio/ television/distance education.


(The study uses examination data about "school leavers" from 96 (all) LEAs in England.)

The authors conclude that there is no reason to suppose, on the basis of the data, that a system retaining selection to a greater or lesser extent has produced better examination results than a fully comprehensive system.

call number: 107.

examinations/comprehensive-non-selective schools/socioeconomic status/comparative analysis/research report.

(This article describes the development of one highly gifted child and the education he received in Australia. Research on gifted children is incorporated in the article.)

call number: 172.

gifted-talented children/reasoning ability/family-community characteristics/educational needs/research report.

Guthrie, Gerard (1985). Current Research in Developing Countries: Teacher Credentialling and Distance Education. *Teaching and Teacher Education;* 1(1): 81-90.

Current research is reviewed on two aspects of educational efficiency in developing countries: the effect of teacher credentials on student achievement and the cost effectiveness of distance education. The author notes that investment in teacher credentialling is frequently productive, but that the efficiency of particular investment strategies is unknown. The potential cost-savings in distance teacher education are often not realized because of the small scale of programs.

call number: 13.

educational efficiency/cost effectiveness/distance education/ teacher certification/academic achievement/research review.


Research on curriculum reform in developing countries is reviewed. Major findings are that: 1) curriculum change strategies can have an influence on the classroom, but progress has been limited and uneven; 2) innovations have had only mixed success because, in many cases, they have been inappropriate to the skills of the teachers and to the conditions under which teachers work; 3) many of the successes that have been reported have occurred under well-funded and staffed pilot conditions; 4) the impact of curriculum change appears to be highly dependent on context.

call number: 24.

curriculum reform/change strategies/instructional innovation/ teacher effectiveness/research review.

On the basis of studies reviewed, it was concluded that 1) the dynamics of success and failure can best be represented by a multidimensional interactive matrix of school-related and out-of-school variables; 2) promotion decisions are based on unreliable measures of academic performance and ignore affective and social goals of education; 3) there is no evidence that repetition is more effective than promotion, or that repetition practices improve academic standards and class homogeneity; and 4) grade retention has certain negative effects on a pupil's self concept and attitude.

call number: 169.

grade retention/academic achievement/student attitudes/school characteristics/non-economic benefits/research review.


Diversification of secondary school education by "vocationalizing" or "practicalizing" the curriculum has been a major component of the World Bank's Education lending program. Of the 174 Education projects approved between 1963 and 1978, 79 projects included elements of diversification drawing about 20 percent of the total cost of Bank/IDA-financed Education projects. The diversified curriculum projects are divided between two models: Model I in which practical subjects are introduced as one component of a general education curriculum with no occupational aims; and model II which offers specialization in vocationally-oriented streams with occupational aims. This review of Bank experience indicated that a clear understanding of the purposes of diversified secondary curricula is essential to successful achievement of project goals. The lessons learned included: (a) diversification was used successfully to meet quantitative needs for secondary level manpower and/or to supply students for further education; (b) diversification schemes that aimed at improving school leavers' employment prospects had unsatisfactory outcomes; (c) there was no empirical indication of student attitude change towards labor, and in the majority of projects, students still preferred academic fields to vocational training; (d) attempts to use diversification to improve the general quality or efficiency of education had uneven results and limited impact, often hindered by implementation problems; and (e) serious questions were raised regarding the comparative cost-effectiveness of diversified secondary curricula.

call number: 287.

curriculum/curriculum reform/vocational education and training/ research report.
In the Middle East, present educational needs have not been satisfied, and these needs will increase as the population grows. Present levels of spending on education are already straining government budgets, and government revenues have reached a plateau due to the drop in the price of oil. Governments have begun to explore alternatives for meeting their objectives including: 1) improving the allocation, control and monitoring of financial resources, 2) reducing unit costs by improving efficiency, and 3) finding extra-budgetary resources, known as resource mobilization.

call number: 199.

educational demand/resource allocation/resource utilization/efficiency/facilities/grade retention/school dropouts/teacher student ratio/fund raising/private schools/research review.


(This partial document contains statistics on achievement in what appears to be Bengali.)

call number: 140.

academic achievement/school enrollment/school attendance/grade retention/school dropouts/textbooks/facilities/costs/research report.


(The conclusions in this paper are based on a review of three well-designed studies and a number of other studies described as non experimental evaluations of naturally occurring service/demonstration programs in Latin America. The well-designed studies are set in Cali, Bogota and Guatemala.)

call number: 35.

early childhood intervention programs/student characteristics/ school quality/socioeconomic status/school dropouts/grade retention/research review.

(The sample consisted of 529 boys and 617 girls, representing 14% of Jamaica's grade 11 population.)

call number: 148.

coeducational-single-sex schools/academic achievement/sex differences/science/research report.


(The sample consisted of 8,570 students in grades 3 to 6 and 1,794 children classified as dropouts in 1978/79 in Egypt.)

Previous studies have employed a cross section design and have affirmed that dropouts suffer a rapid and substantial loss of basic skills during the first few years from school. A related hypothesis suggests the existence of a "permanency threshold" for basic skills within the range of primary school grades. Once this threshold is achieved, a dropout may be expected to retain functional levels of literacy and/or numeracy, regardless of the number of years displaced from school. Such a threshold is often used to justify the length of the compulsory schooling period. This case study examines the retention of basic skills among primary school dropouts. The results contradict many of the hypotheses in the literature on retention.

call number: 171.

school dropouts/primary education/literacy/learning/student ability/student characteristics/test performance/educational attainment/research report.


(The sample consisted of 2900 children in 17 different secondary schools in the South West of England.)

The evidence suggests that single-sex groups for science, whether in mixed schools or in single-sex schools, do not improve the attainment of girls in first year science. Boys and girls are shown to perform equally well upon knowledge-based tests but upon mechanical reasoning and
evaluation of data tests, boys performed significantly better than girls.

call number: 147.

science/coeducational-single-sex schools/sex differences/research report.


(The sample consisted of 224 boys and 227 girls from 5 secondary schools in Bath, England.)

No significant differences were found between the different schools or between groupings of children. No differences between boys and girls were found in regard to practical work.

call number: 150.

coeducational-single-sex schools/academic achievement/science/sex differences/learning/research report.


Sigal, a second-grade girl in Israel, was observed for several months while practicing arithmetic with a structured and controlled computer-assisted (CIA) system. Sigal was an average student, but consistently failed to solve problems on the computer that she could do successfully with paper and pencil. Several kinds of interventions did not bring about improvement in her work on the computer. Continued observations over a 2-year period showed almost no change. This paper suggests reasons for Sigal's experience.

call number: 268.

computer assisted instruction/mathematics/problems/research report.


This document reviews research on the nonmarket benefits of educational investments and presents a strategy for calculating non-market effects.
Standard estimates of the economic value of additional schooling, based on earnings differences associated with differences in the level of schooling attained, cover only a portion of the total effects of education that are valued by citizens. The authors identify a catalog of nonmarket effects, and then propose a procedure for estimating willingness-to-pay for these effects. The calculations suggest that standard estimates of the benefit of incremental schooling substantially understate the full value of such investments.

call number: 158.

rates of return/cost analysis/income/educational benefits/non-economic benefits/birth control/educational needs/outcomes of education/research report.


(The conclusions appear to be based on the authors visits to 25 of the 200 school actively involved in the project.)

The paper provides a description and preliminary assessment of a project designed to improve professional support to primary teachers in one district in West Java, Indonesia.

call number: 4.

supervisory methods/teacher supervision/professional development/academic achievement/teacher student relationship/research report.


(This paper provides statistics on the 32 Bank projects that have incorporated distance education. It also provides case studies of Bank projects in Malaysia, the Ivory Coast, Thailand, the Philippines, Malawi, and China.)

call number: 89.

distance education/television/radio/cost effectiveness/academic achievement/research review.

(The paper analyzes data on primary, secondary and higher education in 27 middle-income countries primarily in Latin America.)

call number: 5.

policy/resource allocation/resource utilization/school quality/research review.


An experiment providing various combinations of nutritional supplementation and "home education" for a cohort of children and their mothers through pregnancy and up to three years of age was conducted in Bogota. This study reports significant effects in children's growth, diet, and school performance four years after the termination of the project's interventions for both supplementation and home education interventions.

call number: 298.

school performance/achievement/nutrition/school enrollment.


This paper describes the history of the diversified curriculum debate. The first section briefly refers to the precedents for such discussions during the colonial era. A second section describes the institutional environment behind the beginning of bilateral and multilateral assistance to diversified curricula in 1960. The third section summarizes the changes in thinking about diversified curricula which have occurred in the World Bank over the last 20 years. This third section, itself, is divided into three subsections: (i) the original World Bank rationales for diversified education (1960-1970); (ii) the implementation history (1970-1980); and (iii) post-1980 strategies, including financing the research whose results are discussed at this meeting. The paper concludes with a fourth section which refers to the options on diversified education ahead.

call number: 285.

curriculum/curriculum reform/vocational education and training/research report.

This article reviews the comparative advantages and disadvantages of vocational and more general academic curriculum. The article concludes that an academic curriculum is by all means more desirable than a vocational one.

call number: 288.

curriculum/vocational education and training/comparative analysis.


This short paper reviews research on factors that influence achievement in developed and developing countries. The author concludes: It is simply not true that the determinants of school achievement are basically the same for developing and developed countries.

call number: 135.

academic achievement/educational improvement/socioeconomic status/educational efficiency/research review.


This document describes Uganda's continued support of education during difficult political and economic times.

call number: 235.

school enrollment/economic development/examinations/family-community characteristics/school quality/educational equity/research report.


(The sample is described as consisting of a random sample of primary schools in 5 districts and 3 urban areas in Uganda.)

Three factors must first be weighed before an investment is made in instructing students in the language spoken at home. One is the economic cost of materials, teacher training and the like; a second is the cognitive cost, if any, of using the mother tongue; the third is logistical feasibility. This paper discusses the later. It is discovered that only 22% of the classrooms in the sample are monolingual; 47% contain 4 or more languages. The average number/classroom is 3.8.

(The sample of consisted of 67 primary schools in 5 economically diverse districts and the three largest urban areas in Uganda.)


(This portion of a larger document provides data on achievement in Thailand, Uganda, Chile, Malaysia and Brazil.)


(IEA Data from 13 countries are examined.)


(The sample consisted of 2856 first grade students and approximately 2600 second grade students in the Philippines.)

Results strongly indicate that the production and distribution of high quality reading materials substantially improve students' knowledge of
science, mathematics and language. Introduction of the textbooks improved student learning in the course of a single year by an amount equal to between .18 and .51 standard deviations in posttest scores. Further improvements in textbook availability (from a ratio of 2 students to each book to a ratio of 1 book per student) seemed to result in no further improvement in quality. There is some evidence that learning gains are larger among those students whose family backgrounds have been associated with severe disadvantage in the level of cognitive skills brought to the school beforehand. Gains resulting from the investment in textbooks were achieved at the cost of about 1% increase in per student annual costs of schooling.

call number: 131.

textbooks/academic achievement/costs/socioeconomic status/
family-community characteristics/research report.


(The sample consisted of 2293 children in 5 districts and 3 urban areas.)

call number: 137.

student attitudes/socioeconomic status/academic achievement/
employment/income/examinations/research report.


(The data were collected from 61 Ugandan primary schools. The final sample contained 10.7% of the schools, 13.1% of grade 7 pupils, and 12.9% of the teachers in 5 districts and the three urban areas in the country.)

call number: 130.

academic achievement/textbooks/teacher characteristics/
facilities/nutrition/student characteristics/research report.


(This paper pulls data from many different sources.)

call number: 138.

(This paper examines influences on student achievement in Africa, Asia, Latin America, and the Middle East.)

The study found that the lower the income of the country, the weaker the influence of pupils' social status on achievement. Conversely, in low-income countries, the effect of school and teacher quality on academic achievement in primary school is comparatively greater. From these data, which are more representative of the world's population of schoolchildren than those used in previous studies, it is possible to conclude that the predominant influence on student learning is the quality of the schools and the teachers to which students are exposed.

call number: 103.


(This paper uses IEA data gathered on a sample of 10,000 schools, 50,000 teachers and 260,000 students in 21 countries.)

The authors suggest that statistical techniques used to analyze IEA data influenced findings. Original analyses of data sought to analyze those variables thought to be important across all societies taken together. The authors re-analyzed the data for each country separately and got different results. Using only variables which were found to be "important" in that particular society, two sorts of changes were found: they tend to increase significantly the variance explained by school effects, and this increase tends to be greatest in "poorer" countries.

call number: 136.

The report fills a gap in the literature on education. While many studies have dealt with the economic returns to investments in the quantity of education (access), little had been said on the returns to investments in quality of education. The report examines the economic yield to be anticipated from an investment in educational quality, with emphasis on Mexico, and analyzes the possible implementation of investments in quality.


This paper surveys the literature on the returns to education in Sub-Saharan Africa. Income and/or output differentials in the urban formal and informal sectors and in agriculture are first described and the implications for rate of return patterns discussed. This is followed by a discussion of aspects of education-migration relationships. Next, survey results of the effects of education on fertility, infant mortality and nutrition are presented and competing sets of implications highlighted. Finally, at a very general level, the effects of education on a variety of other non-monetary variables are considered.


(This article provides background and enrolment figures for private CHS, government academic high schools and upper primary classes in the Central Pacific Republic of Kiribati between 1978 and 1982.)

Kiribati attempted during the 1970's to set up Community High Schools for the majority of students living in small-island village situations who could not proceed to academic secondary schools. The scheme failed as parents saw these schools more as high schools, and wanted them to
lead to Western employment. The government was firm in not allowing this to happen, and continuing to pursue locally-oriented schooling through upper primary classes. This direction has been thrown into doubt by the recent emergence of private high schools on the main island which have attracted many outer-island students.

call number: 188.

private schools/family-community characteristics/cultural differences/employment/research report.


call number: 62.

examinations/student testing/curriculum/research report.


(This report contains data on the Caribbean.)

call number: 48.

vocational technical training/costs/educational spending/class size/school enrollment/research report.


(This paper, which analyzes the educational achievement of the adult populations in 74 countries is based on 1980 census data.)

The first section focuses on regional and gender differences in the proportion of the population without any education. It finds that substantial gains in schooling have been made since the 1940s, although the gap between men and women, though diminishing, persists throughout most of the world today. The second section examines average levels of schooling of the world's population and emphasizes the substantial progress that was made by women between the 1940s and 1970s. The third section presents the proportion of the adult population that has obtained a complete primary school education and suggests that universal primary education is still a distant goal for many countries. The final section compares regional and gender differences in the primary schools completion rate—a measure of internal efficiency. While developing countries have achieved some improvements on this measure, persistently
low levels of primary school efficiency continue to plague education sectors.

call number: 243.

educational attainment/sex differences/primary education/internal efficiency/academic achievement/family-community characteristics/research report.


This paper reviews major research findings pertaining to the relationship of teacher characteristics, including the level of educational attainment and pedagogical training, with student performance in developing countries. The authors found this relationship to be complex and mixed, some of the variables showing positive relationships, while others showed negative or no correlation. They concluded that a larger number of the more carefully designed studies revealed a positive correlation between teacher training and student achievement.

call number: 7.

academic achievement/teacher characteristics/teacher training/research review.


(This book covers the following countries: Australia, Canada, China, England, Finland, Hong Kong, Hungary, Italy, Japan, Korea, Netherlands, Norway, Philippines, Poland, Singapore, Sweden, Thailand, US. Some sample test items are reproduced in the appendix.)

This is a study of science achievement at three levels in each school system: 10 year old, fourteen year old, and the final year of secondary school. The publication presents the following major results: the validity of the tests; the mean achievement score for each country at each level; for the fourteen year olds an extra result of the "bottom 25 percent" of children in school; the achievement differences between boys and girls; the between school differences at each level; the percentage of schools in each country scoring below the lowest school in the highest scoring country.

call number: 299.

achievement/sex difference/science/research report.

(The focus of this article is on the advantages and disadvantages of co-educational and single-sex secondary schools in England and New Zealand.)

call number: 146.

academic achievement/coeducational-single-sex schools/student attitudes/educational benefits/school characteristics/research review.


(This paper was prepared for the World Bank as part of its program for analyzing decentralization policies and is based on discussions with "knowledgeable people" about a sample of 35 advanced industrial and developing countries and visits to some of them.)

call number: 214.

private schools/comparative analysis/policy formation/school quality/school enrollment/economic aid/research report.


(This paper reviews and provides findings for 17 studies of media use throughout the world.)

call number: 90.

distance education/media/radio/television/programed instructional materials/computer assisted instruction/class size/teacher student ratio/academic achievement/research review.


(Approximately 3,000 students in eighty-eight first grade classrooms in Nicaragua participated in the study.)

Both the textbook and radio treatments had significant positive effects on achievement. Availability of textbooks increased student posttest scores by about 3.5 items correct, approximately .33 of a standard
Availability of the radio instructional program increased student posttest scores 14.9 items, about 1.5 standard deviations. Both interventions reduced the achievement gap between urban and rural students.

call number: 129.

mathematics/textbooks/radio/rural-urban factors/academic achievement/research report.


(This short internal memo contains data on rates of return to education in Africa, Asia, and Latin America.)

call number: 45.

rates of return/educational benefits/educational expansion/educational spending/post-secondary education/salary differentials/secondary education/research review.


(This paper uses 1975 data from the Nicaraguan Radio Mathematics Project which evaluated student cognitive performance at the first grade level.)

call number: 258.

radio/grade retention/school dropouts/school attendance/school enrollment/costs/educational attainment/educational efficiency/research report.


The article provides 1) data about the relationship between class size and student achievement in 97 countries, and 2) data about the use of textbooks and radio in approximately 60 first grade classrooms in Nicaragua.

call number: 114.

class size/academic achievement/teacher student ratio/textbooks/radio/costs/research review.

(Section 3 of this document provides a cost analysis of 1) television projects in Columbia, American Samoa, El Salvador, Mexico and the Ivory Coast and 2) radio projects in Thailand, Mexico and Indonesia.)

call number: 88.

radio/cost analysis/television/distance education/research report.


(Data for this analysis were obtained from a survey of 795 rural, farm households in the Terai region of Nepal, studied as part of a World Bank research project examining the effects of education and agricultural extension on rural development.)

call number: 227.

school enrollment/educational outcomes/educational attainment/ social status/sex differences/family-community characteristics/ school attendance/literacy/research report.


(The data for the analyses were obtained from a survey of 683 rural household's in 2 of Nepal's 75 administrative districts.)

The study found a positive effect of education on efficiency for 3 major crops, but only with the recently introduced wheat crop is the effect statistically significant at standard levels. The data provide no evidence that education's effects should be attributed to family background or to a measure of ability. Numeracy is found to affect productivity in wheat production (as well as the propensity to grow wheat at all). Measures of farmer modernity and agricultural knowledge are not found to be correlated with farm efficiency. A one-standard-deviation improvement in the numeracy test score has a present value that is high relative to the probable cost of effecting such an improvement.

call number: 237.
literacy/educational attainment/efficiency/educational benefits/family-community characteristics/input output analysis/research report.


(This paper summarizes information on costs for 14 projects which used distance teaching for primary or secondary level school equivalency.)
call number: 87.
distance education/cost effectiveness/educational benefits/research report.


(The data are from 481 households, 290 of which are in rural areas in the People's Republic of China. The sample has information on 2154 individuals.)

The study examines the impact of education on the employment and earnings of urban dwellers and on the value of output of small farms. The Mincerian rate-of-return to schooling was 4.5 for urban males and 5.5 for urban females. The effect of experience on earnings was unusually low for males and negligible for females. The education levels of adults in farm households had a strong impact on total farm earnings, mostly through its impact on "sideline" production rather than grain output. Data on educational attainment of children allowed an assessment of the determinants of schooling received; as in other developing countries, females do less well than males, children of poorly educated parents do less well, and, most strongly, rural dwellers do less well.
call number: 216.
educational attainment/employment/income/rural-urban factors/sex differences/family-community characteristics/rates of return/research report.


(This internal memorandum describes public/private school issues related to a paper to be developed examining student achievement among 8th grade students in Thailand. Attached to the memorandum are notes from a seminar given by Donald Cox on sample selection bias.)

(Analyses are based on data from 586 elementary schools.)

Jimenez, Emmanuel [e.a.] (1986). *An Economic Evaluation of a National Job Training System: Columbia's Servicio Nacional de Aprendizaje (SENA).*

(The sample consisted of 1410 SENA trainees in Columbia.)


(This document reviews data from countries throughout the world.)


(The sample consists of 43 primary and secondary Bolivian schools and 41 primary Paraguayan schools.)

Data for the Paraguayan and Bolivian samples indicate that the average primary school does exhibit scale economies with respect to the


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(This document reviews data from countries throughout the world.)


(The sample consists of 43 primary and secondary Bolivian schools and 41 primary Paraguayan schools.)

Data for the Paraguayan and Bolivian samples indicate that the average primary school does exhibit scale economies with respect to the
percentage changes in quality adjusted enrollment, with the level of secondary student outputs held fixed. The same finding holds for the average Bolivian secondary school, with the provision of primary levels held fixed. The results are not substantially affected when student's transportation costs are taken into account. For this sample, there do not appear to be any significant complementarities that imply lower costs for schools which offer both primary and secondary services vs those which offer only one or the other. There is some scope to substitute between labor and non-labor inputs, even in the short run, particularly for the Bolivian sample. Thus, in the event of a major escalation in teacher salaries, schools may be able to absorb some of the increase by substituting teachers for materials to maintain the same level of output in terms of quantity and quality. There is some evidence for Paraguay that the size of the physical plant for schools is excessive. This overinvestment would imply that long-run cost minimization should not simply be assumed in cost function studies.

call number: 75.

input costs/school size/school quality/cost effectiveness/ outcomes of education/facilities/student ability/research report.


(This document presents a case study of the change from a nationalized to a decentralized system in Pakistan. All levels of the system from primary through post-secondary are covered.)

The authors explore the issues related to decentralization in financing and managing education. They contend that lifting of prohibitions on private schools has increased enrollments. Indirect evidence suggests an increase in quality also. Still uncertain are issues of internal efficiency, equity and the impact of decentralization on public schools, particularly in rural areas.

call number: 245.

private schools/decentralization/school quality/school enrollment/ costs/educational expansion/educational equity/ expenditure per student/sex differences/research report.

Jimenez, Emmanuel [e.a.] (n.d.). School Effects and Costs for Private and Public Schools in the Dominican Republic: (processed).

call number: 325.

private schools/cost effectiveness/academic achievement/educational efficiency/research report.

Cost-effectiveness is a key consideration in the policy debate on the appropriate role of private schools in predominantly public school systems. This article analyzes the relative performance of public and private schools in Thailand in enhancing eighth grade student scores in standardized mathematics tests, given student background and school characteristics. Its main conclusion is that private schools are, on average, more effective and less costly than public schools in improving student performance in mathematics.

call number: 323.

cost effectiveness/private schools/mathematics/academic achievement/research report.


Single-sex schooling is more effective for girls, but coeducational schooling is more effective for boys in improving student performance in mathematics. The differences are due to peer group effects, rather than school or classroom characteristics.

call number: 319.

coeducational-single-sex schools/effective schools/sex differences/academic achievement/mathematics/research report.


(This paper uses the case studies of Colombia, Philippines, Tanzania and Thailand, on which it provides data.)

Private schools are a cost-effective option for expanding secondary education in some developing countries. They may also provide some lessons for improving the efficiency of public schools.

call number: 321.

efficiency/private schools/cost effectiveness/secondary education/research review.

Philippine schools that rely more heavily on local sources of income are more cost-effective than those that are more dependent on central funding.

call number: 322.

educational finance/cost effectiveness/research report.


Private schools in the Philippines are substantially more effective than their public counterparts in teaching language skills, marginally less effective in teaching mathematics skills, and much less costly per pupil than public schools.

call number: 320.

private schools/effective schools/language arts/mathematics/costs/academic achievement/research report.


(Subjects were 1225 students in their third and fourth years of secondary school in New Zealand. Part of the sample attended coeducational schools and part attended single-sex schools.)

The study examines the effects of coeducation on student attitudes and behaviors related to academic motivation and achievement. Chi-square analysis of responses indicates significant differences between responses of students in the coed schools and those in single-sex schools in scholastic activities and attitudes, prestige and popularity, peer influences, and self-regard. Students from single-sex schools tend to value scholastic achievement and sports participation more than do coed students. Single-sex school students also seem less preoccupied by "rating and dating.".

call number: 152.

(A questionnaire covering student characteristics was administered to 1,225 New Zealand secondary students in two single-sex schools and one coeducational school. Schools were similar in curricula, student regimentation, and attitudes and values of teachers, administrators, and students' parents.)

Significant differences were found between students in single-sex schools and students of the same sex in coeducational schools. Results suggest coeducation may be inimical to both academic achievement and social adjustment.

call number: 156.

coaeducational-single-sex schools/student attitudes/student behavior/sex differences/student characteristics/research report.


call number: 54.

examinations/student testing/curriculum/research report.


(The study uses household survey data from the 1978 Bicol Multipurpose Survey of families in the Philippines.)

Educational levels rose rapidly in the sixties and seventies in the Philippines. The pace of growth was faster for women than men, resulting in women catching up or overtaking men with respect to school attainment. During this period, the number of schools increased dramatically. In this study, the effects of the availability of schools and other determinants of school enrollment are examined. Individual, family and community characteristics are explored.

call number: 113.

academic achievement/sex differences/educational expansion/school enrollment/student characteristics/family-community characteristics/research report.

(The sample includes about 1100 households and 1500 households in Malaysia and the Philippines, respectively. Aggregate schooling levels have risen greatly since the 1960's in Malaysia and the Philippines.)

This paper examines the extent to which the family background of individuals and the education policies of the government together influence schooling levels. The results suggest that education policies in either country have significantly affected levels as well as the relative distribution of schooling among its demographic groups.

call number: 263.

educational policy/educational attainment/family-community characteristics/costs/school enrollment/sex differences/ research report.


(The sample consisted of employed "secondary school leavers", 2000 from Kenya and 2000 from Tanzania.)

The study is described as follows in an internal memo: The interesting conclusions of this research include the findings that rates of return to investment in education have been quite insensitive to rapid expansion of education, that the returns to education are largely mediated through the cognitive skills acquired in school rather than reflecting innate ability or family position, and that there is a large untapped private demand for educational services even among low-income families.

call number: 28.

economic development/educational benefits/educational equity/ academic achievement/educational expansion/cost effectiveness/ research report.


An overview is provided of a research project comparing the restrictive policy for secondary education in Tanzania with the more expansionist policy in Kenya. This "natural experiment" is exploited, by means of
specially designed urban labor market surveys, to examine the relationship between secondary education or its expansion and, in turn, labor productivity, the structure and inequality of pay, and educational access and interregional mobility. The two policy regimes are evaluated and more general policy implications are drawn out.

call number: 277.

secondary education/rates of return/income/educational expansion/cost-benefit analysis/policy/research report.


The paper examines the relationship between education, experience and salary in Côte d'Ivoire, by means of an earnings function. The data are from a sample of the 1984 Ivorian firm-based manpower survey. The main results are that private returns to education in Côte d'Ivoire display a stable trend from the lowest to the highest level of education with much variation in between; returns to education of women is larger than that of men; the private returns to vocational education are higher than those to general education (i.e., not taking into account the relative unit cost of the two educational systems); there is no difference in the impact of education on salary according to the location of the firm; educated foreign workers are better paid than their Ivorian counterparts; and the impact of education on salary is higher in public firms than in private ones.

call number: 279.

rates of return/vocational technical schools/sex differences/employment/income/research report.


(The study is based on a sample of 334 individuals employed in the public and private sector in Cote D'Ivoire, who have at least 6 years of schooling.)

call number: 9.

salary differentials/teacher salaries/research report.

This paper initially notes the role of scientific education in a developing country and the need to enhance scientific education among the school population. Enhancement of science education for all pupils is dependent on the distribution of schools, quality of schools and pupil participation in any country. To understand how science education is advanced in a developing country it is also important to know who is currently succeeding in science education in schools and to understand how this success is distributed amongst the school population. Thus, this paper questions whether school-based science achievement may be predetermined by antecedent factors or whether there is an equal opportunity of success amongst all pupil participants. A review of the literature has found that many antecedent factors affect school and science achievement, and these factors may be more important than within-school processes thought to enhance science education. The antecedent factors refer to: social/home background; age, religion, and sex of the pupil; school class level and size; type of school attended and its locality. This study assesses how antecedent factors affect science performance in a representative sample of pupils in primary and secondary schools throughout Trinidad and Tobago. The representative sample totalled 1998 children, aged 6-10 years. Pupils were selected from a geographic transect of Trinidad and Tobago, which fulfilled demographic criteria. Once pupils were selected, biographic data were obtained for each child. Science achievement was measured by an end-of-term science examination designed for each class by the class teacher and graded on a 100% scale (within each class). Within class pupil scores were standardized for comparison between classes, schools, etc. Results from the analysis are summarized as: science achievement scores decrease as pupils increase in age. Girls perform consistently better than boys, with a slight variation in the sex by religion by school level interaction. Pupils in private schools score higher than pupils in similar levels of state schools. Pupils from a middle class background perform better than pupils from a working class background. Differences in performance relate to the religion of the child, with Muslim pupils scoring higher than Hindu or Christian pupils. Pupils in single-sex schools perform at higher levels than pupils in co-educational schools, and this is true for girls-only and boys-only schools. At the secondary school level the type of school attended is related to science achievement performance with pupils in prestige (usually church controlled) schools performing better than pupils in the comprehensive (state controlled) schools. The results support, develop,
and refine the previous literature on school and science achievement. Unusually, girls are at the forefront of science achievement in both primary and secondary schools. Also, traditional prejudices of social classes, school status and location are confirmed within the school system in Trinidad and Tobago. A number of directions for future research and classroom action studies are indicated which focus on the existence of these inequalities.


(This article provides information on the operation and effectiveness of 3 broadcasting stations in rural Liberia.)


(The basis data set for this cross-country analysis covers higher education in a total of 20 developed countries and 123 developing countries in Africa, Latin America and Asia.)

The results of the analysis for the year 1979 show no long-run tendency towards diseconomies of scale. The results also suggest that the largest declines in average cost occur only at very low levels of enrollment - up to about 500 students. Substantial savings in terms of lower average costs can still be obtained up to an enrollment of about 10,000. Beyond this level cost reductions are minimal. Our simulation study of the behavior of average costs in the developed countries, Africa, Latin America and Asia point to some element of internal efficiency in developing countries higher education. Finally, we show that the relationship between enrollment ratio and real average cost is in all probability due to the strong correlation between enrollment ratio and total enrollment; contrary to the findings of an earlier analysis.
(This paper focuses on the accomplishments and failures of 30 sub-African countries with respect to universal primary education. Most of the data appears to come from UNESCO's Statistical Yearbooks.)

call number: 252.

primary education/school enrollment/costs/educational finance/literacy/research review.


(The sample consisted of 121 American, 164 Chinese (Taiwan) and 165 Japanese fifth grade students.)

call number: 117.

academic achievement/family-community characteristics/cultural differences/mathematics/reading/student attitudes/research report.

Washington, D.C: The World Bank, EDucation and Employment Division, Population and Human Resources Department. PHREE Background Paper 89/07.

This paper reviews literature on the nature, causes and consequences of what elementary school principals do. It also inquires about research methods that would be useful for further research and the impact on policy of research concerning principals. Results of the review identify the effects of what principals do on a small range of students and staff outcomes. The results also describe differences among the practices of principals and provide a relatively detailed description of what appears to be the most effective pattern of practice. Explanations for what principals do are offered in terms of both external influences on principals and internal influences such as attitudes and thought processes. Special attention is devoted to implications for the training of principals.

call number: 306.

headmasters-principals/teacher training/research review.

Although the study's design does not permit inferences about causal relationships, the data strongly suggest that mother's beliefs, expectations, and attributions are associated with their children's reading performance and school attainment (promotion or dropout).


(This paper contains analyses of issues rather than research findings.)

Discussions of privatization of education usually refer to the transfer of educational activities from public to private institutions. This paper contends that a more efficient solution to privatization is a public-choice approach which will expand the production of privately-valued educational outcomes, while maintaining the public functions of schooling.


(The sample consisted of 300 low-income mothers from Mexico, who had at least one but no more than nine years of schooling.)


This report reviews the available studies on the effects of school feeding programs on enrollment, attendance, and school performance. As
for attendance and enrollment, the report concludes that SFPs do probably make a difference when there is a good fit between the program design and the environment in which the program operates. Among the 22 studies discussed, the most rigorously designed studies are also, as a group, the least conclusive. The author concludes there is a need for a conceptual model. Several studies seem to support the view that SFPs work best in poor, stable, rural areas. They seem to be less effective when the poverty is abject and the need for child labor is great. Concerning school performance, the report concludes that the definitive answer as to whether SFPs make a significant difference in the cognitive development of students is unknown. However, preliminary indications are that they do.

call number: 295.

school feeding programs/school attendance/school enrollments/ academic achievement/research review.


(This article covers distance education programs in Brunei, Indonesia, Malaysia, Singapore, Thailand, and the Philippines.)

call number: 311.

distance education/primary education/teacher education/ secondary education/ higher education/evaluation/instructional innovation.


(This report contains tables on students' achievement in mathematics for countries with different income levels, as well as on intended, implemented and attained curriculum.)

The model of the three curriculums is central to this report. At the level of the education system, there is the intended curriculum. At the level of the classroom, there is the implemented curriculum, and at the level of the individual student, there is the attained curriculum. The level of correspondence between the intended and implemented curriculums is labeled "conformity of the educational system." The study shows that in most countries, intentions run ahead of implementation. Reasons for this are sought. There can also be a lack of correspondence between what the teachers believe they have taught and what their students can demonstrate they have learnt. The degree of articulation between the implemented curriculum and the attained curriculum is seen as a measure of the "efficiency" of an educational system. Results from a detailed appraisal showed that the perceptions by teachers and students of the
extent of the implemented curriculum were reasonably consonant in most
topics in the algebra and measurement subtests, in every country. In
other words, teachers agreed with students over what mathematics had
been taught. In arithmetic, geometry and statistics, there were a large
number of items showing discrepancies in different topics.

call number: 291.

curriculum/mathematics/efficiency/internal efficiency/
achievement/research report.

Lockheed, Marlaine, E.; Fuller, Bruce; Nyirongo, Ronald (1988). Family
Background and Student Achievement. Washington, D.C.: The World Bank,
Population and Human Resources (Policy, Planning and Research Working Paper
WPS 27).

In this paper, two studies of student motivational behavior in Thailand
and Malawi address the shortcomings of past research which had shown
that school-related influences have a greater effect on student
achievement than does family background. In the Thailand study,
conventional measures of family background (parental education and
occupation) were kept constant. Student achievement in both urban and
rural settings was related to such motivational variables as educational
expectations, attitudes and effort.

The Malawi study employed definitions of family background more relevant
to a developing country: labor demands placed on children, basic
attributes of houses, and mother tongue. These variables were more
consistently related to pupil achievement than were the conventional
indicators, parental education and occupation.

If, as these two studies indicate, family background is as important to
students in developing countries as in industrial ones, two types of
action are suggested. First, education programs could be designed to
take into account family background characteristics of students. They
might include early intervention programs, such as preschool or a change
in school schedules to better meet patterns of child labor. Second,
education systems could work to improve student motivation and parental
support directly by promoting the importance of education. In sum:
researchers should be more careful in their modeling of family and
school characteristics in the developing world. Failure to recognize the
family's early and apparently lasting influence is a failure to
accommodate education programs to indigenous realities.

call number: 318.

academic achievement/family-community characteristics/effective
schools/motivational factors/educational expectations/attitudes/labor
market/research review/research report.

This paper uses ordinary regression and multi-level analytic techniques to examine the effects of schools, teachers, and teaching processes on enhancing grade 8 mathematics achievement in Nigeria and Swaziland. A significant proportion of variance in student achievement (24% in Nigeria and 16% in Swaziland) was attributable to between-classroom/school factors. School size, class size, and length of the school year had no effect on student achievement, but teaching processes were important in both countries. However, patterns of effects differed between the two countries, suggesting caution be taken in making generalizations about the nature of effective mixes of inputs.

call number: 324.

academic achievement/input output analysis/school size/class size/time on task/teaching practices/research report.


(This paper surveys the findings of 18 studies conducted in low-income countries concerning the extent to which the educational level of small farmers affects their production efficiency. Countries included were Brazil, Japan, Kenya, Korea, Malaysia, the Philippines, Thailand, Columbia, Greece, India, Nepal and Taiwan.)

call number: 228.

educational attainment/efficiency/family-community characteristics/nonformal education/research report.


(The sample consists of 99 mathematics teachers and their 4030 eighth-grade students in Thailand.)

For the past decade, researchers have documented the effects of textbooks on achievement in developing countries, but no research has explored the mechanisms that account for this contribution. This paper analyzes longitudinal data from a national sample of eighth-grade mathematics classrooms in Thailand and explores the effects of textbooks and other factors on student achievement gain. The results indicate that textbooks may affect achievement by substituting for additional postsecondary mathematics education of teachers and by delivering a more comprehensive curriculum.

(The study examines data about 869 students in 37 schools in Botswana.)

Findings reveal 1) unique school effects to be 2 and 3 times more potent than family characteristics for math and reading achievement respectively with formal teacher training and school library resources good predictors of school quality; 2) when a statistical test is run to determine if test score differences between low SES students attending high and low quality schools are greater than test score differences between high SES students educated in low and high quality schools; no socioeconomic group is subject to increasing elasticities of achievement.


(This study examined data about 1,567 secondary school students in 50 schools in the Republic of Ireland.)

Using classrooms as the unit of analysis, the authors compare student performance on standardized tests to their performance on public examinations that are geared to a specific curriculum. This study finds that curriculum-based tests are more sensitive to differences in school characteristics than are standardized tests.

(This report analyzes 23 completed studies and 8 works in process at the time, all of which dealt with teacher effectiveness in Latin America.)

call number: 23.

academic achievement/teacher characteristics/teacher effectiveness/teaching practices/in-service teacher education/research review.


(The sample consisted of 235 pupils from third, fifth and seventh grades in two high-cost primary schools in Nairobi.)

Major findings included the following: 1) High academic performance in English, science and history was found to be related to the frequency of teacher-student interaction during instruction among students in grades 3 and 5; 2) Student performance in math was not highly correlated with the frequency of interaction in grades 3, 5, and 7.

call number: 2.

academic achievement/teacher student relationship/urbanization/research report.


(This paper analyses data from four studies of examination results in Britain since 1965 when a change from selective to comprehensive secondary schools began.)

call number: 104.

academic achievement/comprehensive-non-selective schools/examinations/socioeconomic status/comparative analysis/research report.


(Pages 7-12 briefly describe the effects of poor nutrition and growth retardation on school performance and educational efficiency in Latin America, Indonesia and the Philippines.)

call number: 40.

literacy/nutrition/intelligence/learning/school enrollment/grade retention/research review.

(This document contains data on the 30 poorest African Countries covering the period from 1970 to 1985.)

call number: 219.


(The study analyzes data on secondary level students in Scotland from 1970 to 1984.)

This study examines the effects of the later stages of comprehensive reorganization in Scotland. Nationally representative samples show that standards of attainment rose, particularly among females and pupils of lower socioeconomic status (SES). The rise was faster than could be accounted for by the rise in average SES. Inequalities of attainment associated with SES varied between communities, but overall, they declined for both males and females. Female attainment moved ahead of male attainment. Creamed comprehensives did worse than uncreamed ones, but the longer that either creamed or uncreamed schools had been established as comprehensive the higher was their average attainment.

call number: 92.

comprehensive-non-selective schools/educational equity/academic achievement/socioeconomic status/sex differences/research report.


(The sample consisted of 221 matched pairs who took the WJEC examination.)

The university degree results of students from co-educational and single-sex schools were compared and found to be closely similar except that more first year drop-outs may occur among the single-sex educated students. Variables matched or separated were Arts/Science, sex,
population of school area, social class, university institution and various aspects of A-level attainment.

call number: 155.

coeducational-single-sex schools/academic achievement/school dropouts/student characteristics/research report.


(Data for the analysis conducted in this paper come from 115 Bank projects in agriculture, and non-agriculture projects (transportation, urban, chemicals and manufacturing).)

The results indicate that project-related training (PRT) yields high economic returns in both agriculture and non-agriculture projects, even under conservative assumptions. However, the results also indicate that training investment achieves high returns only when the educational base of a country is sufficiently developed. In the absence of this condition, PRT is an uneconomic investment. The results have the following implications for Bank lending: a) expand PRT investment, particularly in agricultural projects, when a sufficiently high proportion of the population is literate; b) in countries with a weak educational base, make significant efforts to adapt the design and management of PRT to overcome skill deficiencies in the project population; c) in countries where education is poorly developed, lending should stress investment in basic education so as to create the conditions for other investments to achieve economic profitability.

call number: 164.

training/economic aid/economic development/efficiency/rates of return/literacy/resource allocation/education.


(This study examined the impact of 144 radio programs broadcasted to 38,275 primary students and 4,679 teachers in Ethiopia.)

It was found that in all subjects and all grades pupil learning was enhanced by the broadcasts. The impact varied according to subject, grade and region. This variation was probably due to the general difficulty level of the programs compared with pupil background and ability and problems related to language. Future research is recommended to determine the exact reasons for the variations.

call number: 85.
radio/distance education/academic achievement/program
evaluation/research report.


call number: 309.
distance education/evaluation/examinations/quality.


call number: 57.

examinations/student testing/curriculum/research report.


(The sample consists of approximately 400 school-age children from subsistence farm households.)

The study found that older children are significantly more likely than younger children, and girls significantly less likely than boys, to be enrolled in school. Both height-for-age and weight-for-age are positively and significantly related to school enrollment. Height-for-age and household income are positively and significantly related to grade attainment. Other findings from this and other studies in Guatemala, China, the Philippines and Botswana suggest that efforts to improve child nutrition could have educational as well as health and survival benefits.

call number: 195.
nutrition/socioeconomic status/school enrollment/academic achievement/family-community characteristics/research report.


(This paper reports research on the language development of students in 2 literacy classrooms. One of the schools appears to be a primary level
public school and the other appears to be a primary level private school.

call number: 119.

academic achievement/second language learning/cultural factors/student characteristics/literacy/research report.

Moses, Kurt, A. Computerization in Developing Countries: The Human Response. (processed lecture notes).

(This 3 page document summarizes comments made by Kurt Moses, Director, International Computer and Systems Services for the Academy for Educational Development (AED). Included are brief descriptions of computer use in Zimbabwe and Egypt.)

call number: 218.

technology/computers/expectations for success/implementation/cost effectiveness/research report.


(Countries included in the analysis are Botswana, Jordan, Jamaica, Liberia and Thailand.)

call number: 231.

science/laboratories/teaching practices/facilities/costs/curriculum/educational benefits/secondary education.


(The sample consisted of 2559 "standard seven" pupils, age 12-14, and 51 headteachers from 51 schools.)

The study found that pupils belonging to schools with sufficient school facilities significantly outperformed pupils belonging to schools without adequate facilities. This finding was consistent across all subjects.

call number: 110.

academic achievement/facilities/research report.

(Section III of this report reviews evidence on the effects of early intervention programs. Appendix C contains case studies describing programs in Peru, Brazil, Jamaica, and Chile.)

call number: 39.

early childhood intervention programs/costs/educational benefits/collaboration/research study.


(The report is based on data collected from five, secondary level schools.)

call number: 19.

biology/classroom communication/research report.


call number: 310.

distance education/evaluation/examinations/higher education.


call number: 59.

examinations/student testing/curriculum/research report.


(This paper examines statistics related to 9 countries in South Asia.)

call number: 212.
sex differences/literacy/school enrollment/resource allocation/research report.


call number: 58.

examinations/student testing/curriculum/research report.


(This document describes and assesses the initiatives undertaken in 20 districts by the Nepal Children's Organization.)

call number: 144.

preschools/teacher training/nutrition/school enrollment/facilities/management/problems/research report.


(The first of three very short articles briefly describes the use of computers by the Ministry of Education in Zimbabwe.)

call number: 217.

technology/computers/efficiency/research report.


(This document describes experiences in developing/implementing curriculum in Indonesia, Malaysia, Nepal, Pakistan, the Philippines, Sri Lanka, and Thailand.)

call number: 204.

curriculum/implementation/cultural factors/teaching practices/learning/labor market/teacher training/research report.

(This report describes the effects of the Primary Education Project, which served 4,100 primary schools in rural areas, 10,000 teachers and nearly 600,000 students in Pakistan.)

call number: 206.

facilities/textbooks/educational equity/school dropouts/ teaching practices/school quality/input output analysis/school enrollment/teacher effectiveness/teacher supervision/teacher training/research report.


(This discussion paper examines double shifts and half sessions as strategies for dealing with excess numbers of grade 1 students.)

call number: 264.

double-shift/multigrade system/primary education/research review.


(This document examines the cost implications of policy options. The document provides data about education in Haiti.)

call number: 223.

costs/teacher salaries/school enrollment/private schools/ internal efficiency/grade retention/school dropouts/textbooks/ school quality/double-shift/multigrade system/research report.


(This document provides background and examines issues related to the functioning of China's examination system.)

call number: 259.

examinations/educational benefits/educational improvement/ evaluation/research report.

(This paper provides statistics on every level and type of school in China.)

call number: 193.

school enrollment/teacher characteristics/vocational technical schools/educational reform/employment/collaboration/examinations/economic development/research report.


(This is the first publication of the results of the Peruvian Living Standards and Informal Sector Survey. Statistics are provided for 2,580 households interviewed between July and December of 1985. The specific topics covered are: demographics, health, education, fertility, migration, employment activities and housing.)

call number: 126.

family-community characteristics/employment/education/ fertility/school enrollment/literacy/private schools/school resources/research report.


(This very general article describes the reform movement in Japan with emphasis on the need to stimulate creativity. Concern is expressed for moral education and for changes in a system that may be too structured.)

call number: 174.

examinations/educational reform/educational practices/trends/research report.


(This short article is part of the Economist country supplement on Portugal.)

The article describes the shortcomings of education in Portugal and reports on the projects of Education minister Carneiro for the future.

call number: 292.

primary education/literacy/vocational education and training/curriculum/educational finance.

This short article compares the British A-level exams with the GCSE exam and the introduction of a broad national curriculum for 16-year-olds. The A-level is also compared with the Scottish Higher Leaving Certificate and Certificate of Sixth-Year Studies.

call number: 289.

examinations/curriculum/curriculum reform/vocational/secondary education.


(This short article is part of the Economist country supplement on Turkey.)

The article covers the problems of the education system in Turkey: low secondary enrollment, weaknesses of the curriculum, and mentions the plans to introduce educational television and computers in schools. Examples of private schools having experienced with computers are also given.

call number: 293.

secondary education/curriculum/television/computers/language.


(The sample consisted of 1,561 students from Brazil.)

call number: 27.

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teacher training/in-service teacher education/distance education/cost effectiveness/costs/research report.


The sample consisted of 1256 students, age 14, from Chile and 2881 students from India in grades 7 through 9. Major findings include the following: 1) A wide age-range within a grade has no significant or consistent effect on student achievement; 2) Students outside the normal age range for a given grade do not have lower achievement levels than students in the normal range; 3) Students attending classes within which there is a wide age range do not have lower achievement than students attending classes with a narrower age range.

(This paper describes initial planning consideration for implementing school improvement research in two "Black homelands" in South Africa. No sample has yet been selected.)

call number: 99.

planning/educational improvement/implementation/research report.


(This paper examines 50 studies related to effective elementary and secondary schools in Thailand.)

call number: 198.

Teaching practices/time on task/grade retention/school resources/school effectiveness/facilities/school quality/academic achievement/teacher certification/computer assisted instruction/student characteristics/teacher student ratio/family-community characteristics/research review.


(The sample consists of 11,442 third grade students in 399 primary schools from 18 provinces in Thailand.)

call number: 141.

Academic achievement/rural-urban factors/student characteristics/sex differences/preschools/school attendance/school characteristics/research report.

(1217 rural primary teachers in Nepal were trained using radio.)

This study attempted to analyze the cost-effectiveness of the Radio Education Teacher Project. Comparisons of the costs of this program and the Campus-Based Teacher Training Program showed the latter to be much higher.

call number: 26.

cost effectiveness/teacher training/radio/distance education/research report.


call number: 56.

examinations/student testing/curriculum/research report.


(The study investigated formal reasoning ability, and the relationship between reasoning ability, sex, and age group of 600 pre-service primary school teachers in Nigeria.)

call number: 16.

reasoning ability/teacher characteristics/pre-service training/research report.


(This paper reviews 31 published and unpublished studies of teacher effectiveness based in Africa South of the Sahara from 1960-1978.)

call number: 211.

teacher effectiveness/teacher characteristics/school characteristics/family-community characteristics/teaching practices/academic achievement/research review.

(This article reviews Bank experience with community participation in development projects. Information is provided on projects in Mexico, Brazil, Zimbabwe, and Bangladesh.)

call number: 248.

economic development/family-community characteristics/economic aid/costs/donors/research review.


(The report describes Africa's experience with distance education as a mechanism for teacher training and for primary, secondary and tertiary education. Primarily descriptive data are presented on Botswana, Kenya, Swaziland, Tanzania, Uganda, Zimbabwe, Malawi, and Zambia. Cost data and success rates are provided for Brazil, Canary Islands, Kenya, Malawi, Mexico, South Korea, Zambia, Britain, Canada, Costa Rica, Israel, and Japan.)

call number: 17.


(The author examines the implications of three IEA studies for policy-making.)

call number: 66.

policy/evaluation/student testing/academic achievement/student characteristics/science/language arts/school quality/research review.


(This planning document reviews a limited amount of the research on change. Although it is written by a faculty member in the Netherlands, it contains little local perspective.)
call number: 200.

implementation/in-service training/educational improvement/research review.


(A representative sample of 23 secondary schools in Morocco was used.)

call number: 73.

input costs/cost analysis/cost effectiveness/facilities/expenditure per student/secondary education/teacher salaries/research report.


(This draft paper uses data from the 1980 Brazilian Census to investigate the issue of whether teachers are overpaid.)

Earnings standardization for human capital and other worker characteristics shows that teachers in Brazil are not overpaid relative to those in other occupations. The overall lesson is caution regarding hasty recommendations that teachers salaries should be cut in order to achieve budgetary savings.

call number: 266.

teacher salaries/salary differentials/research report.


(The baseline sample consists of 8,051 high school students in Columbia and 4,181 high school students in Tanzania.)

This paper examines secondary school curriculum which has been diversified to include prevocational subjects.

call number: 232.

curriculum/vocational technical training/evaluation/family-community characteristics/academic achievement/costs/employment/income/research report.

This article reviews the evidence on the role of education in economic development, with emphasis on issues that have appeared in the literature in the past two decades: the contribution of education to economic growth, the screening hypothesis, the segmentation of the labor market, the return to investment in schooling, and the effects of education on unemployment and income distribution. It concludes with an optimistic assessment of the contribution of educational investment to the development process, especially when such investment is targeted to primary schooling, general education, and improvements in the quality of instruction and when it is accompanied by cost-recovery at the higher levels of education.

call number: 283.

resource allocation/income/rates of return/educational finance/employment/primary education/vocational technical schools/research review.


(This paper uses individual data on 6,873 male employees from the 1972 General Household Survey in the U.K. to assess the extent to which differences in personal characteristics explain differences in occupational and economic success.)

The results indicate that personal characteristics explain about one-third of the variance in earnings in the U.K. and that education is an important contributor to economic and social ascent.

call number: 225.

family-community characteristics/income/student ability/occupations/socioeconomic status/educational attainment/research report.


(This document presents findings based on statistics gathered from countries throughout the world.)

call number: 159.

(The sample consists of a total of 6,086 secondary school students in academic, commercial and industrial schools in Columbia and a total of 4,181 secondary school students from Tanzania in academic, commercial, technical and agricultural schools.)

The paper presents evidence on differences between public and private schools on a number of indicators like cognitive achievement, unit cost and labor market. The findings are mixed, in the sense that in both countries, statistically controlling for student ability and socioeconomic background, private school students outperform their public school counterparts on academic achievement, whereas the reverse is true regarding achievement on specialized subject-matter. One possible explanation of this finding is that parental pressure (social demand) on private schools makes them tacitly emphasize academic subjects which are viewed by customers as leading to a higher level of opportunities after graduation.

call number: 182.


(Update of the figures of the 53 rate of return case studies published by the author in 1973, and addition of 13 new country cases. 44 countries from all regions and levels of income are dealt with.)

call number: 253.


(This paper examines returns to investment in education at the primary, secondary and post-secondary levels in over 60 countries.)
New cross-country evidence confirms and reinforces earlier patterns, namely, that returns are highest for primary education, the general curricula, the education of women, and countries with the lowest per capita income.

call number: 157.

rates of return/primary education/sex differences/income/curriculum/research review.


The paper presents evidence on the over-time behavior of the rate of return to investment in education in a large number of countries. The emerging pattern is one of declining returns through time, a fact that is interpreted in the context of alternative theories on the relationship between education and earnings, such as human capital, screening, labor market segmentation and the maintenance of the status quo from generation to generation. The evidence lends support to a human capital view of the world. Also, the slow rate of decline of the returns to education over time dispels fears that education might have overexpanded, especially in developing countries.

call number: 280.

rates of return/income/research report.


(This report uses a 1984 sample of about 21,000 Colombian workers.)

A major debate in the economics of education is the extent to which observed earnings differentials between more and less educated workers reflect differences in productivity. This study focuses on the earnings of the self-employed and those in the private sector of the economy. It is argued that in a competitive economy wage differences within such sectors is a good proxy for productivity differences by level of education. Data from a 1984 sample of about 21,000 workers in Colombia support the hypothesis that the returns to education among the self-employed are highest relative to any other grouping of workers. The policy implications of such findings are discussed.

call number: 278.

rates of return/income/external efficiency/policy/research report.


(This paper uses data about primary and secondary education from 100 countries.)

call number: 170.

grade retention/student characteristics/school enrollment/educational efficiency/family-community characteristics/school dropouts/research review/internal efficiency.


(The sample consists of 40,000 workers from Venezuela.)

During the 1975-84 period, the returns to schooling have declined by only 2% in a decade of rapid expansion. The returns to education estimated on the basis of earnings to those in the competitive sectors of the economy are of the same order of magnitude as those estimated on the basis of all wage earners in the economy. The over time change in income inequality is consistent with the beneficial distributive aspect of educational expansion: the increased supply of more educated persons contributed to the narrowing of earnings differentials and hence to a more equitable distribution of income.

call number: 30.

educational expansion/salary differentials/labor market/income/educational benefits/research report.


(The evaluation described in this paper is based on a retrospective follow-up of nearly 1,800 graduates of target and control schools in Columbia three years after leaving school.)

This paper reports the results of an evaluation of Bank-assisted diversified secondary schools in Columbia offering prevocational subjects alongside the traditional academic curriculum. The central finding is that new schools have not generated a different further
training or employment pattern than the control schools. In particular, INEM graduates, relative to traditional graduates, are not more likely to enter employment immediately upon graduation and do not realize higher earnings in the labor market. According to this evaluation, there is virtually no difference in the social rate of return on the resources invested in the two types of schools.

call number: 215.

vocational technical training/curriculum/employment/income/ rates of return/research report.

Quansah, Kofi (1987, February 2). Response to Request from Marlaine Lockheed for Information on Student Examination/Testing by the Caribbean Examinations Council. [letter].

call number: 60.

examinations/student testing/curriculum/research report.


(This paper reviews research on learning outside of formal schools in Africa.)

call number: 123.

employment/nonformal education/educational needs/manpower development/research review.


(The sample consisted of 328 secondary students in the United Kingdom.)

call number: 94.

comprehensive-non-selective schools/academic achievement/school quality/student attitudes/student ability/educational benefits/research report.

(This review is based on work in 22 developing countries.)

Call number: 25.

Economic development/internal efficiency/external efficiency/educational efficiency/resource allocation/research review.


(This executive summary covers a wide variety of topics at all levels of education.)

Call number: 265.

Preschools/academic achievement/rural-urban factors/family-community characteristics/school enrollment/efficiency/employment/nonformal education/school dropouts/research review.


(The study covers a sample of 281 schools from a population of 1045 schools located in Santiago, Chile. Data from 4th and 8th grade students' families were collected during 1981.)

Call number: 187.

Academic achievement/decentralization/private schools/reading/mathematics/school management/educational finance/teacher characteristics/family-community characteristics/research report.


(This study uses a 1900 US national sample of some 15,321 school-going children aged 5-20.)

This study examines variation in the number of months American children spent in school in 1900. Using a national sample of some 15,321 school-going children aged 5-20 taken from federal manuscript census schedules (the 1900 Public Use Sample), the effect of regional, community context (urban-rural), and individual-level characteristics on the length of school terms is explored. A test of variation in school term length using this national sample, employing Multiple Classification Analysis, demonstrates that there were wide differences
in this dimension of school participation from one region to the next, from the countryside to the city, and in the school-going practices of children from different occupational backgrounds. The study closes with a closer examination of this variation through multiple regression. This analysis indicates that the shortest school terms were associated with children who lived on farms and that much of the variation in the length of school terms was tied to the process of urbanization. It also suggests that Southern education was considerably inferior to schooling elsewhere in the country, making it a special case of underdevelopment in the history of American education.

call number: 272.

time on task/rural-urban factors/urbanization/research report.


(This discussion paper is marked "confidential").

This background paper draws on a variety of sources of data generated by other researchers. No in-depth analysis is attempted. Rather, a large number of issues are reviewed, by necessity, somewhat superficially. The paper supports work done on RPO 672-01.

call number: 257.

educational expansion/labor market/educational demand/educational efficiency/research review.


(This internal memorandum summarizes and comments upon a 147 page document describing the results of reform efforts in Haiti. The study itself included 8 first grade and 4 fourth grade classes from each of the 14 geographical zones in Haiti.)

call number: 125.

educational reform/academic achievement/implementation/curriculum/salaries/school management/teacher effectiveness/evaluation/research report.

Sahide, Amal [e.a.]. *The Distance Learning Program at Ikupujung Pandang Indonesia: Problems and Recommendations for Its Improvement* (processed).

(Approximately 3,000 teachers were involved in the project during the 1982-83 academic year.)
The purpose of this study is to describe the distance learning program at Ikipujung Pandang University to fulfill their need for teachers. Major problems encountered were: 1) student learning difficulties, 2) problems related to the development and distribution of learning models, 3) geographic isolation, and 4) problems related to managing the learning centers.

call number: 208.

teacher training/distance education/rural-urban factors/problems/management/research report.


(This paper contains statistics and analyses of primary and secondary, public and private schools in Tanzania.)

At Africa's independence, there was widespread optimism about what the schools to be planned and managed centrally could achieve. Notwithstanding rapid school expansion, universal primary education, and extensive adult literacy programs, the supply of schooling has never satisfied the demand. Responding to persistent pressures, leaders encouraged private (community rather than individual) secondary schools, currently accommodating half Tanzania's secondary school students. Although required to operate within national educational policies, and although drawing on public support, private secondary schools have reflected demand rather than planning and in practice have increased inequalities of access. Thus, a public policy central to the national development agenda is significantly shaped by private initiatives. That process, reflects the increasing influence of a more technocratic leadership, and its efforts to consolidate its position and legitimate its authority.

call number: 189.

educational expansion/educational equity/educational demand/private schools/school enrollment/research report.


(This paper provides analyses of the costs of education in the Dominican Republic, the positive effects of Radio Assisted Community Basic Education (RADECO), and an analysis of replication requirements.)

call number: 84.
Latin American countries have been able to provide schooling for a high proportion of their population, with relatively low costs, in spite of low efficiency levels. This apparent contradiction is mainly explained in terms of low teaching salaries and high rates of repetition. Latin American countries have extended primary education to 7 or 8 grades and reduced the number of years of vocational training in secondary education, thus cutting costs in half. The number of class hours per week has been reduced. Parents contribute to finance costs, the average size of schools is reaching more efficient levels, salaries of high school teachers tend to be reduced to the level of primary teachers, and schools are used in double shifts. On the negative side, one third of rural teachers are not trained, good teachers tend to leave education, there is no job supervision, and there are wide differences in quality among schools. There are no incentives to allocate resources more efficiently, because the Ministry of Finance periodically eliminates all non-salary expenses in recession times. Over one third of educational services are provided by private institutions and several countries are trying to expand the contribution of the private sector through fees. Although most private education caters to medium and high socioeconomic families, there are also efforts in rural isolated areas.

(The sample consists of 1,205 individuals who had completed secondary school in Chile.)

This paper examines the role of education as a determinant of labor market entrance in Chile during the 1970's. Three aspects of education are examined: 1) educational attainment - years of schooling completed; 2) achievement - what students have learned; 3) quality - as measured by, for example, textbook availability, school facilities, teacher training, class size. Among the main findings are 1) educational variables are more powerful predictors of occupational attainment than is family social status, and 2) educational quality variables are much more powerful predictors of occupational attainment than either educational attainment or educational achievement.

call number: 167.

occupation/educational attainment/academic achievement/school quality/sex differences/family-community characteristics/ teacher characteristics/textbooks/research report.


(School level data from 400 primary schools in Bangladesh are used in this program evaluation.)

call number: 143.

school enrollment/grade retention/school dropouts/teacher student ratio/academic achievement/sex differences/costs/class size/research report.


(Subjects were a total of 2,029 Grade 10 and 12 students from 5 coeducational, 4 all-female and 4 all-male high schools located in urban centers of Ontario, Canada.)

Subjects completed measures of value climate and environmental press (High School characteristics Index) in order to permit an evaluation of the hypotheses that compared with single-sex schools, coeducational schools would be perceived by their students as placing (a) less emphasis on scholarship and achievement, (b) greater emphasis on
affiliation and pleasurable, nonacademic activities, and (c) less emphasis on control and discipline. Support was attained for hypotheses 2 and 3, while evidence to hypothesis 1 was inconsistent. The results were interpreted as confirming those of other studies suggesting that, at least from the perspective of most students, coeducational schools enjoy the advantage both in terms of attending to social-emotional needs and minimizing the necessity of regimentation and discipline.

call number: 149.

coeducational-single-sex schools/school characteristics/student attitudes/research report.


(Countries throughout the world are used in the analysis.)

call number: 51.

economic development/educational spending/efficiency/educational finance/educational benefits/educational expansion/rates of return/labor market/cultural factors/educational equity/employment/sex differences/research review.


(Data from 89 countries are examined.)

School systems have expanded rapidly during the last 25 years. Nonetheless, it is widely believed that rapid population growth has reduced expenditures on schooling per child, contributed to a deterioration in school quality, and decreased the proportion of children attending schools. This paper proposes a production-demand framework for explaining the level and distribution of national expenditures on schools, teacher student ratios, and enrollment rates of boys and girls at the primary and secondary levels. Data is used to test empirically the role of real incomes per adult, the relative price of teachers, urbanization, relative size of school aged cohorts, and current total fertility rates on these varied measures of school inputs and enrollments.

call number: 36.

educational spending/expenditure per student/resource allocation/school enrollment/urbanization/school quality/teacher student ratio/socioeconomic status/research report.

(This report traces the origins of the dual system, describes its administrative structure and explains the relationship between firms, schools and students.)

The German dual system combines in-enterprise training with part-time attendance at a vocational school. The system provides a direct link between the country's training capacity and the demand for skilled labor. The system is considered the main reason for the country's low rate of youth unemployment. About two-thirds of German 15-18-year-olds participate in the system.

call number: 239.

Vocational technical schools/employment/vocational technical training/secondary education/research report.


call number: 53.

Examinations/student testing/curriculum/research report.


(This report provides information on radio and media programs in Nepal, Liberia, Sri Lanka and the Ivory Coast.)

call number: 269.

Radio/media/educational benefits/research review.


(The sample consists of 237 primary schools in the state of Ceara, Brazil.)

call number: 96.

School effectiveness/academic achievement/mathematics/facilities/teacher characteristics/teaching practices/school quality/research report.

(The sample consisted of 50 teachers from three elementary schools serving a lower class neighborhood in Israel.)

A field experiment was conducted to change current methods in classrooms to cooperative, small group teaching (SGT) instead of the whole class, presentation-recitation method. Findings revealed that: Implementation of SGT occurred during the second year of the project following 8 months of workshops and the adoption of teacher self-help teams for monitoring classroom instructional performance. The experimental group registered a significant positive change on an attitude questionnaire indicating a more progressive and less controlling approach to teaching and to education in general. Implementers of small group learning were found to be less conservative and more willing to take risks, more spontaneous and imaginative, more open to feelings, and more socially oriented than were teachers who did not implement the new methods in their classrooms. Implementers of SGT expressed greater openness to educational innovations and a greater sense of being able to cope with problems in the classroom than teachers who did not implement the small group approach.

call number: 178.

cooperative learning/implementation/teacher characteristics/ teacher behavior/class organization/teaching practices/research report.

Sharan, Shlomo; Shachar, Chana (1986). Cooperative Learning Effects on Students' Academic Achievement and Verbal Behavior in Multi-Ethnic Junior High-School Classrooms in Israel. Tel Aviv: School of Education, Tel Aviv University (report submitted to the Israel Trustees Foundations and to the Ford Foundation Trust).

(Nine 8th-grade classes of 1 school's junior-high division participated in this experiment.)

call number: 267.

cooperative learning/academic achievement/cultural factors/ student motivation/research report.

Sharan, Shlomo; Shaulov, Ada (1986). Cooperative Learning and Pupils' Motivation to Learn at Different Levels of Cooperativeness. Tel-Aviv: Tel-Aviv University.

(Five hundred and fifty-six pupils in 17 6th-grade classrooms, located in 4 elementary schools in Israel, participated in an experiment)
comparing the effects of cooperative learning and traditional whole-class instruction on pupils' motivation to learn.

Cooperative learning was more motivating than whole class instruction. Pupils at the medium level of cooperativeness displayed greater increases in motivation to learn after studying in cooperative learning classes than did pupils at the low or high level of cooperativeness compared to their peers in the traditionally taught classes.

call number: 176.

cooperative learning/student motivation/teaching practices/ student characteristics/student attitudes/research report.


(This paper analyzes data on school facilities and examination results in 40 secondary schools in Nepal.)

call number: 251.

facilities/examinations/academic achievement/English/ mathematics/class size/teacher salaries/headmasters-principals/ teacher student ratio/school enrollment/teacher supervision/ teaching practices.


(The sample consists of approximately 2200 households in rural Nepal.)

call number: 185.

school attendance/school enrollment/facilities/student characteristics/teacher characteristics/school characteristics/family-community characteristics/nutrition/research report.


(A total of 1147 students, grades 1-5 in five schools in Nepal participated in the study.)

call number: 142.

academic achievement/teacher behavior/school dropouts/ textbooks/teacher training/teaching practices/facilities/ research report.

(This paper describes and provides statistics on college entrance examinations used in the People's Republic of China.)

call number: 192.

examinations/school enrollment/family-community characteristics/rural-urban factors/sex differences/management/research report.


(The sample consisted of 580 primary, middle and high schools in India.)

call number: 205.

teacher/student ratio/teaching practices/teacher supervision/time on task/facilities/teacher effectiveness/rural-urban factors/research report.


(A sample of 100 respondents in a rural community in Ethiopia, of which 40 had gone to school and 60 had not, were interviewed about perceptions and experiences of primary schooling.)

Findings of the study indicate that living conditions in Saya Debir were typical of rural areas in Ethiopia. Data collected on 40 out-migrants showed that most left for further studies. School linkage with the National Literacy Campaign was manifested in support to literacy instruction and admitting neo-literates as students. With regard to wastage, dropping-out was most frequent in grades 1-2. Most repetition took place in grade 1 and absenteeism was generally related to work in agriculture. Major causes for wastage besides work in agriculture were early marriage and difficult economic conditions. Suggested school improvements included more classes and schools, and practically oriented subject matter. Expected and experienced benefits of schooling were most often seen as related to literacy, occupation, mass-organizations, social and political consciousness and health. All primary completers and most drop-outs showed good retention of school-acquired skills and knowledge and frequently transferred the same to non-schoolers.

(Evidence is provided for all levels of education in developed and developing countries.)

The authors note that school quality seems to affect lifetime earnings of all students, regardless of the level of development of a nation. School quality has greater impact on changes in students cognitive and behavioral outcomes in less developed than advanced nations. The paper explains why, in some cases, more years and money spent for schooling may not lead to higher earnings. The paper concludes that improvement in the quality of schooling provided in developing countries may be more important for future economic prospects of these nations in the long run than will expanded access to poor quality education.

call number: 234.

School quality/economic development/income/socioeconomic status/research report.


(This report describes Kenya's examination system, particularly the examination which terminates the basic education cycle and governs access to secondary school.)

Examination reform has involved 1) changing the content of the exam itself to assess a broader range of student competencies and 2) using test results to monitor the performance of schools generally and to identify areas where students perform poorly so that remediation can be provided. The impact of these changes has been positive. After four years of operation, nearly all of the districts which initially were not performing well showed striking achievement gains, thus closing the gap between districts which performed well and those which did not.

call number: 65.

Examinations/student testing/student competency examinations/ academic achievement/educational equity/research report.


(The subjects in this study were 279 gifted 13 year old children in Shanghi.)

call number: 173.

gifted-talented children/reasoning ability/mathematics/curriculum/research report.

Stevenson, Harold W. [e.a.]. Classroom Behavior and Achievement of Japanese, Chinese, and American Children. (processed).

The sample consisted of 240 first-grade and 240 fifth-grade students from each of the following cities: Minneapolis, Sendai, Japan and Taipei, Taiwan.

call number: 3.

Teacher behavior/student behavior/time on task/curriculum/family-community characteristics/mathematics/research report.


(This paper describes 2 studies. One study involves a sample of 288 kindergarten children, 240 first-graders, and 240 fifth-graders from each of five cities: Minneapolis, Taipei, Taiwan and Sendai, Japan. The second study involves 700 children, age 9-12 in Peru.)

call number: 177.

(The sample consisted of 240 first grade and 240 fifth grade students from each of the following cities: Minneapolis, Sendai, Japan, and Taipei, Taiwan.)

American kindergarten children lag behind Japanese children in their understanding of mathematics; by fifth grade they are surpassed by both Japanese and Chinese children. Cognitive abilities of the children in the 3 countries are similar, but large differences exist in the children's life at school, the attitudes of mothers and the involvement of both parents and children in schoolwork.

call number: 116.

Stigler, James W. [e.a.] (n.d.). Mathematics Classrooms in Japan, Taiwan, and the United States. (processed).

(The study was conducted in 20 first-grade and 20 fifth-grade classrooms in three locations: Minneapolis, Sendai, Japan, and Taipei, Taiwan.)

call number: 120.


(221 schools and 7016 secondary school students in the Netherlands were involved in the study.)

call number: 95.
Suryadi, Ace [e.a.]. Teacher Quality as a Determinant of Differential Mathematics Performance Among Poor-Rural Children in Indonesia Junior Secondary Schools. (processed).

(The sample consisted of 2186 9th grade students in Indonesia.)
call number: 122.

academic achievement/rural-urban factors/teacher behavior/ teacher characteristics/teacher effectiveness/mathematics/ facilities/family-community characteristics/research report.


(Data for this analysis came from a 1981 sample survey of 4181 secondary (Form IV) students in 55 schools in Tanzania.)

The empirical analysis for Tanzania shows that although students pay no fees, their school related expenditure is in fact quite substantial, amounting in 1981 to US$139 for state students, and US$439 (including US$242 for fees) for private students. The results also show that students' expenditure vary more by enrollment characteristics than by family background, suggesting that given the substantial expenses involved, students do not spend more or less than what is necessary, regardless of their background. The large proportion of privately enrolled students in Tanzania indicates, however, that wealthier parents are both willing and able to bear a substantial user charge. A possible implication of these results is that user charges for public secondary education could potentially play an important role in mobilizing private household resources for the sector. Their actual relevance in Tanzania needs, however, to be confirmed by additional research.
call number: 242.

costs/school enrollment/family-community characteristics/ private schools/educational finance/research report.


Comparison of children with and without preschool experience indicated significant differences in indices of achievement across all grades and also in scaled scores of the Draw-a-Man test. The socio-economic level had also a significant impact. The positive effects of preschool are maintained for a relatively long period during the primary school years. This study concludes that preschool education can be considered a means of enrichment and a suitable intervention programme for children brought up in relatively poor cultural environments.
call number: 302.


(This document reviews a wide variety of information including evaluation reports, research studies, project reports and reviews related to technology and learning in Thailand, Indonesia, Malaysia, Liberia, Jamaica, Bangladesh and the Philippines.)

call number: 202.

technology/learning/educational efficiency /costs/computer assisted instruction/textbooks/class activities/teaching practices/teacher role/teacher training/cost effectiveness/ research review.


(The sample consists of 3,405 students from 89 schools in Kenya who were candidates for the KPE, the examination taken after 7 years of primary school. Performance on the examination determines admission to secondary schools.)

call number: 112.

cost analysis/input costs/rates of return/examinations/teacher salarieg expenditure per student/school size/teacher student ratio/research report.


(This report contains population and educational statistics for all Sub-Saharan Africa, and is also available in French under the same call number.)

call number: 273.


(This document contains data from countries in Africa, North America, South America, Asia, Europe, and Oceania.)

call number: 76.

input costs/teacher salaries/teacher benefits/teaching conditions/in-service training/class size/teacher student ratio/time on task/teacher certification/research report.


(This document examines the problems and issues related to teacher quality in Nigeria.)

call number: 201.

teacher training/teacher effectiveness/sex differences/in-service training/research report.


(The data used for the analysis includes longitudinal information on pupils from the Netherlands who left primary school in 1965. A sample of 3042 individuals who left school in 1965 were interviewed in 1970, 1974 and 1978.)

call number: 184.

academic achievement/private schools/secondary education/school characteristics/family-community characteristics/student characteristics/social status/research report.


(The sample consists of students from 22 grade 3/4 mixed age classes in the Netherlands.)

Little difference in time on task was found between pupils in mixed age and single age classes. Ability level had little effect on time on task. Teachers found teaching in mixed age classes difficult. Students in mixed age classes spent more time working individually.

call number: 20.
cross age teaching/time on task/research report.


(The study examines 282 Bank-financed education projects approved between 1963 and 1984. There is a detailed analysis of a sample of 21 projects representative of Bank experience.)

call number: 247.

change strategies/implementation/teacher training/management/facilities.


(Although this paper does not include research findings, it presents an analysis of the role of textbooks in quality improvement.)

call number: 240.

textbooks/school quality/educational improvement/implementation/research report.


(This paper examines 21 teacher training programs from the Bank portfolio.)

call number: 241.

teacher training/in-service training/teacher supervision/curriculum/teacher effectiveness/research review.


A group of leading mathematics organizations, warning that American students are dangerously unprepared in math, outlined an ambitious plan to revamp math education that calls for less rote learning and a stronger emphasis on problem solving, fundamental concepts and more use of calculators and computers.

call number: 317.

(This article is based on data from the National Assessment of Educational Progress and concerns the United States only.)

The performance of American students in science is low.

call number: 294.

science/academic achievement/racial differences/sex differences/mathematics/research report.


(This is a draft paper, not for circulation, quotation or citation.)

The present paper provides an overview of educational systems -- termed indigenous schools -- which are primarily descendants of religious schools predating European colonialism. The Islamic school, one such indigenous school system, is described in terms of its social and instructional consequences for children and society in certain parts of the developing world. Since increased access to primary schooling and the learning of basic literacy skills are important educational policy goals, such alternative forms of schooling, where appropriate, may be useful to consider in support of government primary school institutions.

call number: 313.

Islamic schools/non-formal education/pre-school/primary school.


(This paper reports on a longitudinal study of literacy acquisition among 166 first-grade children in a rural town in Morocco.)

Analyses showed that while there were significant differences in Arabic (first literacy) reading achievement between Berber- and Arabic-speaking groups in the first year of the study, such differences virtually disappeared by year 5. Quranic preschooling, which takes place in Arabic, was found to be a mediating influence on achievement in grade 1. Learning to read in French (second literacy) was unrelated to Berber or
Arabic linguistic background, but highly related to reading achievement in Arabic. The findings support the proposition that children in certain social and linguistic contexts need not be taught in their mother tongue in order to achieve literacy norms of the majority language group. These findings are discussed in terms of their potential generalization to other linguistic and cultural contexts.

call number: 69.

reading/academic achievement/literacy/second language learning/ student characteristics/socioeconomic status/sex differences/ research report.


(The author describes Islamic or Quranic schools throughout the Third World.)

Indigenous school systems often feature literacy as a central focus, but such systems have generally been ignored by developmental planners.

call number: 79.

indigenous education/Quranic schools/cultural factors/literacy/ teaching practices/research review.


(The sample consists of 370 children from 4 to 8 years of age and their* families.)

call number: 83.

literacy/Quranic schools/sex differences/community characteristics/second language learning/reading/student characteristics/academic achievement/research report.


(This paper describes Quranic schooling and includes findings and references from studies on the topic.)

call number: 82.

(The sample consisted of 350 6-7 year old children in Morocco.)

Results indicated specific and positive effects of Quranic schooling on serial memory, but not on other memory or cognitive tasks. These findings replicate earlier reports by Scribner and Cole (1981) that Quranic schooling affects specific (and not general) memory skills. The reading measures indicated superior performance among those children with urban background, Arabic maternal language, and to a lesser extent, Quranic schooling. It was concluded that the corpus of research from this and similar studies suggests a "practice theory" of culture and cognition.

call number: 81.


(This policy paper provides information and statistics on education in Africa.)

call number: 46.


(This partial document marked "for official use only" contains statistics on Senegal.)

call number: 256.

(The study uses data from the 1977, 1981, and 1985 Scottish School Leavers Surveys, which describe the examination results and family backgrounds of over 40,000 secondary pupils.)

The findings show that there were significant differences between Education Authorities (EAs) in their examination performance, even after controlling for the effects of students' family backgrounds. Some EAs were at a distinct disadvantage, because they had several schools with high proportions of low social-class pupils. Adjusting for the mean socioeconomic status of the school, in addition to the background characteristics of individual pupils, altered considerably the profile of attainment and achievement for many of the EAs. The findings also suggest that, of the variance in pupil outcomes remaining after controlling statistically for pupil intake, nearly 90% is between pupils, about 10% is between schools, and less than one-tenth of one percent is between EAs.

call number: 93.

academic achievement/examinations/comparative analysis/school effectiveness/student characteristics/research report.


(Data were supplied by 59 U.S schools of management for 1,762 foreign non-native speakers of English (English second language) and 157 foreign native speakers (English primary language).)

Results of the study indicate that English language "verbal ability" tests are not measuring the same construct in samples of non-native English speakers as in samples of native speakers, U.S. or other. Thus, the verbal scores of U.S. and randomly selected foreign ESL (English second language) examinees cannot be assumed to be comparable--that is, cannot be assumed to reflect valid differences in verbal reasoning ability.

call number: 42.


(The study is based on data from GRE files about 78,000 U.S. and 16,000 non-U.S. GRE examinees.)

The study found that foreign ESL examinees performed better, relative to U.S. examinees, on GRE Subject Tests than on the GRE verbal test. A major implication of the findings is that scores on GRE Subject Tests appear to be useful for assessing relative levels of subject-matter mastery for examinees differing widely in linguistic - cultural - educational background. Research is needed to determine the extent to which the comparative academic performance of U.S. students and foreign students is consistent with their comparative performance on the Gre Subject Tests.

call number: 41.


(This report examines African schools.)

call number: 50.

internal efficiency/economic development/educational expansion/ educational finance/expectations for success/school enrollment/ facilities/instructional materials/research report.


(This proposal contains limited data on the use of educational radio in Nicaragua, Thailand and the Dominican Republic.)

call number: 47.

academic achievement/costs/distance education/radio/ mathematics/research review.


call number: 63.

examinations/student testing/curriculum/research report.

(This policy study contains data on primary and secondary enrollment, distribution of secondary enrollment by type of education, tertiary enrollment and its distribution by field of study, teachers and schools, student-teacher ratios, student flows and indicators of efficiency, percentage of students enrolled in private schools, total public expenditure on education and its distribution by recurrent or capital component and by level of education, and by purpose, average salaries of primary and secondary teachers, external aid to education, external public debt of education sector, and the regular economic and social indicators. There also is a substantial bibliography.)

call number: 284.

policy/educational expansion/expenditure/school quality/primary education/secondary education/resource allocation/.


(This processed document is accompanied by a memo and was submitted to the division in the context of the debate on alternatives to Government schooling.)

Mosque schools are not attached to the mosques as everyone thought. Their connection to the mosque is through the Pesh Imam, rather than their proximity to the mosque. However, their location as far as access is concerned is better than for conventional schools. For the small sample in the survey, literacy and numeracy achievement is probably better than in the conventional schools. The administrative separation of the mosque appears to have been beneficial. The majority of teachers are local. The mosque schools were not more successful in preventing drop-outs.

call number: 300.

Quranic schools/literacy/numeracy/access/achievement.


(The sample includes 32 primary school teachers, 16 from 8 project schools and 16 from 8 non-project schools in Pakistan.)

This document describes a program designed to assess the quality and output of teacher training initiative in Pakistan.)

(The study involved 86 schools, and 2599 elementary school students in Israel.)

The study examines the relative status of school versus home variables in explaining the variance in science achievement. The contribution of school variables was found to be "subject specific" - larger in subjects taught in school and less dependent on general ability; and "system specific" - larger in low socioeconomic schools and small in high socioeconomic schools.

call number: 105.

academic achievement/science/socioeconomic status/teaching practices/student characteristics/research report/school effectiveness.


(The study involved 2599 students in 86 elementary schools during 1984.)

This paper describes 3 indices representing different school characteristics. These indices provided a convenient tool for describing certain school processes and for estimating and evaluating the schools effect.

call number: 106.

academic achievement/science/school effectiveness/socioeconomic status/teaching practices/research report.


(The data used in this study were obtained from a science achievement test administered to a random sample of 86 classes in 86 different elementary schools throughout Israel and included 2429 students.)

call number: 97.
science/academic achievement/sex differences/experiential learning/research report.
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