



# *Determinants of Educational Participation in Rural Nepal*



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**DETERMINANTS OF EDUCATIONAL PARTICIPATION IN RURAL NEPAL**  
(A CERID/WEI PROJECT)

Main Report

Tribhuvan University  
Research Centre for Educational Innovation and Development

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2

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## PREFACE

The last three decades in the educational scene of Nepal are characterized by a rapid quantitative development in terms of student enrolments at all levels of education, especially at the primary school level. However, in spite of the intensive efforts made at the national level to provide basic level education to the people in the country, more than 30 percent of the primary school age children still remain un-enrolled in schools and about 50 percent of the students enrolled at the first grade either drop out or repeat in the same class. It is important in this situation to identify the various causes of non-participation in education which is especially acute in the rural areas of the country and to suggest practical measures or remedies for increasing participation by rural children in education.

It is in view of the importance for making such a research study in the context of Nepal's efforts at educational development that this Centre undertook this study project on 'Determinants of Educational Participation in Rural Nepal'. This study has been conducted on a national level with aims to determine child-related, household-related and school-related factors that affect children's participation in education and their continued attendance in schools. The findings of the study are presumed to serve as a potential guide for policy decisions and programme identification in order to facilitate access to education by the country's rural children on an extensive scale.

This study was started in December 1980 with funds from USAID through the World Education Inc. and was completed in March 1984.

It has been a privilege for this Centre to undertake this study. Those of the CERID staffs who were involved in this study had as much gain in terms of new insights and greater experience as the contributions they had made to the completion of the study. We are grateful to USAID/Washington, USAID/Nepal and World Education Inc. for all the unstinted assistance they made available to us financially as well as in technical aspects accordingly as we needed. On behalf of CERID, I would like to express my sincerest thanks to Mr. John T. Pohlman, Consultant/WEI, whose help in the initial stage of the

project had set the pace for continuing with the operation of the study. Mr. Richard L. Shortlidge, Education Research Specialist, USAID/Washington also deserves our due thanks for all his useful advice and cooperation at the initial phase of the study. I am also most grateful to Professor Michael Useem, Project Manager/WEI who assiduously went through the major parts of the manuscript and gave very valuable suggestions for its improvement.

For going through the draft report of this study carefully and giving valuable suggestions for various improvement on it, I want to express my gratitude to Dr. C.P. Gorkhali, Rector/Tribhuvan University, Dr. N.N. Singh, Secretary, Ministry of Education and Culture, Dr. B.M. Mallick, Dean/IOE, Dr. P.L. Pradhan, Chief of Planning Division/Tribhuvan University, Mr. N.P. Rajbhandari, Joint Secretary/MOEC and Mr. R.P. Shrestha, Director/NEW Era.

I would be failing in my duty if I do not mention the supportive role played by Dr. Prem Kasaju, former Executive Director of this Centre. On behalf of the project study team, I wish to express my deep sense of gratitude to Dr. Kasaju for all kinds of guidance and direction he had given to us in the conduct of the project.

In the end, I am confident that the findings as well as the recommendations of this study would be found useful by policy-makers and researchers in education in planning for the future educational development of the country.

G.M. Shrestha  
Acting Executive Director  
Research Centre for Educational  
Innovation and Development  
Tribhuvan University

March 1984

6

## FOREWORD

Education is a critical foundation of economic and social development. Universal access, especially to primary education, is among those essential preconditions for any nation's modernization, and expanding that access has long been a priority of His Majesty's Government.

The recent record of educational development in Nepal is already one of dramatic expansion, with an annual growth rate exceeding 20 percent. The number of secondary students in 1980 was more than 70 times the number enrolled only three decades earlier, and the number of primary students had increased by a factor of 135. The national literacy rate in 1950 was under 1 percent; by 1984 it had climbed over 23 percent.

Expansion of the Nepalese educational system, however, has not yet begun to reach the ultimate goal of near universal enrollment of the country's youth. Indeed, the nation is just now approaching the half-way work: by 1979, only 44 percent of nation's school-age children were attending class.

To understand why many youth do participate in the formal system -- but also why a near equal number do not -- there can be no substitute for direct, systematic study. The logistical and technical problems of conducting detailed research on a large cross-section of the nation's school-age youth, their families, and their local schools, are of course formidable. But through prodigious effort, the Research Center for Educational Innovation and Development has achieved just that.

Under the leadership of Dr. G.M. Shrestha and, earlier, Dr. Prem Kasaju, the Center has interviewed a representative nationwide sample of more than rural 4,600 school-age children and the heads of over 2,300 households. Detailed information has also been assembled on 120 households in the areas of the sampled children. The meticulous attention to detail and the exceptional quality of the sampling, interview, and analytic procedures ensures that the study's results fully and accurately describe the educational participation patterns of the entire school-age population of rural Nepal. The comprehensive scope and technical proficiency of the investigation also ensures that it will stand as the definitive study of the subject for years to come.

Among the project's most striking findings is the central importance of a family's educational background and attitudes in determining whether their children are likely to make use of the formal schooling system. Children in families whose adults had acquired at least several years of school, or who were literate, or who were favourably disposed toward education, are far more likely to attend and remain in both the primary and secondary systems. Equally striking is the pronounced gender disparity in educational participation: boys are more than twice as likely to participate as girls.

The non-participation of many of the Nepal's youth is thus revealed by CERID's study to be doubly problematic. Deprived of an early opportunity to gain literacy and other skills, non-attending children and early leavers will have little further opportunity to acquire the skills needed for a fully functional adulthood. Later, because of their own lack of schooling, many will do little to encourage their own children to seek education. The cycle of educational non-participation is thereby perpetuated from generation to generation. Similarly, with girls doubly unlikely to remain in the school system, the especially pronounced educational deprivation they face will in turn be imposed again on their own daughters.

The national policy implications are many, and this is what gives CERID's study such power. Drawing carefully from the data, the study's report extrapolates a number of compelling recommendations for ways of further increasing educational participation. To break the inter-generational cycle of non-participation, for instance, the report urges literacy and non-formal education programs for the parents of school-age children. To enhance the participation of girls, the report suggests child-care assistance to lessen a burdensome household duty so often carried by older, school-age sisters.

The findings and policy recommendations of the Centre's study are thus certain to be of great interest to Nepal's educational planners. They are certain to be of international interest as well. Some of the lessons about the determinants of educational participation in Nepal will seem familiar to educational planners elsewhere. Yet seldom have the determinants been so precisely examined, the dynamics of participation so searchingly analyzed, and the policy implications so extensively developed. In advancing the quality of educational planning of Nepal, the Research Center for Educational Innovation and Development has furthered the understanding of educational analysts and planners everywhere.

Michael Useem  
World Education Inc.  
Boston, Massachusetts, U.S.A.

7



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Our thanks also go to National Computer Centre, Kathmandu for the prompt help received in organising the survey data and to the National Census Mapping Project, Kathmandu for making available detailed maps of selected districts and village panchayats.

We are also thankful to Mr. P. Sadanandan of Tata Institute of Fundamental Research, Bombay for valuable assistance received in the data processing work.

We express our deep sense of gratitude to the members of the Advisory Panel for providing valuable assistance in the design of this research study. For consultancy services received we extend our thanks to Dr. Madan M. Shrestha, Assistant Dean, IOE/Tribhuvan University, Mr. Sushil K. Shrestha, Reader IOE/Tribhuvan University and Dr. A.B. Kharsikar, Visiting Professor/Tribhuvan University.

We want to offer our thanks to the Chief District Officers and District Education Officers of the sample districts of this project and to the Pradhan Panchas, Panchas, headmasters, teachers, and above all, all those household heads and children of the sample village panchayats who willingly made contributions in their respective capacities to make this study a success.

Finally, we acknowledge the valuable services and co-operation rendered by the research and administrative staff of the Centre who, in one way or another, contributed their mite towards the execution and completion of the study.

## CONTENTS

		<i>Page</i>
	Preface	
	Foreword	
	Acknowledgement	
	Executive Summary	i-viii
Chapter	I Introduction	1-20
Chapter	II Methodology	21-49
Chapter	III Rural Children and Education Participation	50-81
Chapter	IV Rural Households and Educational Participation	82-107
Chapter	V Rural Schools and Educational Participation	108-135
Chapter	VI Factors Influencing Educational Participation	136-154
Chapter	VII Discussions and Implications	155-173
Chapter	VIII Findings and Recommendations	174-186
	<i>Selected Bibliography</i>	187-188
	<i>Appendices</i>	189-
	A. Questionnaire for Children	
	B. Questionnaire for Household Head	
	C. School Survey Form	
	D. Village Panchayat Survey Form	
	E. District Survey Form	
	F. Advisory Panel	
	G. List of Enumerators	

## LIST OF TABLES, FIGURES, ETC.

### TABLES

No.	Rubric	Page
1.1	Growth in Number of Schools, Students and Teachers, 1950-80	11
1.2	Allocation of Budget for the Education Sector	17
2.1	Proportional Sample Specific Size from Selected Districts	39
2.2	Sample Village Panchayats Selected for the Study	41
3.1	Nutritional Status of Rural Children	53
3.2	Children's Involvement in Different Kinds of Household Work	54
3.3	Rural Children's Involvement in Household Work by Age Group	55
3.4	Children's Engagement in Household Activities and Their Participation in School	56
3.5	Rural Children's Engagement in Earning Activities	57
3.6	Children's Engagement in Earning Activities and Participation in School Education	58
3.7	Distribution of Sampled Children by School Level Age Groups and by Sex	59
3.8	Number of Rural Children Enrolled in Schools by Age Group and by Sex	60
3.9	Participation of Normal and Overage Children at Different Levels of Schooling	61
3.10	Mean Age of the Students Enrolled in Selected Grades by District	62
3.11	Different Reasons cited by Rural Children for Their Non-Participation in Education	63
3.12	Mean and Standard Deviations of Explanatory Variables and Their Correlation with the Dependent Variables	65

No.	<i>Rubric</i>	Page
3.13	Inter-Correlations Between Variables	66
3.14	Regression and Standardized Regression Coefficients of Explanatory Variables of Educational Participation	67
3.15	Mean and Standard Deviations of the Explanatory Variables and Their Correlation with Dependent Variables	71
3.16	Regression and Standardized Regression Coefficients of Explanatory Variables of Educational Participation by Level of Schooling	73
3.17	Mean and Standard Deviations of Explanatory Variables and Their Correlations with Educational Participation	75
3.18	Regression and Standardized Regression Coefficients of Child-Related Explanatory Variables of Educational Participation by Sex	76
3.19	Mean and Standard Deviation of Child-Related Explanatory Variables and Their Correlation with School Attendance	78
3.20	Inter-Correlations of Child-Related Variables and Attendance Percentage	79
3.21	Regression and Standardized Regression Coefficients of the Explanatory Child-Related Variables of the Attendance Percentage	80
4.1	Percentage Distribution of Households by Different Language Groups	85
4.2	Land Ownership and Educational Participation	87
4.3	Mean and Standard Deviation of the Household Related Explanatory Variables of Educational Participation	89
4.4	Inter-Correlations of the Household-Related Explanatory Variables and Educational Participation	91
4.5	Regression and Standardized Regression Co-Efficients of Household Related Explanatory Variables of Educational Participation	93

No	Rubric	Page
4.6	Mean and Standard Deviations of the Household-Related Explanatory Variables and Their Correlation with Educational Participation by Level of Schooling	96
4.7	Regression and Standardized Regression Coefficients of the Household-Related Explanatory Variables	98
4.8	Mean and Standard Deviation of the Household-Related Variables and Their Correlation with Educational Participation by Sex	99
4.9	Regression Co-efficients and Standardized Regression Co-Efficients of Household-Related Explanatory Variables of Educational Participation by Sex	100
4.10	Mean and Standard Deviation of Household-Related Explanatory Variables of School Attendance	102
4.11	Regression and Standardized Regression Coefficients of Household Related Explanatory Variables of School Attendance	103
4.12	Mean and Standard Deviations of Household-Related Variables and Their Correlation with the Proportion of School-Going Children	104
4.13	Regression and Standardized Regression Coefficients of Household Related Explanatory Variables of the Proportion of School-Going Children	105
5.1	General Background of Primary and Secondary School Teachers	111
5.2	Academic Qualifications and the Training Status of Primary and Secondary School Teachers	112
5.3	Types of Buildings by Levels of Schooling	114
5.4	Availability and Adequacy of Physical Facilities for Different Purposes	115
5.5	Adequacy of Instructional Materials in Primary, Lower Secondary and Secondary Schools	117
5.6	Mean and Standard Deviations of the School-Related Explanatory Variables of Educational Participation	119

No.	Rubric	Page
5.7	Inter-Correlations of the School Related Explanatory Variables of Educational Participation	121
5.8	Regression and Standardized Regression Co-Efficients of School-Related Explanatory Variables of Educational Participation	122
5.9	Mean and Standard Deviations of School-Related Explanatory Variables of Educational Participation by Levels of Schooling	125
5.10	Regression and Standardized Regression Coefficients of School-Related Explanatory Variables of Educational Participation for Primary and Secondary School Levels	127
5.11	Regression and Standardized Regression Coefficients of School-Related Explanatory Variables of Educational Participation by Sex for Primary Age Children	129
5.12	Mean and Standard Deviations of Selected School Characteristics and Their Co-Relations with Attendance Percentage	130
5.13	Regression and Standardized Regression Coefficients School-Related Explanatory Variables of School Attendance	131
5.14	Mean and Standard Deviations of Selected School Characteristics and Their Co-relation with Attendance Percentage by Levels of Schooling	133
5.15	Regression and Standardized Regression Coefficients of School-Related Explanatory Variables of School Attendance, by Levels of Schooling	134
6.1	Regression Results for Educational Participation using all Predictor Variables for Primary, Secondary and Total Sample	137
6.2	Ranking of Educational Participation Predictors in Terms of Their Statistical Importance	140
6.3	Stepwise Regression Model of Education Participation using Mutual Variables	143
6.4	Results of Stepwise Regression Runs using Mutable Variables	144

No.	<i>Rubric</i>	<i>Page</i>
6.5	Stepwise Regression Model of Educational Participation Framed using Mutable Variables. in the Primary Age Sample	146
6.6	Stepwise Regression Model of Education Participation Formed using Mutable Variables in the Secondary Age Sample	147
6.7	Regression Results for Attendance Percentage Using all Explanatory Variables for Primary, Secondary and Total Sample	149
6.8	Stepwise Regression Model of Attendance Percentage using Mutable Variables	152
7.1	Proportion of Variance Explained by Different Clusters of Variables	156

## FIGURES

2.1	Diagram Showing Schematic Framework of the Study	24
7.1	A List of Highly Significant Variables Affecting Educational Participation	158
7.2	List of Highly Significant Variables Affecting School Attendance	163
7.3	List of Modifiable Variables that have Significant bearing on Increasing Educational Participation	166
7.4	List of Modifiable Variables that have significant bearing on Increasing Attendance Percentage of Rural School Children	166

## MAP

<i>Map of Nepal Showing Stratified Regions and Sample Districts Selected for DEP Study</i>	36
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## CHARTS

<i>Chart Showing Structure of Education</i>	10
<i>Administrative Organization of Education</i>	12

## EXECUTIVE SUMMARY

### *Background*

Universalization of the first level education is a prerequisite for enabling the rural populace to participate effectively in development activities as well as forging national identity and integration. As aptly stated in the World Development Report of 1982, Nepal's policy of expansion of primary education "would ... offer promise of raising agricultural productivity and alleviating several dimensions of poverty".

Though primary education expanded considerably during 1951-81, only 68 percent of the school age children are enrolled in primary schools grade 1-5 and there is a wide disparity in the enrolment figures of rural and urban students as well as of boys and girls. A well-coordinated policy is therefore called for to achieve the target of universal primary education. To serve as a basis for formulating such a policy it is important to identify those factors that affect rural children's participation in education. It is with this end in view that this study has been undertaken.

### *Objectives*

The objectives of the study are (i) to identify child, household and school-related characteristics, separately and collectively; that affect rural children's participation in school education; (ii) to find out the factors that bear upon the attendance of school-going children; and (iii) to make recommendations for increasing rural children's participation in education.

### *Procedure of the Study*

Interviews were taken of 2,310 household heads and 4,655 school-age children in seven representative districts of the Kingdom. These districts were selected so as to represent the three geographical regions of the country -- the mountains, the hills and the terai. From each of these districts, three village panchayats representing high, medium, and low [stratified on the basis of per capita agricultural production and the number of S.L.C.



graduates per thousand population] were selected. The number of households to be covered for survey was fixed on the basis of the number of households in each selected region. Additionally, two village panchayats from the inner-terai region were also included in the survey.

Child- and household-related information was gathered from questionnaires prepared for interviewing the children and household heads. With the use of survey forms, important particulars about the concerned schools, and district and village panchayats were collected.

### *Major Findings*

The major factors that affect children's participation in education in rural Nepal are as follows:

#### Child-related Factors

1. Sex is the single most important predictor of educational participation. Boys' participation rate is higher by 33 percent than girls'.
2. For every one year's schooling in father's education the possibility of his children's participation in education increases by 4.5 percent.
3. Distant location of the school demotivates parents from sending children to school. In the primary age group, children's educational participation decreased by 2.5 percent for every kilometer between the child's home and the school.
4. A significant proportion of child in all primary grades are overage. A year's increase in age is associated with probable increment in educational participation by 4 percent.
5. A child's chance of participating in formal education is reduced by 33 percent if he is engaged in earning activity.
6. Primary school age children who have to help with the household work have a 9.3 percent reduction in school participation.

#### Household-related Factors

1. The educational status of the adults in a family was found to be the strongest predictor of rural children's educational participation. One year's increase in the average educational status of the adults raises children's participation rate in school by 4.5 percent.
2. The attitude of the household head toward modernity was found to have a strong influence on educational participation.
3. The probability of a child participating in education was, other things being equal, higher if the language he speaks at home is Nepali. This case is applicable to the hills only.
4. The higher the income of a family is, the greater is the chance of the children's participation in education.
5. Two major occupations - cottage industry and labour in which the rural households are engaged adversely affected children's participation in education. Participation rate decreased by 6.7 percent in the primary age sample.

#### School-related Factors

1. Among the selected school-related factors, ethnic similarity between teacher and students was found to promote educational participation especially in the hills.
2. Qualified and trained teachers working in a school helped increase educational participation.

#### Regional, Sex-wise and Level-wise Differences

1. Distance from home to school affects educational participation by school-age children, mostly in the hills and the mountains.

2. In the terai and inner-terai where girl's enrolment is lowest, father's educational status seems to have the strongest effect on educational participation.
3. Of the 40 percent of the rural school age children (6-15) that go to school the enrolment ratio for sampled girls was 22.0 percent as against 55.7 percent for boys.
4. The rate of girls giving up school education after the age of 12 and 13 is extremely high.

#### *Effect of Selected Mutable Variables*

Significant mutable variables positively associated with educational participation are the educational level of adults in the family, favourable attitude of the household head, the provision of qualified and trained teachers, and good physical facilities in the schools. Those associated negatively are greater distance to school, rural children's engagement in earning activities and a high ratio of children to adults in a family.

#### *Factors Affecting School Attendance*

1. The factors that determine school attendance were in many aspects different from those affecting enrolment.
2. "Grade continued" or the number of grades that a student completes had the most significant effect on regular attendance of school-going children.
3. The multiplicity of classes in a school was found to be negatively associated with school attendance.
4. Greater distance to school and a high students teacher ratio had an adverse effect on regular attendance of school-going children.
5. Improved physical facilities like a playground and instructional resources (like teaching materials and library) had a significant

positive effect on the regular attendance of school-going children.

### *Implications and Recommendations*

The findings of this study have implications for

- (a) extending access to education by rural children which may call for alternative structures and innovative methods of education.
- (b) reducing pressure on rural children to be engaged in domestic work.
- (c) increasing efforts to develop a positive attitude among the rural people toward education, and reducing social bias against girls' education; and
- (d) improving physical and instructional facilities of a school to enhance its attractiveness and its power to keep students from dropping out.

### *Recommendations*

On the basis of the major findings of this study, recommendations for maximizing educational participation by rural children are made as follows:

1. Adopting Alternative Structure and Methods to Increase Areas to Education

The industrial model of setting up a school centrally is not very practical in the mountains and parts of the hills where the settlement pattern is sparse and scattered. Hence, it is recommended that *alternative structure of primary education (such as mini-schools and annex classes) and non-formal approaches be adopted to increase rural children's access to education.*

2. Reducing Pressure of Domestic Work on Children

Rural children, who are heavily engaged in household chores, cannot normally participate in education. Thus, it is recommended that *various approaches, such as child-care centres and coops to look after the cattle and to fetch wood/fodder, should be adopted to disengage children from certain household duties so that they can take part in schooling.*

3. Raising the Level of People's Awareness and Commitment

To enhance the awareness level of the village people about the value of education, it is important that *literacy and non-formal education programmes be conducted on a wide scale so as to make education facilities available to the rural people. Besides an educational campaign should be launched in the community in a way that can exert a subtle social pressure on rural parents to send their children to school.*

4. Adopting Differentiated Policy of Financing and/or Supporting the Education of the Most Needy

Despite the fact that primary education including textbooks (upto grade 3) has been made free, many families cannot still afford to send their children to school because of incidental expenses and the loss of labour at home. In fact, equity in education connotes a discriminatory benefit awarding society so that the most needy and the backward people get a greater need-based share. Thus, *it is necessary to provide special support and incentive mechanism for the economically and socially disadvantaged children.*

5. Increasing Educational  
Relevance to Rural Needs.

One reason for the indifferent attitude of rural parents towards education is that primary school education, as it stands now, has not been productive. Thus, it is imperative that *steps must be taken to raise the extent of relevance of school programmes to rural needs and to link with them productive activities. In the context of Nepal, schools can ill afford to remain isolated as islands of academic instructions.*

6. Improving Physical and  
Instructional Facilities  
In Schools

In order to bring the rural primary schools to at least the threshold level of attracting and holding rural children, *the physical as well as instructional facilities of these schools need to be considerably extended and improved.*

7. Recruiting Teachers of Similar  
Ethnic Background and Providing  
Continuing Education to Them

*While recruiting teachers, preference should be given, other things being equal, to local residents with an ethnic background similar to that of the majority of students who are dedicated to bringing about gradual improvement in the instructional programme of the school.*

8. Lessening Inequities and/Imbalances

Considering the regional and socio-ethnic differences in educational participation, it is necessary that *educational planning should specifically address to resolving imbalances and inequities in education.*

9. Promoting Research and Development Efforts for Increasing Participation in Education

As the process of achieving universalization of primary education will be more and more challenging at later stages, *concerted research and development efforts should be made to explore innovative strategies (like alternative structures and methods) and supportive programmes (like primary preparatory classes) for increasing the attractiveness and efficiency of primary school education.*

10. Bringing about Effective Partnership between Local Participation and Government Efforts

In the final analysis, achievement of the universalization of primary education will depend largely on the level of synchronization and complementarity of efforts of the local people and the government. Thus, it is essential that *the governmental inputs for educational development in each panchayat should be well consorted with local efforts and plans.*

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Chapter I

INTRODUCTION

*Nepal - A General Background*

For many centuries in the past, Nepal remained virtually cut off from the rest of the world. Even inside the country, interactions between various ethnic groups, that lie concentrated in different parts of the Kingdom, were largely infrequent. The rugged topography of the country and the then political situation had much to account for this prolonged isolation from the outside world and for lack of regular contacts even among the people living in it. In brief, the feudal and oppressive policies of the Rana regime (1946-1950) hindered the people from exercising their basic socio-political rights and left the country devoid of an infrastructure for socio-economic development.

In 1951, with the dawn of democracy in the Kingdom, the country, which had so long remained insulated against outside influence, wriggled out of its shell and embarked upon a process of development in the modern sense of the term. National development activities began to be undertaken in all sectors. Friendly countries and international agencies extended cooperation in the nation's priority areas of development. Obviously, starting from scratch, the country had to date made a great deal of progress in various development sectors, especially in the sectors of transport and communication, education, health and agriculture.

However, Nepal still remains to be one of the least developed among developing nations in the world. Its resources are extremely limited and most of the available ones cannot be easily harnessed because of the rough terrain and for the lack of a sound infrastructure. In this context, it is natural that education has been considered as an important and integral component of the development process by way of creating awareness among the populace as well as building a knowledge and skill base for facilitating developmental activities.



### Location

Bounded on the east, south and west by India and on the north by the autonomous region of Tibet, Nepal lies within the latitudes of 26°.12' and 30°.27' North and the longitudes of 80°.4' and 88°.12' East and has an area of 147,181 sq. km. The country is shaped like a rectangle with an average length of 885 km from east to west and a width of 193 km from south to north. It is a landlocked country. The nearest seaport is Calcutta in India which is 1120 km away.

### Physical Division

Geographically Nepal can be divided into three elongated strips - the low land or the plains (terai) along the southern belt, the hills (pahar) in the midland and the mountains (himal) in the north. The terai land is flat and fertile and has an altitude ranging from 60 to 300 metres. The hills area is predominantly hilly with some patches of flat river basins and valleys here and there and has an altitude ranging from 600 to 4877 metres. The Kathmandu Valley itself which is in the hilly region is at an altitude of 1300 metres. The Himalayan region is extremely mountainous with elevations rising from 4877 to 8848 metres above sea level.

The terai, which has good prospects of agricultural and industrial development, constitutes only 17 percent of the total land surface, the rugged hills 68 percent and the arid mountains 15 percent.

### Climate and Vegetation

Nepal, though not big in size, has a wide range of climate differing according to variations in altitude and location. In general, the climate ranges from hot tropical in the terai to moderate sub-tropical in the midlands and to tundra in the high mountains. As the climate along the southern belt of the country is of a hot tropical monsoon type, the terai including the Inner-terai or *Bhitri-Madesh* (northern portion of terai) had dense forests and grows a variety of food and cash crops. Once a highly malarial place, the terai has recently become the centre of large-scale migration from

neighbouring areas especially from the hills where the density of population is high. The hills including the valleys have a mild salubrious climate which accounts for making this region, the core settlement area of the country. The mountain region has a climate ranging from temperate to arctic with extremely cold winters which force the inhabitants to leave their homes in mid-winter.

#### Administrative Division

For administrative purpose, Nepal is divided into 14 zones and five development regions. The eastern development region comprises Mechi, Kosi and Sagarmatha zones and the central region has Janakpur, Bagmati and Narayani zones. Similarly the western development region has Gandaki, Dhaulagiri and Lumbini zones, the mid-western region has Rapti, Bheri and Karnali zones and the far-western region has Seti and Mahakali zones. The country is again divided into 75 districts and each district is sub-divided into town/village panchayats (lowest administrative unit). There are a total of 29 town panchayats and more than 4000 village panchayats in the country. A chief district officer is in charge of each district.

#### Population and Ethnicity

The population of Nepal was 15,022,839 as on 22 June 1981 in which males represent 51.2 percent. The national rate of population growth is 2.66 percent, though within the last decade, the population growth in the terai, owing to continued influx of people from all sides, has been as high as 4.3 percent.

The population density in the country, according to 1981 census, is 102.1 persons per sq km as against 78.5 persons only in 1971. Population density ranges from 20.7 persons per sq km in the hills to 1551 in the plains. The general pattern of population growth is one of decreasing density from south to north and from east to west.

Ethnically the people of Nepal belong to two distinct groups - Indo-Aryan and Tibeto-Burman. The Tibeto-Burman ethnic group like Sherpas is concentrated mostly in the north and the Indo-Aryan group like the terai people mostly

in the south. In the hills this distinction is not so prominent because of the inter-mixing that has taken place through the ages though there are distinct groups of Indo-Aryan stock like Brahmans and Chhetris and of Tibeto-Burman stock like Tamangs, Magars and Gurungs. In Nepal there are at least 25 cultural groups that fall within varying shades of Caucasoid and Mongoloid races and each cultural group has developed a cultural pattern of its own which is distinguishable from that of many other groups. For instance, Chhetris, Gurungs, Rais and Limbus are famed for being brave Gorkha soldiers, Newars are credited with a rich heritage of art and architecture and Sherpas are known the world over as good mountain-climbers. There are quite a few small community groups in the country like Satars, Chepangs, Kusundas and Rautes who are comparatively in a very backward and primitive stage.

Caste system still persists among major ethnic communities and the social, cultural and economic condition of a community has a great deal of bearing on the caste to which it belongs. A number of caste groups are socially, though not legally, treated as low caste people or even as untouchables. These people, who have for generations accepted their place in the hierarchy of Nepalese society, hardly care to claim equality with other caste groups. As earning bread is their major concern, education does not hold much attraction for them. Besides the orthodox teachers even discourage the children sitting together with so-called low caste children. Though in recent years this discriminatory treatment on the basis of caste is on the way out, it still poses a problem in various places of the country so that uninhibited socialization in a spirit of harmony among the pupils of a school often gets affected.

#### Religion

Nepal is the only Hindu Kingdom in the world. According to the census of 1981, 89.5 percent of the people are Hindus, 5.3 percent Buddhists and 2.6 percent Muslims. The remaining 2.6 percent belong to various other faiths and creeds.

Religion forms an integral part of life in Nepal. There are temples,

shrines, stupas and chortens dotted all over the country. In almost every household there is a special room, or at least a part of a room, allotted for the purpose of puja which consist in saying prayers to and worshipping gods. Knowledge and learning are regarded as attributes of the Goddess of Learning so that even a book, a pencil and a writing slate are held as sacred. Adults instruct their children to touch these symbols of learning with their heads if they step over them with legs.

Hindus and Buddhists in Nepal live together in religious harmony. As the result of a process of symbiotic growth and cross-cultural interaction that has been going on through the ages in Nepal, Hinduism and Buddhism have even blended in many ways, the most important being the evolution of Tantrism, a highly symbolic and metaphysical religious system.

Religion as a way of life has also been responsible for the existence of a few religious schools, as for example, there are *Gombas* run by the Buddhist priests in the north that impart knowledge of Buddhist religion to Children, there are *Madarasas* run by the Muslims where the Koran is predominantly taught and there are Sanskrit schools run by the Hindu Brahmins where Sanskrit-based education is imparted. However in these years, with the growing level of awareness among the people of various communities and as a result of the emphasis given at the national level to school education most parents send their children to the modern type of schools.

The Nepalese observe a number of religious festivals that occur periodically each year as well as in the life period of a person. In most of these festivals which are marked by religious ceremonies and social get-togethers people of all faiths participate with equal zeal and fervour.

#### Language

Nepali, which is the national language, is the mother tongue of 58.3 percent of the people in the country. Besides Nepali, there are some 11 major languages and several dialects spoken by different communities in the country. For instance, Maithili is spoken by 11.1 percent of the people, Bhojpuri by 7.6 percent, Tharu by 3.6 percent, Tamang by 3.5 percent and Newari by 3 per-

cent. The remaining 13 percent of the people speak various other languages or dialects.

However, Nepali is understood by a large majority of the people and it is being used as the medium of communication all over the country. Nepali is also made the medium of instruction in the schools of Nepal as a strategy in bringing about national integration. In spite of the increasing use of Nepali, the language problem however exists in some areas, especially at the primary school grades among the non-Nepali speaking communities.

So far as the pattern of ethnic composition and distribution in the country is concerned the Nepali-speaking community comprises Brahmins (priestly caste) Chhetris (warriors' caste) and occupational caste groups like Damais (tailors-cum-brass band players), Sarkis (cobblers), Kamis (blacksmiths), Sunars (goldsmiths), etc. The Brahmins, who have played a dominant role in the society as priestly caste group, the Chhetris belonging to the warrior class who wield a greater influence in the political and social setup of the country and the Newars, who are known for their distinctive cultural heritage, have comparatively taken greater advantage of educational opportunities in the country.

The inhabitants of the northern Himalayan sector who mainly constitute the Sherpas have their language, culture and religion related more closely to those of the people living in the Tibetan region, and those of the terai dwellers on the southern side have much of their language, culture and economy in common with those of the people living in the northern part of India. In between there are people of various ethnic and cultural groups that, notwithstanding the influences from both the directions, have distinct indigenous characteristics. However, with the emphasis given to the wider use of Nepali and as a result of the interest taken by most non-Nepali-speaking people in learning this language, more than 72 percent of the country's population speak or understand this language.

### Economy

The Nepalese are a predominantly agricultural people. According to latest statistics, 91.1 percent of economically active population of the country are engaged in agriculture, 4.6 percent in government and private services, 1.6 percent in business and the remaining 2.7 percent in various other trades.

Cultivated land and population are unevenly scattered over the three topographical regions of the mountains, hills and the terai. The hills and the mountains have about two-thirds of the population but account for only one-third of the available cultivable land in the country. In the hills and the mountains, the average size of land holding per family is less than two-fifths of a hectare.

The people in the mountains, where agricultural production is low, raise sheep, goats and yaks and weave woollen blankets. The cold climatic and the near non-arable condition of the mountains makes it necessary for these people to move down to the south in search of pasture for their cattle and of work for themselves during winter months. Some people like the Sherpas carry on trade also in addition to agriculture and work for mountaineering expedition teams.

The people in the hills, besides the little income they make by farming in their small fields, temporarily migrate to towns in search of unskilled jobs during the off-season.

The terai is often called the granary of Nepal and much of the forest wealth of the country lies in the terai itself.

Industrially Nepal is still in its infancy. Except for jute, it has practically very little exportable industrial production. Agriculture, which is the mainstay of national economy, constitutes more than 60 percent of the GDP and as such most (about 80 percent) of the country's exports are of agricultural origin. The gross per capita income of an average Nepalese in 1981 was estimated to be only \$130 according to the World Bank report.

The current Sixth Five Year Plan (1980-85) has set a target of achieving 4.3 percent annual growth in the GDP in which agriculture, because of its potentials for immediate returns, is given the topmost priority with industry, transport and communication following in order of priorities.

#### Transportation

One of the biggest hurdles in the development of Nepal is transportation difficulty considering the topography and the economic status of the country. In most parts of the hills and the mountains, the usual means of transport services consist of load-bearing men and animals. Though transportation facilities are better in the terai, bullock carts are still very widely used to make up for the inadequacy of all-weather motorable roads. Similarly, though the network of air-links and roadways has considerably expanded within the last few years there are still 'many miles to go' so far as transportation facilities are concerned. Especially in remote hills areas, the transportation problem is so acute that except for the construction of some foot tracks or mule tracks there is not much the country can do to ease this problem in the near foreseeable future.

The problem of transportation certainly affects, as it does on every other aspect of development, educational development as well. If a school is distantly located and there is no easy means of reaching the school from neighbouring areas for lack of modern transportation system one can imagine the maximal extent to which this educational facility can be utilized by the local community. During the monsoon days when rivers get flooded people in several parts of the country virtually remain cut off for many days from many other parts of the country thus disrupting the general tenor of life there.

#### Health and Nutrition

The causes that especially lead to the poor health and nutritional standards of the people are their poor economic condition, ignorance of the rules of health, hygiene and dietary rules, inequitable food distribution and inadequate health services and facilities.

An average family in Nepal consists of 5.8 persons and life expectancy is 46 years for men and 42.5 years for women. According to the recent statistics there was only one doctor for every 30,000 and one hospital for every 52,000 people. The rising population growth rate (2.66%) combined with the slow rate of agricultural production (1.4% annual growth rate) naturally has an adverse effect upon education and health services in inverse proportion. The Country Health Profile published by the Ministry of Health in 1979 estimates that 50 percent of children die before the age of five. The high fertility rate (6.1%) of an average woman tends to create not only the problem of over-population but also the added problem of providing child care and necessary educational services.

Different community groups have various food taboos. The daily meal of an average person is usually poor and does not conform to the dietary requirements. Continued protein and vitamin deficiency stunts the growth of children so that weak health and intermittent illness results in irregular attendance at or dropping out of school. As 40 percent of the people are living below the subsistence level of economy, improvement in the dietary condition of these people will depend upon education as well as other assistance services made available to them.

#### *Education in Nepal*

In Nepal the modern type of education began with the establishment of an English-based school, the first of its kind, in Kathmandu in 1854 A.D. But the pace of educational development was, all through the years, slowed down by the then government to such an extent that by 1950 A.D. less than 1 percent people had been literate.

With the sudden opening of the floodgates of education in 1950's followed by a wave of enthusiasm rising among the people for education, schools began to be set up in different parts of the country and parents started sending their children to school. There was therefore considerable educational progress in the years between 1950 and 1970 and, as a result of systematic



efforts on the part of the government with the introduction of the National Education System Plan in 1971, there was a further spurt of educational expansion during 1971-80.

#### Educational Structure

When the English type of education was first introduced in the country, a general structure of 5 years' primary, 3 years' middle and 2 years' high school education was followed. This structure had been in vogue for many years until the NESP of 1971 adopted a 3+4+3 pattern of education as is indicated in the following chart.

#### Structure of Education Chart

<u>Level of schooling</u>	<u>Grades</u>	<u>Age level</u>
Primary*	I - III	6 - 8
Lower secondary	IV - VII	9 - 12
Secondary	VIII - X	13 - 15

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\* This level has been increased for practical reasons to 5 grades since 1981 leaving the lower secondary level to only two grades.

The terminal goal for each level of schooling according to NESP has been stated as 'making literate' for the primary level, 'character-building' for the lower secondary level and 'preparation of productive citizens' for the secondary level. The officially identified age groups for primary school education are 6-8, for lower secondary 9-12 and for secondary 13-15. This structure with only three years of primary education has been adopted with implicit aims of providing at least basic level education facilities to the maximum number of people on the basis of equity and social justice. The NESP further stipulated that for being a primary school teacher one needs to pass SLC and have teacher training. Similarly to become a lower secondary school teacher one has to pass the Intermediate and to receive training. For a

secondary school teacher, Bachelor's degree plus training is required.

### Educational Expansion

With the growing interest of the people in education and with the thrust given at the national level to educational development, there has been a steady growth, in numerical terms, of schools, students and teachers the extent of which is evident from the following figures.

Table 1.1  
GROWTH IN NUMBER OF SCHOOLS, STUDENTS AND TEACHERS, 1950-80

	Primary				Lower secondary				Secondary			
	1950	1960	1970	1980	1950	1960	1970	1980	1950	1960	1970	1980
No. of schools	321	4001	7275	10130	x	x	x	3501	11	156	1094	785 <sup>+</sup>
No. of students	8505	182533	408471	1067912	x	x	x	391427	1680*	21115*	120537*	121007*
of which females	86 (1%)	NA	64752 (15.8%)	299512 (28%)	x	x	x	80889 (21%)	NA	NA	17265 (15%)	21613 (18%)
No. of teachers	642	7281	18674	27805	x	x	x	11693	120*	1612*	5628*	4683
of which trained	20 (3%)	NA	4983 (26.7%)	9971 (36%)				4587 (39%)	NA	NA	981 (17.5%)	2919 (62%)

<sup>+</sup>The reduced figure is due to re-classification of schools into three categories.

\* Includes lower secondary.

It is easy to assess the substantial progress education had made during a period of three decades, especially when we compare the low figures of 1950 with those of 1980. Quantitatively the numbers of schools, students and teachers increased approximately by 32, 135 and 44 times respectively in 1980 from the figures available for 1950 at the primary school level, and by 71, 72 and 39 times respectively at the secondary school level.

Similarly the percentage of girls' enrolment went up from 1 percent in 1950 to 28 percent in 1980 at the primary school level. At the secondary school level also the percentage of females (figures for this were not

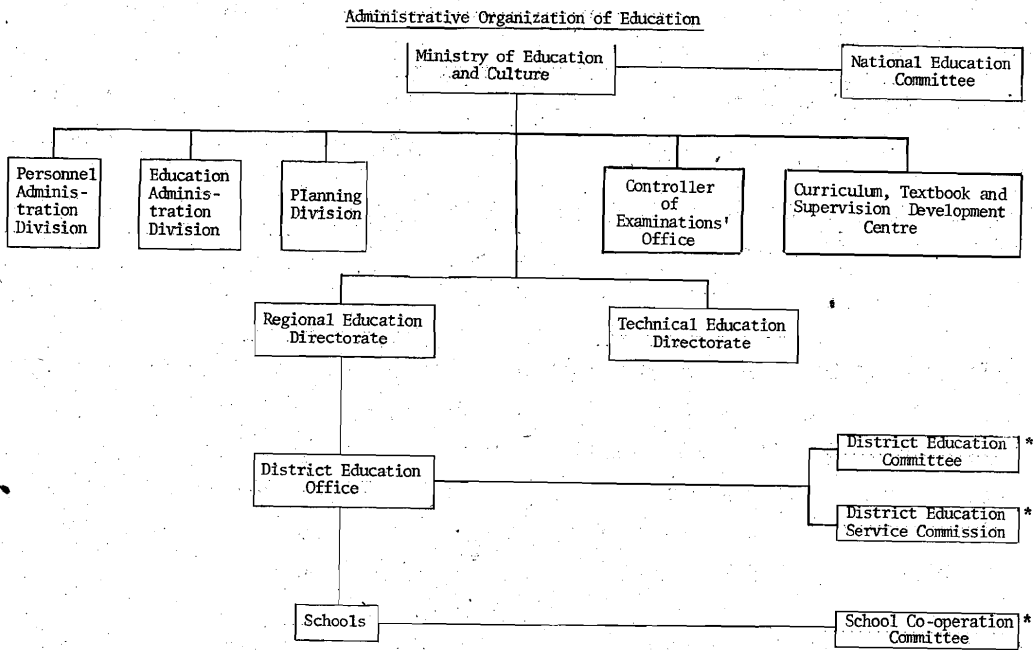
available for 1950) was taking an upward trend so that it reached 18 percent in 1980.

The proportion of trained primary school teachers also rose from 3 percent in 1950 to 36 percent in 1980. At the secondary school level also (figure of teachers were not available for 1950) the percentage of trained teachers went up to 62 percent in 1980.

The overall literacy rate also which was, according to information available for 1950, less than 1 percent, shot up to 23 percent in 1980.

#### Administrative Organisation

The educational system in Nepal is centralized. Planning, policy-making and programmes including the preparation of the curriculum and textbooks for the educational development of the country are administered at the central level. Given below is the organigram of Nepal's educational administration.



Recently with the institution of the school managing committee, the District Panchayat has also been made responsible for the educational development of the district. Similarly, the School Co-operation Committee has been replaced by the school managing committee which works in conjunction with village/towns/panchayat/village assembly. The provision for District Education Service Commission has been recently abolished.

The Ministry of Education and Culture (MOEC) is the highest administrative body responsible for formulating, implementing and monitoring education programmes in the country. The MOEC, through its various divisions and sections, takes care of the administration in the education sector and makes short-term and long-term plans for education development in the country.

The National Education Committee (NEC) is the top level body set up by the Government to formulate comprehensive plans and policies for educational development in the country. At present, the NEC is chaired by the Minister of Education. The Secretary of Education, the chairperson of the Social Service Committee of the National Panchayat and the Vice-chancellor of the Tribhuvan University are ex-officio members. The member-secretary for the committee including two educationists as members of the committee are nominated by His Majesty the King. The MOEC runs its administration through three main divisions - Personnel Administration, Education Administration and Planning. These are also the Controller of Examinations' Office (COE) Office and Curriculum Textbook and Supervision Development Centre (CTSDC) directly under the Ministry.

As arms of the Ministry there are five Directorates of Education, one each based at the five development regions. Each directorate is headed by a regional education director. There is one District Education Office headed by a District Education Officer (DEO) in each of the 75 districts of the country. The Directorates and District Education Offices co-ordinate and supervise the implementation of education programmes in their respective areas.

Presently a national level Technical Education Directorate has also been set up to formulate plans on technical aspects of school education and to implement and administer technical education programmes.

At the district level, the DEO is helped by the district education committee in matters of general educational concern and by the district education service commission for the appointment of teachers. The school cooperation committee set up for each school is to assist the school in

various aspects of its development.\*

The implementation of the NESP in its efforts to systematize educational development by properly improving and organising school's financial capabilities, teachers' status, school curriculum and textbooks has, apart from its tangible achievements, also brought about a situation in which there was a marked decrease in local contribution to education so much so that a tendency among the people to look up to the government for all kinds of assistance in the operation of their schools seemed to emerge all over the country. This has led the government recently to adopt several measures by which people's involvement in education can be increased.

#### Curriculum

The Curriculum, Textbook and Supervision Development Centre under the Ministry of Education and Culture frames the curriculum for all the subjects taught in each grade at the school level. A uniform kind of curriculum has been prescribed with aims to bring about national harmony. No local variations, according to the heterogeneous (climatic, ethnic and economic) nature of the country, are incorporated or are provided for in the curriculum. Nepali is used as the medium of instruction for all schools in the country. The school supervisors see that the centrally prescribed curriculum is followed in all grades. District level examination at the end of primary school education and zonal level examination at the end of lower secondary education are instituted to ensure uniformity of standards. This practice has lately been not strictly followed.

In the primary school curricula, the subjects taught are Nepali, social studies, arithmetic and drawing and painting. In the fourth and fifth grades science and health, Sanskrit, English, physical education and moral education

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\*With a decentralization policy followed recently, this district level organizational pattern has been replaced by a District Education Planning Committee in which the District Panchayat chairman/members play a more active role and at the local, the school managing committee has been activated to oversee and to contribute to the operation of the school.

are added and drawings and painting dropped out. In grade six and seven, the subjects taught include one pre-vocational subject also and at the secondary level the subjects taught are Nepali, English, mathematics, one vocational subject, two subjects from one of the selective groups [e.g., science group, Sanskrit group, social studies group, etc.] and one extra paper from any selective group. At the end of the school education, students are required to appear in the School Leaving Certificate Examination which is the terminal examination conducted at the national level by the SLC Controller of Examination's Office, Ministry of Education and Culture.

#### Textbooks and Instructional Materials

School textbooks are prepared at the national level and are prescribed for all grades in schools all over the country. This policy has been taken with a view to systematizing educational development in the country and to ensuring a uniform standard in the achievement of students. The CTSDC is in charge of preparing manuscripts for all textbooks and the Janak Education Materials Centre Limited (JEMC) publishes and distributes them. Presently the JEMC does most of the distribution of textbooks through the Sajha Prakashan, which is a semi-government co-operative publishing firm.

Textbooks are distributed free of charge to all students from grade one to three and to girls in grade four and five in the 18 remote districts of the country. The cost of free distribution of textbooks is borne by the government with partial assistance of UNICEF.

Limited quantities of educational materials especially for science and sports are distributed to schools by the CTSDC through the regional directorates. Some instructional materials especially on science are made available to schools by the Science Equipment Centre which is under the JEMC. The various integrated rural development projects that are in operation in several parts of the country run certain educational programmes under which some educational materials are provided to schools lying in their project areas.

### Teacher Training

The National Education System Plan required all teachers to receive training in order to be qualified for being permanent teachers. Towards this end various intensive teacher training programmes including equal access of women to education and radio education teacher training programmes have been conducted. However as a result of the rapid growth of schools in the country, the dearth of qualified teachers for schools, especially in remote areas, has on many occasions posed a problem. In many schools in villages there are not teachers, not many people prefer to go to work in these difficult areas. To tackle this problem, the government has recently lowered the basic qualifications required for each level of teachers. This policy has partially solved the problem. Nevertheless, the huge growth in enrolment especially at the primary school level has not been matched by an equal increase in the number of teachers. If the teacher pupil ratio from grade I - VII was 1:29 in 1976 it came to only 1:38 in 1981 (the standard ratio set by NESP in 1971 was 1:30 for primary and 1:25 for lower secondary). In 1981 the percentage of trained teachers was only 35 percent at the primary school level and 39.5 and 62.5 percent at the lower secondary and secondary level respectively.

### Physical Facilities

Most school buildings, especially in rural areas are of a very poor quality. Most primary school buildings consist of two or three small classrooms only which have mud floors, and have no furniture and not sufficient light. The rooms which have no glasspanes or windows are cold in winter and for lack of essential services like electricity, water, sanitation and land for a playground are conducive neither to a good learning atmosphere nor to health. In secondary school buildings there is a noticeable absence of science laboratories, workshops, libraries, and appropriate instructional equipment.

### Financing in Education

The government is committed to bearing 100, 75 and 50 percent of the expenditure required to pay for the salaries of teachers at the primary,

lower secondary and secondary schools respectively. In remote areas however, the government meets the full expenses required for the salaries of all levels of teachers. The government is also committed to making textbooks available up to grade three in all schools in the country and to all girls up to grade five in schools of 18 remote areas.

Total budgetary expenditure on education went up from Rs.51.7 million in 1970 to Rs.421.6 million in 1980. Education expenditure reached a peak of 12.1 percent in 1975/76 when a higher proportion of teachers' salaries were first paid by the government. It is worth noting that as much as 35 percent of the education expenditure is absorbed in supporting the Tribhuvan University system. Primary education takes up 26.6 percent and secondary education 18.5 percent of the total education budget. Although the educational expenditure of 8.83 percent (in 1980/81) of the national budget or about 1.4 percent of GDP is not as high as it is in other Asian countries, this expenditure is also supplemented by contributions from local private resources. The local support constitutes donations, income from land endowments, voluntary labour and other services by the local people.

The following table gives an insight into the share of education in the total national budget and the proportion of amounts allotted to primary, secondary and higher education levels.

Table 1.2

ALLOCATION OF BUDGET FOR THE EDUCATION SECTOR

Year	Primary	Secondary	Higher	Others	[in percentage]
					Share of education in total budget
1978/79	27.0	20.0	36.0	17.0	9.67
1979/80	28.28	21.21	33.96	16.55	8.34
1980/81	26.6	18.5	35.0	19.9	8.83

Though higher education, in the total budgetary picture, is resource-privileged, the escalating enrolment pattern in higher education has out-



stripped expectations made from the plans and policies in higher education. Thus the seemingly larger share of budget in higher education does not allow for greater flexibility for streamlining policies and programmes in higher education. The next bigger chunk of the education budget goes to primary education. But most of this amount is spent on paying teachers' salaries leaving little or no resource for the development of schools.

#### Quality of Education

The rapid numerical expansion of education at primary and secondary levels in the last three decades has admittedly not been paralleled by a proportionate increase in the qualitative aspect of education imparted. There are several factors to account for the deterioration of standards, as it is generally felt, in teaching. Some of the major factors responsible for this effect on educational quality are budgetary constraints, poor physical facilities in schools, inadequacy of trained teachers compounded with severe problems of the scarcity of science, mathematics and English teachers, lack of proper motivation and dedication among the teachers, near-absolute lack of good and useful teaching materials, and the general lack of relevance of the curriculum and the textbooks to the learners' needs..

Naturally the cumulative effects of all these factors continue to make school education unattractive and irrelevant. Considering the fact that there was still a large number of school-age children not participating in education as many as 53 percent (figures of 1980) of primary school enrollees were found to drop out or repeat the grades. A recent study has even shown that a grade three completer could reach the achievement level of grade two only. Such a situation obviously makes a case for taking measures to enhance the quality of education imparted.

#### Persistent Inequities in Education

Apparently during the last three decades earnest efforts have been made by the government to provide facilities for increasing access to education for all school-going children irrespective of their caste, creed, sex, race and regional area. Some of the important steps taken towards promoting

education on the basis of equity and social justice are the provision of schools in hills and remote areas, special incentives given to teachers working in remote areas, relaxing the conditions for establishing schools in remote areas and free primary education and free textbooks for the first three grades. These measures have substantially contributed to making educational opportunities (primary education in particular) available to and within the reach of all children aspiring to have an education. In spite of all these measures, wide differences still exist in the equitable development of education in the country for reasons of geographical and climatic variations, traditional views of various cultural groups of people, and socio-economic disparities.

There are also wide imbalances in the quality of teaching in the urban and rural areas. In urban areas there are greater facilities in terms of teachers, schools and teaching materials. Besides, there are expensive private schools also which have been showing better performance due to their ability to employ more motivated teachers and provide better facilities and a better school environment. Moreover, it is the children of the elite and the affluent families that go to these privately run schools. The prevailing inequalities in income and wealth are thus gradually leading towards increasing divergence in educational standards.

Regional disparities in the enrolment pattern also exist to a great extent. For example, at the primary school level, the enrolment ratio by development region varied from 50.9 percent in the far-western region to 85.1 percent in the central region [the national average is 66%].

Female enrolment ratios are comparatively lower at all levels of education [figures for 1980 show 28% at primary, 21% at lower secondary and 18% at secondary levels]. This low participation of girls in education is ascribable to the prejudicial view held through the ages by the people that education for daughters is not necessary and it is not a rewarding investment because they eventually marry into other families. Besides, girls are needed at home most for taking care of babies and helping with household work. With some communities in the terai, girls, as they grow up, are segregated from

men and are married at any early age.

Similarly, there are other underprivileged groups like low caste people and backward communities whose access to education is at an extremely low level.



*The challenging task is how to have these children hold on to school.*

21

Chapter II

METHODOLOGY

1. *Purpose of the Study*

Considering the crucial role that education plays in bringing about mass awareness and in enabling the rural populace to become effective participants in developmental activities, His Majesty's Government of Nepal has, appropriately enough, emphasized the universalization of primary school education in the country. Consistent with this emphasis, the Ministry of Education and Culture has adopted a liberal policy of giving official recognition to establishing new primary schools on the basis of two major factors, namely, the school building that is constructed by means of local contribution and a minimum number of students in the locality for enrolment in the school. The extent of local contribution and the probable number of student enrolment are construed by educational planners and district level education officials as evidence of the social demand for education. The approval of newly established schools, the provision of grants-in-aid to cover teachers' salary and the distribution of textbooks free of charge are considered as the supply factors that are in many ways stimulative enough to meeting the demand for education. It has been assumed that, given this rising social demand for education, the facilities of schooling will gradually become extensive with the support scheme adopted by the government and thus the universalization of primary education will be achieved in due course of time.

However, there are several limitations in this seemingly simple demand and supply scheme for promoting universalization of primary education.

First, the requirement of local contribution in the construction of the school building for getting official approval of a new school is not very practical, especially in the case of straggling hamlets that are so common in rural Nepal. Second, the establishment of a new school in a particular location may not fit in with the needs of all sections of the population living there. Third, the quality of services that a new school offers is also as vital as the establishment of the school itself which means that the lack of

quality will have grave consequences. Lastly, there are several other factors like the socio-economic ones that need to be duly considered in the process of enlisting wider participation in education.

It is in the context of the non-enrolment of a high proportion of school-age children in rural Nepal that this study has been undertaken with aims to present an objective picture of the various factors that exert an influence in the educational participation of rural children.

## 2. *Objectives*

Specially, the objectives set forth for this study are:

- a. to identify child-related, household-related and school-related factors that affect rural children's participation in formal education opportunities;
- b. to make a comparative study of differential effects of selected blocks of variables on rural children's participation in education;
- c. to assess the factors that influence the attendance of school-going children in primary and secondary schools; and
- d. to suggest recommendations for major policy and programmatic decisions in increasing the rate of participation of rural children in the educational activities.

## 3. *Conceptual Framework of the Study*

Since the year 1965, when in the Karachi Conference the participating countries pledged to achieve universal primary school education within two decades, the universalization of first level education has been of prime concern to almost all Asian countries. Consequently, several countries have so far achieved near-universalization of primary education. However, most countries of South Asia have still to go a long way in achieving the goal of universalization. Currently, these countries are striving towards "Education for All by 2000 A.D." The postponement of the dates for achieving universalization of primary education is largely ascribable to the lack of objective

understanding of the task as a whole as well as of concerted commitment towards this end.

Various opinions, due to the lack of empirical evidence, have been expressed with respect to the potential effect of different factors on universalization of primary education. The most frequently expressed concerns are the absence of schools in rural areas or the lack of proper atmosphere in rural schools, irrelevance of educational programmes to local needs, economic hardship of the family and traditional bias against women's education. The UNESCO regional office in Bangkok also has played an important contributory role in facilitating exchange of ideas and experiences among the educationists of this region in matters relating to universalization of primary education.\* However, an objective and comprehensive assessment of the differential effects of potential factors on educational participation has so far received little attention and much less efforts.

Consequently, what has become quite a common feature today is that people subscribe very strongly to narrow opinions about the factors relating to educational participation. Thus, it is very important that various factors affecting educational participation be properly understood with respect to their differential effects in a particular socio-economic and cultural milieu.

Thus, in order to obtain an impartial and objective picture of the differential effects of selected variables related with the child, the household and the school respectively, the following conceptual framework was used in this study.

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\*Some of the related studies in this area have been mentioned in the selected bibliography.

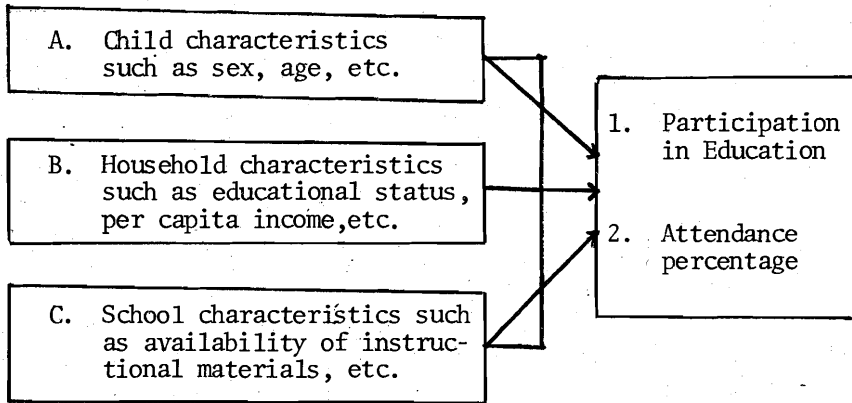


Fig. 2.1: Diagram showing schematic framework of the Study.

At this point, it is important to explain briefly the focus of this study on two dependent variables - one is the participation in education and another, the percentage of school attendance. Although there are three important aspects, participation, retention and achievement connected with the universalization of primary education, universal participation by all the school-age children is the first important condition to be achieved. Since non-enrolment of school-age children is a major problem in rural Nepal, this study has been primarily directed toward identifying the factors that affect rural children's participation in education. Educational participation in this study is measured simply in terms of a child's enrolment or non-enrolment in a school. The second major concern of this study is to identify the factors that influence the regular attendance of children after they got enrolled in schools. As regularity in the class contributes both to retention and to greater achievement levels, the identification of factors affecting school attendance is likely to be of immense value.

A description of the variables included in this study is given in the following section.

#### 4. Description of Variables

Although the basic unit of analysis in this study is the school-age (6-15 years) child, variables are categorized as child-related, household-related and school-related on the basis of information obtained by using child questionnaire, household questionnaire and school survey forms respectively.

##### (a) Child-related Variables

The variable item as well as a brief description of child-related variables are given below:

- SEX: Gender of the child  
This is a dichotomous variable with a value of 1 assigned to boys and 0 to girls.
- AGE: Chronological age of the child  
The actual age of a child, within the officially prescribed schooling age of 6-15 years, is coded for each child.
- NUTR: Nutritional status of a child  
The weight to height ratio of a child is compared with standard values derived from Harvard Standard [Stuart and Stevenson, 1969], and classified into three levels of nutritional status, viz., *severe malnutrition* if the value is less than eighty percent, *first degree of malnutrition* if the value is equal to or more than eighty but less than ninety percent and *normal* if the value is ninety percent or higher.
- HELPHSE: Helping with the household work  
It is a dichotomous variable. A value of 1 has been assigned to those children who had to assist in household chores and 0 to those who did not have to do so.
- HELPEARN: Helping in earning activities  
This is also coded as a dichotomous variable. A value of 1 has been assigned to those children who had to be engaged in some kind of earning activities and 0 to others who were not engaged in any earning activities.



- DISTCH:            Distance to school  
This variable refers to the distance from child's home to the school where he is already enrolled or expected to get enrolled. For the school-going children, the distance measured in kilometers, to the schools where they were studying is assigned to them. For those children who were not participating in school education, the distance to the nearest school corresponding to their ages was assigned to them.
- EDUCPART:        Educational participation  
The child's participation in education is measured in a dichotomous manner. A value of 1 has been assigned if a child was enrolled in school and 0 if he was not enrolled at the time of this survey.
- WHTIND:            Weight to height index  
It is just another form of expressing a child's nutritional status. Instead of three levels of nutritional status, the percentage of weight to height ratio as compared with Harvard Standard has been used. The value ranges from sixty to one hundred.
- GRADCONT:        School grade in which the child is studying now  
[school-going children only).  
The value of this variable ranges from 1 to 10 corresponding to the grade a child was studying in at the time of this survey.
- STUDYWK:        Average time spent on study on week days  
[school-going children only)  
This variable refers to the time a student spends at home for his study. This is computed in the form of average time measured in hours a child devotes to study at home in a day.
- ATTPCT:        Attendance percentage  
[school-going children only]  
The attendance percentage refers to the actual number of days a student attended school vis-a-vis the total number of instructional days for a given reference period. These calculations were made on the basis of school attendance register. The value ranges from 1 to 100.

FATHEDUC:            Educational status of the child's father  
Considering the perceived importance of father's educational status, this variable has been included in this category. A value of 0 has been assigned to those children whose parents are illiterate, 1 for children with literate parents, and a number corresponding to the years of education completed has been assigned to those children whose parents have received varying degrees of formal education.

(b) Household-related Variables

The variable item as well as a brief description of the household-related variables is given below. The values of selected household characteristics are assigned to each of the school-age children belonging to that particular household.

LANGHOME:            Language spoken at home  
This variable is a measure of whether the child speaks Nepali at home or not. Nepali is the national language of Nepal and it is also the medium of instruction in schools. A value of 1 is assigned if a child speaks Nepali at home and 0 if he speaks another language.

AGRICU:              Agriculture as a family occupation  
If at least one of the members of a family is engaged in agriculture, this variable takes the value of 1, otherwise it takes 0.

BUSINESS:            Business as a family occupation  
If a member of the family is engaged in business, this variable takes the value of 1 otherwise it takes 0.

COTTIND:              Cottage industry as a family occupation  
A value of 1 is assigned to a child if one or several members of his family are engaged in cottage industry and 0 if none are engaged in it.

LABOUR:              Labour as the main source of or one of the ways of the livelihood of the family  
If one or several members of the family are

engaged in labour, a value of 1 is assigned, otherwise 0.

PROF: Professional service as the occupation of at least one of the family members

Professional service includes such occupations as doctors and health workers, engineers, agriculture specialists, lawyers and teachers. So, if any one of the family members is engaged in any of the above-mentioned professions, the variable PROF takes the value of 1 otherwise it takes the value of 0.

NONPROF: Non-professional service as an occupation of at least one of the family members

This category of non-professional service includes government civil service or service in any semi-government or private agency. The nature of the variable is the same as that of PROF.

ADULTEDUC: Average education level of the adults in the family

This variable was calculated on the basis of dividing the aggregate number of years of education that the adults in a family have received by the total number of adults in the family.

CHILDEARN: School-age children engaged in earning activity

If at least one of the children of the household was found engaged in earning activities, a value of 1 is assigned and a value of 0 is assigned if none are involved in such activities.

CHADRTIO: Children-adult ratio in the family

This ratio is the total number of children in a family divided by the total number of adults in that family.

ANIMALS: Total number of animals in a household

This is the total of different kinds of live-stocks such as cows, buffaloes, sheep, goats, etc. kept in a household.

ATTITUDE: Attitude of the household head towards modernity

There are altogether twenty questions on attitudes which on a three-point scale are scored as 1, 0 and -1 for positive, undecided and negative respon-

se to an item. Thus, the value varies from -20 to 20.

<u>PCTADERN:</u>	<u>Percentage of adult earners in the family</u> It represents the number of earning adults converted into percentages out of the total adults in the family.
<u>LATRINE:</u>	<u>Availability of a latrine in the household</u> The variable is of a dichotomous nature. If there is a latrine, a value of 1 is assigned and if there is not one, the assigned value to this variable is 0.
<u>DISLOSEC:</u>	<u>Distance to the nearest lower secondary school</u> The unit is given in kilometres calculated up to one place of decimal.
<u>DISTSEC:</u>	<u>Distance to the nearest secondary school</u> Here, also the unit of measurement is kilometre calculated to one place of decimal only.
<u>ADULTLIT:</u>	<u>Percentage of adult literates in the family</u> It represents the number of literate adults out of the total adults in the family converted into percentage.
<u>SCHAGCHL:</u>	<u>Total number of school-age children in a family</u> This variable is a frequency count of children who are within the age bracket of 6-15 years.
<u>PCTSCGCH:</u>	<u>Percentage of school-going children</u> It represents the percentage of school-going children out of the total school age children in a household.

(c) School-related Variables

The variable names and brief descriptions of the school-related variables are given below. The values of selected characteristics of the related schools are coded for each of the children who are enrolled in the schools and those of the nearest schools are coded for the non-enrolled children corresponding to their respective school age.

- PCTEDTCH: Percentage of qualified teachers in the school  
The officially prescribed qualifications are School Leaving Certificate, Intermediate and Bachelor's degree respectively for primary, lower secondary and secondary school teachers. If a teacher's qualification reaches that level, he is considered as a qualified teacher, otherwise not.
- PCTTRDT: Percentage of trained teachers in the school  
A teacher who has completed at least one semester's (five months') training is considered as a trained teacher.
- PCTNEPLI: Percentage of teachers with Nepali as their mother tongue  
This constitutes the percentage of teachers with Nepali as their mother tongue out of the total number of teachers in the school.
- PCTEXPER: Percentage of experienced teachers in school  
If a teacher has teaching experience of at least five years he/she is considered as an experienced teacher.
- PCETHNIC: Percentage of teachers with ethnic background similar to the ethnic majority of the school locality  
Here the percentage of teachers belonging to the local ethnic group/groups is indicated.
- PCTFEMT: Percentage of female teachers in school
- PLAYGRND: Availability of a playground in the school  
If a playground is not available a value of 0 is assigned to this variable. If a playground is available but not quite sufficient, a value of 1 is assigned and if sufficiently available of 2 is assigned to it.
- GENMAT: Availability of general instructional materials  
These instructional materials include a black-board, chalk, duster, etc. This variable is measured by means of a 4 point rating scale, ranging from a sufficient condition (4) to an insufficient condition (1).

- CHARTS:            Availability of charts and maps  
The measurement procedure is the same as that of GENMAT.
- PHYSED:           Availability of physical education materials  
This variable is measured in the same way as that of GENMAT.
- LIBRARY:          Availability of a library in the school  
The availability is rated on a 4-point scale, ranging from a totally inadequate (non-existence) to an adequate condition.
- STRATIO:           Student-teacher ratio in the school  
The total number of students divided by the total number of teachers forms this student-teacher ratio.
- STUDEXPN:         Per student expenditure  
The total expenditure of a school divided by the total number of students in it constitutes the per student expenditure in the school.
- BLDGTYPE:         Type of school buildings  
School buildings are classified into three categories viz., mud-built, brick-built and concrete built. The value assigned to these types of buildings are respectively one, two and three.
- PCAPSPACE:        Space available per student in a classroom  
It shows the total area of classrooms divided by the total number of students.
- SCHLEVEL:         The status of the school in the three-level typology of primary, lower secondary, or secondary school  
If a school is primary, the value assigned is 1. The values for lower secondary and secondary are 2 and 3 respectively.
- CLACYCLE:         Number of grades in the school
- LOSECDIS:         Distance to the nearest lower secondary school  
[in case of primary school only]  
The unit of distance is kilometre.

PCTGIRLS:

Percentage of girls' enrolment in schools

This shows the percentage of girls' enrolment in the total school enrolment.

5. *Analytical Design of the Study*

As this study is intended to make detailed analyses of the factors that influence educational participation by rural children, the multiple linear regression technique has been used for analytical purposes. The analytical design included four major regression equations pertaining to the effects of three major blocks of variables [i.e. child, household and school] and of a composite of all these variables. A brief description of each of these planned regression analyses is given in this section.

(a) Educational Participation as a Function of Child Characteristics

It is hypothesized that educational participation is a function of such child characteristics as sex, age, nutritional status and distance to the nearest school. The relationship of child characteristics to participation in education could be shown as:

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + \dots + b_kx_k + E,$$

Where,

$Y$  = participation in education

$x_1$  = sex

$x_2$  = age

$x_3$  = nutritional status, etc.

$b_0$  = intercept

$b_i$ 's = least squares regression coefficients, and

$E$  = error term.

(b) Educational Participation as a Function of Household Characteristics

Similarly, the relationship of household characteristics to participation in education could be shown as:

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + \dots + b_kx_k + E,$$

Where,  $x_i$ 's stand for the per capita income, the percentage of literate adults, and the attitude of the household head, etc. and other terms are as explained in (a).

(c) Educational Participation as a Function of School Characteristics

In the same manner, the differential effects of school characteristics on educational participation can be identified by means of a regression equation as shown below:

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + \dots + b_kx_k + E,$$

Where,  $x_i$ 's stand for the percentage of trained teachers, availability of instructional materials, per student expenditure, etc. and other terms are as explained in (a).

(d) Educational Participation as a Function of Selected Child, Household and School Characteristics

In this regression equation, selected child, household-, and school-related variables are regressed on rural children's participation in education. To put it in an equation form,

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + \dots + b_kx_k + E,$$

Where  $x_i$ 's stand for the sex of the child, the per capita income of the family, the percentage of qualified teachers in the school, etc. and other terms are as explained in (a), (b), (c).



Each of these four major regression equations is also run separately for two levels of schooling (primary and secondary), for boys and girls (in case of primary) and for four geographic regions (mountain, hills, terai and inner terai). In this connection, a regression equation with selected mutable variable is also run so as to draw more pointed implications for policy and programmatic decisions.

Before ending this section, it needs to be noted here that in addition to these quantitative analyses the overall design of this study includes the collection of qualitative data also so as to present a balanced and realistic view of the problem and prospects of increasing participation in education.

#### 6. *Selection of Study Sample*

In order to ensure a representative sample of rural school age population of the entire Kingdom, a multi-stage stratified sampling procedure has been followed in the selection of districts and of school-age children. This procedure involved the following steps:

- (a) Stratification of the Kingdom into seven regions.
- (b) Selection of a representative district from each of the seven regions.
- (c) Specification of sample size and proportional sampling from seven districts.
- (d) Selection of village panchayats in each district.
- (e) Selection of households and children.

#### (a) Stratification of the Kingdom into Homogeneous Regions

The topography of Nepal lends itself well to stratifying the Kingdom into geographically homogeneous regions. These topographically diverse regions are predominantly inhabited by groups of people with similar ethnic origin, language, culture, economic condition and educational opportunities. In order to ensure adequate representation of these diverse topographical conditions and of peoples of different ethnic and cultural backgrounds, the entire Kingdom has been stratified into seven regions as shown below.

<u>A</u> Western Mountain Region	<u>B</u> Eastern Mountain Region	
<u>C</u> Western Hill Region	<u>D</u> Central Hill Region	<u>E</u> Eastern Hill Region
<u>F</u> Western Plain Region		<u>G</u> Eastern Plain Region

Note: See the map overleaf.

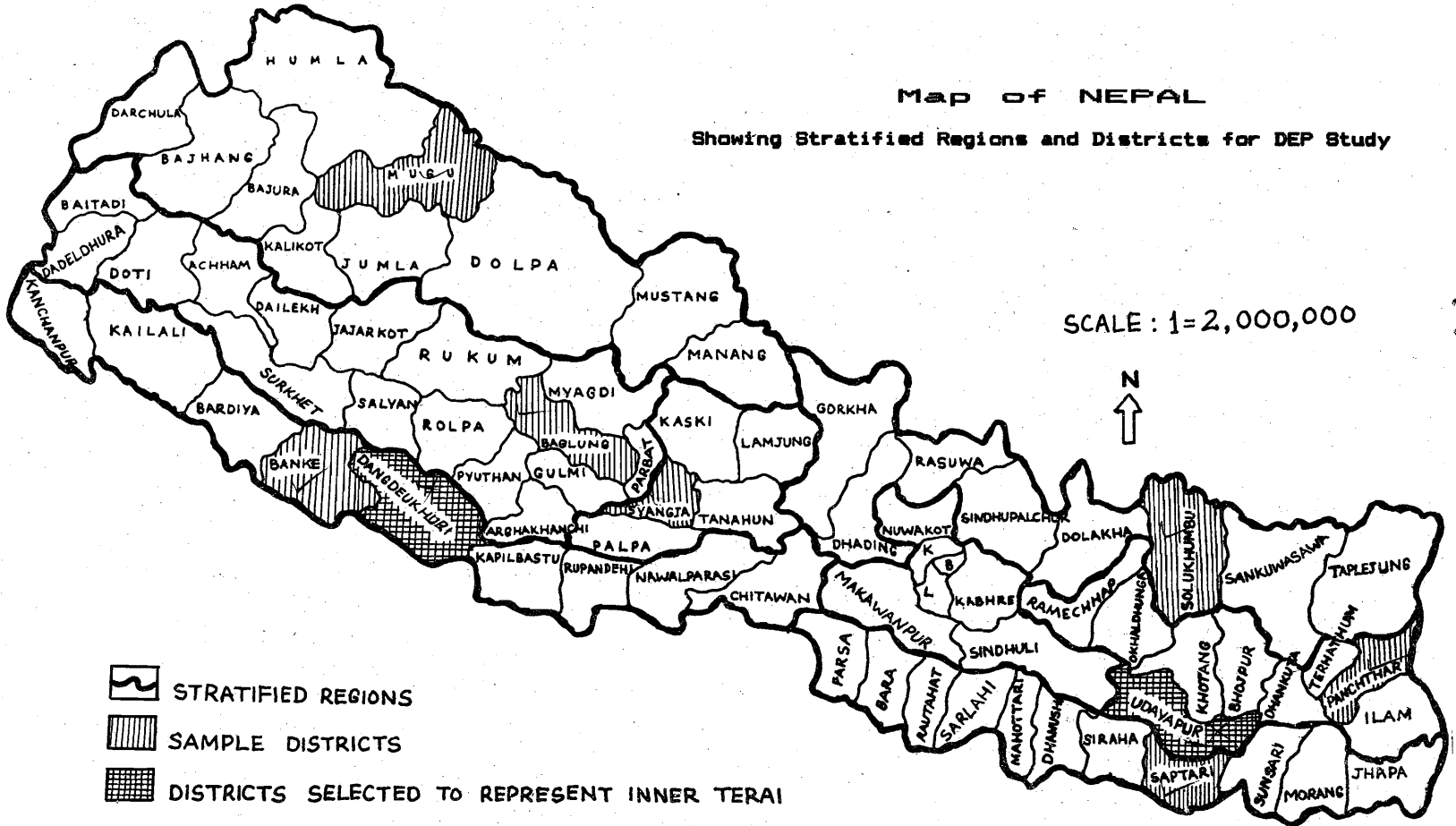
# Map of NEPAL




Showing Stratified Regions and Districts for DEP Study

SCALE : 1 = 2,000,000



181



-  STRATIFIED REGIONS
-  SAMPLE DISTRICTS
-  DISTRICTS SELECTED TO REPRESENT INNER TERAI

Region 'A' which represents the western mountain range is the most backward and is the most difficult to reach. People belonging to various caste ethnic groups inhabit this area. Region 'B' which lies in the eastern part of the Kingdom is also geographically similar to region 'A'. The majority of the people living in this region are also Sherpas but they are relatively in a better position from the point of view of economic and educational status. In this region there is also a long stretch of the Mahabharat range which runs through west to east of the Kingdom. Region 'C', which forms the western hill range, is inhabited by Brahmins, Chhetriyas, Gurungs, Magars and Newars. The ethnic composition in the central hill range which is classified as region 'D' is more or less the same as in region 'C'. Inhabited mostly by Rais, Limbus, Brahmins, and Chhetriyas, region 'E' covers the eastern mid-hill range of the Kingdom. The economic and educational status of the people inhabiting this mid-mountain belt can be perceived to be gradually increasing as one goes from west to east. The terai belt in the south, which is plain land, is divided into two parts. The western part, region 'F', is relatively backward both economically and educationally. The ethnic composition of this region consists of Tharus, Brahmins, Chhetriyas, Muslims, etc. The eastern terai belt is region 'G' and the people living in this area are Brahmins, Chhetriyas, Tharus, Rajbansis, Satars, etc. Thus, the seventy-five districts of the Kingdom have been stratified into seven regions on the basis of topography as well as of socio-economic and cultural background.

(b) Selection of a Representative District  
from Each of the Seven Regions

The second stage in the sampling procedure was to select a typical district from each of the seven strata. The main concern was to choose a district which could be considered as representative of the stratum without any serious loss of information. The major criterion followed in this respect was to select a typical district that would represent the educational status in the stratum.

On the basis of selected indicators\*, the deviation of each district from other remaining districts in the stratum [i.e. one of the seven homogeneous regions] with respect to their educational status was computed [Radha Krishna and Mishra, 1970]. The district with the least average deviation would be the typical one possessing characteristics representative of the region or the stratum with respect to its educational status. In this manner, seven typical districts were selected to represent the seven regions. The districts corresponding to different regions are shown below:

<u>Region</u>	<u>Selected District</u>
A - Western Mountain	Mugu
B - Eastern Mountain	Solukhumbu
C - Western Hill	Baglung
D - Central Hill	Shyangja
E - Eastern Hill	Panchthar
F - Western Plain	Banke
G - Eastern Plain	Saptari

Considering the typical nature of the inner-terai which is an area of recent settlement and which is in many ways different from the above selected districts, it was decided to include in the sample two more additional districts representing the inner-terai sector. In this connection, Dang and Udayapur were selected as the representative districts of inner-terai sector. The district of Udayapur is adjacent to Saptari - one of the sample districts in the eastern terai region and the district of Dang is adjacent to Banke - the sample district in the western terai region.

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\*Six educational indicators used for the purpose of the study are: literacy percentage, percentage of student enrolment, teacher student ratio, percent age of girls' enrolment, percentage of trained teachers, and number of schools per thousand school age population.

(c) Specification of Sample Size and Proportional Sampling from District

The unit of the sample is a household. The method used to determine the optimum size of the sample was based on the power of the statistical test that is to be performed in the analysis of the data. As the primary statistical model to be used in this study is correlational, a power analysis was performed for a significance test of a correlation co-efficient\*.

According to this estimate, the sample size required to detect the minimum correlation of .1 at .01 significant level with the desired power of .99 is 2175.

The required number of households in each district was determined in proportion to the total number of the households in the respective regions. The details are shown in the following table.

Table 2.1

PROPORTIONAL SAMPLE SPECIFIC SIZE FROM SELECTED DISTRICTS

<u>Region</u>	<u>Sample district</u>	<u>Total no. of households in the region**</u>	<u>Percentage</u>	<u>Sample size</u>
A	Mugu	88,517	3.55	78
B	Solukhumbu	220,552	8.85	195
C	Baglung	465,560	18.68	411
D	Shyangja	487,432	19.56	430
E	Panchthar	261,780	10.50	231
F	Banke	241,630	9.69	213
G	Saptari	727,163	29.17	642
		2492,634	100.00	2200

\*The formula used for the determination of sample size is:

$$N = \left[ \frac{z_{\alpha} + z_{\beta}}{z_{\rho}} \right]^2 + 3.$$

\*\*Based on 1971 Census Data.

In the case of two inner-terai districts, Udayapur and Dang, fifty-five households each from the two districts were determined as a representative proportion of the total number of households in the regions to which these districts belong. Thus, the total sample of this study numbered 2310 households.

(d) Selection of Village Panchayats in Each District

Within a district there are several village panchayats. The village panchayats of each selected district were classified as low, medium and high with respect to the economic (per capita agricultural production) and educational (number of S.L.C. graduates per thousand population) indicators separately.

The village panchayats falling into the low, medium and high categories with respect to both the indicators were considered for the selection, and one village panchayat from each category was randomly selected. This process of selecting three representative village panchayats within each selected district was presumed to ensure a fair representation of all the village panchayats in each district.

The cut-off points used for classifying village panchayats in the district into the categories of the low, medium, and high are based on the ranks of the village panchayats with respect to selected indicators. First, the village panchayats were ranked according to each indicator separately and putting them all together, the bottom one-third of the total village panchayats were considered as low, the second one-third as medium and the remaining top one-third as high categories. Then the village panchayats were arranged in two-way classification using those indicators in low, medium and high categories.

In the case of the inner-terai districts only one village panchayat each from the two districts was selected. These village panchayats were chosen from the medium level category only so as to avoid extreme cases.

The list of village panchayats selected in the manner as described above is given in the following table.

Table 2.2

SAMPLE VILLAGE PANCHAYATS SELECTED FOR THE STUDY

<u>Districts</u>	<u>Village panchayats by stratum</u>		
	<u>Low</u>	<u>Medium</u>	<u>High</u>
1. Mugu	Seri	Srikot	Rowa
2. Solukhumbu	Gudel	Sotang	Salleri
3. Baglung	Nishi	Bhimghthe	Kalika
4. Shyangja	Rapakot	Kilung	Deurali Shakhari
5. Panchthar	Lungruppa	Nagin	Phidim
6. Banke	Phattepur	Hasanapur	Mohanpur
7. Saptari	Bairawa	Raipur	Pathargada
8. Udayapur		Deuri	
9. Dang		Tulsipur	

(e) Selection of Households and Children

The required number of households in each village panchayat was selected randomly with the help of Random Number Table.

All the school-age (6 to 15 years) children of those selected households were the child sample of the study. [And if a randomly selected household have no school-age children, a substitute household was selected. Similarly, if the required data could not be collected in a household because of refusal or migration, again the substitute household was selected].

All the schools where the sampled children are studying at the time of the survey are the school sample of the study. Besides, the information of those schools where no sampled children are studying but are expected to go there to study is also included in the survey.



## 7. *Survey of Instruments*

The major instruments developed to conduct the comprehensive survey in selected village panchayats in nine districts of the Kingdom are as specified below.

### (a) Child Questionnaire

The child questionnaire was designed to elicit from the children themselves information that would throw light on the causes and conditions influencing their participation in educational opportunities available in their village panchayats. The areas also covered in this questionnaire were child's background, nutritional status, prior school exposure, educational activities, involvement in economic activities of the family, and time given to study at home. The details are given in Appendix 'A'.

### (b) Household Head Questionnaire

This questionnaire was developed in order to obtain information on the demographic characteristics, educational status and economic activities of the family. Information on child's activities in and outside the home and the attitude of the household head towards modernity was also obtained through the questionnaire. Thus, the questionnaire had a wide coverage including both qualitative as well as quantitative information. This questionnaire was administered personally to the household head in an interview situation. The details of the household head questionnaire are given in Appendix 'B'.

### (c) School Survey Form

This survey form was designed to collect information on the type and level of the schools in the sampled village panchayats, available physical facilities in the schools, sufficiency of instructional materials, quality of the teaching staff, the number of students, proximity to the upper level school (in case of primary and lower secondary), etc. in order to assess their effects on educational participation. See Appendix 'C' for further details.

(d) Village Panchayat Survey Form

With a view to collecting the background information of the sampled village panchayats, this survey form was designed. It includes detailed guidelines on collecting information about historical background, social characteristics, educational data, geographic setting, economic activities, etc. of the related village panchayats. The details are given in Appendix 'D'.

(e) District Panchayat Survey Form

In addition to comprehensive data collection from three village panchayats, this survey form was designed to collect relevant district level data on education and health facilities and the on-going development activities. See Appendix 'E' for details.

8. *Collection of Field Data*

The comprehensive survey work was preceded by pre-testing of survey instruments and rehearsal of the data collection procedure. Adequate preparatory work such as training of the project personnel and development of the survey guide was completed before undertaking field activities so as to ensure a high standard of objectivity in the survey work. Both at the initial stage, and also intermittently, the field survey activity was supervised by the senior research staff. These activities are briefly described below.

(a) Pre-testing of Survey Questionnaire

As a process in pre-testing the survey instruments and the rehearsal of the data collection procedure, a pilot study was carried out in two districts viz. Rupandehi and Palpa. To make the pilot study more realistic and in line with other village panchayats in which the actual study would take place, those two districts were selected from the terai and hilly regions of the Kingdom. The village panchayats of a district were classified into high, medium and low strata on the basis of the per capita agriculture production and the number of SLC graduates per

thousand population and a village panchayat within each stratum was selected randomly. Altogether 174 household heads and 340 school-age children of these households were interviewed. In addition, 33 schools were surveyed with respect to their physical and instructional facilities.

On the basis of the analyses of the pilot study data, the survey instruments were modified and refined accordingly. The revised questionnaires and forms were used in the final survey.

(b) Preparation of Survey Guide

On the basis of the field experience gained from the pilot study, a survey guide was prepared. The purpose was to maintain uniformity in the field survey procedure by providing structured guideline for undertaking field activities in a systematic manner. The survey guide, in addition to clarifying the roles and responsibilities of team leaders and enumerators, contained necessary directions to be followed at different phases of the field survey, i.e., getting ready for departure to the field, establishing rapport with district and village level personnel, and checking and dispatching the filled-up questionnaires\*.

(c) Training of Field Staff

Basically, three types of project personnel: namely, team leaders (researchers/supervisors), enumerators and local enumerators were involved in data collection at the field level. All of these personnel were trained in their specific tasks before conducting the actual survey.

In addition to organizing an orientation programme and a series of mini-workshops on educational research at the Centre, two groups of team leaders were sent to India for a five-week-long intensive training programme on large-scale survey research and computer programming and

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\**Survey Guide*, prepared for DEP field staff, CERID, 1981 (Mimeo, p. 42).

regression analysis. The team leaders were also intimately involved in the design and development of the survey instruments and the survey guide. A two-week-long orientation and training programme was conducted for the enumerators with focus on developing skills and confidence in them in administering survey questionnaires. The team leaders conducted on-the-spot orientation programmes to the local enumerators. Although the local enumerators were primarily hired to facilitate interviewing household heads and children in their local language, they were also made acquainted with the nature of survey instruments and the techniques of interviewing.

(d) Data Collection Procedure

Under the supervision of the senior CERID staff, eight team leaders, fourteen enumerators and thirty-one local enumerators were involved in the field data collection. The following are the procedures employed in collecting the data for the study.

- i. Although the number of teams sent to sampled districts varied according to the sample size to be interviewed in a given district, the field survey team, in all cases, was composed of two members. While administering questionnaires, one member conducted interviews with the respondents and another recorded their responses.
- ii. Three field survey teams were sent to each of the five districts Mugu, Solukhumbu, Shyangja, Banke and Saptari - and two teams each to Baglung, Dang and Panchthar. Only one team was sent to Udayapur.
- iii. In each of the sampled districts, a team leader was assigned to supervise and coordinate field work in the district.
- iv. At the district level, the team leader contacted related district level officers, acquainted them with the nature and purpose of the survey work, and obtained a letter of intro-

duction to show it to the village level personnel. Meanwhile, the research team collected an updated list of households of the sampled village panchayats along with available information from the office of the Chief District Officer, District Panchayat Office and District Education Office. After these contacts were made and necessary information collected, the team leader and the research teams proceeded toward the villages.

- v. At the village level, the research team contacted the village pradhanpancha and the village panchayat members and social workers. After acquainting them with the nature and importance of the survey work, the research team obtained a list of households from them in order to cross-check it with the one received from the district office. Then, the required number of households was randomly selected using the Random Number Table.
- vi. The field survey team visited the households assigned to them, interviewed both the household heads and the school-age children (6-15 years) and collected necessary information. On the whole, the cooperation received from the village level official, the household heads and the children was satisfactory enough. The extent of non-response from the household heads was less than .1 percent which is negligible.
- vii. The team leader, in addition to supervising the work of the research teams, collected demographical, socio-economic, educational and cultural information about the village panchayat and also related data from the schools in the locality.
- viii. Because of the climatic and topographical reasons, the field data collection in Mugu and Solukhumbu, the two mountainous districts in the Himalayan region, was completed at the first phase of the survey in the month of November, 1981. A total of six research teams headed by six team leaders were

sent to these two districts, at the rate of three teams in one district, to conduct survey work simultaneously in three village panchayats so that the data collection could be completed before it starts snowing in these districts. In the case of other districts, the research teams first completed all necessary work in one village panchayat and then moved on to the second and third village panchayats selected for the survey.

- ix. The team leader and enumerators checked the filled-up questionnaires on a daily basis and also completed the coding of certain items of the questionnaire that did not require conversions and calculations.
- x. The same team leader and other members of the field survey team completed the coding of questionnaires at the centre and also prepared the profiles of the village panchayats and the district that they visited.

#### 9. *Analyses of Data*

The analyses of the obtained data focussed on three major aspects, namely, the preparation of aggregate tables of descriptive indicators, regression runs to identify significant predictors, and contextual interpretation of the results of regression analyses.

The aggregate tables of descriptive indicators which were prepared present the current status of rural children, rural households and rural schools in Nepal. These tables were prepared for all the samples as well as for different regions and levels of schooling.

In order to identify significant predictors of educational participation and school attendance, regression equations using the SPSS package were run. In the first run, all potential variables measured in this study were included. The variables with negligible effect on dependent variable and with high inter-correlations among themselves were deleted from the final run so as to make



*It needs tact on the part of interviewers to win the rural people's confidence.*



*Cross-checking the information collected requires seriousness of purpose*

the analyses more efficient. [Thus the number of variables included into different types of regression models depends on the nature of the model]. With educational participation and school attendance as dependent variables, regression equations were run separately for child, household and school characteristics as well as for all variables in a composite model. Regression equations were also separately run for boys and girls, different geographic regions and levels of schooling to identify differential effects of selected variables.

Though regression analyses are able to determine statistical relationship, they do not permit a comprehensive explanation of underlying factors governing these relationships. To this end, the qualitative analyses of the reactions of village respondents and the quality aspects of educational programmes in the socio-economic and cultural context of rural community were undertaken to provide contextual integration of the quantitative findings.

#### *10. Organization of the Report*

As the objectives of the study suggest, the major components into which the study report has been divided are child, household, and school-related factors for each of which one chapter has been apportioned. If the first introductory chapter is devoted to giving a general perspective of Nepal which includes its present educational status and trends, this chapter deals with the methodology and procedures followed for the study. The three chapters that follow deal consecutively with child-, household-, and school-related factors that influence educational participation by rural children.

In chapter six, the diverse factors that independently or collectively influenced by educational participation by rural children have been pinpointed and each elaborated upon in relative terms with another.

Chapter seven deals with 'Discussions and Implications' of the major findings of the study and chapter eight lists important findings of the study and presents recommendations for increasing rural children's participation in school education.





*Children involved in earning activities*

## RURAL CHILDREN AND EDUCATIONAL PARTICIPATION

### 1. Role of Children in Rural Households

In most of the rural households, the declining per capita land holding, depleting resources and growing population pressures have obliged the people to look for other sources to supplement their income even for the sake of maintaining the family at a subsistence level. Thus, the burden of supporting the family lies on the shoulders not only of the parents but also of the children who are required to lend a helping hand in doing household chores as well as to engage in productive and wage-earning activities so as to make an extra income for the family. In a nutshell, children's support services are vital to the survival of the family.

In fact children are, even at their age, economic assets to a rural family. The kind of activities that the children are engaged in range from taking care of toddlers to going *parma*\*. Children's engagement in different activities vary with their age and sex. The young children (5-8 years) help the parents in household chores which partially give them more time to be engaged in productive activities. The grown-up children (9-15 years) do the job of grazing animals, fetching firewood, etc. and are occasionally engaged in wage-earning activities. Thus, the children's role in household activities has direct or indirect implications for the economy of a family. In the words of a parent, *"How can an old man and his wife support all their children, if they do not do their share of household work and are not busy with other supplementary income-generating activities?"*

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\**Parma* is a kind of mutual arrangement in which several households in a village community contribute labour to a family on a reciprocal basis.

The role of daughters is particularly crucial in household economy. Girls are very helpful in such activities as taking care of babies, domestic animals, and the kitchen garden. Considering the fact that the fertility rate of an average Nepalese woman is 6.3, mothers frequently need help in their regular household chores, and in this respect girls are mostly required to extend possible help irrespective of their age. The crucial role of girls in household affairs and in the family's economy coupled with social prejudice against educating girls acts as a great deterrent to female education in a rural community.

In a subsistence economy, children are prized primarily for their contribution to the maintenance of the family. The idea of educating children in terms of an investment for the future welfare of the child as well as of the nation is a matter of secondary consideration only. A child will be sent to school only if he can be spared from household duties and if the family can afford his education. In many families, children are taught to take care of their own needs by engaging in some supporting activities like keeping domestic animals.

In the context of the prevailing rigid social structure in Nepal and of the customary linkage between the caste and the family occupation, the fate of a child is decreed from the day of his birth. The up-bringing of the child takes place according to the traditional occupational pattern to which the prevalent system of school education may not be relevant either. Education, particularly of the archaic and unproductive type, is only of secondary consideration in the face of the survival issue in the rural community. It is in the context of the socio-economic situation described above that the findings on the participation of rural children in the formal schooling system should be interpreted and understood.

In this chapter, we will consider the findings of the national survey on the status of children in rural communities, and the relationship between child-related variables and educational participation as well as school attendance. The implications of these findings are also discussed.

## 2. Status of Rural Children

In the course of the household survey, the children of school-going age (6-15 years) in each of the households visited were contacted and the measurement of their heights and weights taken. They were also interviewed to get an insight into their activities at home and outside. The reasons for their not going to school were also taken from the children themselves. The major findings are as stated in the following sections.

### (a) Nutritional Status

Heights and weights of 4655 children of ages 6 to 15 years of all sampled households in nine districts were obtained with the help of measuring tape and a weighing machine. Then, after computing the weight to height index according to the Harvard Standard, it is classified into nutritional status according to Gomez's classification. According to Gomez classification, above 90 percent of the Harvard Standard is classified as normal, 80 to 90 percent as first degree of malnutrition and below 80 percent as severe malnutrition.

The following table shows the distribution of children with respect to their nutritional status.

Table 3.1

#### NUTRITIONAL STATUS OF RURAL CHILDREN

<u>Nutrition level</u>	<u>Normal</u>	<u>1st degree of malnutrition</u>	<u>Severe malnutrition</u>
Number of children	2544	1312	799
Percent	54.7	28.2	17.2

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Source: Survey Data.

It is obvious from the table that about forty-five percent of rural children are below normal nutritional status. There is also some evidence to show that the nutritional status of a child improves with his age.

(b) Engagement in Household and Earning Activities

The survey indicated that about three-fourths of the rural children are engaged in household activities. The major activities in which rural children are engaged are shown in the following table.

Table 3.2

CHILDREN'S INVOLVEMENT IN DIFFERENT KINDS OF HOUSEHOLD WORK

<u>S.No.</u>	<u>Type of work</u>	<u>No. of children engaged</u>	<u>Percentage</u>
1.	Looking after younger children and taking care of home	1567	44.7
2.	Taking cattle out for grazing	1549	44.0
3.	Collecting firewood and grass for fodder	1470	41.8
4.	Carrying water and feeding cattle	1297	36.0
5.	Helping in farming and/or in small business like shopkeeping	430	12.2
6.	Making dungcakes and collecting dry leaves for cooking purposes	335	9.5
7.	Others	57	1.6

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Source: Survey Data

Note : The total percentage exceeds 100 percent as one child may be involved in more than one activity.

Item no. 2 or "cattle grazing", no. 3 or "collecting firewood and grass for fodder" and no. 4 which is "carrying water" are all daily chores which take up a great deal of time during the day so that it interferes with the daily school hours. Further, item no. 1 which constitutes "looking after younger children and taking care of home" would require a child who is usually of school age to stay home all the day long when his parents are engaged in agricultural and other earning activities. Thus, it is very likely that two school-age children might be required for helping parents in household activities in the day time, which is bound to hamper their participation in formal schooling. One out of eight children contacted under this survey was found to have helped their parents in farming or in family business. On the whole, it is obvious that rural children's involvement in indirect economic activities at home is quite substantial and this is bound to have some effect on their participation in the formal education process.

The survey data revealed that children's involvement in household activities increased with age. The following table testified to this fact.

Table 3.3

RURAL CHILDREN'S INVOLVEMENT IN HOUSEHOLD WORK BY AGE GROUP

<u>Involvement in household work</u>	<u>Age Group</u>			<u>Total</u>
	<u>06 - 08</u>	<u>09 - 12</u>	<u>13 - 15</u>	
Involved	954 (54.86)	1613 (85.98)	950 (91.35)	3517 (73.40)
Not involved	785 (45.14)	263 (14.02)	90 (09.65)	1138 (26.60)
Total	1739 (100)	1876 (100)	1040 (100)	4655 (100)

Source: Survey Data.

Note : Figures in brackets indicate percentages.

The most noticeable thing in the above table is the sharp increase (from 6-8 years group to 9-12 years group) in the percentage of children who had to participate in household activities. Considering the fact that the average age of first graders, according to the survey data, is approximately nine years, the need for children to be engaged in household activities might be a strong causal factor for the high dropout rate in the first grade.

As the children's involvement in household work increased, their participation in education was found to decrease. The inverse correlation between engagement in household activities and educational participation can be visualized from the following table.

Table 3.4

CHILDREN'S ENGAGEMENT IN HOUSEHOLD ACTIVITIES  
AND THEIR PARTICIPATION IN SCHOOL

		Participation	
		<u>no</u>	<u>yes</u>
Involvement in household activities	yes	2221 (63.15)	1296 (36.85)
	no	571 (50.18)	567 (49.82)

$\phi = -.112, \quad p < .05$

Note: Figures in parentheses indicate row percentage.

Although the negative correlation between educational participation and involvement in household activities is small, it is statistically significant, which points out that children's share of household work deters them from attending school.

Approximately six percent of the total children contacted during the survey were found to be engaged in direct economic activities. The

earning activities in which rural children are engaged are indicated in the table below.

Table 3.5

RURAL CHILDREN'S ENGAGEMENT IN EARNING ACTIVITIES

<u>S.No.</u>	<u>Earning Activities</u>	<u>Number of children engaged</u>	<u>Percentage</u>
1.	Working in agricultural field and/or in business (shopkeeping, etc.)	140	50.4
2.	Labour	53	19.1
3.	Working as servants (in someone else's house)	52	18.7
4.	Exchange of labour in agricultural farming	32	11.5
5.	Collecting firewood and/or eatables from forest for sale	19	6.8
6.	Others	7	2.5
7.	Keeping cattle, goats, etc. and sell the products from them	1	0.3

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Source: Survey Data.

The above table displays to some extent a dismal picture of child labour prevalent in the rural communities of Nepal. In some families, children were found to be required to accompany their parents when they went out to work in the field or to look after family business when the elder people were away from home. In a few cases children were found to be working as servants in someone else's home or to be engaged in wage-earning activities by way of supplementing the family income.

As indicated in table 3.6, more than ninety percent of the children who were engaged in earning activities were found to be non-participants in the formal education.



Table 3.6

CHILDREN'S ENGAGEMENT IN EARNING ACTIVITIES  
AND PARTICIPATION IN SCHOOL EDUCATION

		<u>Participation</u>	
		<u>no</u>	<u>yes</u>
Engagement in earning activities	Yes	258 (92.81)	20 (7.19)
	no	2534 (57.89)	1843 (42.11)

$\phi = -.169, \rho < .05$

Note: Figures in parentheses indicate row percentages.

A significant negative association between engagement in earning activities and participation in education is apparent from the above table. Only seven percent of earning children as compared with forty-two percent of the children in the non-earning group were found to be participating in school education.

(c) Rural Children's Participation in Education

Out of 4655 sampled children, 1863 boys and girls were found to be participating in school education. Table 3.7 shows the pattern of distribution of sampled children by school level age groups and by sex.

Table 3.7  
DISTRIBUTION OF SAMPLED CHILDREN BY SCHOOL LEVEL  
AGE GROUPS AND BY SEX

<u>Sex</u>	<u>Age Group (in years)</u>			<u>Total</u>
	<u>6 - 8</u>	<u>9 - 12</u>	<u>13 - 15</u>	
Boys	875 (50.33)	905 (53.0)	617 (59.3)	2487 (53.4)
Girls	864 (49.7)	881 (47.0)	423 (40.7)	2168 (46.6)
Total	1739 (37.4)	1876 (40.3)	1040 (22.3)	4655 (100)

Source: Survey Data.

Note : Figures in parentheses indicate percentage.

A sharp decrease in the percentage of girls in the upper age group (13-15 years) is one of the striking features of the above table. Two major reasons could be given for this steep decline in the numbers of girls in the 13-15 years age group. These are (a) non-reporting of girls during household survey, and (b) early child marriage. With certain ethnic communities (such as Muslims) in rural Nepal, the social custom prohibits free association of girls with male members of the community. When a girl reaches a certain age (12 or 13 years), she is not supposed to appear before an outsider. This social custom is indicative of a prevailing negative attitude toward the education of girls. In the course of interviews made with household heads, the research team encountered several cases where parents reported that, although a particular girl was staying with them, she had already been married. In this circumstance, the girl was left out of count in our survey data.

The educational participation of 1863 boys and girls out of the total 4655 sampled children between the age of six and fifteen at primary,

lower secondary and secondary levels are shown in the following table.

Table 3.8

NUMBER OF RURAL CHILDREN ENROLLED IN SCHOOLS BY AGE GROUP AND BY SEX

<u>Sex</u>	<u>Age Group (in years)</u>			<u>Total</u>
	<u>6 - 8</u>	<u>9 - 12</u>	<u>13 - 15</u>	
Boys	415 (42.43)	620 (68.51)	315 (56.59)	1386 (55.68)
Girls	201 (23.27)	217 (24.63)	59 (13.95)	477 (22.00)
Total	616 (35.42)	837 (44.62)	410 (39.42)	1863 (40.02)

Source: Survey Data.

Note : Figures in parentheses indicate enrolment percentage out of the total children in that particular age group.

Only forty percent of the school age (6-15) rural children are attending school. The corresponding national figure for the year 1979 is forty-four percent\* which indicates that the rural enrolment is less by four percent than the national average. Of the total children enrolled, the difference in the enrolment of boys and girls is very striking.

The enrolment ratio for boys, that is, the enrolled number out of the total 6-15 age group of boys, is 55.68 percent whereas it is only 22 percent in the case of girls. These figures are comparatively lower when compared with the national enrolment ratios of 63 percent and 22.8 percent for boys and girls respectively for the year 1979.

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\**Educational Statistics Report, 1981.* Ministry of Education and Culture, Kathmandu, Nepal.

The apparent primary school enrolment rate (Grades I - III) was 66.6 percent or 1194 out of 1739 primary school age children were enrolled. This enrolment rate is very low as compared with ninety percent primary school enrolment ratio for the nation as a whole. Moreover, a more discouraging picture is perceptible if we look for the actual enrolment rate which works out to about 35 percent only, that is to say, only 610 out of 1194 children studying in primary schools belong to the 6-8 years age group.

The distribution of overage students at different levels of schooling is shown in Table 3.9.

Table 3.9

PARTICIPATION OF NORMAL AND OVERAGE CHILDREN  
AT DIFFERENT LEVELS OF SCHOOLING

<u>Level</u>	<u>Age Group</u>			<u>Total</u>
	<u>6 - 8</u>	<u>9 - 12</u>	<u>13 - 15</u>	
Primary	610 (51.1)	503 (42.1)	81 (6.8)	1194
Lower Secondary	6 (1.1)	330 (57.8)	235 (41.1)	571
Secondary		4 (4.1)	94 (95.9)	98

Note: Figures in parentheses indicate percentage. As the survey was confined to the age group of 6-15 years the participation of overage children at the secondary level is not evident from this table.

More than forty percent of total students enrolled at primary and lower secondary levels are overage for the grades they are studying in.

In order to get a clear picture about the distribution of average students across grades, the average age for selected grades was computed.

for each of the nine districts. The mean age for different grades by district is presented in the following table.

Table 3.10

MEAN AGE OF THE STUDENTS ENROLLED IN SELECTED GRADES BY DISTRICT

<u>District</u>	<u>Grades</u>						
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Mugu	8	11	11	14	14	14	15
Solukhumbu	9	11	12	12	14	14	15
Shyangja	8	9	10	11	12	13	13
Panchthar	9	9	11	11	13	14	14
Banke	9	10	10	11	12	12	13
Dang	8	10	11	12	13	14	-
Saptari	7	8	9	10	11	12	13
Baglung	9	10	10	12	12	13	13
Udayapur	8	9	10	11	11	12	14

Except in the case of Saptari, a district in the terai which is relatively a more accessible area, the mean age of students enrolled in different grades did not reveal a consistent pattern. The range seemed to be wider in the remote districts of Mugu and Solukhumbu. The relatively less accessible hill districts, Panchthar and Baglung, had a higher mean age in Grade I. On the whole, it appears that the overage students were unevenly distributed across different grades.

The mean age of enrolled students, which is in general 2-3 years above the expected age level, reveals some important aspects of non-participation in education. Probably due to the poor nutritional standard and, for that matter, slow physical growth of children of 6-8 years age group, parents delay sending children to school. During interviews, parents frequently expressed their concern about sending a young child (6-8 years old) to school which is located 1-2 km away from their homes. Parents, generally in the hill areas, did not think that

their children were physically fit to go to school at this age. And in the other case, the demand of parents for the children of the age group 9-13 to assist them in doing household chores is greater than that for the children of the lower age group. Thus, these two factors - low nutritional status of primary school age children and the need to share some of the household work - might, in combination, severely affect educational participation by rural children.

(d) Reasons for Non-Participation

According to this survey, sixty percent of the school age rural children are not attending school. A variety of factors had been cited by children as reasons for their being unable to join school. These are indicated in the following table.

Table 3.11

DIFFERENT REASONS CITED BY RURAL CHILDREN FOR THEIR  
NON-PARTICIPATION IN EDUCATION

<u>S.No.</u>	<u>Reasons</u>	<u>No. of children</u>	<u>Per-centage</u>
1.	Not sent by parents	772	27.7
2.	Shortage of manpower to look after household work	769	27.5
3.	Poor economic condition	509	18.2
4.	Others	407	14.6
5.	School is a long way	232	8.3
6.	Bad health condition	62	2.2
7.	Social tradition of not sending girls to school	21	0.8
8.	Schooling is useless	17	0.6
9.	Social discrimination (untouchability due to scheduled caste)	3	0.6

Source: Survey Data.

Parental attitude toward education and the need for children's help in household activities appeared to be two major factors hindering children's participation in education. In spite of the common notion that an economically poor condition is the single biggest factor in non-participation, it ranked third according to the survey data. In the final analysis, it seemed that a number of factors which are household, economic, social and health-related in nature, deterred, in various combinations, the rural children from participating in education.

3. *Child-related Factors Influencing Participation in Education*

In this section, we shall examine the effect of child-related variables on educational participation by rural children.

(a) Variables Entered in Regression Equation

Six child-related variables were used as explanatory variables in the multiple linear regression model. These are: (i) father's education status (FATHEDUC), (ii) sex, (iii) age, (iv) helping in household activities (HELPHSE), (v) helping in earning activities (HELPEARN), and (vi) distance to school (DISTSCH). Data on these six variables were available for 4613 children. Forty-two cases with incomplete data were deleted from the analysis. The dependent variable is educational participation (EDUCPART) which is a dichotomous variable denoted by 1 for participation and 0 for non-participation.

The following table shows the mean and standard deviations of the explanatory variables along with their correlations with the dependent variable. In order to provide a comparative picture of different geographic regions, the regional means of these variables are also shown in Table 3.12.

Table 3.12

MEAN AND STANDARD DEVIATIONS OF EXPLANATORY VARIABLES  
AND THEIR CORRELATION WITH THE DEPENDENT VARIABLES

S. No.	Explanatory variable	Mean (St. Dev.)	Correlation with dependent variables	Regional Mean			
				Mountain	Hill	Terai	Inner terai
1.	FATHEDUC	1.39 (2.79)	.271	.50 (1.11)	1.63 (3.06)	1.45 (2.90)	.99 (1.80)
2.	SEX	.53 (0.50)	.343	.56 (0.50)	.52 (0.50)	.55 (0.50)	.46 (0.50)
3.	AGE	9.96 (2.78)	.048	10.26 (2.84)	10.11 (2.82)	9.64 (2.67)	9.94 (2.8)
4.	HELPHSE	.75 (0.43)	-.116	.82 (0.38)	.78 (0.41)	.70 (0.46)	.64 (0.47)
5.	HELPEARNS	.06 (0.24)	-.169	.06 (0.24)	.05 (0.23)	.07 (0.25)	.07 (0.25)
6.	DISTSCH	2.53 (3.64)	-.194	3.08 (3.74)	2.84 (4.45)	2.07 (2.30)	1.41 (1.11)
<u>Dependent variable</u>							
1.	EDUCPART	.40 (0.49)		.27 (0.44)	.50 (0.50)	.31 (0.46)	.36 (0.46)

Note: Figures in parentheses indicate standard deviations.

Table 3.12 reveals regional disparities with respect to father's educational status, distance to school and educational participation. Educational participation by children of the mountain region was only about half of that of the hill region and was lower than that of the terai and inner-terai regions. The educational status of the children of the mountain region was found to be quite low. In spite of the fact



that the region they live in is the mountain area, these children were also required to go to school at quite a distance from their homes, about three kilometers on the average.

(b) Inter-correlation between Variables

The zero-order inter-correlations of six explanatory variables and one dependent variable are shown in the following table.

Table 3.13

INTER-CORRELATIONS BETWEEN VARIABLES

<u>Variables</u>	<u>FATHEDUC</u>	<u>SEX</u>	<u>AGE</u>	<u>HELPHSE</u>	<u>HELPEARN</u>	<u>DISTSCH</u>
EDUCPART	.271	.343	.048	-.116	-.169	-.194
FATHEDUC		-.029	-.073	-.112	-.092	-.100
SEX			.054	-.169	-.018	-.024
AGE				.378	.264	.361
HELPHSE					.046	.137
HELPEARN						.128

It is interesting to note that father's education status was found to be consistently negatively associated with three variables that adversely affected children's participation in education. Apparently, educated fathers not only discouraged their children from being involved in household and earning activities, but they also seemed to play a more active role in establishing schools in near locality so that their children did not have to go far for schooling. The negative correlation between sex and helping with household activities indicates that the demand for participation in household activities was less in case of boys than of girls.

(c) Results of Regression Analysis

Six explanatory variables and one dependent variable were used in the multiple linear regression model. The results of regression analysis were shown in Table 3.14. The standardized regression coefficients (B) of explanatory variables for each of the four geographic regions are shown in the table.

Table 3.14

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF EXPLANATORY  
VARIABLES OF EDUCATIONAL PARTICIPATION

S. No.	Explanatory variables	Regression coefficient (b)	Standardized regression coefficient (B)	Standardized regression co-efficient (B)			
				Mountain	Hill	Terai	Inner-terai
1.	FATHEDUC	.044	.251**	.173**	.211**	.300**	.229**
2.	SEX	.314	.320**	.305**	.332**	.340**	.227**
3.	AGE	.034	.191**	.272**	.175**	.167**	.155**
4.	HELPHSE	-.081	-.071**	-.207**	-.008	-.124**	-.180**
5.	HELPEARN	-.334	-.162**	-.080*	-.150**	-.189**	-.192**
6.	DISTSCH	-.027	-.200*	-.184**	-.281**	-.107**	-.150*
	$\bar{R}^2$		.260*	.246**	.276**	.295**	.236**
	Number of cases		4613	596	2184	1605	228

Note: \*\*significant at .01 level  
\*significant at .05 level.

Twenty-six percent of the variance of the educational participation was explained by six explanatory variables entered into the equation. All six variables were found to be significant at .01 level. A brief description of each of these variables in order of their relative strengths and regional differences is given in the following lines.

Sex - The sex of a child appeared to be the strongest factor, and the most consistent in the case of different geographic regions, that has to do with educational participation by rural children. The difference between male and female participation is about thirty-one percent. In probabilistic terms, to be born as a male child one has, other things assuming to be equal, thirty-one percent greater chance of having formal schooling than one who is born as a female. Thus, the social barrier [i.e., the traditional attitude against the education of girls] and the economic necessity of having girls be engaged in household activities\* appear to be prominent factors in adversely affecting girls' participation in education.

Father's Education - The increment of every one year in father's education is likely to increase children's participation in education by four percent. Considering the fact that most of the rural parents are illiterate, the current emphasis given to wider expansion of adult education programmes in rural communities will have a positive effect on educational participation by children.

Distance to School - Proximity to school has a positive effect on drawing children to formal schooling. Conversely, the distant location of a school discourages parents to send their children, particularly the girls, to school. Interview data show that parents did not feel it safe to send their young children of age 6-8 schools which are located at a distance of about two kilometers or more.

Age - The age factor comes into the picture of educational participation in two distinct forms, one in relation to the distance to be covered by a child going to school and another, the likelihood of having a younger brother or sister to look after some of the household activities (such as watching the house). An increase of one year of age is associated with the probable increment in

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\*The Status of Women in Nepal, CEDA, Vol. II, Part 9.

education participation by four percent. The presence of a significant proportion of overage children in primary schools is indicative of this direction.

Helping in Earning Activities - A child's being engaged in earning activity reduces his chance of participating in formal education by thirty-three percent more than in the case of a child not engaged in earning activity. Although only a limited number of children were found to be engaged in earning activities, the regression coefficient of this variable ( $b = -.334$ ) warrants some serious consideration in this area.

Helping in Household Activities - Children's involvement in household activities was found to have adversely affected their participation in education. Considering the fact that rural children are required to lend a hand in the subsistence economy of the family, this factor may continue to stand in the way of the universalization of educational opportunity in rural Nepal. Additionally, the impact of children's engagement in household activities upon their study time and study habits deserves serious consideration on the part of the educational planners and educators of Nepal.

Regional Differences - Excluding the sex variable, there appeared to be some significant differences between geographic regions with respect to the influence of child-related variables on educational participation. Father's educational status seemed to have the strongest influence in the terai and the inner-terai regions. These are the regions where girls' enrolment is lowest in the country. Next to the sex variable, the age of a child and his/her involvement in household activities were found to be influential factors in educational participation in the mountain region whereas it was not so in the remaining geographic regions. Given the difficult topography of the mountain region and the hard life associated with it, these factors obviously seemed to have adversely affected



*Children helping with household work*

children's participation in schooling. On the other hand, children's engagement in earning activities appeared to be a strong factor in the case of the terai and the inner-terai regions where opportunities of work are available much more than in the mountain and the hills regions. Finally, it is interesting to note that the distance to school variable had a strong influence in the hills than in other regions.

(d) Differences by Level of Schooling

In order to identify differential effects of the explanatory variables at different levels of schooling, separate multiple regression models for primary and secondary levels were run. Grades I-III were considered as primary level and IV-X (i.e., both lower secondary IV-VII and secondary VII - X) were included in the secondary level. The descriptive information about the variables included in the models is shown in the following table.

Table 3.15

MEAN AND STANDARD DEVIATIONS OF THE EXPLANATORY VARIABLES  
AND THEIR CORRELATION WITH DEPENDENT VARIABLES

S. No.	Explanatory variables	Mean and SD		Correlation with dependent variables	
		Primary	Secondary	Primary	Secondary
1.	FATHEDUC	1.34 (2.69)	1.46 (2.95)	.240	.320
2.	SEX	.53 (0.50)	.54 (0.50)	.316	.390
3.	AGE	8.31 (1.92)	12.64 (1.65)	.242	-.125
4.	NUTR	2.29 (0.79)	2.51 (0.70)	.077	-.065
5.	HELPHSE	.67 (0.47)	.89 (0.31)	-.078	-.196

Cont'd/ ...

6. HELPEARNS*	-	.13 (0.34)	-	-.267
7. DISTSCH	1.64 (1.84)	3.98 (5.10)	-.143	-.262
<u>Dependent variable</u>				
1. EDUCPART	.41	.38	-	-

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\* This variable was not included in the primary level equation.  
Note: Figures within parentheses are standard deviations.

Two descriptive indices in the above table are different from the previous table (See Table 3.12) and as such they deserve some comment. First, the correlation between the nutritional status of children with educational participation is positive, although low, for the primary level whereas it is negative for the secondary level. (Physical weakness for doing domestic work may be the cause for the children's going to school). Secondly, a high standard deviation of the distance to school variable at the secondary level implies the absence of lower secondary and secondary school in the vicinity to cater to the corresponding school age group of children.

The results of regression analysis of child-related variables influencing educational participation by level of schooling are shown in Table 3.16.

Table 3.16

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF EXPLANATORY  
VARIABLES OF EDUCATIONAL PARTICIPATION BY LEVEL OF SCHOOLING

S. No.	Explanatory variable	Primary		Secondary	
		Regression co-efficient (b)	Standardized regression (B)	Regression co-efficient (b)	Standardized regression (B)
1.	FATHEDUC	.047	.258**	.045	.273**
2.	SEX	.276	.280**	.349	.359**
3.	AGE	.081	.314**	.004	.013
4.	NUTR	-.062	-.099**	-.012	-.018
5.	HELPHSE	-.097	-.092**	-.140	-.090**
6.	HELPEARN	-	-	-.290	-.201**
7.	DISTSCH	-.036	-.135**	-.018	-.190**
	$\bar{R}^2$		.250**		.345**
	N		2860		1753

Note: \*\*significant at .01 level.

\*significant at .05 level.

There appeared to be some but noticeable differences in the effects of different explanatory variables at the primary and secondary levels. The age variable was found to be the strongest factor to influence educational participation at the primary level, but it was insignificant at the secondary level. The sex bias in educational participation was stronger at the secondary level than at the primary level. At the primary school level, the probability of boys' participation in school is higher by .276 than that of girls, but in case of the secondary school level, that probability is higher by .349.



The finding with respect to the effects of nutritional status on educational participation at the primary school level is rather of a dubious nature or is even bewildering. Although the zero-order correlation between the nutritional status of children and educational participation is positive, the sign of the regression coefficient of the variable nutritional status is found to be in the negative direction. Thus, the nutritional status appeared as a suppressor variable\*. This negative sign of the variable nutritional status is primarily due to the adjustment/control effect of other variables such as sex and age which are more strongly associated with educational participation than the nutritional status of children.

(e) Sex Differences

Separate regression models with six child-related explanatory variables and educational participation as dependent variable were run for boys and girls of primary school level to identify different effects of these variables controlled for sex. The descriptive data of these models are given in Table 3.17.

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\* "A variable receives a negative weight in a regression equation if the ratio between its correlation with the error in the rest of the equation and its correlation with the criterion variable exceeds a certain amount". [Richard B. Darlington. "Multiple Regression in Psychological Research and Practice". *Psychological Bulletin*. 1968, Vol. 69, No. W. Page 179].

Table 3.17

MEAN AND STANDARD DEVIATIONS OF EXPLANATORY VARIABLES AND  
THEIR CORRELATIONS WITH EDUCATIONAL PARTICIPATION

S. No.	Explanatory variable	Mean		r	
		Girls	Boys	Girls	Boys
1.	FATHEDUC	1.42 (2.79)	1.28 (2.60)	.337	.202
2.	AGE	8.13 (1.70)	8.48 (2.08)	.126	.288
3.	NUTR	2.27 (.78)	2.31 (.79)	-.064	-.109
4.	HELPHSE	.75 (.43)	.60 (.49)	-.078	.007
5.	DISTSCH	1.66 (1.91)	1.63 (1.80)	-.142	-.153
<u>Dependent variable</u>					
1.	EDUCPART	.25 (.43)	.56 (.53)	-	-

Note: Figures within parentheses are standard deviations.

Girl's participation in schooling was found to be strongly associated with the father's education status whereas the age factor had the strongest relationship with educational participation in the case of boys. Helping in household chores and a stronger deterrent effect upon girls' education than upon boys'. The nutritional status of a child is more strongly negatively correlated with boys' participation than that of girls.

The results of the regression analysis of these models are indicated in the following table.

Table 3.18

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF CHILD-RELATED EXPLANATORY VARIABLES OF EDUCATIONAL PARTICIPATION BY SEX

S. No.	Variable	Girls		Boys	
		Regression co-efficient (b)	Standardized co-efficient (B)	Regression co-efficient (b)	Standardized co-efficient (B)
1.	FATHEDUC	.051	.330**	.044	.229**
2.	AGE	.058	.226**	.094	.393**
3.	NUTR	-.038	-.069**	-.082	-.130**
4.	HELPHSE	-.114	-.114**	-.085	-.084**
5.	DISTSCH	-.028	-.124**	-.042	-.153*
	$\bar{R}^2$	.167		.194	
	N	1344		1516	

Note: \*\* significant at .01 level.  
\* significant at .05 level.

Father's education status and age of children were found to be most strongly associated with the educational participation of girls and boys respectively. A unit's increase in father's education (i.e., one year of education) results in five percent increment in the probability of girls' participation in education. This point lends support to the potentiality of adult education in reducing social bias against female education. On the other hand, a unit increase in a child's age is likely to increase the probability of boys' participation in schooling by a little more than nine percent. This indicates that rural parents tend to consider more seriously about the education of their offspring or to send their children to school at a later age than at the age of six which is the officially prescribed or recognized age for a child

to start his formal school education. The nutritional status appeared to have a stronger negative influence on boys' participation in education whereas helping in household activities and stronger adverse effects on participation in schooling by girls.

(f) Child-related Variables influencing School Attendance

The second dependent variable used in the regression analysis of the survey data was school attendance. The attendance percentage was calculated by dividing the number of days for which a child was present at school by the total number of instructional days for a given reference period, i.e., one academic year for most of the schools. In a few cases, the available data on school attendance for a period of several months were also used. A regression model with nine child-related variables as explanatory variables and the attendance percentage as a dependent variable was run. The model explained just one percent of the variance in the dependent variable. Only two variables in the model were significant. These were "grade continued" and "time to reach school". Since the proportion of variance explained by the model is of little practical importance, the details are not reproduced here.

However, the  $R^2$  of the overall model with three blocks of child-, household- and school-related variables regression on attendance percentage was .111 (significant at .01 level). In this section, a brief description of the child-related variables and their regression coefficients in the model are presented. The details of overall significance of these child-related variables and comparison with other blocks of variables will be treated in chapter six.

The descriptive data on seven child-related variables entered, along with other variables, in the model are given in the following table.

Table 3.19

MEAN AND STANDARD DEVIATION OF CHILD-RELATED EXPLANATORY  
VARIABLES AND THEIR CORRELATION WITH SCHOOL ATTENDANCE

S. No.	Variable	Mean	S.D.	r	Overall	
					Primary Mean	Secondary Mean
1.	FATHEDUC	2.31	3.63	.046	2.11 (3.39)	0.075 2.67 (0.117) (4.01)
2.	WHTIND	89.45	12.46	.038	88.27 (12.77)	-0.004 91.57 (-0.000) (11.61)
3.	GRADCONT	3.12	2.20	.063	1.73 (0.82)	0.197 5.63 (0.019) (1.60)
4.	TIMESCH	25.06	22.57	.080	20.94 (18.75)	-0.018 32.44 (-0.176) (26.48)
5.	EXPEDUC	188.64	388.44	.030	97.18 (919.61)	-0.096 352.67 (-0.079) (374.17)
6.	HELPEARN	.01	.10	-.067	.01 (0.09)	-0.097 .02 (-0.028) (0.12)
7.	STUDYWK	1.20	1.02	.040	.85 (0.69)	0.039 1.83 (0.040) (1.19)
<u>Dependent variable</u>						
1.	ATTPCT	61.93	23.06	-	61.71 (23.14)	62.34 (22.92)

Note: The above mentioned seven child-related variables along with other household- and school-related variables were entered in the overall regression equation on school attendance. Thus, the descriptive values of only these variables are mentioned in the table.

The expected number of work days in one academic year of ten months' duration is, according to the official regulation, 220 days. However, the actual number of work days is estimated to be about 200 days only. So, according to the survey data, rural children enrolled in schools attended for 124 days in one academic year. This attendance percentage

is about the same at both primary and secondary levels. The correlation of all the child-related variables with school attendance is very low.

The inter-correlations of seven child-related variables and school attendance are shown in Table 3.20.

Table 3.20

INTER-CORRELATIONS OF CHILD-RELATED VARIABLES AND ATTENDANCE PERCENTAGE

<u>Variables</u>	<u>FATHEDUC</u>	<u>WHTIND</u>	<u>GRADCONT</u>	<u>TIMESCH</u>	<u>EXPEDUC</u>	<u>HELPEARNS</u>	<u>STUDYWK</u>
ATTPCT	.046	.038	.063	-.080	.030	-.067	.040
FATHEDUC		.004	.094	-.099	.183	-.054	.140
WHTIND			.146	.052	.136	.036	.058
GRADCONT				.250	.426	.030	.560
TIMESCH					.080	.010	.130
EXPEDUC						-.016	.309
HELPEARNS							.014

Two variables "time to reach school" and "helping in earning activities" are negatively correlated with attendance percentage and the remaining variables have low positive correlation with the dependent variable. The variable "weight-height index" is positively correlated with "grade continued", indicating that a child with good nutritional status tends to continue his/her study at school.

Part of the results of regression model, showing the regression coefficients of child-related variables, on overall attendance percentage is given in the following table.

Table 3.21

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF THE EXPLANATORY CHILD-RELATED VARIABLES OF THE ATTENDANCE PERCENTAGE

S. No.	Variable	Total		Primary		Secondary	
		Regression coefficient (b)	Standardized regression (B)	Regression coefficient (b)	Standardized regression (B)	Regression coefficient (b)	Standardized regression (B)
1.	FATHEDUC	.283	.065	.561	.082**	.084	.015
2.	WIHTIND	.070	.038	.062	.034	.119	.060
3.	GRADCONT	2.493	.238**	6.244	.221**	2.622	.182**
4.	TIMESCH	-.091	-.089**	-.041	-.033	.096	-.111**
5.	EXPEDUC	-.004	-.060*	.003	.036	-.005	-.084
6.	HELPEARNS	-14.620	-.066**	-23.327	-.092**	-7.137	-.038
7.	STUDYWK	.235	.010	-1.455	-.043	1.034	.054
R <sup>2</sup> of the overall model		.111**		.137**		.209**	
N		1946		1185		661	

Note: \*\* significant at .01 level.  
\* significant at .05 level.

The significant and consistent effect of the variable "grade continued" suggests that the school attendance pattern of a child improves as he goes on getting to upper grades. The education status of the father appeared to have a mild positive effect on child's attendance percentage at the primary school level. The variable "time to reach school" had a negative effect on school attendance at the secondary school, thus substantiating the fact that rural children had to walk a considerable distance in attending the lower-secondary and secondary schools. Similarly the variable "helping in earning activities" had a negative effect on school attendance at the primary school level.

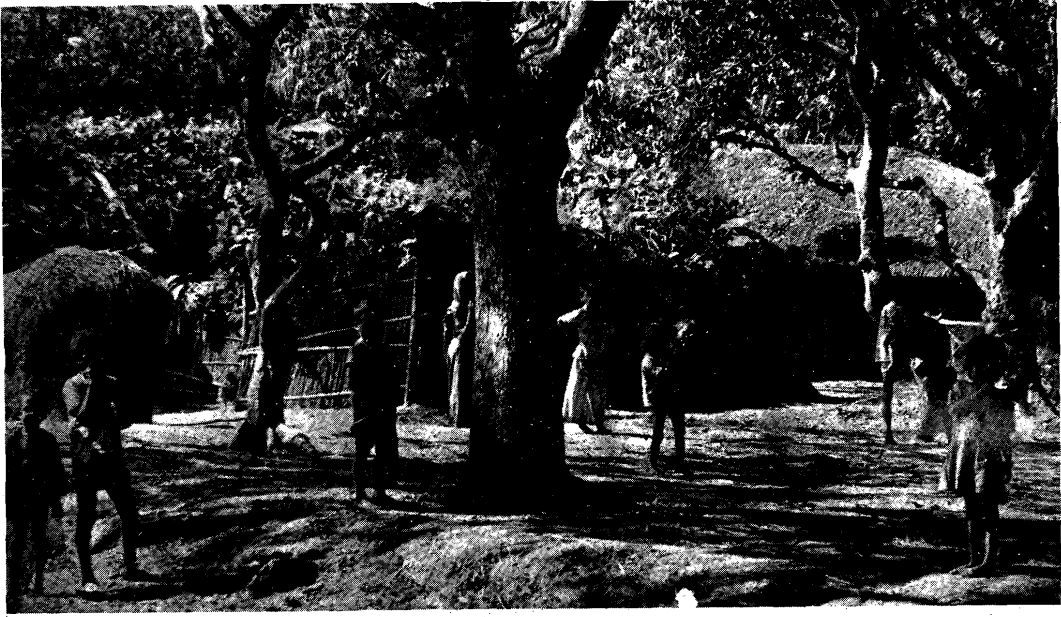
Selected child-related variables such as sex, age, fathers' educational status and engagement in household activities significantly affected rural children's participation in education. The sex variable which is the strongest single factor in affecting participation suggests that a strong bias still existed in the rural communities against girls' education. This is further compounded by greater demands on girls' involvement in household activities. There is strong evidence to suggest that father's educational status has a great softening effect on this traditional bias against female education. In the final analysis, there is less likelihood that girls' enrolment in school can significantly rise unless they can be made free from the household duties and rigid social customs.

Age, next to the sex variable, appeared to be a strong factor in increasing the probability of participation in education. However, there is a dilemma. As increase in age raises the chance of participation by rural children so is the greater likelihood of their being engaged in household and earning activities. In brief, the effect of rural economy on educational participation is quite obvious. This situation has two major, but in the same direction, implications: either the rural economy needs to be improved by adopting appropriate technologies and development-oriented mechanisms like cooperatives to spare children from household activities or the school system needs to be adjusted to fit in with the needs of the rural children and with the time convenient to them.

Father's educational status appeared to have positively affected educational participation by rural children, but it was also found that it correlated negatively with other factors that adversely affected participation in education. Thus, the expansion and effectiveness of the adult education programmes should have a salutary effect upon educational participation by rural children.

There were also some significant differences between geographical regions, the levels of schooling and sex with respect to the effects of child-related variables upon educational participation which should be considered in making policy decisions and programmes towards the universalization of educational opportunity.





*The question is how to attract these children to school.*



*Straggling settlements*

83

Chapter IV

RURAL HOUSEHOLDS AND EDUCATIONAL PARTICIPATION

1. *Characteristics of Rural Households*

Nepal is a nation of small villages lying scattered in variegated topographical conditions and crisscrossed or isolated by rivers, hills and mountains\*. A village is a cluster of households surrounded by cultivable land, either in the hills or in the plain area. The settlement pattern in a village is determined primarily by the topographical characteristics of the area, such as the availability of cultivable land and the fauna and flora, and by the ethnic composition of the local population. In many cases, the ethnic composition of the local community lends a distinct social characteristic to a village.

The ethnic and economic status of a household largely determines its location in the village community, with the upper caste people who are normally in a better economic condition centrally concentrated and the lower caste people living at the outskirts of the village. Thus in a village, we may see rings or pockets of households that belong to different ethnic groups following a hierarchy of the caste system based on the social tradition of a particular village. The access to and the utilization of basic services such as health and education that are available in the village panchayat also depend to a great extent on the caste status of the family. The occupation followed by a household is also much in line with its caste status considering the fact that specialized trades and functions are assigned to particular groups in the traditional caste system.

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\*According to 1981 census, Nepal consists of 29 towns (urban or semi-urban) panchayats and 4022 village panchayats.

The economy of a rural household revolves around such activities as are connected with meeting the basic needs of the family members. The rural economy is basically agrarian in nature and the average production from agriculture is barely sufficient to maintain the family even at the subsistence level. Thus, every member of the rural family is required to participate in household and earning activities that contribute to the maintenance of the family. Due to lack of resources, marketing facilities and other income-generating opportunities in the rural communities, a rural family often remains in a very tight economic situation.

In this chapter, we shall examine the major characteristics of the rural households as revealed by the survey data and shall also analyze the relationship between the household characteristics and educational participation in rural Nepal.

(a) Demographic Characteristics

According to the data on 2312 households surveyed in this study, the average size of a rural family is 6.7 persons.

A convenient way of describing the population of rural Nepal is to use the basis of different language groups. There are twelve major languages spoken in Nepal. Of these languages, Nepali is both the official national language and the medium of instruction in schools. In most cases other than Nepali, one language generally represents one ethnic group although one group e.g., Magars may have more than one language and within each ethnic group there is a caste hierarchy. For example, "Tharu" is an ethnic group that has its own language and has different caste groups within it.

The following table gives the percentage distribution of households by different language groups.

Table 4.1

PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY DIFFERENT LANGUAGE GROUPS

<u>S. No.</u>	<u>Language group</u>	<u>Percentages of households</u>	<u>National percentages*</u>
1.	Nepali	41.2	58.3
2.	Maithili	26.4	11.1
3.	Tharu	5.2	3.6
4.	Abadhi	5.1	7.6
5.	Rai/Kirati	4.9	NA
6.	Magar	4.9	NA
7.	Limbu	3.1	NA
8.	Gurung	1.9	NA
9.	Sherpa / Bhote	1.8	NA
10.	Newari	1.3	3.0
11.	Tamang	0.7	3.5
12.	Others	3.4	12.9**

Source: Survey Data.

\*Census data, 1981

\*\*This also includes Rai/Kirati, Magar, Limbu, Gurung and Sherpa as well as Rajbanshi, Satar, Sunwar, Danuwar, Chepang, Thakali, etc.

The proportional representation of different language groups in the survey sample, as shown in Table 4.1, testifies to the fact that almost all major language groups are covered in the study.

With respect to the religious status of the surveyed households, 91.4 percent are Hindus, 5.5 percent Muslims and 3.1 percent Buddhists. The corresponding figures for the nation as a whole are Hindus (89.5%), Buddhists (5.3%), Muslims (2.6%) and others (2.6%).

(b) Economic Status of the Rural Household

The total income of the household from different sources such as land yield, livestock, business and service was used to calculate the per capita income.

According to the survey data, the per capita income of the rural population is Rs.1160.46\* (about U.S.\$ 97). The national per capita, income for the corresponding year is Rs.1573 (U.S.\$ 130). The separate calculation of per capita income for the households that had at least one child in school and for those that had none revealed a striking result. There was a difference of about Rs.488.10 (U.S.\$ 40) between the two categories of households, one that had some participation in education and the other that had no participation at all. This finding suggests a strong association between family income and educational participation.

The average land holding of a household in the rural communities of Nepal, according to the survey data, is about 20 ropanis\*\*. Land is the principal asset of a Nepalese household. The quality and productivity of land however varies in different topographical regions. The size of land ownership may be considered as an indicator of family wealth. Of the 2312 households surveyed, 8.4 percent do not own any land of their own. There was a striking difference between the land ownership of a household that sent at least one of its members to school and one that did not. The average land holding of the first category of households was 24.8 ropanis where it was only 14.6 ropanis only for the latter category. Association between land ownership and educational participation can be assessed from the following contingency table.

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\*U.S.\$ . 1 = Nepali Rs. 12.10.

\*\*1 acre = 7.94 ropani.

Table 4.2

LAND OWNERSHIP AND EDUCATIONAL PARTICIPATION

(in percentage)

<u>Land ownership</u>	<u>Participation</u>	
	<u>No</u>	<u>Yes*</u>
Yes	42.4	57.6
No	73.3	26.7

\*With at least one number of the household attending school.

Approximately 58 percent of the households with some land of their own had at least one of their school-age children participating in formal education. On the other hand, 73 percent of the landless households did not have any of their school-age children attending school. This finding clearly indicates a strong positive correlation between land ownership and education participation.

The survey data indicates that 91 percent of the households kept livestock such as cows, oxen, buffaloes, goats and sheep. The importance of livestock in a rural community lies not only for the sake of meat and ploughing but also for the sake of manure. These livestock are also a source of some extra income for the family.

The school-age children of about eleven percent of the rural households were reported to be engaged in earning activities and thus, making some income to support the family.

Most of the rural people dwell in thatched houses or mud-built huts. Such a house had mud walls that are supported by bamboo sticks or rough wooden props and beams and which has its foundation pillars of unhewn logs or rough stones pegged only a few feet down into the ground. About

82 percent of the 2312 houses observed during the survey were found to be of this type. The remaining eighteen percent of houses were of a better (or strongly-built) type which is a little improvement over the thatched type because of their having stone walls or tiled roofs. Only two houses, and that also in the terai region, were found to be of a (well-built) type - building with cemented, tinned or tiled roof, stone or brick walls, and solid foundation. [The structure of the building was found to be one storey, or at most two, and the interior of the building was just a one-room structure].

(c) Educational Characteristics

According to the survey data, about twenty-nine percent of the adults in the survey districts were found to be literate. The national literacy percentage for the corresponding year was 23 percent\*. At the time of survey, only a few adults from 2.3 percent of the households were reported to have attended non-formal education programmes, some sponsored by government and some by non-government agencies. It seems obvious that the adult education or non-formal education programmes have not reached the rural villages to a satisfactory extent.

The average number of school-age children in rural households was found to consist of two of which forty percent were attending school. It was also found that in addition to 1863 children of 6-15 years of age participating in education, 191 children who were above 15 years were also attending school.

2. *Household-related Variables Influencing Educational Participation*

The data on 2312 households were coded for each of the school-age children corresponding to their respective household. These household characteristics pertaining to the school-age children (6-15 years) were used to predict the

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\*The national literacy percentage is calculated inclusive of the population of 6 years of age and above whereas the survey results included adults of 16 years of age and above.

educational participation of these children. Regression analysis for all the cases and separately for different geographic regions was made the details of which are presented in this section.

Variables Entered in the Model

Thirteen household-related explanatory variables and one dependent variable were entered in the multiple linear regression model. Descriptive information about these variable is presented in Table 4.3.

Table 4.3

MEAN AND STANDARD DEVIATION OF THE HOUSEHOLD RELATED EXPLANATORY VARIABLES OF EDUCATIONAL PARTICIPATION

No.	variables	Overall		Correlation with dependent variable	Regional Means			
		Mean	S. D.		Mountain	Hill	Teraí	Inner-terai
1.	LANGHOME	.44	.50	.163	.33 (.47)	.75 (.43)	.03 (.18)	.57 (1.50)
2.	AGRICU	.92	.27	.095	.98 (.13)	.97 (.18)	.84 (.36)	.87 (.32)
3.	BUSINESS	.10	.30	.085	.08 (.27)	.07 (.26)	.14 (.35)	.11 (.31)
4.	COTTIND	.02	.13	.061	.02 (.15)	.02 (.13)	.02 (.14)	
5.	LABOUR	.36	.48	-.217	.33 (.47)	.28 (.47)	.47 (.50)	.35 (.48)
6.	PROF	.03	.17	.145	.01 (.12)	.03 (.18)	.03 (.18)	.02 (.13)
7.	NONPROF	.14	.35	.157	.09 (.28)	.21 (.41)	.06 (.23)	.17 (.37)
8.	ADULTEDUC	1.11	1.71	.321	.64 (1.09)	1.34 (1.93)	.99 (1.58)	.95 (1.44)
9.	CHILDEARN	.13			.13 (.36)	.12 (.32)	.14 (.34)	.12 (.33)
10.	CHADRTIO	1.27	.74	-.068	1.29 (.81)	1.32 (.75)	1.18 (.69)	1.40 (.80)
11.	ANIMALS	7.60	8.34	.059	10.11 (10.95)	7.03 (6.21)	7.56 (9.74)	6.87 (6.36)
12.	PCAPINCM	1048.87	937.29	.266	844.29 (676.81)	1185.99 (1022.71)	962.06 (879.52)	881.29 (866.76)
13.	ATTITUDE	10.96	6.41	.211	5.97 (6.87)	11.43 (6.35)	12.34 (5.49)	9.88 (5.26)
	<u>Dependent variable</u>							
1.	EDUCPART	.40	.49	-	.27 (.44)	.50 (.50)	.31 (.46)	.36 (.48)

Note: Figures within parentheses indicate standard deviations.



On the average, 44 percent of the school-age children who were contacted during the field survey were found to be speaking Nepali at home. The percentage of such children is highest in the hills and lowest in the terai region where only three percent were found speaking Nepali at home. The fact that only such a low percentage of the terai children speak Nepali at home deserves serious consideration at the national level in view of the fact that Nepali is prescribed as the medium of instruction in the schools. There is also a high proportion of Nepali-speaking children in the inner-terai region which might be the result of the internal migration of people from the hills to the region.

Nepal is basically an agrarian country. According to the survey data, the major occupation of more than ninety percent of the rural households was agriculture. Besides, a significant proportion of the rural households were also found to be engaged in other occupations like labour (36%), business (10%) and non-professional service or employment in government and non-government offices. The percentages of households engaged in labour and business were highest in the terai region whereas the hills had the highest proportion of households with non-professional services among their major occupation. In the case of thirteen percent of the households, the school-age children were also found to be engaged in earning activities.

The average number of livestock per household is highest in the mountain region. This might be due to the nature of land in the mountain region which makes suitable pastures for cattle grazing rather than for other agricultural purposes. The income from the domestic livestock and from the children's earning adds to the income of the family from the land. The grand total of the income made by the family from different sources was used in computing the per capita income. The mean of the per capita income variables was found to be Rs. 1048.87

(i.e., a little over U.S.\$ .87)\*. Instead of using the father's education status only, the average level of education attained by all the adults in the family has been used in the regression with household characteristics.

The average adult education level of the rural households was found to be a little more than one year of education. The attitude of the household head toward education and other development efforts as measured by the three point modernity scale specifically prepared for the study, appeared to be modestly positive [the score ranges from +20 through 0 to -20].

3. *Inter-correlations of  
the Variables*

The inter-correlations of the household - related explanatory variables and educational participation is given in the following matrix.

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\*The actual per capita income from the survey data was Rs.1160.46 (US\$ . 97). The difference in these values is due to the use of a child as a unit resulting in the assignment of the same household income to as many school-age children as happened to be in the sample from that particular household.

A close examination of the preceding correlation matrix reveals that there existed a higher positive correlation between educational participation and such composite variables as the average education status of the adults in the household, the per capita income and the attitude toward modernity than in the case with other variables like the language spoken at home and the major occupations of the household. Of the six major occupations of the rural household, four - professional jobs, non-professional jobs, agriculture and business - were found to be positively correlated with children's participation in education. The remaining two household occupations - cottage industry and labour - were negatively correlated with educational participation. The correlation between children's engagement in earning activities and educational participation was also found to be negative and statistically significant.

Labour as a major occupation of the household and children being engaged in wage-earning activities were found to be negatively associated not only with children's participation in formal schooling but also with the average education status of the adults in the household, their attitude toward modernity, and surprisingly enough, with the per capita income of the households too. This suggests that children's earning did not significantly increase the income of the household. This evidence also indicates that labourers belong to the poorest and the landless group in the rural communities of Nepal [correlation between labour and agriculture =  $-.243$ ].

Three variables - the average education status of the adults in the household, the attitude toward modernity and the per capita income - were found to be significantly inter-correlated with each other. It is clear that the attitude of the household head toward sending children to school and other on-going developmental activities in the community is associated with the education and the economic status of the family.

#### 4. *Results of Regression Analysis*

Thirteen household-related variables were regressed on the educational participation by rural children. The regression and standardized regression

coefficients of these explanatory variables of educational participation are given in Table 4.5.

Table 4.5

REGRESSION AND STANDARDIZED REGRESSION CO-EFFICIENTS OF HOUSEHOLD-RELATED EXPLANATORY VARIABLES OF EDUCATIONAL PARTICIPATION

S. No.	Explanatory variable	Overall		Standardized Regression Coefficients (B)			
		Regression Co-efficient (b)	Standardized Reg. Coeff. (B)	Mountain	Hill	Terai	Inner-terai
1.	LANGHOME	.124	.125**	.022	.093**	.020	.038
2.	AGRICU	.072	.039**	.042	-.030	.082**	-.022
3.	BUSINESS	.035	.021	.081	.025	-.016	-.111
4.	COTTIND	-.173	-.047**	.013	-.072**	-.024	-
5.	LABOUR	-.078	-.077**	-.026	-.073**	-.063*	-.092
6.	PROF	.109	.038**	-.018	.004	.102**	.086
7.	NONPROF	.046	.032*	-.048	.032	.027	.021
8.	ADULTEDUC	.045	.158**	.125*	.160**	.174**	.090
9.	CHILDEARN	-.136	-.092**	-.069	-.105**	-.098**	-.082
10.	CHADRTIO	-.013	-.020	.013	-.028	-.040	-.074
11.	ANIMALS	.001	.017	-.006	.016	.050*	.024
12.	PCAPINOM	.0005	.095**	.138**	.078**	.066**	.216**
13.	ATTITUDE	.009	.123**	.112**	.137**	.086**	.068
	$\bar{R}^2$		.173**	.088**	.150**	.169**	.105**
	N		4613	596	2184	1605	228

Note: \*\*significant at .01 level.  
\*significant at .05 level.

Seventeen percent of the variation in educational participation by rural children is explained by thirteen household-related explanatory variables. A brief description of the relative influence of these variables is presented in the following paragraphs.

A. Educational Status of Adults in the Family and Attitude of the Household Head

It is highly significant to note that the average educational status of the adults in the family had the strongest association with educational participation by rural children. A unit increase in the average education status of the adults is associated with 4.5 percent increment in children's participation in schooling. It is also logical to assume that the presence of an educated adult in the household might motivate young children to be inclined to formal education. The attitude of the head of the household toward modernity, which is in part influenced by the educational status of the family, was found to have a strong influence on educational participation.

B. Language Spoken at Home

There are about twelve major languages and several other dialects and languages spoken by different minority groups in the country. Nepali, which is the mother tongue of about fifty-eight percent (1981 census) of the population, is both the national language of the country and the medium of instruction in schools. The study results revealed that the probability of participation in education for a child who spoke Nepali at home was higher by .124 than for a child who spoke another language at home. The reasons for this strong association between Nepali-speaking children and educational participation are obvious. Nepali-speaking children would feel comfortable in the classroom and enjoy school life whereas it might be a threatening experience for non-Nepali-speaking children.

Some parents again do not feel optimistic about the fact that their children would benefit much from the Nepali-speaking teachers. In practice, teachers with different language backgrounds may use a bilingual approach in teaching early grades in primary schools. The percentage of teachers with a

language background other than Nepali is about thirty-four. The implication of this language issue to increasing educational participation by rural children will be dealt with in greater detail in a later chapter.

C. Income of the Family

The per capita income of the household was found to have a significant effect on educational participation. It is easy to imagine that the higher the income of the family is, the greater is the chance of children's participation in education. Conversely if a household is very poor so that it needs the services of children in increasing the family income, the probability of children's participation in education from that household decreases significantly.

E. Regional Similarities and Differences

There appeared to be more similarities except for a few interesting differences with respect to the influence of different variables in the case of variegated geographic regions. In the case of the inner-terai region, only one variable - the per capita income of a family - was found to have a significant effect on educational participation. In the remaining three regions, all three variables - the average education status of the adults in the family, the per capita income and the attitude toward modernity - had equal and significant effects on participation in education by rural children.

Two variables - Nepali as a language being spoken at home and cottage industry as a major occupation of the household - were significant factors only in the case of the hills region. Labour as the household occupation and involvement of children in earning activities adversely influenced educational participation among the children of the hills and the terai regions only. The effect of agriculture as a household occupation was found to be positive and significant only in the case of the terai region.

F. Household Characteristics and Educational Participation by Levels of Schooling

In order to identify differential effects of household-related variables

upon educational participation at different levels of schooling, multiple linear regression models were separately run for primary and secondary school levels respectively. The descriptive data for the variables entered in these two models are given in the following table.

Table 4.6

MEAN AND STANDARD DEVIATIONS OF THE HOUSEHOLD-RELATED EXPLANATORY VARIABLES AND THEIR CORRELATION WITH EDUCATIONAL PARTICIPATION BY LEVEL OF SCHOOLING

S. No.	Variable	Primary			Secondary		
		Mean	S. D.	r with EDUCPART	Mean	S. D.	r with EDUCPART
1.	AGRICU	.93	.27	.085	.97	.28	.107
2.	BUSINESS	.08	.28	.060	.12	.33	.126
3.	COTTIND	.02	.13	-.072	.02	.13	-.042
4.	LABOUR	.37	.48	-.176	.33	.47	-.283
5.	PROF	.02	.15	.133	.04	.20	.209
6.	NONPROF	.14	.35	.133	.14	.34	.197
7.	ADULTEDUC	.93	1.54	.282	1.35	1.95	.393
8.	CHADRTIO	1.30	.73	-.052	1.22	.76	-.098
9.	ANIMALS	7.49	7.80	.067	7.92	9.17	.050
10.	PCAPINCUM	967.29	838.27	.239	1181.97	1066.44	.319
11.	ATTITUDE	10.50	6.49	.198	11.72	6.20	.246
12.	PCTADERN	94.59	13.23	-.109	92.62	14.32	-.195
13.	LANGHOME	.45	.50	.182	.42	.49	.127
14.	LATRINE	.05	.22	.117	.07	.26	.240
15.	EDUCPART	.41	.49		.38	.48	

Two new variables, the percentage of adults earning and the existence of latrine appear in the above table. The percentage of adults of the rural households engaged in some kind of earning activities was found to be quite high and this factor was negatively associated with children's participation in education. Obviously, when almost all adults in a family were outside in earning activities, at least some children of school-going age were required, or even compelled, to look after home and do the household chores. Although only a few rural households (about 6%) had latrines of their own, this variable was also found to be positively associated with educational participation.

Table 4.6 reveals that the rural households with some of their children attending secondary schools had higher average values with respect to the per capita income, the modern attitude of the household head and the average education status of the adults in the family. All these variables are both positively and significantly correlated with educational participation.

Given in Table 4.7 are the results of a regression analysis with fourteen household-related explanatory variables and with educational participation as the dependent variable run separately for primary and secondary school level.

A significantly higher proportion of variance in educational participation at the secondary level was explained by household-related variables than that at the primary school level.

As in the case of the overall model, three variables - the average education status of the adults in the family, per capita income and the attitude of the household head - were found to have a highly significant and consistent effect on educational participation both at the primary school levels. Similarly, the variable "labour as a major occupation of the household" had a significant negative effect at both levels. The cottage industry as a major occupation of the household had a highly significant negative effect on participation at the primary school level



Table 4.7

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF THE HOUSE-  
HOLD-RELATED EXPLANATORY VARIABLES OF EDUCATIONAL PARTICIPATION  
IN PRIMARY AND SECONDARY SCHOOLS

S. No.	Variable	Primary		Secondary	
		Regression coefficient (b)	Std. Reg. coefficient (B)	Regression coefficient (b)	Std. Reg. coefficient (B)
1.	AGRICU	.125	.064**	.083	.049*
2.	BUSINESS	-.016	-.009	.046	.031
3.	COTTIND	-.202	-.057**	-.121	-.033
4.	LABOUR	-.081	-.080**	-.132	-.128**
5.	PROF	.021	.006	.186	.077**
6.	NONPROF	.037	.026	.099	.070**
7.	ADULTEDU	.047	.148**	.038	.151**
8.	CHADRTIO	-.009	-.014	-.014	-.021
9.	ANIMALS	.001	.014	.001	.028
10.	PCAPINCM	.000	.113**	.000	.087**
11.	ATTITUDE	.009	.123**	.010	.129**
12.	LANGHOME	x	x	.081	.083**
13.	PCTADERN	-.001	0.025	-.002	-.046*
14.	LATRINE	x	x	.137	.073**
	$\bar{R}^2$		.121**		.230**
	N		2860		1753

Note: \*\*significant at .01 level.  
\*significant at .05 level.

but not a very significant one at the secondary level. The effect of agriculture as a family occupation on educational participation was found to be stronger at the primary school level than at the secondary school level. On the other hand, having one or more adults in the household engaged in either professional or non-professional jobs was found to be significantly associated with educational participation at the secondary school level, but not

so significant at the primary school level. Finally, the provision for a latrine in the household was found to be significantly associated with secondary school participation.

5. *Household Characteristics and Educational Participation by Sex*

Two separate regression models were run for boys and girls of primary school age. The descriptive data on the household-related variables entered in these models are given in the following table.

Table 4.8

MEAN AND STANDARD DEVIATION OF THE HOUSEHOLD-RELATED VARIABLES  
AND THEIR CORRELATION WITH EDUCATIONAL PARTICIPATION BY SEX

S. No.	Variable	Boys			Girls		
		Mean	S. D.	r with EDUCPART	Mean	S. D.	r with EDUCPART
1.	AGRICU	.93	.25	.121	.93	.26	.045
2.	BUSINESS	.08	.28	.002	.08	.28	.146
3.	COTTING	.02	.12	-.064	.02	.15	-.074
4.	LABOUR	.38	.49	-.162	.36	.48	-.238
5.	PROF	.02	.14	.059	.02	.16	.176
6.	NONPROF	.13	.34	.131	.15	.36	.175
7.	ADULTEDU	.90	1.52	.227	1.03	1.55	.421
8.	CHADRTIO	1.28	.72	-.026	1.33	.75	-.070
9.	ANIMALS	7.47	8.08	.066	7.33	7.47	.071
10.	PCAPINCM	945.50	756.91	.176	991.87	921.14	.360
11.	ATTITUDE	10.13	6.63	.212	10.93	6.30	.254
12.	PCTADERN	95.05	12.50	-1.00	94.06	13.99	-.162

The above table reveals that, with respect to selected key household characteristics such as the average education status of the adults, the per capita income of the family and their attitude towards modernity, the average values for these variables were found to be higher for girls than for boys. The significant and higher correlation of these factors with educational participation of girls as compared to that of boys indicates that higher values in these three important household characteristics are significantly associated with increased girls' participation.

The results of a regression analysis with twelve household-related explanatory variables of educational participation executed separately for primary school-age boys and girls are given in Table 4.9 .

Table 4.9  
REGRESSION CO-EFFICIENTS AND STANDARDIZED REGRESSION CO-EFFICIENTS OF  
HOUSEHOLD-RELATED EXPLANATORY VARIABLES OF EDUCATIONAL PARTICIPATION  
BY SEX

S. No.	Variable	Boys		Girls	
		Regression co-efficient (b)	Standardized regression co-efficient (B)	Regression co-efficient (b)	Standardized regression co-efficient (B)
1.	AGRICU	.184	.092**	.035	.021
2.	BUSINESS	-.085	-.047	.041	.026
3.	COTTIND	-.211	-.052*	-.145	-.049*
4.	LABOUR	-.080	-.087**	-.092	-.120**
5.	PROF	-.108	.030	.165	.061*
6.	NONPROF	.069	.047	.018	.013
7.	ADULTEDU	.039	.120**	.064	.230**
8.	CHADRTIO	.005	.007	-.006	-.010
9.	ANIMALS	.001	.023	-.000	-.002
10.	PCAPINCM	.000	.067*	.000	.168**
11.	ATTITUDE	.013	.173**	.008	.115**
12.	PCTADERN	-.001	-.035	-.001	-.029
	$\bar{R}^2$		.106		.231
	N		1516		1344

Note: \*\*significant at .01 level.

\*significant at .05 level.

A significantly higher proportion of variation in girls' participation in education than those of boys explained by household characteristics indicates that household factors play a more prominent role in determining girls' enrolment in schools. However, the direction and the relative strength of the effects of these variables appeared to be similar with regard to both girls' and boys' participation in education. The only noticeable difference is that a professional job as a major household occupation was found to affect significantly and positively girls' participation whereas it was agriculture as a household occupation that was in favour of boys' participation. It is clear that the pre-deposition of the household toward promoting girls' education is greatly enhanced by exposure of the family to jobs which require higher levels of education and training.

6. *Household Characteristics  
and School Attendance*

The inclusion of selected household characteristics alone in the regression model did not make for significant proportions of variance in school attendance. However, the overall regression model with selected child, household-, and school-related explanatory variables accounted for eleven per cent of variation in school attendance. In this section, we shall examine the household-related variables only that are entered in the overall model.

The descriptive data on ten household-related variables included in the overall regression model on school attendance were given in the following table.

Table 4.10

MEAN AND STANDARD DEVIATION OF HOUSEHOLD-RELATED EXPLANATORY  
VARIABLES OF SCHOOL ATTENDANCE

<u>S.No.</u>	<u>Variable</u>	<u>Mean</u>	<u>S. D.</u>	<u>With ATTPCT</u>
1.	LANGHOME	.54	.50	.083
2.	SETTLDUR	.998	.04	.037
3.	AGRICU	.95	.21	-.038
4.	BUSINESS	.13	.34	.058
5.	OCTTIND	.01	.09	-.019
6.	LABOUR	.23	.42	-.032
7.	ANIMALS	8.20	8.65	.001
8.	HSESPCE	7.64	6.48	.087
9.	PCAPINCM	1353.68	1184.57	.058
10.	ATTITUDE	12.62	5.69	.010
11.	ATTPCT	61.93	23.06	-

Although the signs of correlation of selected household characteristics with school attendance were in the expected direction, most of the coefficients were very low.

The results of regression analysis of household-related explanatory variables of attendance percentage in overall school attendance model are given in Table 4.11.

Table 4. 11

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF HOUSEHOLD-RELATED EXPLANATORY VARIABLES OF SCHOOL ATTENDANCE

<u>S. No.</u>	<u>Variable</u>	<u>Regression co-efficient (b)</u>	<u>Standardized regression co-efficient (B)</u>
1.	LANGHOME	4.019	.087**
2.	SETTLDUR	26.840	.047*
3.	AGRICU	-3.827	-.035
4.	BUSINESS	2.200	.032
5.	COTTIND	-3.237	-.013
6.	LABOUR	2.132	.039
7.	ANIMALS	.061	.023
8.	HSESPCE	.275	.077**
9.	PCAPINCM	-.000	-.025
10.	ATTITUDE	-.063	-.016
	Overall $\bar{R}^2$		.111
	N		1846

Note: \*\*significant at .01 level  
\*significant at .05 level.

Only two household characteristics - Nepali as a language spoken at home and the per capita household space - appeared to have a significant effect on school attendance by rural children.

7. Household Characteristics and  
Proportion of School-going  
Children

- 104 -

A major area of interest in this study was to identify factors associated with the proportion of school-age children that participate in formal education from a given household. Thus, a regression analysis of selected household characteristics as independent variables and the percentage of school-going children from a household as a dependent variable was executed. The descriptive data on the variables entered into the model are given in Table 4.12.

Table 4.12

MEAN AND STANDARD DEVIATIONS OF HOUSEHOLD-RELATED VARIABLES AND  
THEIR CORRELATION WITH THE PROPORTION OF SCHOOL-GOING CHILDREN

<u>S. No.</u>	<u>Variable</u>	<u>Mean</u>	<u>S. D.</u>	<u>With PCTSCGCH</u>
1.	LANGHOME	.41	.49	.205
2.	AGRICU	.91	.28	.132
3.	BUSINESS	.09	.29	.095
4.	COTTIND	.02	.14	-.050
5.	LABOUR	.38	.49	-.236
6.	DISLOSEC	2.86	2.61	-.139
7.	DISTSEC	7.81	7.10	-.160
8.	CHILDEARN	.11	.31	-.171
9.	LATRINE	.05	.22	.194
10.	ADULTLIT	.27	.28	.194
11.	SCHAGCHL	2.01	1.04	.073
12.	ATTITUDE	10.85	6.42	.239
13.	CHADRTIO	1.11	.70	-.074
14.	ANIMALS	6.96	7.77	.081
15.	PCAPINCM	1045.75	921.18	.296
	PCTSCGCH	38.52	41.46	-

Note: The means given in this table are based on data where a household is the unit of analysis (N = 2312).

As in the case of educational participation and school attendance, household characteristics such as the per capita income, the attitude of the household head and adults' literacy status were found to be positively and significantly associated with the proportion of school-going children from a household. Similarly, labour as a major occupation of the household, children's engagement in earning activities and distance to lower secondary and secondary schools were negatively correlated with the percentage of school-going children.

The results of the regression analysis with these fifteen household variables and the percentage of school-going children as dependent variables are shown in Table 4.13.

Table 4.13

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF HOUSEHOLD-RELATED EXPLANATORY VARIABLES OF THE PROPORTION OF SCHOOL-GOING CHILDREN

S. No.	Variable	Regression co-efficient (b)	Standardized regression co-efficient (B)
1.	LANGHOME	12.220	.145**
2.	AGRICU	10.735	.037**
3.	BUSINESS	4.151	.029
4.	COTTIND	-9.306	-.030
5.	LABOUR	-7.230	-.093**
6.	DISLOSEC	-.831	-.052*
7.	DISTSEC	-.411	-.070**
8.	GHILDEARN	-14.143	-.106**
9.	LATRINE	10.788	.056**
10.	ADULTLIT	18.127	.124**
11.	SCHAGGHL	2.034	.051**
12.	ATTITUDE	.857	.137**
13.	CHADRTIO	-3.845	-.065**
14.	ANIMALS	.155	.029
15.	PCAPINCM	.005	.113**
	R <sup>2</sup>		.225**
	N		2312

Note: \*\*significant at .01 level  
\*significant at .05 level.



About 23 percent of the variation in the proportion of school-going children was explained by selected fifteen household characteristics. This coefficient of determination is higher by five percent than that in the case of educational participation.

Like in the case of participation and school attendance, four household characteristics - Nepali as a language spoken at home, the modern attitude of the head of the household, the adults' literacy status and the per capita income - had a strong and positive effect on the proportion of school-going children from rural households. Children's engagement in earning activities labour as a household occupation, a high child-adult ratio and distance to secondary school had a strong negative effect on the number of children that would actually go to school. Obviously, these factors would require that rural children attend to activities that support the family rather than participate in education. The existence of a latrine in a household, which is also an indicator of economic and education status of the family, and agriculture as a household occupation were also found to have a strong positive effect on the proportion of school-going children from the rural households.

#### 8. *Summary*

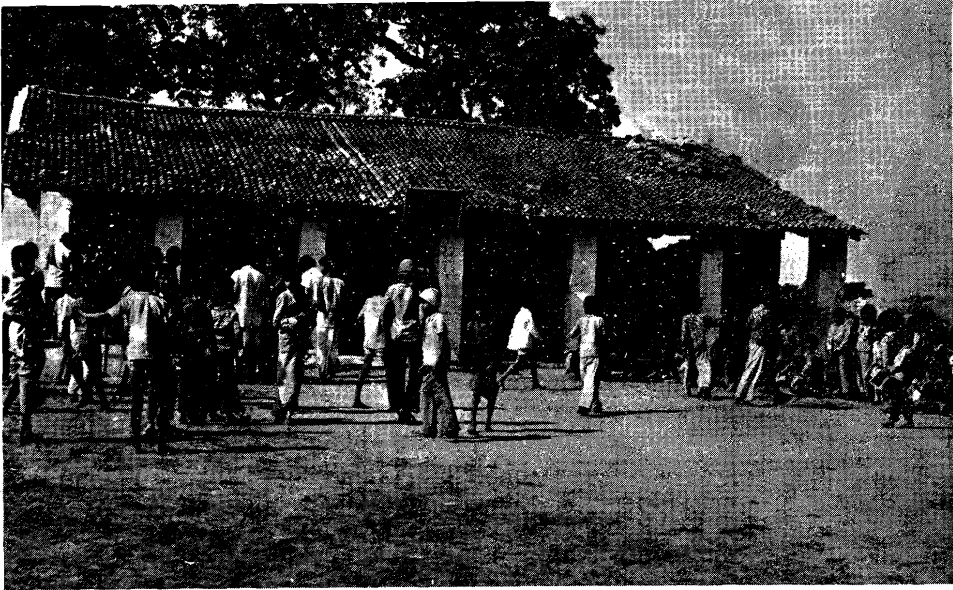
The selected educational and economic characteristics of the rural households significantly affected educational participation by rural children. The average education status of the adults in the family and the modern attitude of the head of the household have a strong and positive effect on educational participation. The economic status of the household, as reflected in the per capita income, also had a consistently strong and positive effect on participation. On the other hand, family occupations like labour and cottage industry, which require the children to devote their time at home, had a consistently strong and negative effect on children's participation in education.

Some significant differences were found with respect to differential effects of household characteristics upon educational participation in different geographic regions, at different levels of schooling and in boys' and girls' enrolment. The specific regression models explained a higher proportion of variance in educational participation of girls than those of boys and at the secondary level than at the primary school level.

Although the selected household characteristics alone failed to explain any significant proportion of variance in school attendance, two household characteristics - Nepali as a language spoken at home and the per capita house space - out of ten variables entered in the overall school attendance model were found to have a significant positive effect on the percentage of school attendance by rural children.

The same variables that affected educational participation significantly were also significant predictors of the proportion of school-going children from rural households.

The major implications of the results of these analyses pertain to the raising of education status of the adults and the moulding of their attitude toward modernity on one hand and the freeing of rural children from household chores as well as earning activities on the other. The time and type of children's engagement at home and in other outside activities had specific implications for the design and management of education system that would be appropriate for different rural situations.



*Not many schools have a constructed building of this type.*



*Classes are often crowded.*

109

Chapter V

RURAL SCHOOLS AND EDUCATIONAL PARTICIPATION

1. *Characteristics of Rural Schools*

The establishment of schools in rural communities of Nepal is a relatively recent phenomenon. Educational expansion during the decade of 1951-1961, after the dawn of democracy in 1951 and consequently an increased level of awareness of the importance of education, took place primarily in urban centres and town areas. Only after 1961, when the panchayat political system was promulgated in the country and village panchayats constituted as the first tier of this system in all parts of the country, social and political workers of the rural communities began to take greater interest in establishing schools. Soon afterwards, the establishment of a school in the village community became a symbol of social prestige for the villagers and particularly for the social workers and the village representatives there.

The initial burden of establishing a school was borne by the villagers themselves. Villagers would contribute in cash, kind and labour in constructing a school building. In many rural communities, the construction of a school building is the most that the villagers can do on their own part. In the case of constructing school buildings in remote areas and for disadvantaged sections of the population, the government provides substantial help such as roofing materials and building grants. Once the school building is constructed and a minimum of forty students are gathered to start instruction at grade I level, the villagers are entitled to apply for approval of their school. The establishment of a primary school in a village is approved by the District Education Office on behalf of the Ministry of Education. The approval of a new school is determined largely on the basis of social demands rather than on educational and academic considerations. Although there are certain minimum requirements for a school to get official recognition, these are seldom strictly adhered to in practice.

Thus, we find primary schools in rural communities in different types and sizes, ranging from an improvised one-room structure to a concrete building with well-partitioned classrooms. Most of the rural schools, particularly the primary schools, are hardly equipped with even the minimum physical and instructional facilities. Except for a few families with sizable land holdings and other assets, the financial capability of the rural people to support the village school in improving its physical and instructional facilities is very limited. The government provides grants-in-aid for teachers' salary and for stationery. So, in many cases the physical and instructional facilities of the rural schools are likely to remain unimproved, or even to deteriorate in course of time.

Classrooms in rural primary schools operate without even minimum physical facilities with virtually no other learning materials than the textbooks provided to the children free of charge. This situation compels the teachers to follow the traditional pattern of teaching which emphasizes chanting and choral reading in the classroom and memorization and cramming on the parts of students. The instructional system which is geared to the student's needs and local realities is an exception rather than a rule. Efforts made to improve school facilities are rare and the emphasis laid on improving the quality of instruction is almost non-existent.

In this section, we shall take a close look at the status of rural schools as revealed by the survey of schools in the nine sampled districts.

(a) Number and Level of Schools

The structure of school education in Nepal is of ten years' duration consisting of three levels, viz., three years of primary school (Grade I-III), and four years of lower secondary level (grades IV-VII), and three years of secondary school (grade VIII-X)\*. In this study, altogether one hundred and twenty schools were surveyed. Of these, fifty-three were primary schools

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\*In 1982, the school system was re-structured in the 5+2+3 pattern.

having Grades I-III only. Forty-one schools were of the lower secondary level, but these schools had also primary grades in them and twenty-six were secondary schools. Of the twenty-six secondary schools, seven had lower secondary grades and seventeen schools had both lower secondary and primary grades. All the rural schools surveyed under the study are public schools run by the local people basically with the help of government grants.

(b) Teachers' Background

Related data on teachers' background and qualifications were collected by administering questionnaire to individual teachers of the schools surveyed under the study. The general backgrounds of 951 teachers of 120 rural schools by primary and secondary school levels are indicated in the following table.

Table 5.1

GENERAL BACKGROUND OF PRIMARY AND SECONDARY SCHOOL TEACHERS

<u>Level</u>	<u>Background</u>								<u>Total</u>
	<u>Male</u>	<u>Female</u>	<u>Local</u>	<u>Non- local</u>	<u>Nepali</u>	<u>Non- Nepali</u>	<u>Major ethnic group of village</u>	<u>Other ethnic groups</u>	
Primary	341 (88.8)	43 (11.2)	253 (65.1)	131 (34.1)	255 (66.6)	129 (33.6)	144 (37.5)	240 (62.5)	384
Secondary	522 (92.1)	43 (7.9)	343 (60.5)	224 (39.5)	331 (58.6)	236 (41.6)	156 (27.5)	411 (72.5)	567
Total	863 (90.7)	88 (9.3)	596 (62.7)	355 (37.3)	586 (61.6)	365 (38.4)	300 (31.5)	651 (68.5)	951

Note: Secondary includes lower secondary also.  
Figures in parentheses indicate percentage.

The proportion of female teachers in the rural schools was found to be very low, only nine percent of the total teachers. Although nearly two-thirds of the school teachers were from the same village, at least half of them did not belong to the major ethnic group of the village. Only about one-third of the total teachers were from language groups other than those speaking Nepali.

The required academic qualifications to become teachers at different levels of schooling are S.L.C. (School Leaving Certificate) pass for primary schools, and Intermediate and Bachelors degrees for lower secondary and secondary schools respectively. Additionally, the teachers who had their degrees in liberal arts are required to have one year of professional training. For the purpose of this study, a teacher is considered as trained if he has completed at least six months of teacher training, and as experienced if he has had at least five years of teaching experience irrespective of the level in which he taught.

The academic qualifications and the training status of the primary and secondary school teachers are shown in Table 5.2.

Table 5.2

ACADEMIC QUALIFICATIONS AND THE TRAINING STATUS OF PRIMARY AND  
SECONDARY SCHOOL TEACHERS

Level	Background				Teaching experi- ence of 5 years or more	Teaching experi- ence of less than 5 years	Total
	Qualified	Under- qualified	Trained	Un- trained			
Primary	281 (73.2)	103 (26.8)	160 (41.7)	224 (58.3)	234 (60.9)	150 (39.1)	384
Secondary	319 (56.3)	248 (43.7)	285 (50.3)	282 (49.7)	369 (65.1)	198 (34.9)	567
Total	600 (63.1)	351 (36.9)	445 (46.8)	506 (53.2)	603 (63.4)	348 (36.6)	951

Note: Lower secondary is included in the secondary level.  
Figures in parentheses are percentages.

According to this survey, about one-third of the teachers were found to be under-qualified for the level they were teaching in. The proportion of trained teachers in the study sample was about forty-seven percent which was

slightly higher than that of the nation as a whole (40%)\*. The higher percentage of experienced teachers in rural schools is an indication of the fact that unlike in urban areas, teachers tend to hold on to their jobs. in rural areas.

(c) Student Enrolment and Unit Cost

A total of 27690 students were enrolled in 120 schools in 23 village panchayats surveyed under the study. Of the total students, 12394 children in the primary grades (I-III) and 15296 in the lower secondary and secondary grades. About twenty-nine percent of the primary school students were girls but the percentage of girl students in lower secondary and secondary grades was only seventeen percent which showed that the participation of girls decreased as the level of grades increased.

The unit cost of school level education, i.e., per pupil expenditure calculated on the basis of dividing the total expenditure by the total number of students, was found to be Rs. 129.47 (about US\$ 11). at the primary school level and Rs. 272.99 (US\$ 23) at the secondary level.

(d) Physical Facilities

The emergence of a school as an institution to provide mass education in a given community requires appropriate physical facilities for running classes and promoting co-curricular activities. A building with classrooms of appropriate sizes and with fairly adequate space for other educational purposes is the minimum basic requirement in the name of physical facilities for running a school. The types of school buildings available in rural communities and the adequacy of physical facilities are described in this section.

For the purpose of this study, school buildings are classified into three categories, namely, "mud-built" which indicates that the houses have mud walls supported by bamboo or wooden pillars and have thatched roofs, "brick-built" which suggests that the houses have brick (including stone) walls with thatched roofs or roofs of corrugated sheets, and "concrete-built" which signifies that the walls are made of cement/mortar and brick and are covered with concrete-cement roofs. The availability of school buildings in rural communi-



ties by types of buildings is indicated in the following table.

Table 5.3

TYPES OF BUILDINGS BY LEVELS OF SCHOOLING

<u>School</u>	<u>Type</u>			<u>Total</u>
	<u>Mud- built</u>	<u>Brick- built</u>	<u>Concrete- built</u>	
Primary	28 (52.8)	23 (43.4)	2 (3.8)	53
Lower secondary	9 (22.0)	26 (63.4)	6 (14.6)	41
Secondary	4 (15.4)	13 (50.0)	9 (34.6)	26
<u>Total</u>	<u>41</u> (34.2)	<u>62</u> (51.7)	<u>17</u> (14.1)	120

Note: Figures in parentheses indicate percentage.

It is obvious from the above table that secondary schools had better physical facilities in terms of school buildings. A great number of primary school buildings were just mud-built ones. A common feature in Nepal is that secondary level classes are run mostly in better buildings and primary level classes in relatively poor and inconvenient buildings. Should there not be enough classrooms for all grades, the primary level classes would be the first ones to be affected, that is to say, these classes would be run in the open air.

The availability and adequacy of classrooms and physical spaces for other purposes in those one hundred and twenty rural schools are shown in Table 5.4. The availability of different physical facilities has been rated in a three-points scale - sufficiently available, available but not sufficient, and not available.

Table 5.4

AVAILABILITY AND ADEQUACY OF PHYSICAL FACILITIES FOR DIFFERENT PURPOSES

S. No.	Space for different purposes	Categories			Total
		Not available	Available, not sufficient	Sufficiently available	
1.	Classroom	18 (15.0)	37 (30.8)	65 (54.2)	120
2.	Teachers' common room	72 (60.0)	23 (19.2)	25 (20.8)	120
3.	Library	101 (84.2)	9 (7.5)	10 (8.3)	120
4.	Laboratory	48 (72.7)	7 (10.6)	11 (16.7)	66*
5.	Workshop for vocational subject	47 (74.6)	3 (4.8)	13 (20.6)	63*
6.	Playground	6 (5.0)	46 (38.3)	68 (56.7)	120

Note: Figures in parentheses are row percentages.

\*The availability of laboratory and workshop has been rated for lower secondary and secondary schools only because science is taught at grade IV onward and vocational subjects are taught at grade VIII and beyond.

The figures indicated in the above table present a rather gloomy picture of inadequate physical facilities for instruction and other purposes. A significant proportion of rural schools did not have even adequate space for running classes in. A more discomforting matter is that fifteen percent of schools had no classrooms at all. The field observers' notes revealed that these schools that had no classrooms were all primary schools with dilapidated buildings and classes were run in the open under the shade of trees. Of course it is one thing to run the classes in the open out of option and completely another to run them out of compulsion. One can understand the situation when classes would have to be cancelled during the monsoon rains

and the cold winter days.

Most of the schools did not have rooms for teachers, libraries, laboratories and workshops for teaching vocational subjects. Sixty-eight of the total of 120 schools has fairly large playgrounds. A school in a rural community is usually located in an area which happened to be the public property or which was given away to the school by a landlord because of a sense of charity or of the low quality of the land for agricultural purposes, rural schools in general have some open space around them. This open space is usually designated as a playground by the school officials. However, the functionality and suitability of these playgrounds for games and sports vary with the terrain of the land and the economic status of the schools.

Sometimes the location of a rural school is fixed at a place equidistant from the surrounding small villages. In such a situation, the location of the school becomes inconvenient to all the children and the utilization of the playground and the available open space in the school becomes a remote possibility.

#### (e) Availability of Instructional Materials

During the survey of 120 rural schools in the sampled nine districts, the availability of instructional materials was recorded against the checklist specifically designed for the study. This materials checklist consisted of seven categories such as general materials, charts and maps, library, science and vocational subjects, and each category contained several specific groups of items. The ratings of the adequacy of these materials for instructional purposes were obtained from headmasters in the case of primary schools and from concerned teachers with respect to specific subject areas in the case of lower secondary and secondary schools.

A comparative picture of the adequacy of instructional materials in primary, lower secondary and secondary schools with respect to different categories of materials is provided in Table 5.5.

Table 5.5

<u>Categories of instructional materials</u>	SECONDARY SCHOOLS			
	<i>(in percentage)</i>			
	Adequacy			
	<u>Insufficient</u>	<u>Somewhat insufficient</u>	<u>Fairly sufficient</u>	<u>Sufficient</u>
<u>General materials</u>				
Primary	5.7%	26.4%	41.5%	26.4%
Lower secondary	7.3	14.7	26.8	51.2
Secondary	0.0	11.5	23.1	65.4
<u>Charts and maps</u>				
Primary	32.1	39.6	22.6	5.7
Lower secondary	19.5	48.8	22.0	9.7
Secondary	3.8	73.1	23.1	0.0
<u>Physical education</u>				
Primary	45.3	45.3	9.4	0.0
Lower secondary	26.8	41.5	29.3	2.4
Secondary	7.7	57.7	34.6	0.0
<u>Library</u>				
Primary	75.5	13.2	7.5	3.8
Lower secondary	75.6	22.0	2.4	0.0
Secondary	19.2	50.0	27.0	3.8
<u>Science</u>				
Lower secondary	65.9	26.8	7.3	0.0
Secondary	23.1	65.4	7.7	3.8
<u>Pre-vocational</u>				
Lower secondary	44.7	28.9	21.2	5.3
Secondary	12.4	29.2	29.2	29.2
<u>Vocational</u>				
Secondary	17.6	23.5	52.9	6.0

The obtained data on the adequacy of instructional materials in rural schools present a very discouraging picture. Even basic materials such as chalkboards and dusters were not available in adequate quantity in about one-third of the primary schools. Most of these schools did not have a library at all. Very few primary schools had charts and maps required for instructional purposes and still fewer schools had instructional materials for games and sports. Thus, we can easily imagine the effect this lack of materials would have on the quality of instruction imparted in primary schools. The picture is not very different for the lower secondary schools, excluding the availability of general materials in these schools.

When we compare the extent of the adequacy of instructional materials at different levels of schooling, we find that secondary schools were relatively better off than either the lower secondary or primary schools. But, on the whole, the availability of instructional materials in the rural schools was found to be at somewhat insufficient level. In the end, it may also be noted that despite the emphasis placed on universalization/democratization of educational opportunities by educational planners, no adequate efforts had been made toward improving physical and instructional facilities of rural primary schools.

## 2. *School Characteristics and Educational Participation*

Selected school characteristics were coded for each of the 4613 rural children, corresponding to the school that the child was attending in the case of participating children and the nearest school for those children who were not participating in education. These school-related variables were used in the multiple linear regression model to predict educational participation by rural children. Separate regression models were executed for different geographic regions.

### (a) School-related Variables Entered in Regression Models

The descriptive data on selected school characteristics as explanatory variables are given in the following table.

Table 5.6

MEAN AND STANDARD DEVIATIONS OF THE SCHOOL-RELATED EXPLANATORY  
VARIABLES OF EDUCATIONAL PARTICIPATION

S. No.	Explanatory variable	Overall		Regional Means			
		Mean	r with EDUCPART	Mountain	Hill	Terai	Inner- terai
1.	PCTEDTCH	60.03 (29.42)	.112	45.57 (28.24)	61.40 (28.73)	67.44 (28.90)	73.02 (24.66)
2.	PCTTRDT	43.72 (29.92)	.034	23.12 (25.34)	35.95 (25.45)	62.44 (28.23)	40.12 (21.37)
3.	PCTNEPLI	56.46 (41.16)	.108	77.67 (25.37)	83.04 (25.88)	10.33 (15.75)	71.23 (36.02)
4.	PCETHNIC	30.93 (34.40)	.178	20.29 (25.45)	49.94 (36.90)	10.61 (16.17)	10.67 (24.03)
5.	PCTEXPER	59.61 (32.71)	.063	33.71 (27.55)	48.32 (27.15)	81.17 (28.37)	83.75 (10.53)
6.	PCTFEMT	6.44 (14.04)	.064	12.81 (15.25)	9.48 (17.19)	.71 (3.49)	1.05 (3.32)
7.	PLAYGRND	1.46 (.58)	-.021	1.54 (.50)	1.53 (.51)	1.27 (.66)	2.00 (0.00)
8.	GENMAT	3.11 (.84)	.057	2.54 (1.07)	2.92 (.68)	3.46 (.76)	4.00 (0.00)
9.	CHARTS	2.10 (.66)	.011	1.99 (.84)	2.08 (.60)	2.24 (.65)	1.24 (.44)
10.	PHYSED	2.06 (.74)	.073	1.38 (.63)	2.10 (.70)	2.22 (.73)	2.34 (.47)
11.	LIBRARY	1.52 (.74)	.062	1.23 (.55)	1.69 (.84)	1.39 (.62)	1.65 (.48)
12.	STRATIO	31.33 (15.42)	.082	16.57 (10.56)	31.46 (13.28)	35.11 (15.90)	42.21 (16.26)
13.	STUEXPN	189.89 (150.53)	.069	347.24 (283.46)	162.54 (102.83)	177.19 (89.74)	129.92 (119.24)
14.	BLDGTYPE	1.63 (.71)	.030	1.74 (.48)	1.76 (.47)	1.33 (.93)	2.26 (.44)
15.	PCAPSPCE	.54 (.41)	-.10	.93 (.54)	.57 (.42)	.39 (.23)	.43 (.27)

Note: Figures in parentheses are standard deviations.

About sixty-two percent of the rural school teachers were found to have required academic qualifications for the class level they were teaching and forty-four percent of the total teachers had undergone professional training. The percentage of qualified and trained teachers was found to be the lowest in the mountain region for the obvious reason that very few teachers from the urban area would prefer to go to work in the difficult and inaccessible part of the country. The proportion of teachers whose mother tongue was Nepali was found to be quite high in all three regions except in the terai region. The extent of similarity between the ethnic status of the teachers and that of students was found to be low in general. And it was very low both in the case of the terai and the inner-terai regions. The percentage of female teachers, albeit low in relation to the total teachers, was higher in the mountain and the hill regions than in the terai and inner-terai regions, again indicating that the bias against girls going out of home for jobs and/or education is very strong in the terai region.

With respect to instructional facilities, the rural schools in general appeared to be in a far from satisfactory condition. No consistent differences were found between geographic regions in relation to the adequacy of materials for instructional purposes and co-curricular activities.

The teachers' background variables like the proportion of qualified teachers, the degree of similarity between the ethnic status of teachers and that of students, the percentage of teachers of the Nepali language group, and the proportion of female teachers were found to positively correlate with educational participation by rural children. The availability of general materials for classroom instruction, games and sports and the library was also found to have positive correlation with educational participation. However, the per pupil expenditure and the available space per student and negative association with participation in education. This negative correlation of these two important school characteristics appear to be the artifact of the measurement unit. The higher the number of students in a school [i.e., the higher participation rate] the lower will be the available space per student and the average expenditure per pupil. Conversely, we would find a bigger space and a higher expenditure per student in a school





The proportion of qualified and trained teachers in rural schools was found to be positively correlated with the availability and the adequacy of instructional materials, excluding the provision of a library. These two teacher variables were also associated with higher students ratios.

Three of the space- and school-income-related variables -- the type of school building, per pupil expenditure and the provision of a library - appeared to be significantly interlinked as well as positively. However, the availability of a playground was found to have negative association with almost all selected school characteristics except the provision of games and sports materials.

(c) Results of Regression Analysis

The results of regression analysis with thirteen school-related explanatory variables and participation in education as a dependent variable are given in Table 5.8. The results of separate regression runs for each of the four geographic regions are also indicated in the table.

Table 5.8  
REGRESSION AND STANDARDIZED REGRESSION CO-EFFICIENTS OF SCHOOL-RELATED EXPLANATORY VARIABLES OF EDUCATIONAL PARTICIPATION

S. No.	Variable	Overall		Standardized regression co-ef. (D)		
		Regression coefficient (b)	Standardized Reg. Co. (B)	Mountain	Hill	Terai
1.	PCAFSPCE	-.094	-.080**	.018	-.158**	.071
2.	CHARTS	-.002	-.016	.084	-.017	-.013
3.	PHYSED	.035	.053**	.204*	.046	.017
4.	LIBRARY	.015	.022	-.073	-.039	.079*
5.	PCTEDTCH	.001	.090**	-.045	.167**	-.049
6.	PCTTRDT	.001	.083**	.327**	.062*	-.006
7.	PCTNEPLI	.001	.062**	-.113	.038	-.064*
8.	PCETHNIC	.002	.140**	.126	.107**	-.086*
9.	PCTEXPER	-.002	-.103**	-.162	-.064*	.003
10.	PCTFEMT	.002	.058**	-.133	.072**	.003
11.	SIRATIO	.001	.016	.150*	-.022	.011
12.	STUDEXPN	-.000	-.042*	-.152	-.008	-.028
13.	BLDGTYPE	.000	.001	-.265**	-.047	-.039
	R <sup>2</sup>		.061**	.066**	.093**	.021**
	N		4613	596	2164	1605

Note: The regression co-efficients for the Inner-terai are not reported here because of the insignificant R<sup>2</sup> of the regression equation for that region.

\*\*significant at .01 level  
\*significant at .05 level.

Only six percent of the variations in educational participation were explained by selected school characteristics. The effects of eight of the thirteen selected variables upon educational participation were found to be statistically significant at .01 level.

All of the teacher-related variables were found to have a strong effect on educational participation by rural children. The proportion of ethnic similarity between the students and the teachers had the strongest effect on participation. The percentage of qualified and trained teachers had strong positive effects on educational participation. Strangely enough, the percentage of experienced teachers [i.e., with more than five years of teaching experience] was found to have a very strong negative effect on rural children's participation in education. The proportion of female teachers in the school had a positive effect on educational participation by rural children. The positive impact of female teachers on girls' enrolment in rural communities was also substantiated by an evaluative study conducted by CERID\*.

Two school characteristics - available classroom space per student and the average expenditure per pupil - were found to be negatively associated with participation. These negative findings appear to be basically the artifact of measurement unit used in the analysis as noted in section 2.1. It also seems to suggest that once a school has reached the saturation point with respect to admitting students, the school will be less attractive for the villagers to send their children to it.

The provision of physical education, i.e., the availability and adequacy of games and sports materials, was found to attract rural children to participate in formal education.

In the end, it must be noted here that, in the context of the prevailing low percentage of trained and qualified teachers as well as female teachers and less than adequate availability of instructional

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\**Equal Access of Women to Education: An Evaluative Study.* CERID, Kathmandu, Nepal, 1979.

materials in rural schools, there is a great possibility of boosting educational participation by rural children by means of extensive teacher preparation programmes and development/dissemination of appropriate instructional materials.

There appeared to exist significant differences between geographic regions with respect to differential effects of school-related variables on educational participation. The specific regression models for different regions explained as much as nine percent of variation in educational participation of the hills children and as low as only two percent for the terai region. The specific model for the inner-terai region failed to explain and statistically significant variation in children's participation in education in that region.

The percentage of trained teachers had the strongest effect on educational participation in the mountain region whereas it was the proportion of qualified teachers in the case of the hilly region. The proportion of female teachers and the ethnic similarity between the students and the teachers were found to have very strong positive effects only in the hilly region. On the contrary, the ethnic similarity variable and the teachers from the Nepali language group had slight but significant negative effects on educational participation by the terai children.

A strong negative effect of the type of school building on educational participation by rural children in the mountain region suggests that good school buildings, in general, are located in places which are inconvenient for school-age children.

These findings imply that various school-related factors should be considered and duly emphasized while making policy and programmatic decisions to increase educational participation in different geographic regions of the country.

3. *School Characteristics and Educational Participation by Levels of Schooling*

- 125 -

In order to identify differential effects of school-related characteristics on educational participation at different levels of schools, separate regression analyses were undertaken for primary and secondary schools.

The descriptive data on selected school characteristics for primary and secondary school levels and their correlation with educational participation are given in Table 5.9. Table 5.9

MEAN AND STANDARD DEVIATIONS OF SCHOOL-RELATED EXPLANATORY VARIABLES OF EDUCATIONAL PARTICIPATION BY LEVELS OF SCHOOLING

S. No.	Variable	Primary			Secondary		
		Mean	S. D.	r with EDUCPART	Mean	S. D.	r with EDUCPART
1.	PCTEDTCH	64.02	31.21	.123	58.78	25.90	.083
2.	PCTTRDT	38.24	32.16	-.032	52.65	23.23	-.014
3.	PCTNEPLI	58.85	41.87	.155	52.57	39.68	.018
4.	PCTETHNIC	33.46	36.19	.170	26.81	30.82	.188
5.	PCTEDPER	56.46	33.85	-.059	64.74	30.06	-.59
6.	PCTFEMT	6.91	16.27	.026	5.68	9.30	.176
7.	PLAYGRND	1.51	.56	-.022	1.38	.60	-.031
8.	CHARTS	2.09	.70	.004	2.13	.58	.030
9.	PHYSED	1.91	.74	.059	2.31	.67	.134
10.	LIBRARY	1.42	.72	.090	1.69	.77	.040
11.	STRATIO	34.36	16.06	.076	26.41	12.89	.076
12.	STUDEXPN	134.17	98.25	-.033	280.81	176.34	-.088
13.	BLDGTYPE	1.51	.73	.071	1.83	.64	-.022
14.	PCAPSPCE	.67	.38	-.043	.66	.44	-.166
15.	SCHLEVEL	.42	.49	.107	-	-	-
16.	CLACYCLE	5.16	2.27	-.112	-	-	-
17.	LOSECDIS	1.76	2.79	.046	-	-	-
18.	EDUCPART	.41	.49	-	.38	.48	-

Note: Some values that are not applicable to the secondary level are not reported [e.g., school level, class cycle and distance to lower secondary school].

The primary schools in rural communities had a higher percentage of qualified teachers whereas the secondary schools had a higher proportion of trained teachers. The degree of ethnic similarity between the students and the teachers was found to be slightly higher in primary schools than that in the secondary schools. This suggests that persons of different ethnic backgrounds are increasingly becoming primary school teachers. With respect to other school characteristics such as the type of building, adequacy of instructional materials, and available space and expenditure per student, the average values were slightly higher for secondary schools than those for primary schools. In brief, the physical and instructional facilities are less satisfactory in primary schools.

Three new variables - school level, class cycle (i.e., the number of grades run in a school), and distance to the lower secondary school - appear in the above table. The high average number of grades (i.e., 5.16) in primary schools is primarily due to the fact that primary school grades (I-III) are also run in secondary schools. Excluding three variables - the provision of physical education, the library, the percentage of female teachers, the variable "class cycle - the number of grades run in a school" had negative association with almost all school characteristics and negatively correlated with educational participation also. It seems to suggest that the number of grades in a school, in itself, is not an attractive factor in increasing participation in primary school education.

The results of regression analysis run separately for primary and secondary school levels are presented in the following table. Ten school-related explanatory variables were entered in the regression model in the case of primary school level and fourteen variables in the case of secondary school level.

Table 5.10

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF SCHOOL-RELATED EXPLANATORY VARIABLES OF EDUCATIONAL PARTICIPATION FOR PRIMARY AND SECONDARY SCHOOL LEVELS

S. No.	Variable	Primary		Secondary	
		Regression coefficient (b)	Standard Reg. Coef. (B)	Regression coefficient (b)	Standard Reg. Coef. (B)
1.	PCAPSPCE	-.063	-.048*	-.139	-.127**
2.	PLAYGRND	-	-	-.092	-.115**
3.	CHARTS	-	-	-.030	-.035
4.	PHYSED	-	-	.052	.071*
5.	LIBRARY	.065	.093**	000	001
6.	PCTEDTCH	.001	.086**	-000	010
7.	PCTTRDT	-.000	-.028	001	066
8.	PCTNEPLI	-	-	000	000
9.	PCETHNIC	.002	.157**	004	229**
10.	PCTEXPER	-	-	-000	-021
11.	PCIFEMT	-	-	010	183**
12.	STRATIO	.000	.007	-002	-050
13.	STUDERPN	-.007	-.017	-000	-051
14.	BLDGTYPE	-	-	-020	-027
15.	SCHLEVEL	-.005	-.005	-	-
16.	LOSECDIS	-.011	-.066*	-	-
17.	CLACYCLE	-.035	-.161**	-	-
	$\bar{R}^2$		.061**		.102**
	N		2860		1753

Note: \*\*significant at .01 level.

\*significant at .05 level.

A slightly higher proportion of variation in secondary school participation was explained by the selected school variables than that at the primary school level.

As in the case of the overall regression model, the degree of ethnic similarity between the teachers and students had a very strong and positive effect on educational participation both at the primary and the secondary school levels. It may be inferred that the growing proportion of teachers from different ethnic backgrounds will serve as a stimulating factor in increasing educational participation by school-age children of various ethnic backgrounds.

Similarly, the available classroom space per student was found to have a strong but negative effect on participation in education by rural children. As stated previously, it might have been a pure artifact of the measurement unit or the schools that have already reached a saturation point in student enrolment did not attract other school-age children to participate in them. It may also be the case that the rural schools were located either in a densely populated area so as not to have enough space to attract more students or in such a sparsely inhabited area that the location was inconvenient for the potential school-going children.

There are some significant differences with respect to the effects of selected school variables on educational participation at the primary and the secondary school levels. The percentage of qualified teachers and the provision of the library were found to have significant positive effects on primary school participation. On the other hand, the percentage of female teachers and the provision of physical education has positive effects on participation in secondary education. The number of grades run in a school had a strong negative effect on educational participation at the primary school level whereas it was the availability of the playground having a negative effect in the case of secondary schools. It needs to be noted here that the availability of a playground had no relationship ( $r = -.014$ ) with the adequacy of games and sports materials at the secondary school level.

4. *School Characteristics and Educational Participation by Sex*

Separate regression models were executed for boys and girls of primary school age in order to determine whether selected school characteristics affected differentially their participation in education. No noticeable differences appeared in the average values of school-related variables when these were classified by sex. The results of regression analysis also revealed more similarities than differences with respect to boys' and girls' participation in primary school education. The results are presented in Table 5.11.

Table 5.11

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF SCHOOL-RELATED EXPLANATORY VARIABLES OF EDUCATIONAL PARTICIPATION BY SEX FOR PRIMARY AGE CHILDREN

S. No.	Variable	Boys		Girls	
		Regression coefficient (b)	Standard. Reg. Coef. (B)	Regression coefficient (b)	Standard. Reg. Coef. (B)
1.	PCAPSPCE	-.128	-.012**	-.014	-.012
2.	SCHLEVEL	.027	.056	-.017	-.019
3.	LOSECDIS	-.015	-.088*	-.012	-.073
4.	LIBRARY	.078	.107**	.060	.102**
5.	CLACYCLE	-.040	-.181**	-.027	-.145**
6.	PCTEDTCH	.002	.095**	.001	.094**
7.	PCTTROT	-.001	-.035	-.000	-.025
8.	PCETHNIC	.002	.153**	.002	.171**
9.	STRATIO	-.001	-.034	.002	.073
10.	STUDEXPN	-.000	-.035	-.000	-.018
	$\bar{R}^2$		.076**		.068**
	N		1516		1344

Note: \*\*significant at .01 level.  
\*significant at .05 level.



The extent of similarity between the ethnic status of the teachers and the students, and the provision of qualified teachers and the library were found to have strong positive effects on both boys' and girls' participation in primary school education. However, the variable "class cycle", i.e., the number of grades in primary schools, appeared to have a depressing effect on participation. The available classroom space per student and the distance to a lower secondary school had negative effects on boys' participation only. The non-availability of lower secondary schools in nearby areas would obviously be a discouraging factor for primary school-going children.

5. *School Characteristics and School Attendance*

A major area of interest in this study was to identify school-related factors that significantly affected school attendance of rural children. The descriptive data on selected school characteristics, coded for each school-going child corresponding to the school he was attending, are given in Table 5.12.

Table 5.12

MEAN AND STANDARD DEVIATIONS OF SELECTED SCHOOL CHARACTERISTICS AND THEIR CO-RELATIONS WITH ATTENDANCE PERCENTAGE

<u>S. No.</u>	<u>Variable</u>	<u>Mean</u>	<u>S.D.</u>	<u>r with ATTENCT</u>
1.	PLAYGRND	1.45	.59	.120
2.	GENMAT	3.17	.80	-.024
3.	CHARTS	2.11	.66	.033
4.	PHYSED	2.13	.22	.049
5.	LIBRARY	1.58	.81	.058
6.	CLACYCLE	5.74	2.35	-.070
7.	PCTEDTCH	66.06	22.04	-.004
8.	PCTLOCT	67.96	33.70	.056
9.	PCTTRDT	42.47	23.10	-.130
10.	PCTNEPLI	61.88	40.08	.093
11.	PCTEXPER	52.09	31.95	-.122
12.	PCTGIRLS	23.20	12.22	.079
13.	STRATIO	31.89	15.40	-.105
14.	STUDEXPN	127.16	131.48	.059
15.	BLDGTYPE	1.66	.62	.010
16.	PCAPSPCE	.49	.31	.064
17.	ATTPCT	61.93	23.08	-

Note: Because of difference in N (only 1846 children who attended school are included here) the mean values for the variables are slightly different from those means for all children (N=4613) as reported in Table 5.6.

The correlation of selected school characteristics with attendance percentage was found to be quite different from that with educational participation. Some school variables which positively affected children's participation in education were found to be negatively associated with school attendance. The proportion of qualified and trained teachers correlated negatively with school attendance. The percentage of experienced teachers had negative association both with educational participation and with attendance percentage.

The available space and average expenditure per student which had adverse effects on participation in education by rural children were found to have positive correlation with school attendance. As might be expected, a high student-teacher ratio was found to be associated with decreasing attendance percentage of rural school children.

The results of regression analysis with selected school characteristics as explanatory variables of school attendance are presented in Table 5.13. [In the first run of this model, all sixteen variables were entered in the regression equation. However, eight of these variables which did not have any significant effect on attendance percentage were deleted from the second run of the school attendance model].

Table 5.13

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS SCHOOL-RELATED EXPLANATORY VARIABLES OF SCHOOL ATTENDANCE

S. No.	Variable	Regression coefficient (b)	Standardized regression coefficient (B)
1.	PLAYGRND	3.600	.091**
2.	LIBRARY	3.644	.128**
3.	CLACYCLE	-1.577	-.161**
4.	PCTLOCT	.076	.111**
5.	PCTTRDT	-.125	-.157**
6.	PCINEPLI	-.022	-.038
7.	STRATIO	-.147	-.098**
8.	STUDEXPN	.017	.100**
	R <sup>2</sup>	.065	
	N	1846	

Note: \*\*significant at .01 level.  
\*significant at .05 level.

The percentage of trained teachers had a strong negative effect on school attendance whereas the proportion of local teachers was found to have a strong positive effect on attendance of rural children. The provisions of a library and a playground were also found to have significant positive effects on attendance percentage. Unlike the case in educational participation, the average expenditure per student had a positive effect on school attendance. The number of grades run in a school and the high student teacher ratio were found to have a negative effect on attendance percentage of rural school children.

In brief, it appears that a crowded school (i.e., high student-teacher ratio) with far-stretched operation in terms of the number of classes run (i.e., a higher class cycle) had low attendance percentage of rural school children. The presence of local teachers served as a stimulating factor for rural students to become more regular in their school attendance. This factor can be a potent means of regulating children's school attendance in as much as rural teachers maintain personal contact with parents as well as students in the village community. Finally, improvement in the facilities of the library as well as games and sports will have salutary effects on attendance percentage of rural school children.

Separate regression analyses were executed for primary and secondary school levels so as to identify differential effects of selected school characteristics on school attendance at these levels. The descriptive data on selected characteristics for primary and secondary schools are presented in Table 5.14.

Table 5.14

MEAN AND STANDARD DEVIATIONS OF SELECTED SCHOOL CHARACTERISTICS AND THEIR CORRELATION WITH ATTENDANCE PERCENTAGE BY LEVELS OF SCHOOLING

S. No.	Variable	Primary			Secondary		
		Mean	S. D.	Correlation coefficient	Mean	S. D.	Correlation coefficient
1.	PLAYGRND	1.50	.58	.074	1.36	.59	.208
2.	GFNMAT	3.05	.82	-.016	3.38	.72	-.051
3.	CHARTS	2.09	.71	.077	2.15	.56	-.069
4.	PHYSED	1.96	.71	.031	2.42	.62	.082
5.	LIBRARY	1.49	.78	.093	1.73	.85	-.002
6.	CLACYCLE	4.85	2.22	.093	7.32	1.64	-.081
7.	PCTEDTCH	68.58	30.34	.055	61.54	25.97	-.124
8.	PCTLOCT	68.19	30.42	.045	67.56	28.19	.085
9.	PCTTRDT	37.02	30.45	-.141	52.24	23.55	-.131
10.	PCTNEPLI	66.58	40.00	.049	53.47	38.88	.184
11.	PCTEXPER	54.03	32.34	-.072	62.47	30.55	-.226
12.	PCTGIRLS	22.07	12.42	.096	16.83	8.55	-.085
13.	STRATIO	35.80	16.14	-.033	27.67	12.39	-.280
14.	STUDEXPN	130.31	101.72	.044	261.16	136.93	.084
15.	BLDGTYPE	1.57	.63	-.053	1.81	.56	.131
16.	PCAPSPCE	.45	.33	.030	.57	.27	.136
17.	ATTPCT	61.71	23.14	-	62.34	22.92	

There appeared to be some significant differences in the strength and signs of correlations of selected school characteristics with school attendance in relation to the levels of schooling. In general, these correlations were higher for secondary schools than those for primary schools. Some variables - adequacy of charts and maps, and the proportion of qualified teachers - were found to be positively associated with school attendance at the primary school level whereas these same variables correlated negatively with attendance percentage at the secondary school level. The type of school building (i.e., better built ones) was found to be positively associated with school attendance at the secondary level, but negatively at the primary school level. Only at the secondary school level, the adequacy of school building showed its effect in an expected direction.

The results of the regression analysis with eight selected school characteristics as predictors of school attendance at primary and secondary school levels are presented in Table 5.15.

Table 5.15

REGRESSION AND STANDARDIZED REGRESSION COEFFICIENTS OF SCHOOL-RELATED EXPLANATORY VARIABLES OF SCHOOL ATTENDANCE BY LEVELS OF SCHOOLING

S. No.	Variable	Primary		Secondary	
		Regression coefficient (b)	Standard. Reg. Coef. (B)	Regression coefficient (b)	Standard. Reg. Coef. (B)
1.	PLAYGRND	-5.767	.148**	2.668	.067*
2.	LIBRARY	3.557	.131**	4.286	.145**
3.	CLACYCLE	-.869	-.062	-2.006	-.192**
4.	PCTLOCT	.116	.143**	.086	.107**
5.	PCTTRDT	-.042	-.043	-.158	-.208**
6.	PCINEPLI	.108	.018	-4.648	-.080*
7.	STRATIO	-.528	-.285**	-5.642	-.039
8.	STUDEXPN	.016	.098*	.009	.038
	$R^2$		.134**		.063**
	N		661		1175

Note: \*\*significant at .01 level.  
\*significant at .05 level.

A significantly higher proportion of variation in primary school attendance was explained by the selected school characteristics than that at the secondary school level.

A higher student-teacher ratio in the primary schools had a strong negative effect on school attendance at this level whereas it was the proportion of trained teachers that had a strong negative effect at the

secondary school level. The proportion of local teachers was a strong factor in increasing attendance percentage of rural children at both levels of schooling. The provisions of a playground and a library had positive effects at both levels. The number of grades run in a school had a strong negative effect on school attendance only at the secondary school level.

#### 6. *Summary*

The quality of services offered by the rural schools will greatly enhance participation in education by rural school children and regularity in their attending schools. For this the rural schools should be equipped with adequate physical as well as instructional facilities and efforts should be directed toward increasing the relevancy and effectiveness of school programmes. However, as this study revealed, the rural schools were inadequately equipped with physical and instructional facilities.

Selected school characteristics such as the academic qualification and the training status of teachers, the ethnic similarity between the teachers and the students, and the provision of instructional materials have significant positive effects on educational participation. However, a different set of variables had strong positive effects on school attendance. These were the proportion of local teachers, the provision of a playground and a library, and the available space and the average expenditure per student. Thus, different school characteristics had different effects on educational participation and school attendance. In addition, there were some significant differences among geographic regions and between levels of schools which should be considered in making relevant decisions on improving rural schools.

These findings suggest that various steps could be taken to improve physical and instructional facilities of the rural schools including the provision of qualified and trained teachers from different ethnic backgrounds which, as this study indicated, would have significant effects on increasing educational participation by rural children and the attendance percentage of those children who were already in schools.

136

Chapter VI

FACTORS INFLUENCING EDUCATIONAL PARTICIPATION

1. *Composite Regression Model*

In order to obtain a composite picture of the effects of all predictor variables, models in which educational participation and attendance percentage were regressed were executed on all available predictors. This form of analysis permits each variable, regardless of its source (child, household or school) to compete with all other variables in the prediction of the dependent variables. Those predictors whose correlation with the dependent variable derives from an association with a more salient predictor will have their weights diminished in this analysis. Thus, the regression method will permit a control or statistical adjustment to occur. As a result of such an analysis a more parsimonious model will obtain.

2. *Results of Composite Regression Model for Participation*

In the analysis described here all independent variables were used as predictors of educational participation. This model was repeated for the primary school age sample, the secondary sample and the total sample. This analysis will identify predictors that differentially relate to participation for primary and secondary school age children.

The results of this analysis are presented in Table 6.1. The entries in this table are standardized regression coefficients (beta weights). The standardized weights for a regression model are freed from the scaling effects present in raw score regression weights. A raw score weight will take values dependent in part on the variance of the predictor variable to which it is assigned.

Table 6.1

REGRESSION RESULTS FOR EDUCATIONAL PARTICIPATION USING ALL PREDICTOR  
VARIABLES FOR PRIMARY, SECONDARY AND TOTAL SAMPLE

<u>Variable</u>	<u>Primary</u>	<u>Secondary</u>	<u>Total sample</u>
1. FATHEDUC	.071*	.065	.068**
2. SEX	.297**	.367**	.330**
3. AGE	.295**	-.027	.181**
4. NUTR	-.075**	-.011	
5. PCAPSPCE	-.050*	-.040	-.037
6. HELPHSE	-.088**	-.100**	-.070**
7. LANGHOME	.047	.014	.029
8. AGRICU	.023	.074**	.046**
9. BUSINESS	.012	.061*	.031
10. COITIND	-.041*	-.010	-.032*
11. LABOUR	-.065**	-.093**	-.075**
12. PROF	.003	.061*	.031
13. NONPROF	-.004	.077**	.030
14. ADULTLIT	.092**	.038*	.096**
15. HELPEARNS	-.049*	-.138**	-.124**
16. LATRINE	.010	.062*	.029
17. SCHLEVEL	.014		
18. DISCOSEC	-.019		
19. PLAYGRND	-.054*	-.079**	-.066**
20. CHARTS	-.005	-.047	-.028

Contd /..



(Table 6.1 contd.)

	<u>Variable</u>	<u>Primary</u>	<u>Secondary</u>	<u>Total sample</u>
21.	PHYSED	.012	.040	.002
22.	LIBRARY	.040	.020	.009
23.	CHADRTIO	-.008	-.014	-.022
24.	ANIMALS	.029	.043	.030
25.	PCAPINCM	.097*	.071**	.077**
26.	ATTITUDE	.109**	.054	.098**
27.	CLACYCLE	-.102*		
28.	CHILDEARN	-.037	-.031	
29.	PCTEDTCH	.042	.003	.051**
30.	PCTTRDT	-.005	.013	.023
31.	PCINEPLI	.111**	.035	.094**
32.	PCETHNIC	.055**	.181**	.108**
33.	PCTEXPER	-.029	.009	-.042
34.	DISTSCH	-.107**	-.129**	-.162**
35.	PCTIFEMT	-.009	.049	-.007
36.	STRATIO	.027	-.059	.023
37.	STUDEXPN	-.009	-.054	-.071**
38.	BLDGTYPE	-.023	-.023	-.040*
	$\bar{R}^2$	.364	.474	.365

Note: \*\* significant at .01 level  
 \* significant at .05 level

Consequently the raw score weights will not be determined solely by the importance of the predictor variables, but also by the arbitrary scale of values chosen to measure the predictor. The standardized weights presented here are the weights that are obtained when all the variables in the model

are transformed to standard scores. As a result of this standardization the values of the beta weights are more meaningful statistical measures of the relative importance of the predictors.

The composite models described in Table 6.1 accounted for 37 percent of the variance in educational participation in the primary and total samples. In the secondary school age sample, 47 percent of the variance in participation was predicted by the model. The predictors that produced significant partial 'F' tests for their effects are indicated in Table 6.1 by asterisks. The .01 and .001 probability values were used to judge the significance of the predictors. Due to the large sample size available in this study the traditional 0.5 level of significance would have identified variables that would neither be substantively nor practically significant.

Table 6.2 presents a ranking of the significant predictors from the model described in Table 6.1. The ranking was based on the partial 'F' tests for each predictor. This mode of presentation reflects the relative importance of the predictors. In both the primary and secondary school age samples, sex was the single most important predictor of educational participation. After statistically adjusting for the effects of all other variables boys have a participation rate 33 percent higher than girls in the total sample. The corresponding rates in the primary and secondary school age sample are 29 percent and 37 percent respectively.

Age is a strong determinant of participation in the primary school age sample, but not in the secondary sample. In the primary age sample there is a 7.5 percent increment in participation for each year of age.

Distance to school is a very strong predictor of participation. In the primary age group there is a 2.8 percent decrement in the educational participation rate for a distance of every kilometer between the child's home and school. In the secondary age sample the corresponding decrement is 1.2 percent.

Table 6.2

RANKING OF EDUCATIONAL PARTICIPATION PREDICTORS IN TERMS OF THEIR  
STATISTICAL IMPORTANCE\*

<u>Primary</u>	<u>Secondary</u>
1. Sex (+)	1. Sex (+)
2. Age (+)	2. Percentage of teachers with some ethnic background as students (+)
3. Distance to school (-)	3. Child helps with earnings of family (-)
4. Parent's attitude toward education (+)	4. Distance to school (-)
5. Child helps in the household (-) and per capita income (+)	5. Child helps in the household (-)
6. Nutritional status (-)	6. Family earns money through labour (-)
7. Percent of teachers speaking Nepali (+)	7. Family engaged in non-professional work (+)
8. Family earns money through labour (-) and adult education level of household (+)	8. Family engaged in agriculture (+)
9. Child's earnings for the household (-)	9. Playground at school (-)
10. Number of class cycles (-)	10. Per capita income (+)
11. Father's education level (+)	11. Family engaged in professional work (+)
12. Percent of teachers with same ethnic background as students (+)	12. Family engaged in business (+)
13. Per capita space in household (-)	13. Adult education level of household (+)
14. Family engaged in cottage industry (-)	

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\*The ranking was performed using the partial 'F' tests for the predictors from the composite model. The signs (+ or -) given after each predictor indicate whether the relationship was positive or negative.

The contribution made by the child to the family's income and the degree to which a child helps in the household detract him from school participation. This points again to the importance of the child as an economic asset in the household. Further, this underscores the indirect cost placed on the family when a child is released from household work or work outside the home for money. Many rural families cannot bear this cost. Primary age children who help in the household have a 9.3 percent reduction in school participation, and for secondary school age children the decrement in participation is 15.4 percent.

A cluster of variables indicative of a family's predisposition toward education also predicted educational participation. Parent's attitude toward education was a highly significant predictor of participation for the primary age sample. The educational level of the adults in the household was also an important predictor for both the primary and secondary age samples, and father's education was a significant predictor in the secondary age sample.

Occupation of the family members predicted participation. Children whose families were engaged in labour exhibited a lower participation rate than those whose families were not engaged in labour. In the primary age sample there was 6.7 percent reduction in the participation rate and in the secondary age sample the reduction was 9.5 percent. In the secondary sample the children of families engaged in agriculture, or professional or non-professional work had a higher participation rate. In addition, the per capita family income was related to participation. The per capita income relationship was stronger in the primary age sample than in the secondary age sample.

The most important school-related variables were the ethnic similarity of the students and teachers, and the percent of teachers speaking Nepali. In the secondary age sample, the percent of teachers with the sample ethnicity as the student was the second strongest predictor of participation. In the primary age sample, the percent of teacher speaking Nepali was a very important predictor. The only other school-related variable significantly related to participation was the presence of a playground at school, and this variable was negatively related to participation.

### 3. *The Effects of Mutable Variables*

In order to use the results of this study for policy modification, an analysis must be performed considering only those variables that can be modified or affected by policy. Such an analysis will result in a diminished degree of predictability ( $\bar{R}^2$ ), but in a more realistic representation of the results for policy implications. A subset of the available predictors was identified that consisted of changeable predictors. The dependent variable, educational participation, was then regressed on the variables in the mutual subset using a forward stepwise regression analysis. The results of stepwise analysis permit us to identify a set of predictors which will yield an optimal prediction equation. These specific factors, when manipulated through policy decisions, should prove useful in facilitating increased participation in education.

The stepwise procedure was terminated when the partial 'F' test for a predictor candidate failed to reach the .01 level of significance. This method was used to identify significant mutual predictors for all cases and for different regions as well as separately in the primary and secondary samples.

The results of stepwise regression using mutable variables are presented in Table 6.3.

Table 6.3

STEPWISE REGRESSION MODEL OF EDUCATION PARTICIPATION USING  
MUTUAL VARIABLES

	<u>Variable</u>	<u>Regression co-efficient</u>	<u>Standardized regression co-efficient</u>
1.	ADULTLIT	.327	.191
2.	DISTSCH	-.020	-.148
3.	PCETHNIC	.002	.130
4.	HELPEARN	-.256	-.124
5.	ATTITUDE	.009	.115
6.	PCTNEPLI	.001	.099
7.	PLAYGRND	-.055	-.065
8.	CHADRTIO	-.039	-.058
9.	PCTEDTCH	.001	.058
10.	PHYSED	.029	.044
11.	PCTEXPER	-.001	-.061
12.	PCTTRDT	.001	.051
	$\bar{R}^2$		.179
	N		4613

The significant mutable variables associated positively with educational participation are, in order of their predictive strength, average literacy level of adults of the family, percentage of teachers having an ethnic background similar to that of students, positive attitude of the head of the household, percentage of Nepali-speaking teachers, provision of qualified and trained teachers, and availability of physical education facilities in the school. On the other hand, the mutable factors negatively associated with rural children's participation in education are distance to school, the children's engagement in earning activities and a high children adult ratio in

the family. In addition, contrary to our expectation, the percentage of experienced teachers and the availability of the playground are found to be negatively associated with participation.

Thus, it is obvious that, adult education and non-formal programmes directed toward raising the level of awareness of rural adults, developing modern attitudes in them, and reducing the size of the family will have a salutary effect on educational participation. Similarly, the policies of recruiting teachers from the local community and the provision of qualified teachers with improved facilities in school will be of great help in attracting non-enrolled children to school. Moreover, easy access to education coupled with reduction in family demands on the child's time and labour will result in greater participation in education by rural children.

Separate stepwise regressions using the same set of mutable variables for the mountain, hills and terai regions were also run. The results are given in Table 6.4.

Table 6.4

RESULTS OF STEPWISE REGRESSION RUNS USING MUTABLE VARIABLES

(a) Mountain Region

<u>S.No.</u>	<u>Variable</u>	<u>Regression co-efficient</u>	<u>Standardized regression co-efficient</u>
1.	ATTITUDE	.015	.229
2.	PCTTRDT	.004	.235
3.	BLDGTYPE	-.172	-.185
4.	DISTSCH	-.013	-.110
5.	STRATIO	.005	.117
	$\bar{R}^2$	.117	
	N	596	

(b) Hill Region

<u>S.No.</u>	<u>Variable</u>	<u>Regression co-efficient</u>	<u>Standardized regression co-efficient</u>
1.	DISTSCH	-.021	-.187
2.	ADULTLIT	.246	.143
3.	PCTEDTCH	.002	.105
4.	HELPEARN	-.292	-.133
5.	ATTITUDE	.009	.120
6.	PCETHNIC	.001	.109
7.	CHADRTIO	-.047	-.070
	$\bar{R}^2$	.186	
	N	2184	

(c) Terai Region

<u>S.No.</u>	<u>Variable</u>	<u>Regression co-efficient</u>	<u>Standardized regression co-efficient</u>
1.	ADULTLIT	.502	.281
2.	HELPEARN	-.249	-.134
3.	LIBRARY	.080	.107
4.	DISTSCH	-.015	-.073
5.	CHADRTIO	-.045	-.067
	$\bar{R}^2$	.139	
	N	1605	

The negative association of distance to school with educational participation was found to be common to all three regions. The average literacy level of



adults was found to be a significant mutable variable in the case of the hills and the terai but not in the case of the mountain. Similarly, the attitude of the household head was a significant mutable variable of educational participation in the mountain and the hills region but not in the terai. Children's engagement in earning activities and a high children adult ratio were found to have negative association with participation in education in two out of three regions (hills and terai). In brief, it is clear that there are important regional differences with respect to the effect of mutable variables on educational participation which should be taken into consideration while taking policy and programmatic decisions in the area of education.

Separate regression equations with a set of mutable variables were run for the primary and the secondary school levels. The results of this analysis for the primary age sample appear in Table 6.5. The mutable predictors that have

Table 6.5

STEPWISE REGRESSION MODEL OF EDUCATIONAL PARTICIPATION FRAMED  
USING MUTABLE VARIABLES IN THE PRIMARY AGE SAMPLE

(n = 2860)

<u>S. no.</u>	<u>Variable</u>	<u>Regression co-efficient</u>	<u>Standardized regression co-efficient</u>
1.	FATHEDUC	.031	.168
2.	PCETHNIC	.001	.101
3.	ATTITUDE	.009	.124
4.	PCTNEPALI	.002	.177
5.	DISTSCH	-.024	-.091
6.	CLACYCLE	-.022	-.100
7.	CHILDEARN	-.002	-.061
8.	PHYSED	.043	.064
9.	PLAYGRND	-.053	-.061
10.	CHADRTIO	-.033	-.049
11.	PCTEDTCH	.001	.047

$\bar{R}^2$

.154

the greatest impact on participation in the primary grades are father's education and the percent of teachers speaking Nepali. Parent's attitude toward education was also positively related to participation. Distance to school and the number of class cycles in the school were negatively related to participation. Percent of teachers of the same ethnic background as the student was positively related to participation. A child's earnings in relation to those of the household are a negative determinant of participation. To a lesser degree, physical education facilities, the presence of a playground, the child/adult ratio and percent of educated teachers were related to participation. The playground variable was inversely related to participation, that is, the presence of a playground was associated with lower participation rates.

Table 6.6

STEPWISE REGRESSION MODEL OF EDUCATION PARTICIPATION FORMED  
USING MUTABLE VARIABLES IN THE SECONDARY AGE SAMPLE

(n = 1753)

<u>S.No.</u>	<u>Variable</u>	<u>Regression co-efficient</u>	<u>Standardized regression co-efficient</u>
1.	ADULTLIT	.319	.197
2.	HELPEARN	-.307	-.213
3.	DISTSCH	-.016	.167
4.	PCETHNIC	.003	.167
5.	ATTITUDE	.007	.096
6.	PCTFEMT	.005	.095
7.	CHADRTIO	-.043	-.068
	$\bar{R}^2$		.245

In Table 6.6 the results of a comparable analysis for the secondary age sample is presented. The most important predictor is the child's contribution

to the family's income. Those children who contribute to the family's earnings have a participation percent 31 points less than those who do not help by earning money. Children with literate adults in the household had a participation percent 32 points above those who did not have literate adults in the household. As with the primary age sample, teachers' ethnic identify with the child contributed positively to participation. Distance to school demonstrated a negative relationship to attendance. To a lesser degree, the percent of female teachers, parents' attitudes toward education and the child/adult ratio in the household were determinants of participation.

#### 4. *Comparison of Composite Results with Separate Analysis*

An important aspect of the composite analysis of all indicators (child, household and school) is that the relative importance of various predictors can change when they are placed in a model with all other indicators.

For example, father's education was one of the most important indicators in the analysis of child-related variables; standardized weights of .258 and .273 were observed in the primary and secondary samples respectively. However, in the composite analysis which included other household indicators of socio-economic variables, father's education received beta weights of .071 and .065 for the primary and secondary samples respectively. In the composite analysis HELPEARNS was a less potent predictor than when the child variables were used alone; the beta weight reduced to -.138 in the composite analysis.

The variable of sex retained its strong explanatory status in the composite analysis. Age still showed a strong influence in the primary sample but none in the secondary sample. The influence of sex and age is robust under the shift to the composite model.

With respect to the household variables, the education level of the adults in the household (ADULTEDU) had a lesser weight in the composite study than when only household variables were used to explain participation. The beta weights for ADULTEDU reduced from .148 and .151 to .092 and .083 for the primary and

secondary samples respectively. In the secondary sample, parent's attitude toward modern ideas (ATTITUDE) diminished in importance in the composite analysis compared to the analysis using only household variables. The beta weights were .129 and .054 in the household and composite analysis respectively. Nepali spoken at home was an insignificant predictor of participation in the composite analysis, whereas its effect was significant in the household variable analysis.

With respect to the school-related variables, the percent of teachers of the child's ethnic type showed a weaker relationship for the primary sample in the composite analysis compared to the analysis using only school-related variables. The beta weight diminished from .157 to .055. The corresponding weight in the secondary sample was virtually unchanged. The percent of teachers who are female was not significantly related to participation in the composite analysis; whereas in the school-related variable analysis, it was a significant predictor in the secondary sample. The presence of a library in the school (LIBRARY) was not significant in the composite analysis while it was in the school variable study.

5. *Factors Influencing School attendance*

Selected child, household and school characteristics were regressed on school attendance for the school-going children as a whole and separately for the primary and secondary school levels. The results are provided in Table 6.7.

Table 6.7

REGRESSION RESULTS FOR ATTENDANCE PERCENTAGE USING ALL EXPLANATORY VARIABLES FOR PRIMARY, SECONDARY AND TOTAL SAMPLE

S.No.	Variable	Standardized regression co-efficient		
		Primary	Secondary	Total sample
1.	FATHEDUC	.082	.015	.045
2.	WIHTIND	.034	.060	.038
3.	GRADCONT	.220**	.182**	.238**

/...

S.No.	Variable	Standardized regression co-efficient		
		Primary	Secondary	Total sample
4.	TIMESCH	-.033	-.111*	-.089**
5.	EXPEDUC	.036	-.084	-.060
6.	HELPEARNS	-.092**	-.038	-.066*
7.	STUDYWK	-.043	.054	.010
8.	LANGHOME	.113*	.027	.087*
9.	SETTLDUR	.030	.083	.047
10.	AGRICU	-.027	-.003	-.035
11.	BUSINESS	.032	.018	.032
12.	COTTIND	.009	-.024	-.013
13.	LABOUR	.045	-.011	.039
14.	PLAYGRND	.050	.082	.111*
15.	CHARTS	.120**	-.023	.061
16.	PHYSED	-.041	.205**	.010
17.	LIBRARY	.109**	.067	.108**
18.	ANIMALS	.051	.012	.023
19.	HSESPCE	.079	.063	.077*
20.	PCAPINCM	-.058	.015	.025
21.	ATTITUDE	-.027	.035	-.016
22.	CLACYCLE	-.204**	-.116	-.240**
23.	PCTEDTCH	.033	.003	.035
24.	PCTLOCT	.103*	-.027	.056
25.	PCTTRDT	-.297**	-.013	-.236**
26.	PCTNEPLI	-.130*	.138	-.071

/...

S.No.	Variable	Standardized regression co-efficient		
		Primary	Secondary	Total sample
27.	PCTEXPER	.051	-.021	.033
28.	PCTGIRLS	.033	-.036	.049
29.	STRATIO	-.037	-.347**	-.118**
30.	STUEXP	.036	-.007	.034
31.	BLDGTYPE	-.017	.114*	-.010
	R <sup>2</sup>	.137	.209	.111
	N	1185	661	1846

Note: \*\*significant at .01 level.  
\*significant at .05 level.

The variable "grade continued", i.e., the number of school grades that a child has completed, had the most significant effect on regular attendance of school-going children. This result indicates that the higher the grade that the child is in, the more regular is his attendance in school, implying that if the school could hold a child for the initial few years, the child becomes more regular in his school attendance. As regards other significant variables associated with school attendance, they tend to have differential effects vis-a-vis different levels of schooling.

'Class cycle', i.e., the number of grades/classes in a school, is another powerful explanatory variable. The negative sign indicates that as the number of grades in a school increased students' school attendance decreases. This variable is significant in case of the total and the primary school sample only. This result coupled with the average number of teachers in primary level of schooling which is .87 implies that the availability of teachers in primary schools are less adequate and hence, they do not get sufficient time to supervise children in school. It should also be noted here that the available resources in a school (teachers, physical facilities, educational materials, etc.) used to be primarily directed to higher grades. These two factors partially explain why an increased number of grades in a school could

have a negative effect on school attendance. In the case of primary school sample, another significant variables are the percentage of trained teachers and the percentage of Nepali-speaking teachers which have a negative effect on attendance percentage. [It may be recalled here that the effects of these variables are positive and significant in the case of educational participation]. On the other hand, the provisions of charts and library were found to have a positive effect on the attendance percentage of primary school children.

In the case of secondary school sample, a higher student teacher ratio and a longer time required to reach school were found to have a negative effect on school attendance. On the other hand, the provision of physical education facilities and the "Pakki" type of building had a significant positive impact on the attendance percentage of secondary school students.

A set of mutable variables was also regressed on attendance percentage of school-going children. The results are given in Table 6.8.

Table 6.8

STEPWISE REGRESSION MODEL OF ATTENDANCE PERCENTAGE USING  
MUTABLE VARIABLES

<u>S.No.</u>	<u>Variable</u>	<u>Regression co-efficient</u>	<u>Standardized regression co-efficient</u>
1.	PCTTRDT	-.095	-.116
2.	DISTSCH	-1.614	-.127
3.	PLAYGRND	3.834	.097
4.	STRATIO	-.140	-.093
5.	LIBRARY	2.193	.077
	$R^2$		.054
	N		1846

The explanatory power of the model is very low as compared to that of model with education but it is significant. This result indicates that school distance should be minimized and the number of students per teacher should be lowered so as to promote regular attendance of school-going children. Contrary to our expectation, the percentage of trained teachers was found to be negatively associated with the attendance percentage. Availability of playground and library were two significant variables affecting school attendance of students positively.

#### 6. *Summary*

The composite analysis indicates that the strongest single determinant of participation is the child's sex. In addition the effect of the child's sex becomes more important in the secondary schools. Female children not only participate less, but also leave school at a greater rate than the boys before attending a secondary school. Girls constitute 28 percent of the primary school children and only 17 percent of the secondary school children.

Distance to school is also a crucial determinant of participation. The relationship is strong and negative which implies that increasing distances from school result in smaller participation rates. The effect of distance is equally detrimental to primary and secondary age students.

The child's role in the economic well-being of the family is an extremely important determinant of participation. Apparently many families can not afford to release the child from his economic role to permit participation in schooling. As a result of this cost factor, many children do not participate in schooling.

The most important school characteristic is the ethnicity and the native language of the teachers. Participation in the primary grades is positively influenced if the teachers speak Nepali. At the secondary level, participation depends on the ethnic similarity between the student and the teacher. Hence those schools with staff that reflect the ethnic composition of the community will enjoy higher participation rates than the schools lacking such staff.



The results of regression analysis with mutable variables indicate that the provision of adult education and non-formal programmes will have a positive effect on educational participation. Similarly, the provision of qualified teachers with an ethnic background similar to that of students will help in attracting non-enrolled children to school. Easy access to education and diminished demand on their time and labour will result in greater participation in education by rural children.

The majority of variables affecting school attendance are school characteristics. The higher a child moves up the school grade ladder, the more regular he becomes in attending school. The results of stepwise regression equation on school attendance indicates that the minimum distance to school and a low student to teacher ratio facilitates regularity in school attendance. Moreover, the improvement in physical and instructional facilities in the school would have a significant positive effect on the regular attendance of school-going children.

## DISCUSSIONS AND IMPLICATIONS

### 1. *Expansion of Basic Level Education*

The universalization of primary school education plays a crucial role in a developing economy. Recent studies show that education, in general, was found to be associated with increased rural productivity, improved nutritional status and decreased women's fertility rate\*. Thus, the emphasis placed on increasing access of rural people to educational programmes in developing countries appears to be in the right direction.

Nepal, as a developing country, aims at universalization of basic level education, both primary school education and adult education programmes, as a potential means of creating mass awareness and of enabling rural populace to participate effectively in the developmental projects. Various factors influence rural people's participation in education. An objective understanding, rather than a subjective speculation, of these factors would greatly enhance our ability to make rational decisions toward promoting a wider and more sustaining participation in education. With this consideration in mind, this study has been directed toward providing an insight into factors that affect educational participation by rural children of school-going age (6-15 years) as well as an empirical data base so that appropriate policy and programmatic decisions could be made to bring into effect a wider and more effective participation in the formal education programme.

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\*B.G. Baidya, D.T. Jamison and R.P. Shrestha (eds.) *Education and Rural Development in Nepal*, World Bank/New Era Study (RPO No. 671/49), Washington D.C., The World Bank, 1981.

2. Comparative Look at Factors  
 Influencing Educational Participation and School Attendance - 156 -

A comparative analysis of the differential effects of the groups of factors would enable us to determine which factors are the most important ones and to examine which factors are the most potential ones for increasing educational participation and school attendance. The proportions of variances in educational participation and school attendance predicted by the clusters of child, household and school variables and by all variables included in one overall model are shown in Table 7.1.

Table 7.1

• PROPORTION OF VARIANCE EXPLAINED BY DIFFERENT CLUSTERS OF VARIABLES

(a)  $\bar{R}^2$  of different equations  
 (Educational Participation)

Cluster of variables	Level of schooling			Sex		Regionwise			
	Overall	Primary	Secondary	Boys	Girls	Mountain	Hill	Terai	Inner-terai
CHILD	.260	.250	.345	.167	.194	.246	.276	.295	.236
HOUSEHOLD	.173	.121	.230	.106	.231	.088	.150	.169	.105
SCHOOL	.064	.061	.102	.076	.068	.066	.093	.021	-
ALL VARIABLES	.369	.364	.474	-	-	-	-	-	-
MUTABLE	.179	.154	.245	-	-	-	-	-	-

(b)  $\bar{R}^2$  of different equations  
 (School Attendance)

	Overall	Primary	Secondary
CHILD	n.s.	-	-
HOUSEHOLD	n.s.	-	-
SCHOOL	.065	.134	.063
ALL VARIABLES	.111	.137	.209
MUTABLE	.054		

(c)  $\bar{R}^2$  of the equation  
 (Percentage of School-going Children)

HOUSEHOLD ONLY	Overall
	.225

The results of regression analysis revealed that the child-related factors were the strongest predictors of educational participation. Although significant, only a small proportion of variation in educational participation was explained by school characteristics.

The findings of this study also indicated that the selected child, household and school characteristics explained a significantly higher proportion of variance in educational participation by rural children than that of attendance percentage of the school-going children.

The child- and household-related factors had very strong effects on whether a rural child would go to school or not whereas these same factors, in and of themselves, did not appear to have any significant effect on attendance percentage of rural school children. After a rural child had been enrolled in a school, it is the school-related factors that determined how regularly he would attend his school. In addition, there are noticeable regionwise, sex and levelwise differences in the proportion of variance explained.

In this section, we shall take a close look at the specific variables in each cluster of factors associated significantly with participation in education by rural children. A list of highly significant variables affecting educational participation is presented in the following figure.

Figure - 7.1: A list of highly significant variables affecting educational participation.

<u>Child</u>	<u>Household</u>	<u>School</u>	<u>Overall</u>
1. Sex (+)	1. Adult education (+)	1. Per cent of teachers with similar ethnic background (+)	Sex (+)
2. Father's education (+)	2. Nepali as a language spoken at home (+)	2. Per cent of qualified teachers (+)	Distance to school (-)
3. Distance to school (-)	3. Modernity attitude (+)	3. Per cent of experienced teachers (-)	Age (+)
4. Age (+)	4. Children earning (-)	4. Classroom space per student (-)	Help in earning (-)
5. Help in earning (-)	5. Per capita income (+)	5. Per cent of trained teachers (+)	Help in household (-)
6. Help in household (-)	6. Labour (-)	6. Per cent of female teachers (+)	Father's education (+)
	7. Cottage industry (-)	7. Physical education (+)	Modernity attitude (+)
	8. Agriculture (+)	8. Per cent of teachers with Nepali as their tongue (+)	Labour (-)
	9. Professional (+)		Per capita income (+)
			Adult education (+)
			Agriculture (+)
			Cottage industry (-)
			Percent of teachers with ethnic background (+)
			Playground (-)
			Percent of teachers with Nepali as their mother tongue (+)
			Expenditure per student (-)
			Percent of qualified teachers (+)
			Type of school building (-)

Note: The signs (+, -) denote the direction of effect.

It is significant to note that all of the child-related and most of the same household and school characteristics came out as significant predictors of educational participation in the overall model that included all variables. Thus, it seems logical to discuss the nature and strength of these variables in terms of clusters of factors having significant effects on participation on education by rural children.

A. Child-related Factors

The traditional social bias against girls' education, the physical location of the school, and the low education and economic status of the rural household are all adversely affecting the rural children's participation in education.

When we refer to the lack of awareness of the importance of education in general, and the social bias against female education in particular, the tradition as well as the present condition of the rural community comes into the picture. The aspirations and life styles of the rural people are simply transferred from one generation to the next. The activity patterns revolving around the survival and the subsistence of the family remain intact in which children are required to contribute in whatever way possible. Given the widespread illiteracy, particularly a very high illiteracy rate for women, and the lack of resources to venture on new methods and activities, any major break-through in the tradition and inner-directedness of the rural community is likely to take a long time. The effects of education are not easily visible to the villagers largely because an educated person is likely to migrate to the urban area and/or the educational programmes are not properly geared to the needs and convenience of the rural communities. Thus the social traditions (such as the custom of early marriage) and the economic hardships of the rural life create certain demands on children.

On the other hand, the pull factor of the school, i.e., the ability of the school to attract students is not very strong. The location of the school is not very convenient to all and the school facilities are not adequate enough to impart a relevant and effective education. On the

average, a child who goes to a primary school has to walk from a little more than one to even one and half kilometers. In many cases, the primary school is located at a point which is equidistant from the surrounding villages. Thus, the physical location of a school may be inconvenient for all of the children in different villages. This is one reason why rural parents send their children to school at a later age than at the officially prescribed age of six.

So, we find the rural children caught in a dilemma between the demand on their time to do household duties and the need to join school for a better future. The social pressure on parents to send their children to school is of course growing, but has not yet assumed a proportion which leads to the establishment of a strong social custom in this respect. Parental concern in and commitment to sending their children to school appear to be directly proportional to the education and economic status of the family.

The above discussion has two implications. First, efforts need to be directed toward reducing the family pressure on children's heavy involvement in household and earning activities. Secondly, the relevance and the timing of the school should be adjusted according to the needs and the convenience of rural children. Lastly, the participation of over-age children in rural primary schools has important implications for the sequencing and pacing of classroom instruction.

#### B. Household-related Factors

Three categories of household characteristics appeared to be in operation in influencing rural children's participation in education. The awareness and affordability factors, as reflected by the average education status of the adults in the family, the modernity attitude of the head of the household and the per capita income, have influenced educational participation in the positive direction. Family occupations such as the labour and cottage industry which put a great demand on children's time had adversely affected participation. These results seem to be consistent with the findings from the child data (Section 1.1), thus substantiating the validity of the study results.

The language spoken at home, as the third category of household characteristics, has been found to have a strong effect on educational participation. The Nepali language being the mandatory medium of instruction in schools, a child from a family where Nepali is spoken has a significantly higher probability of participating in education and benefitting from school experience than the one whose family language is not Nepali. Thus, the use of the first language of children as the medium of instruction at the primary school level would have, in general, a wholesome effect upon educational participation.

These findings suggest that efforts directed toward increasing the awareness level of the adult members of a family, particularly the head of the household, would have a desired effect on increasing rural children's participation in education. Additionally, in order to make the primary school experience enjoyable and beneficial to children, the language used in classroom instruction should be the one that is easily understood by them, or the one in which they can converse well, or else the teacher should be adequately prepared in bilingual instruction.

#### C. School-related factors

Most of the school characteristics that have a significant effect on educational participation are related to the teachers' background. Thus, it is significant to note here that the physical and instructional facilities of the school, due to the inadequacy of these facilities in rural schools as revealed by the school survey data, did not show their effects on educational participation in an expected manner.

Having a teacher of a similar ethnic background seemed to serve as a strong stimulating factor for the children of a particular ethnic group to participate in education. Considering the diverse ethnic composition of the population of Nepal, this finding has a very valuable implication for teacher recruitment.



The academic qualification and the training status of teachers, the proportion of female teachers and of teachers from the Nepali language group had positive effects on participation. So, the emphasis given to teacher training and particularly to the provision of female teachers in rural schools appear to be in the right direction. The effect of experienced teachers on educational participation was found to be negative. This might be the result of a variety of factors including the inertia in the profession of teaching which is strong among the old/experienced teachers.

Only two school characteristics, other than teachers' background, had significant effects on educational participation. The negative effect of the available classroom space per student is a measurement artifact, particularly in the context of Nepal where admission practices and the provision of furniture and other materials in the classroom do not follow a common standard. The provision of games and sports attract children to participate in education. This also indicates the possibility of increasing rural children's participation in education if the current inadequacies in the instructional facilities of the rural schools could be ameliorated.

These findings on the effects of selected school characteristics suggest that rural children's participation in education could be significantly increased by means of appropriate teacher recruitment, training and placement policies on the one hand, and by improving instructional facilities of the rural schools on the other.

#### D. Factors Related to School Attendance

Next to participation, the regular attendance of school-going children is the most important thing, particularly when the actual number of instructional days in rural schools is considerably less than the number of days specified as required by official regulation. The actual number of instructional days may also be considered as an indicator of the smooth functioning of the school. An insight into the factors that affect school attendance would help us in improving school facilities that would sustain student's interest in school activities.

A list of highly significant variables affecting school attendance is shown in the following figure.

Figure - 7.2: List of highly significant variables affecting school attendance.

<u>Child</u>	<u>Household</u>	<u>School</u>	<u>Overall</u>
None	None	Class cycle (-) Per cent trained teachers (-) Library (+) Per cent local teachers (+) Student teacher ratio (-) Expenditure per student (+) Playground (+)	Grade continued (+) Time to reach school (-) Help in earning (-) Nepali as a language spoken at home (+) Space per person (+) Class cycle (number of grades run in a school) (-) Per cent of trained teachers (-) Playground (+) Library (+) Student teacher ratio (-) Charts (+)

Note: The sign (+, -) denote the direction of effect, positive and negative.

It is highly important to note that the significant predictors of educational participation did not have similar effects on attendance percentage of rural children. None of the selected child and household characteristics, by themselves, explained any significant proportion of variation in school attendance. However, in the overall regression model on school attendance, a few child- and household-related variables appeared to be significant predictors which deserve further elaboration.

The variable "grade continued" (continuing study at upper grades) came out to be one of the significant predictors of school attendance. On the basis of the relatively small magnitude of the effect of school characteristics on educational participation, it might be inferred that the attractive power of the school is not strong. In addition, the holding power of the school is also not strong as is evidenced by the higher drop-out rate in the first grade of the primary school. Thus, it is obvious that it is difficult to get the rural children to school

as well as to hold them in school through early grades of primary schools. However, once the rural children have continued their studies for a few years, the probability of their regularly attending schools increases immensely. This finding also substantiates the contention that the rural people begin to take school education seriously after a few years of investment in education.

As in the case of participation, the distance to school and children's involvement in earning activities had an adverse effect on school attendance. The family demand on children to devote their time to household duties not only prevented them from participating in education but also detracted the school-going children from regularly attending their schools.

The language spoken at home came out as a strong factor in the case of participation and school attendance. Language, as a tool of thinking and concept formation, plays a crucial role in the instructional activities of children. Thus, it is very important that the classroom instruction takes place in a language familiar to children in order to encourage active participation and regular attendance.

Most of the variables related with school attendance are school characteristics. This is as it should be. Given the limited instructional resources that the rural schools have, it is encouraging to note that the provisions of library, playground and instructional materials have significant positive effects on the attendance percentage of rural children. On the other hand, the number of grades run in a school\* and a high student teacher ratio have acted as deterring factors against regular attendance of school-going children. These findings imply that the physical and instructional facilities of rural schools need, in the least, to be raised to a level so as to provide adequate as well as comfortable space for children and necessary materials for meaningful teaching/learning processes. These facilities are required to offset, as much as possible, the negative effects of trained teachers on school attendance.

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\*The average number of teachers per classroom is, according to the survey data is .87 in the primary schools.

- 165 -

F. Factors Related to Regional and Levelwise Differences

Three composite factors appear to contribute considerably to regional differences with respect to children's participation in education. First, the topography of the region plays a big role in determining the access of children to education. The location of a school and the distance to be covered by children while going to that school are very strong factors in determining children's participation in education in the hilly and the mountainous regions. Secondly, the major language of the region also plays a powerful role in children's participation in education. Thirdly, the attitude toward education in general, and the bias against girls' education in particular which differ from one ethnic and religious groups to another are also important factors in determining educational participation of rural children.

Although the magnitude of their effects may differ to some extent, most of the factors that affect children's participation at both the primary and the secondary school levels are similar. However, as regards the universalization of the primary level education, concerted efforts toward increasing awareness level, instilling positive attitude in the rural adults and improving school facilities would significantly increase children's participation. One important factor that has considerable pedagogical implication is the overage (i.e., a little more than eight years old) when rural children get enrolled in primary schools. On the other hand, the improvement of school facilities and the amelioration of certain difficulties, such as the distance to school, would obviously have far-reaching effects on increasing participation at the secondary level education.

3. *Review of Factors to Policy and Programmatic Decisions*

Some variables such as sex, age and economic status of the household that strongly affect educational participation are difficult to change. Nevertheless, efforts can still be directed towards changing the attitude of rural people

that will help in reducing the strong bias against girls' education. So, during the analyses of survey data, two step-up regression models were executed with modifiable variables included in the regression equations. As a result of these analyses, the lists of selected characteristics that having significant bearing on educational participation and social attendance are reproduced in Figures 7.3 and 7.4.

Figure - 7.3: List of modifiable variables that have significant bearing on increasing educational participation.

1. Adult literacy (+)	}	
2. Attitude of the head of the household (+)	}	Household-related factors
3. Child adult ratio (-)	}	
4. Distance to school (-)	}	
5. Help in earning (-)	}	Child-related factors
6. Per cent of teachers with similar ethnic background (+)	}	
7. Per cent of teachers with Nepali as their mother tongue (+)	}	
8. Playground (-)	}	
9. Per cent of qualified teachers (+)	}	School-related factors
10. Physical education (+)	}	
11. Per cent of experienced teachers (-)	}	
12. Per cent of trained teachers (+)	}	

Figure - 7.4: List of modifiable variables that have significant bearing on increasing attendance percentage of rural school children.

1. Per cent of trained teachers (-)
2. Distance to school (-)
3. Playground (+)
4. Student teacher ratio (-)
5. Library (+)
6. Charts (+)
7. Per cent of local teachers (+)

The results of step-up analysis reveal that the literacy programme and other developmental programmes aimed at modifying the attitude of rural adults would have a salutary effect on rural children's participation in education. A reduction in the child adult ratio, i.e., the less number of children in the family that would accrue from a widespread utilization of family planning services by the rural people would increase the affordability by rural households to support the education of their children. In essence, the development projects targetted to benefit rural children would also have some beneficial effect on educational participation.

The easy access of rural children to education is a strong determinant of both educational participation and school attendance. Thus, either the location of the schools in rural communities should be convenient to children or some mechanism should be developed to bring educational facilities to the reach of rural children. Given that rural children have to devote considerable amount of their time to household duties, there seems to be no other choice than to adjust educational programmes to their convenience and needs.

A greater number of variables affecting both participation and attendance are school-related characteristics. The obvious implication is that a great deal of effort needs to be concentrated on providing teachers with suitable background knowledge, on improving physical as well as instructional facilities of the school, and also on enhancing the relevance of educational programmes.

#### 4. *Major Implications*

The education system operates in a complex web of socio-economic and cultural settings. These contextual factors influence the process of participation in education in different manners. The planners and facilitators of education should be cognizant of these factors and strive toward gradual improvement in the efficiency and effectiveness of the education system. Keeping this view in mind, some major implications of the findings of this study are described below.

- A. Shortening distance to school and inducing parents to send children to school:

With respect to child-related factors affecting educational participation, increasing access of rural children to education and releasing them from household duties are two major factors. This access to education is determined primarily by two factors, viz., the location of school (physical proximity) and the commitment on the part of parents to provide education to their children. The indicators of both of these factors present less than a satisfactory picture. That is, the distance to school is quite considerable, given the topographical difficulty of certain regions and the willingness of parents to send their children to school is not high. Furthermore, the access of rural children to education is also determined by time available to them to attend school as well as by the relevance of school programmes to their background and needs. It seems that very little attention has been given so far to these important considerations.

- B. Raising the awareness level of parents and making education relevant to rural realities

Closely related to the factors described above, almost as a corollary, are the awareness level of the adults in the family and their concern for the education of their children and the family occupations that demand a greater proportion of children's time at home -- two composite factors which have very strong effects on educational participation. It is very unlikely that unless we can raise the consciousness of the rural people beyond a threshold level, the participation rate of rural children will not increase significantly. Thus, it seems imperative that this general awareness component should be an integral component of all developmental projects in the rural community. Considering that the major occupations of rural households will remain unchanged at least for the foreseeable future, a major question arises with respect to the relevance of the current education system to at least certain segments of rural population. There exists as much a need for making education relevant to the realities of the rural context as for rural people to send their children to participate in education.

C. Making the school attractive

In the final analysis, the quality of education that a school offers would remain to be the most important determinant of both educational participation and school attendance. Fortunately, this is an area in which the planners and facilitators of education has an upper hand. If the indicators of school facilities present a less than satisfactory picture as revealed by the findings of this study, it also opens avenues for appropriate interventions and innovations.

D. Selecting suitable teachers and improving their efficiency

The highly significant effects of selected teacher characteristics provide us with meaningful guidelines in the recruitment and training of teachers. Considering the crucial role of teachers in minimally equipped rural schools, it should not be overlooked that the provision of qualified teachers with their ethnic background similar to that of students will enhance educational participation of children rather than if they were from different ethnic backgrounds. Particularly those from low ethnic status groups which have remained underprivileged so far will find it safe and at home in schools where there are teachers belonging to their community. Furthermore, there exists a need for reducing the inertia among teachers and heightening the currently low socio-economic status associated with the profession of teaching so that the visible negative effects of experienced and trained teachers on educational participation and school attendance respectively could be reversed in due course of time. In this context, teachers' involvement in planning and preparing for instructional activities is an essential consideration.

5. *Education in the Context of Rural Nepal*

The effectiveness of an education system is dependent, among other things, upon the conditions in which it operates. Education has different meanings and purposes for different people. For some people, education may not mean



practically anything at all. This is particularly true for some inhabitants in remote rural areas where several generations of people have remained in total isolation. The rural communities in Nepal, however, have exposure of varying degrees to modern thinking, modern technology and modern ways of life. So, education in a rural community should be first viewed as a modern intervention primarily superimposed from outside.

After centuries of isolation, education and other developmental projects are gradually becoming a part of rural life. Some visible effects of participating in education consist in the form of mass consciousness about the importance of education\*. But the adequate level of zeal required on the part of rural people and the development of an appropriate and relevant education system for universalization of the first level education still remain to materialize to a satisfactory extent.

In this section, an attempt is made toward a synthesis of the implications of the study result with particular reference to the topographical, social, economic and cultural contexts of rural Nepal.

#### A. School Location

The location of a school which is normally at a central place, according to the industrial model of education, would presuppose a sizable population density in the vicinity, transport facilities and a strong willingness on the part of parents to provide education to their children so that they could move up the social and economic ladder. These conditions may or may not exist in a particular rural community especially in the mountain and in certain parts of the hilly region.

The establishment of a school at a central location to serve the sparsely populated surrounding villages may be inconvenient for all children, thus deterring their participation as well as causing irregular attendance of the school-going children.

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\**Attitude Toward and Expectations from Education*. CERID, Kathmandu, Nepal, 1981.

Such a situation would either require a new concept of rural education that would take education to the reach of rural children (i.e., adjust the system to fit into the rural context rather than demand a great deal from the rural people) or call for initiating supporting activities (such as tutorial sessions) in the village so as to prepare students for the school. Traditionally, education in Nepal was primarily imparted in the form of short-term tutorial classes by a teacher, usually a priest, or the literate parent of a household. Even this system would require the willingness of literate parents or the help of tutors in the case of illiterate parents, or both. These approaches deserve careful considerations if we aim at wide participation in the primary school education as well as at reducing wastage in school education.

#### B. School Facilities

The establishment and approval of a school in itself should not be treated as a culminating activity on the part of rural people in their involvement in local education and on the part of educational officials to bring about quality in school programmes. However, it often happens that the zeal which led to the establishment of a school does not hold for all the time which explains why the physical and instructional facilities of a school are often way below satisfactory levels. So, it is very important that the managing committee of the school and the district level education officials should work closely in improving school facilities so as to make them attractive enough to sustain the interest of the children throughout their years of school education. It may be noted that the quality of instructional activities in rural schools is likely to remain unimproved without the provision of adequate physical space and instructional materials.

#### C. Teachers

The availability of teachers with adequate academic qualifications and appropriate ethnic background is still inadequate in rural schools. Further, a considerable degree of inertia is found to exist among the experienced and trained teachers. This condition may be attributed to

some degree to the lack of incentives for teachers [e.g., a primary school teacher can not be promoted to the status of a secondary school teacher unless he has earned an additional college degree] and to the lack of their involvement in the decision-making process.

This situation poses a very strong challenge to the improvement of education in rural Nepal. The whole gamut of policies relating to the recruitment and placement of teachers, the in-service education of teachers\*, incentive and promotion system, and above all their involvement in the management of the school system, need to be re-examined and appropriate re-organizations made accordingly. Specifically, as this study indicated, there should be concerted efforts in recruiting teachers of an ethnic background similar to that of students, encouraging local teachers to actively participate in improving the school programme, and revitalizing the morale, skills and commitment of experienced and trained teachers.

#### D. Planning and Implementing Education Programmes

At present, the schedule of classes, the curricular contents, the modalities of instruction and the priorities of education are all decided by a group of people at the central level who could be heavily biased toward the urban situation. Thus, these educational programmes may have little or no relevance to rural realities. Although, the core elements and the basic framework of the curriculum and instructional requirements could be specified at the central level, some flexibility should be incorporated within that structure so as to accommodate the needs of rural communities and make adjustments according to the convenience of rural children. The involvement of teachers, selected community members, and the education officials of the districts in drawing up the details of educational programmes for their community within the broad structure/outline prescribed by the centre

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\*Recently, the Ministry of Education adopted a regulation to the effect that teacher training would not be made a pre-requisite for becoming a permanent teacher. [MOE, 1981].

would generate much-needed enthusiasm, creativity and cooperation for improving the quality of education in rural schools. The major factors to be considered are class schedules that will be convenient to most of the rural children, the prescription of curricular contents in relation to local needs, and the utilization of a variety of instructional modes [such as tutorial, learning groups, accelerated programmes and so on].

E. Built-in Evaluation System

The task of bringing about improvement of education in rural communities would require a considerable period of time and planned efforts. These efforts should be based on a continuous examination of factors that strongly affect educational participation, regular attendance, and achievement of desired outcomes. At present, the data base as required to monitor the progress of the education system is not available. The present study is the first one of this scale to identify factors that determine educational participation and school attendance. Using the related data of this study as base-line indicators of selected characteristics, an evaluation and feedback mechanism could be institutionalized so as to lend support to the rational decision-making processes in improving the quality of education in rural Nepal.

F. Supportive Educational Policies

Most important of all, the policy-makers and planners of the education system should give due consideration to the factors that can really facilitate participation, and attendance, of students and ensure effective instruction in rural schools. Major policy changes would be required to make the education system relevant to the needs of and convenient to rural children. A supportive strategy with respect to educational policies and programmatic decisions will go a long way toward improving the quality of education in rural schools.

*Chapter VIII*

## FINDINGS AND RECOMMENDATIONS

This study was undertaken to identify factors that determine the educational participation of rural children and the regular attendance of school-going children. In order to obtain an empirical as well as impartial picture of the differential effects of various factors on educational participation the child, the household, and the school characteristics were included in the conceptual design of the study.

A multi-stage stratified sampling procedure has been followed in the selection of districts and school-age children to ensure a representative sample of rural school age population of the entire Kingdom. Seven districts - Mugu, Solukhumbu, Baglung, Shyangja, Panchthar, Banke and Saptari - were selected as the seven topographically representative regions of the country. In addition, Dang and Udayapur were also included as the representative districts of the inner-terai sector. From each of these districts, three village panchayats - were selected for the survey on the basis of ensuring a proportional representation of the total number of households in the respective regions. Altogether 4655 school age children from these 2310 households and 120 schools of the selected village panchayats were the child and the school sample of this study.

The data on demographic characteristics, educational status and economic activities of the family, and the attitude of the household head toward modernity were obtained through the administration of household questionnaire. The child questionnaire was designed to solicit detailed information from children themselves about different causes and conditions influencing their participation in school education. A comprehensive survey of schools in the given locality where the sampled children were expected to participate was also undertaken. In addition, historical, economic and educational data of the village panchayats and the districts surveyed under the study were also collected. The collection of data was completed in seven months starting from

October 1981 in the Himalayan region and from December 1981 in other regions.

The analyses and interpretations of the obtained data were focussed on the presentation of the current status, regression runs to identify significant predictors, and contextual interpretation of the results of regression analysis.

#### *Major Findings*

The major findings of this study are presented with respect to each cluster of variables as well as to all factors in composite model.

#### Child Characteristics and Educational Participation

1. About forty-five percent of rural school age children were found to be below the normal nutritional standard.
2. About three-fourths of the rural children were found engaged in household activities. The major household chores that the children were engaged in included looking after younger children and taking care of the home, taking cattle out for grazing, collecting firewood and grass for fodder, and carrying water and feeding cattle.
3. Approximately six percent of the total children contacted during the survey were found to be directly engaged in economic activities.
4. Only forty percent of the rural school age children in the sampled areas were found attending school. The enrolment ratio for boys was 55.7 percent whereas it was only 22.0 percent in the case of girls.
5. The apparent primary school (grade I-III) enrolment rate was 66.6 percent [1194 out of 1639 primary school age children] as compared with 90 percent enrolment ratio for the nation as a whole in 1981. The actual age specific enrolment ratio was

about 35 percent only, that is, only 610 out of 1194 children studying in primary schools belonged to the 6-8 years age group.

6. More than forty percent of total students enrolled at primary and lower secondary levels were over-age for the grades they were studying in.
7. The major causes mentioned by rural children for their non-participation in schooling were: not sent by parents, shortage of labour to look after household work, poor economic condition, and the school is far away.
8. Of the six child characteristics, sex has been found to be the single most important predictor of educational participation. Boys have a participation rate 31 percent higher than girls.
9. The increment of every one year in father's education leads to increasing children's participation in education by 4.5 percent.
10. The greater the distance to school from home, the greater is the possibility of parents not sending their children, particularly girls, to school. For a distance of every one kilometer the possibility of a child to go to school decreases by 2.5 percent.
11. Getting older by every one year heightens the possibility of a child's educational participation by four percent. This explains why a very large proportion of children are studying in grades for which they are over-age.
12. If a child is engaged in an earning activity, his chance of participating in formal education was found to diminish by 33 percent.
13. For a child who is engaged in household activities, the chance of his going to school is reduced by 9.3 percent.
14. Fathers' educational status seemed to have the strongest influence in the terai and the inner-terai regions where, it must be noted,

girls' enrolment is lowest in the country.

15. The age variable was found to be a very strong factor influencing educational participation at the primary school level.
16. The distance to school was found to have a stronger negative effect on girls' participation in education than in the case of boys.

#### Household Characteristics and Educational Participation

1. According to the survey data, the per capita income of the rural population is about US\$ 97 [Nepali Rs 1160] as against the national per capita income of US\$ 130.
2. Approximately 58 percent land-owning householders had at least one of their school-age children receiving school education, whereas, 73 percent of the landless households did not have any of their school-age children attending school.
3. About 30 percent of the rural adults in the sampled regions were found to be literate.
4. During the time of the survey, only a few adults from 2.3 percent of the households reported to have attended non-formal education programmes conducted by government and non-government agencies.
5. Although more than ninety percent of rural households were in agriculture, a significant proportion of rural families were also found to be solely or partially engaged in other occupations like labour (35%), business (10%), and non-professional services in government and non-government offices (14%).
6. In 13 percent of the households, the school age children were also found to be engaged in earning activities.



7. Of the thirteen selected household characteristics, the average educational status of the adults in the family was found to be the strongest predictor of rural children's educational participation.
8. The household head's receptivity towards modernisation has been found to have a strong bearing on his children's educational participation.
9. A child who speaks Nepali at home has a greater chance of participation in education than one who speaks a language other than Nepali at home. In a regionwise analysis, however, this finding has proved to be true only in the case of the hills.
10. The greater the income a family has, the greater the chances are for the children in that family to join school.
11. Two major occupations - cottage industry and labour - of the rural households, especially in the hills and the terai, were found to have adversely affected children's participation in education.
12. If one or more adults in the household are engaged in professional or non-professional jobs it had a significant effect on educational participation at the secondary school level.
13. A professional job as a household occupation was found to have significantly and positively affected girls' participation in education.

#### School Characteristics and Educational Participation

1. Seventy-three percent of primary school teachers and fifty-six percent of secondary school teachers (including lower-secondary level) were found to possess the required qualification for the level they were teaching and as regards trained teachers only forty-two percent of the primary level and fifty percent of the

2. A large number of primary school buildings were just mud-built structures. Secondary schools had comparatively better physical facilities.
3. Forty-six percent of the schools surveyed under the study did not have adequate space for all the classrooms. Most of the schools did not have rooms for teachers, libraries, laboratories and workshops.
4. Few primary schools had sufficient charts and maps for instructional purposes and fewer still had any materials for games and sports.
5. The unit cost or per pupil cost of school level education, was found to be Rs.130 (about US\$ 11) at the primary and Rs.273 (about US\$ 23) at the secondary level.
6. Among the selected school characteristics, the ethnic similarity between the teacher and the students was found to be most strongly associated with educational participation. However, as the region-wise analysis indicated this is true only in the case of the hills region. It has even a slight negative effect on participation by rural children in the terai region.
7. The proportion of qualified and trained teachers in a school has been found to have a strong positive effect on educational participation.
8. The availability of instructional materials in schools had a significant positive effect on educational participation.

Factors Affecting Participation: Composite Model

1. The strongest determinant of educational participation is sex, which is more important in the secondary school level.
2. The distance to a school is also a crucial determinant of participation.

3. A cluster of variables indicative of a family's predisposition toward education [such as attitude toward education and educational status of the adults] also determine educational participation.
4. The child's role in the economic well-being of the family is an extremely important determinant of educational participation.
5. Two important child-related characteristics that influence educational participation are the ethnic background of the teachers and the language spoken by them.

#### Mutable Variables

Significant mutable variables associated positively with educational participation are the average educational level of the adults in the family and the positive attitude of the head of the household, the provision of qualified and trained teachers, and the availability of physical and educational facilities in the school. Those associated negatively are greater distance to school, rural children's engagement in earning activities and a high children adult ratio in the family.

#### Factors Affecting School Attendance

The factors that contribute to regular school attendance were found to differ in many ways from those affecting educational participation.

1. "Grade continued" or the number of school grades that a student has completed had the most significant effect on regular attendance of school-going children.
2. The number of grades/classes in a school was found to be negatively associated with school attendance [The teacher class ratio is 0.87:1 at the primary school level].

3. The distance to school and the high student teacher ratio were found to have an adverse effect on regular attendance of school-going children.
4. The improvement of physical facilities [such as playground] and instructional resources [such as teaching materials and library] was found to have a significant positive effect on the regular attendance of school-going children.

### *Recommendations*

1. Adopting Alternative Structures and Methods to Increase Access to Education

Within the concept of a modern school one envisages a good building, a sizable student population within the perimeter of a walking distance from the school, a team of qualified teaching staff, and above all, a commitment on the part of parents to send their children to school. These conditions do not easily prevail in rural communities, particularly in the remote mountain and hilly areas where settlements are sparse and scattered, and where the parents' zeal toward education is below the threshold level. The present policy of approving the establishment of a new school with respect to a certain specified size of student population has resulted in the location of a new school at a locus which, though equidistant from several villages, is rather inconvenient to almost all younger students of these villages. Added to this is the time schedule, usually 10 or 11 a.m. to 4.00 p.m., which is not convenient to children who have to help with household chores.

In brief, the present industrial model of schooling is not practical for the sparse and scattered population in the mountains and certain sections of the hill regions.

Thus, it is recommended that *alternative structures of primary education (like mini-schools, annex classes or even Bhasha pathshalas)*

*and non-formal approaches be explored and adopted to increase access of rural children to education.*

2. Reducing Pressure of Domestic Work on Children

Due to the compounded effects of social traditions, ignorance and subsistence level of economy, rural children are required to assist in a number of household activities. The work pressure on girls particularly is very high. However, considering the kind of work in which rural children are mostly engaged such as looking after younger children and taking the cattle out for grazing, there are several possibilities of lessening work pressure on rural children. But, rural development efforts have not been properly addressed to these problems yet. Unless rural children can be freed from certain household chores, it is very unlikely that they will be able to participate in education in any meaningful manner.

*Thus, it is recommended that various approaches, such as child-care centres and coops to look after cattle-grazing and fetching firewood/ fodder, should be adopted to spare children from certain household duties so as to enable them to take part in schooling.*

3. Raising the Level of People's Awareness and Commitment

In certain sections of the rural community, parental predisposition toward education is below the threshold level because their immediate concern is with daily subsistence, and the plight they are in, does not permit them to perceive returns from education in foreseeable future. Thus, in such a situation, necessary zeal for sending children to school may be lacking.

In order to enhance the level of awareness about the importance of education among the rural people, and to develop in them a positive attitude towards education as well as to increase the level of their

commitment in providing education to children, it is suggested that *literacy and non-formal education programmes be made widely available to the rural populace*. After all, adult literacy programmes and primary school education are both complimentary activities toward the universalization of the first level of education. In addition, it is important that a *wave of educational campaign be sustained in the community so as to exert a subtle social pressure on the rural people to send their children to school*.

4. Adopting Differentiated Policy  
of Financing and/or Supporting  
the Education of the Most Needy

Equity in education, in the strict sense of the term, can be achieved only if a differentiated policy of financing and supporting the education of the most needy by special means is followed. In fact, the most indigent and the needy people especially in remote and backward areas have an equal right to get unequal treatment for their benefits. The distributory system of benefits should therefore be discriminatory in essence so that the very needy ones get a reasonable share from the point of view of equity and justice. Many laudable efforts such as special scholarships have already been instituted in this direction. However, these efforts need to be consolidated and expanded and further effective means of supporting education be identified. Obviously, this will be a continuing affairs depending on the specific needs and situations of local communities.

Despite the provision of free primary education including the distribution of textbooks free of charge, some families still cannot afford to send their children to school on account of other incidental expenses required and of the indirect cost they have to bear as a result of loss of labour at home. Thus, *it is necessary to devise special means of inducing these economically and socially disadvantaged parents to send their children to school*.

5. Promoting Relevance of Education  
to Rural Needs

A major factor that is responsible for the indifferent attitude of rural parents toward education is the lack of direct relevance of school education to their life and its unproductive nature. The highly academic nature of education alienates children from the life styles of the rural community. The linear system of education, where there is no option for diversifying one's concept but to go in for the higher level of education, prompts the rural students to migrate to urban areas. Consequently, the expected contribution from education to the upliftment of rural communities remains largely unfulfilled.

*It is therefore important that practical steps be gradually initiated and institutionalized in the primary schools to raise the extent of relevance of school programmes to life and to link them with some productive activities. In the context of rural communities in Nepal, schools can ill afford to remain isolated as islands of academic institutions.*

6. Improving Physical and Instructional  
Facilities in School

Education does not take place in a vacuum. The school ceases to be an educational institution; if the atmosphere in it is not conducive to the teaching/learning processes. With the rapidly growing student population in the same limited physical space and barely sufficient instructional facilities, teachers are pushed toward developing apathetic attitude toward school education. All these factors have adversely affected the "pull" power of the school.

*In order to maintain the rural primary schools even at the threshold level in their capacity to attract and hold rural children, the physical as well as instructional facilities of these schools should be considerably extended and improved. Co-ordinated efforts should be made to make available for these schools very essential instructional aids in order to make teaching/learning processes in the classroom effective.*

7. Recruiting Teachers of Similar Ethnic Background and Providing Continuing Education to Them

Teachers hold a crucially important position, particularly in the education of younger children. Nothing can be a substitute for their lack of competencies and commitment.

Thus, it is highly essential that *planned efforts be made toward continuing education of teachers in service.*

*While employing teachers, preference should be given, as far as possible, to local people whose ethnic background is similar to that of the majority of students. In the teacher training programme, emphasis should also be given to the adequate preparation of primary school teachers (with background of a language other than Nepali) in bi-lingual instruction.*

8. Minimizing Inequalities and Imbalances

*Considering the regional and socio-ethnic differences in educational participation, it is imperative that the process and substance of educational planning should specifically address to lessening imbalances and inequities in education.*

Specific and detailed educational plans to achieve universal participation in education must be made at the local district level. In this context, the current policy of encouraging and promoting local leadership and participation in school management is a step in the right direction.

9. Promoting Research and Development Efforts for Increasing Participation in Education

As the process of achieving universalization of primary school education will be more challenging and increasingly complex at later stages, *concerted research and development efforts should be directed toward identifying innovative (such as alternative structures and methods) and supportive programmes (such as pre-primary preparatory classes and*



*teachers' centres) for improving the attractiveness and efficiency of primary school education.*

10. Bringing about Effective Partnership  
between Local Participation and  
Governmental Efforts

Progress towards achieving the objective of universalizing primary education depends to a great extent on the measure of harmony and complementarity between the efforts made in this direction by the local people and the development inputs provided by the government. Thus it is deemed very important to ensure an effective partnership as well as a mutuality of efforts between the local participation and governmental support in the educational development programmes community.

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187

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Appendix - A

Questionnaire for Children

1. Geographic Information

- 1.1 District \_\_\_\_\_
- 1.2 Village Panchayat \_\_\_\_\_
- 1.3 Ward No. \_\_\_\_\_
- 1.4 Name of the Village \_\_\_\_\_

1

2

3

2. Personal Information

- 2.1 Serial No. of Household \_\_\_\_\_
- 2.2 Name of the Child \_\_\_\_\_
- 2.3 Name of the Household Head \_\_\_\_\_
- 2.4 Serial No. of the Child \_\_\_\_\_
- 2.5 Chronological Order of Birth of the Child \_\_\_\_\_
- 2.6 Father's Name \_\_\_\_\_
- 2.7 Educational Qualification \_\_\_\_\_
- 2.8 Sex of the Child: \_\_\_\_\_

4

6

Card No.

7

8

9

10

11

12

13

1 = Male

0 = Female

3. Information on Health

3.1 Age \_\_\_\_\_ Years. \_\_\_\_\_ Months

14	15

3.2 Height \_\_\_\_\_ Cms.

3.3 Weight \_\_\_\_\_ Kilogram

3.4 Height to weight index	<input type="text"/>
3.5 Nutritional status	<input type="text"/>

16		18

19

4. Information on Education

4.1 Do you go to school?

20

1 = Yes

0 = No

4.2 [To be asked to school-going children only]

4.2.1 What is the name of your school? \_\_\_\_\_

21	22

4.2.2 In what grade are you studying? \_\_\_\_\_

23	24

4.2.3 How long does it take to reach your school ?

25		27

minutes

4.3 [To be asked to unschooled children only]

4.3.1 Why do you not go to school?

28

(Listen to the children's responses carefully and put ✓ mark in the boxes given below)

1 = on account of economic reasons

2 = because of health reasons

3 = because the school is a long way from home

4 = because there is no point in going to school

5 = because there is no helping hand to do the household chores

6 = because parents did not enrol me in the school

7 = due to social reasons

8 = because there is no custom of sending daughters to school

9 = other reasons, if any \_\_\_\_\_

4.3.2 Have you ever joined a school?  29

1 = Yes

0 = No

4.3.3 If yes, what grade have you completed?  30

grade

4.4 [Questions meant for both the schooled and unschooled children]

4.4.1 Have you repeated any grade?  31

1 = Yes

0 = No

If yes, specify the number of times repeated in each grade in the following table:

Grades	/ 1 /	/ 2 /	/ 3 /	/ 4 /	/ 5 /	/ 6 /	/ 7 /	/ 8 /	/ 9 /	/ 10 /	Total
Number of times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32

4.4.2 Percentage of school attendance of a child (To be filled up from the information collected in the school survey form)

Total number of days the school was run

Percentage

Total number of days the school was run

33  35

4.4.3 Distance of the school from the student's home  km.

Annual expenditure  Rs.

36 37  
     
38 41

5. Information on Activities

5.1 Do you lend a hand in household work?

42

1 = Yes

0 = No

If yes, in which of the following activities do you lend your hands?

---

---

---

[Listen to the children's responses carefully and put ✓ mark on the following statements.]

1 = making dung-cakes and collecting firewoods

43

2 = looking after the young ones, cooking meals and watching home

44

3 = fetching water, preparing feed for cattle and other animals

45

4 = helping in agricultural work and other business activities

46

5 = grazing animals

47

6 = collecting grass and firewood

48

7 = other activities, if any \_\_\_\_\_

49

5.2 Are you engaged in income-generating activities and/or exchange your labour with others?

50

1 = Yes

0 = No

If yes, what type of income-generating activities are you engaged in?

---

---

[Listen to the responses of the children carefully and put ✓ mark on the following statements.]

- |  |                          |                                |
|--|--------------------------|--------------------------------|
| 1 = exchange your labour with others   | <input type="checkbox"/> | <input type="checkbox"/>       |
| 2 = work to earn daily wages   | <input type="checkbox"/> | 51<br><input type="checkbox"/> |
| 3 = collect firewood and/or fruits from the forest and sell them in the market | <input type="checkbox"/> | 52<br><input type="checkbox"/> |
| 4 = work as a domestic servant in others' home                                 | <input type="checkbox"/> | 53<br><input type="checkbox"/> |
| 5 = work in the agricultural activities and small business undertakings        | <input type="checkbox"/> | 54<br><input type="checkbox"/> |
| 6 = sell curios and one's own collection of goods and commodities              | <input type="checkbox"/> | 55<br><input type="checkbox"/> |
| 7 = other income-generating activities, if any _____                           | <input type="checkbox"/> | 56<br><input type="checkbox"/> |
|  |                          | 5<br><input type="checkbox"/>  |

5.3 [Questions meant for schooled children only.]

5.3.1 What study assignments do you do at home?

---

---

---

5.3.2 Have you done any school-related activities other than the study-assignment?

1 = Yes

0 = No

If yes, what sort of activities do you do?

---

---

5.3.3 How many hours do you study at home excluding the school hours?

5.3.3.1 On holidays  hours

5.3.3.2 On other days  hours

<input type="checkbox"/>	<input type="checkbox"/>
58	59
<input type="checkbox"/>	<input type="checkbox"/>
60	61



Questionnaire for Household Head

1. General Information

1.1 District \_\_\_\_\_

1

1.2 Village Panchayat \_\_\_\_\_

2

1.3 Ward No. \_\_\_\_\_

3

1.4 Name of the village \_\_\_\_\_

1.5 Serial no. of household \_\_\_\_\_

4  6

Card No.  27

2. Information on Household

2.1 Name of the household head \_\_\_\_\_

2.2 Surname (caste) \_\_\_\_\_

2.3 Religion:  Hinduism  Buddhism  Islam  
 other

2.4 What language is spoken at home?

- |                                   |                                      |  |
|-----------------------------------|--------------------------------------|--|
| <input type="checkbox"/> Nepali   | <input type="checkbox"/> Tharu       | <input type="checkbox"/> Limbu           |
| <input type="checkbox"/> Maithili | <input type="checkbox"/> Newari      | <input type="checkbox"/> Sherpa / Bhotia |
| <input type="checkbox"/> Bhojpuri | <input type="checkbox"/> Magar       | <input type="checkbox"/> Danuwar         |
| <input type="checkbox"/> Tamang   | <input type="checkbox"/> Rai, Kirati | <input type="checkbox"/> Gurung          |
| <input type="checkbox"/> Avadhi   | <input type="checkbox"/> Other _____ |  |

1 = Nepali	<input type="checkbox"/>
2 = Other than Nepali	<input type="checkbox"/>

8

2.5 How long have you been living in this village?

9

1 = For more than two years	<input type="checkbox"/>
0 = For two years or less	<input type="checkbox"/>

105

2.6 Information on adult members of each household.

Age group	S. No.	Name	Age	Sex		Marital Status		Occupation	Literate	Illiterate	Formal Education		Non-formal education	Duration
				Male	Female	Married	Unmarried				Level of accomplishment	Current level		
16 years and above														
		Total												

1966

- 2.6.1 Male  Number      
 10 11
- 2.6.2 Female  Number      
 12 13
- 2.6.3 Occupation
- a. Agriculture       
 14
- b. Business       
 15
- c. Cottage industry       
 16
- d. Wage-earning       
 17
- e. Professional service       
 18
- f. Non-professional service       
 19
- 2.6.4 Earning members  Number       
 20 21
- 2.6.5 Average level of educational attainment of the adults         
 [This level is to be enumerated dividing the total level of educational attainments by the total no. of adults.]   
 22 24
- 2.6.6 No. of adults studying in formal schools  Number      
 25
- 2.6.7 No. of adult participants of non-formal education  Number      
 26
- 2.6.8 Total number of illiterate adults  Number       
 27 28

2.7 Information on school-going children.

Age group	S. No.	Name	Age	Boy	Girl	School		If yes, studying level	Annual expenditure	Name of the school	Dis- tance (Km)	Passed level, if left the	Reasons for non-enrol- ment or dropped out
						Going	Not going						
6-15 years old													
		Total											

*Handwritten mark*

- 2.7.1 6 to 8 year old boys  Number  29
- 2.7.2 6 to 8 year old school-going boys  Number  30
- 2.7.3 6 to 8 year old girl  Number  31
- 2.7.4 6 to 8 year old school-going girls  Number  32
- 2.7.5 9 to 15 year old boys  Number  33
- 2.7.6 9 to 15 year old school/going boys  Number  34
- 2.7.7 9 to 15 year old girls  Number  35
- 2.7.8 9 to 15 year old school-going girls  Number  36
- 2.7.9 Children studying at primary level  Number

2.8 Information on children upto 5 years old

Total numbers of children upto 5 years old:

- Boys  Number  38
- Girls  Number  39

3. Education Information

3.1 Which are the nearest primary, lower secondary and secondary schools from your homes? How far are they?

Level of the school	Name of the school	Distance (km)
Primary		
Lower secondary		
Secondary		

<input type="text"/>	<input type="text"/>
40	42
<input type="text"/>	<input type="text"/>
43	45
<input type="text"/>	<input type="text"/>
46	48

3.2 Are your children engaged in income-generating activities and labour-exchanging activities or not?

- 1 = Yes
- 0 = No

49

If yes, who does what sort of income-generating activities and what amount of earning does he do?

Serial no. of children	Types of income-generating activities	Description of activities performed in the last month	Amount of income

3.2.1 Total no. of children engaged in income-generating activities

Number  50

3.2.2 Total amount of annual income earned by the children

Rs.  51  54

4. Economic Information

4.1 Information on Lands:

4.1.1 How much land do you have?  Ropani

55  57

4.1.2 What kinds and how much of production do you harvest annually?

Crops	Main crops	Annual production (MT) pathi	Prevalent market rate	
			Rate	Total Amount
Food grains				
1. Paddy				
2. Maize				
3. Wheat				
4.				
5.				
6.				
7.				
Total				
Cash crops				
1. Mustard				
2. Potato				
3.				
4.				
Total				

4.1.2.1 Total production of food-grains  MT  58  60

4.1.2.2 Price of the produced food-grains  Rs.  61  65

4.1.2.3 Total production of cash-crops  MT  66  68

4.1.2.4 Price of the produced cash-crops  Rs.  69  73

4.2 Information on Livestock

4.2.1 Do you raise livestock?

1 = Yes

0 = No

If yes, how many and what kinds of animals do you keep now?

Serial No.	Kinds of animals	Number	Type and number of production (annually)	Total
1.	Cow			
2.	Oxen			
3.	Buffaloes			
4.	Goats			
5.	Pigs			
6.				
7.				
8.				
9.				
10.				

4.2.1.1 Total heads of cows, buffaloes and oxen  Number  74  75

4.2.1.2 Total heads of goats and pigs  Number  76  77



4.3 Information on House Structure.

Card No. 3

4.3.1 Please, give information on your house structure.

7

S. No. of No. storeys	Measurement		Cemented	Tile roof	Mud wall	Toilet facility		Self-used or rented (if rented total annual income)
	Length (M)	Breadth (M)				No. of rooms	Toilet facility Yes No	

4.3.1.1 Area covered by the structure of house      sq meters

      
8      11

4.3.1.2 Type of the house used

      
12

1 = Mud wall     

2 = Tile-roofed     

3 = Cemented     

4.3.1.3 Toilet facility

      
13

1 = Yes     

2 = No     

4.4 Information on Vehicles

4.4.1 How many and what types of vehicles do you have?

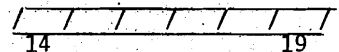
Serial No.	Types of vehicles	Number	Total amount of nannual income	Remarks
1.	Cart			
2.	Cycle			
3.	Rickshaw			
4.	Tractor			
5.	Horse			
6.	Others			
	Total			

4.5 Information on Income Resources

4.5.1 What are the income sources of your family members?

Serial No.	Sources of income	Major sources	No. of family members involved in different occupations	Annual income	Remarks
1.	Agriculture				
2.	Livestock				
3.	Business				
4.	Service				
5.	Cottage industry				
6.	Wage-earning				
7.	Rent collection of houses and vehicles				
8.	Fringe benefits, dividends, etc.				
	Total				

4.5.1.1 Total income  Rs.



5. Information on Attitude toward Education and Development Activities of the Household head

Please, give your own opinion about the following statements.

S. No.	Statement	Agree 1	Un- decided 0	Dis- agree -1
1.	There has been an improvement in the children's behaviours and cleanliness habits as the result of education they have had			
2.	The children have provided help in domestic chores with the knowledge and skills that they have learnt at school			
3.	Equal opportunity of education for girls is not necessary			

S. No.	Statement	Agree 1	Un- decided 0	Dis- agree -1
4.	The exorcists are better to be consulted than health workers in the health post in case of illness			
5.	Lessons on cleanliness taught to the children at school contribute to the family members too			
6.	The condition of the village has tremendously improved after the spread of education			
7.	Industrial development is not possible in the village except agriculture			
8.	The village can develop with the collective efforts of the villagers only			
9.	The villagers' willingness to participate in the village development activities has increased with the establishment of schools			
10.	Family planning is necessary to control population growth			
11.	The adult education program has not affected or will not affect the village situation			
12.	It is better to involve girls in household work than to send them to school			
13.	When you strongly feel for doing something you should do it even at the cost of traditional values and customs			
14.	It is not necessary to adopt better farming techniques such as the use of improved variety of seeds, chemical fertilizers, pesticide, scientific agricultural implements, etc. in order to increase agricultural production			
15.	The adults should participate in adult education program containing literacy, modern farming techniques, skill development, cleanliness aspects and so on when they are free			
16.	There is no need of publicizing the modern farming system in order to increase agricultural production			
17.	The government, and not the villagers should manage everything like transportation facility and culverts, provision of irrigation and drinking water, etc. for the development of the village			
18.	There is no need of undergoing family planning measures for happy family life			
19.	The health services program has helped to control the disease			

S. No.	Statement	Agree 1	Un- decided 0	Dis- agree -1
20.	The agriculture development program (radio broadcast, agriculture education, services of JTA, etc.) has contributed to increasing agricultural production of the village			

5.1 Measurement of the attitude

20                      22

[The sum total of the figures collected from the attitudinal statements.]

205

School Survey Form

1. Geographic Information

1.1 District \_\_\_\_\_

1

1.2 Village Panchayat \_\_\_\_\_

2

2. General Information

2.1 Name of the School \_\_\_\_\_

3 4

2.2 Address :

District \_\_\_\_\_

5 6

Village Panchayat \_\_\_\_\_

Name of the Village \_\_\_\_\_

2.3 School Identity No. \_\_\_\_\_

Card No.

7  
8 9

2.4 Established on \_\_\_\_\_

10 11

2.5 School Level:

1 = Primary

12

2 = Lower secondary

3 = Secondary

1 = Vocational

13

2 = General

2.6 Classes in operation:

From grade  to  grades

14 16

2.7 Types of school:

1 = Co-education

2 = Only for boys

3 = Only for girls

[For primary schools only]

2.8 How near is the lower secondary school from this school?

18				20

Name of the school \_\_\_\_\_

Distance \_\_\_\_\_ kms.

[For lower secondary schools only]

2.9 How near is the secondary school from this school?

21				23

Name of the school \_\_\_\_\_

Distance \_\_\_\_\_ kms.

207

3. Information on Teachers

Please give information on teachers of your school.

S. No.	Full Name	Caste	Sex		Mother tongue	Local	Out-sider	Quali-fication	Training		Experi-ences (No. of years)	Teaching in		Subjects taught at the school
			Male	Female					Trained	Untra-ined		Highest	Lowest	

82

3.1	No. of teachers with under-S.L.C. qualification who teach at the primary level	<input type="text"/>	<input type="text"/>	24
3.2	No. of teachers with below I.A. qualification who teach at the lower secondary level	<input type="text"/>	<input type="text"/>	25 26
3.3	No. of teachers with below B.A. qualification who teach at the secondary level	<input type="text"/>	<input type="text"/>	27 28
3.4	No. of male teachers teaching in the primary level	<input type="text"/>	<input type="text"/>	29
3.5	No. of male teachers teaching in the lower secondary level	<input type="text"/>	<input type="text"/>	30 31
3.6	No. of male teachers teaching in the secondary level	<input type="text"/>	<input type="text"/>	32 33
3.7	No. of female teachers teaching in the primary level	<input type="text"/>	<input type="text"/>	34
3.8	No. of female teachers teaching in the lower secondary level	<input type="text"/>	<input type="text"/>	35 36
3.9	No. of female teachers teaching in the secondary level	<input type="text"/>	<input type="text"/>	37 38
3.10	No. of local teachers who are teaching in the primary level	<input type="text"/>	<input type="text"/>	39
3.11	No. of local teachers teaching both in the lower secondary and secondary level	<input type="text"/>	<input type="text"/>	40 41
3.12	No. of trained teachers teaching in the primary level	<input type="text"/>	<input type="text"/>	42
3.13	No. of trained teachers teaching both in the lower secondary and secondary level	<input type="text"/>	<input type="text"/>	43 44
3.14	No. of teachers teaching in the primary level who speak Nepali as their mother tongue	<input type="text"/>	<input type="text"/>	45
3.15	No. of teachers teaching in both the lower secondary and secondary level who speak Nepali as their mother tongue	<input type="text"/>	<input type="text"/>	46 47
3.16	No. of teachers belonging to the major castes of the village who are teaching in the primary level	<input type="text"/>	<input type="text"/>	48
3.17	No. of major ethnic teachers teaching both in the lower secondary and secondary level	<input type="text"/>	<input type="text"/>	49 50
3.18	No. of primary level teachers who have teaching experience of five years or more	<input type="text"/>	<input type="text"/>	51
3.19	No. of lower secondary and secondary level teachers who have teaching experience of five years or more	<input type="text"/>	<input type="text"/>	52 53

209



Information on Students

What is the distribution pattern of students in each class of your school?

Class	/	1	/	2	/	3	/	4	/	5	/	6	/	7	/	8	/	9	/	10	/	Total
Boys	/		/		/		/		/		/		/		/		/		/		/	
Girls	/		/		/		/		/		/		/		/		/		/		/	
Total	/		/		/		/		/		/		/		/		/		/		/	

4.1 No. of boys studying at the primary level	<input type="text"/>
4.2 No. of girls studying at the primary level	<input type="text"/>
4.3 No. of boys studying both at the lower-secondary and secondary level	<input type="text"/>
4.4 No. of girls studying both at the lower secondary and secondary level	<input type="text"/>

<input type="text"/>	<input type="text"/>
54	56
<input type="text"/>	<input type="text"/>
57	59
<input type="text"/>	<input type="text"/>
60	62
<input type="text"/>	<input type="text"/>
63	65

5. Income/Expenditure Information

5.1 How much is the income of your school and from which sources does it come?

[Give itemized income figures for the last year]

S. No.	Item	Income (Rs.)
1.	Tuition fee	
2.	Government grant	
3.	Return from the land	
4.	Non-governmental grant	
5.	Other sources, if any	
Total		

5.1.1 Total income of the school /Rs.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
66							71

5.2 Give itemized expenditure for the last figures:

     /      /       
72 73

S. No.	Item	Expenditure (Rs.)	
		Primary	Lower secondary and secondary
1.	Salary and Allowances		
	(a) Teachers		
	(b) Other staffs		
2.	Stationary		
3.	Instructional materials		
4.	Extra curricular activities		
5.	Miscellaneous		
	Total expenses		
	Balance		

     /      /       
74 75

Card No.   5   /   7  

5.2.1 Annual expenditure of primary school /Rs. <u>    </u> /
5.2.2 Annual expenditure of lower secondary schools /Rs. <u>    </u> /

     /      /       
8 12

     /      /       
13 18

6. Information on Physical Facilities

6.1 Please, give some information on your school as mentioned in the table below.

S.No. of building	Type of building			No. of storeys	No. of rooms		Remarks
	Mud wall	Brick wall			Class rooms	Rooms for other activities	
		Tile roofed	R.C.C. plastered				

211

6.1.1 Types of building

[Enumerate average in case of more than one building]

19

6.2 How is the amount of space as mentioned in the table given below.

S. No	Space for different purposes	Yes		No	Remarks
		Enough	Not enough		
1.	Office room				
2.	Laboratory				
3.	Workshop				
4.	Teacher's room				
5.	Library				
6.	Playground				
7.	Store room				
8.					
9.					

20  
  
21  
  
22  
  
23  
  
24  
  
25

6.3 What is the area of the school compound?

Ropani\*

Bigha\*

26      29

6.4 Please give some information on classrooms as mentioned in the table given below.

Serial no. of building	Serial no. of class-room	Measurement of classrooms		Morning session		Day session	
		Length (meter)	Breadth (meter)	Class	No. of students	Class	No. of students

\*1 Ropani = 74' x 74'. 1 Bigha = 13 ropani.

212

6.4.1 Amount of space available in the classroom for each student at the primary level

Space

30 32

6.4.2 Amount of space available in the classroom for each student both at the lower secondary and secondary levels

Space

[Calculate the total area of all classrooms and divide it by the total number of students for each specific level.]

33 35

7. Information on Educational Materials

(For the related subject teacher)

Please give an assessment of various subjects-related instructional materials which are needed for teaching subjects included in the curriculum.

Description	Availability	
	Yes	No
1. Ordinary Materials		
a) Chalk		
b) Duster		
c) Blackboard		
d)		
e)		

36

1 = Too insufficient

2 = Almost insufficient

3 = Mostly sufficient

4 = Sufficient

2. Description	Availability	
	Yes	No
Chart and Maps		
a) Maps		
b) Posters on health education		
c) Language charts		
d) Mathematical charts		
e)		
f)		

37

1 = Too insufficient  2 = Almost insufficient   
 3 = Mostly sufficient  4 = Sufficient

3. Description	Availability	
	Yes	No
Physical education		
a) Materials for physical exercise		
b) Sports materials		
c)		

38

1 = Too insufficient  2 = Almost insufficient   
 3 = Mostly sufficient  4 = Sufficient

4. Description	Availability	
	Yes	No
Library		
a) Books		
b) Magazines, journals, bulletins, etc.		
c) Newspapers		
d)		

39

1 = Too insufficient  2 = Almost insufficient   
 3 = Mostly sufficient  4 = Sufficient

214

5. Description	Availability	
	Yes	No
Science equipment		
a) Equipment on physics		
b) Chemicals and equipment on chemistry		
c) Materials on biology		
d) Materials on astronomy		
e)		

1 = Too insufficient       2 = Almost insufficient   
 3 = Mostly sufficient       4 = Sufficient

6. Description	Availability	
	Yes	No
Pre-vocational materials		
a) Equipment		
b) Instruments and implements		
c) Land		
d)		
e)		

1 = Too insufficient       2 = Almost insufficient   
 3 = Mostly sufficient       4 = Sufficient

7. Description	Availability	
	Yes	No
Vocational materials		
a) Agricultural implements		
Seeds		
Land		
Others		

75

	Availability	
	Yes	No
b) Home science equipment.		
Utensils		
Other materials		
c) Secretarial Science		
Materials		
Books on typing and symbols		
d) Industrial and technical instruments		
Equipment		
Ordinary materials		
Others		

1 = Too insufficient       2 = Almost insufficient   
3 = Mostly sufficient       4 = Sufficient

8. Information on Attendance

Please give the attendance record of the students as shown in the table given below.

Name of the School \_\_\_\_\_

No. of school days \_\_\_\_\_

S. No.	Name of the student in full	Sex	Age	Address	Class	No. of days of attendance

Appendix - D

Village Panchayat Survey Form

1. General Information

- (a) Name of the village panchayat \_\_\_\_\_
- (b) District \_\_\_\_\_
- (c) Area of the village panchayat \_\_\_\_\_
- (d) The category to which the village panchayat belongs
- High
- Medium
- Low

2. Historical Background

- (a) Historical description in general:
- (b) The history of educational development:

3. Geography

- (a) Physical features:
- (b) Climate:
- (c) Transport and communication:
- (d) River system:
- (e) Natural resources:

4. Social Milieu

- (a) Information on religion, language, ethnic composition and population:

217



Ethnic group	Language spoken by the people	Religion	Total population	No. of 6-15 year old children	No. of households	Remarks

(b) Occupation of the people:

(c) Social and cultural practices:

4. Educational Development

(a) Information on schools, students and teachers:

Level of the school	Primary school	Lower secondary school	Secondary school	Campus	Remarks
Number of schools					
Number of students					
Number of teachers					

(b) People's attitude toward schools:

(c) Learning programs for illiterate adults and achievements from them:

(d) Other nonformal educational activities:

Serial No.	Type of training	No. of participants		Training institution	Duration of training
		Male	Female		

- (e) Opportunities for higher education:
- (f) People's participation in education:

5. Economic Information

- (a) Resources and means for their mobilization:
- (b) Agricultural aspect:
  - i. Area of cultivable land
  - ii. Irrigational facilities
  - iii. Production of cash crops
  - iv. Production of foodgrains
  - v. Modernization of agricultural practices
  - vi. Services from J.T.A.
- (c) Industry and commerce:
  - i. Information on cottage industries located around the village panchayat
  - ii. Information on agro-based industries
  - iii. Production and export of raw materials
  - iv. Goods imported from outside
  - v. Marketing facilities and shopping centre
- (d) Information on development plans and projects going on in and around the village panchayat:

6. Health Services and Facilities

- (a) People's habit of cleanliness:
- (b) People's awareness of maintaining good health:
- (c) Ways adopted by the people regarding prevention and treatment of diseases:
- (d) Attitude toward family planning and people's willingness in the adoption of family planning measures:

7. Contribution to the village development program by the village panchayat leaders

(a) Active participation in the educational expansion in the village panchayat:

(b) Local initiative in undertaking construction works:

(c) Involvement in several other areas of village development programs:

8. Information on the developmental roles played by social and class organizations and other service clubs.

9. General remarks

District Survey Form

1. General Information

(a) Name of the district \_\_\_\_\_

(b) Area of the district \_\_\_\_\_

(c) Under which category does it fall?

/A/ /B/ /C/ /D/ /E/ /F/ /G/

2. Information on Social Aspects of the District

[Collection of information from the District Office]

(a) What is the population of the district?

(b) Which is the major ethnic group in the district? What other caste people are there in this district?

(c) What language is mainly spoken by the people? What other languages are used by the people in this district?

(d) What is the major religion of this district? What other religions are practised by the people?

(e) What is the main occupation of the people? What are other subsidiary professions?

3. Information on Education

[To be acquired from District Education Office]

(a) No. of schools -

Serial No.	Level	Numbers of schools			
		Primary level	Lower Secondary level	Secondary level	Campus
1.	Primary				
2.	Lower secondary				
3.	Secondary				
4.	Campus				
	Total				

(b) Total number of students enrolled at different levels.

Primary level		Lower secondary level		Secondary level		Campus		Total
Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	

(c) No. of teachers.

Level	Training	Boys	Girls	Total
Primary	Trained			
	Untrained			
Lower Secondary	Trained			
	Untrained			
Secondary	Trained			
	Untrained			
Campus	Trained			
	Untrained			

(d) In what form has the nonformal education developed in this district?  
 [When was it started? What types of program were offered? What educational programs are in operation now and in how many centres are they running?  
 How many and what kind of people are beneficiaries of these programs?]

(e) History of Educational Development and the Availability of Higher Education Opportunities in the District.

1. When was education first started in this district?
2. In what form and at what pace has educational expansion taken place in this district?
3. What is the number of S.L.C. pass people here? (Give the number on a yearwise basis)
4. What opportunities for higher education are available here?

(f) Problems concerning Educational Development in the District.  
[Such problems as are related to educational administration, improvement of quality in education, etc. in the district.]

4. Information on Health Services

[To be collected from Public Health Office]

(While collecting information on health services the number of hospitals, health posts and Ayurvedic centres and the date of their establishment have to be acquired. Moreover, information on health services campaign undertaken by this office and the influence of jhankris (exorcists or faith-healers) on the people have to be noted too.)

5. Information on Transport and Communication

[Information on this aspect has to be drawn from the district post office and telegraph office.]

(While collecting information it is required to take into account the type of transportation and if the modern means of transportation have been introduced, mention the year when such means were introduced in this district. Likewise, the number of post offices, sub-post offices and the facilities of wireless system have also to be noted.)

6. Information on Power Supply

[Collect this information from related offices.]

(Information on power supply should include the availability and facility of power supply, and the coverage of power supply. If there is no facility of power supply it will be necessary to note how the people manage to get light and fuel.)

Information on Industry

[Collect information from the related office or in the absence of this office, contact the district office.]

(Information on industry should include the type and number of small-scale and large-scale industries, their production rate, demand and the current status.)

8. Information on Agriculture

[Collect from District Agriculture Office]

(a) Crop production:

[a.1] Food crops

[a.2] Cash crops

(b) Irrigation system:

(c) Steps taken for modernizing the agricultural pattern.

9. Information on Business

[Collect from the Chief District Office.]

(a) Marketing centre

(b) Goods imported in the district

(c) Goods exported from the district

(d) How and when were business activities initiated and how their subsequent expansion and diversification have taken place?

10. Information on the Development Plans of the District

[Collect from the District Panchayat Office.]

List of national level and district level development plans with their brief descriptions.

(Give the importance of each specific plan showing in the 'remarks' column how many people will be benefitted.)

224

Serial No.	Name of the plan	Name of village panchayat	Planning level and grants		Total outlay	Remarks
			District level	National level		

11. Miscellaneous Information

[Collect from various respective offices.]

(This aspect should include district-based offices, social organizations, service clubs, etc.)

Serial No.	Name of the institution	Address	Date of establishment	Remarks

225



Appendix - F

ADVISORY PANEL

1. Malla, Professor Upendra Man  
Member,  
National Planning Commission
2. Sharma, Dr. Suresh Raj  
Member Secretary,  
National Education Committee
3. Shrestha, Dr. Kedar Nath  
Dean,  
Institute of Education/T.U.  
[At present Chief Specialist,  
CTSDC/MOE]
4. Upadhaya, Dr. Ishwar Prasad  
Joint Secretary  
Ministry of Education and Culture
5. Shrestha, Mr. Bihari Krishna  
Joint Secretary,  
Ministry of Local Development and Panchayat
6. Dixit, Dr. Hemanga  
Formerly Dean,  
Institute of Medicine/T.U.
7. Chapagain, Mr. Devi Prasad  
Manager,  
National Computer Centre
8. Gurung, Mrs. Chandra  
Chief,  
Women's Training Centre
9. Shrestha, Mr. Babu Ram  
Under Secretary,  
Ministry of Finance

Appendix - G

List of Enumerators

1. Adhikari, Mr. Kamal
2. Aryal, Mr. Dipak Kumar
3. Bharati, Mr. Navaraj
4. Bhattarai, Mr. Sharad Prashad
5. Dhungana, Mr. Ujjwal
6. Dhungel, Mr. Dinesh Raj
7. Karki, Mr. Birendra
8. Mool, Mr. Satya Lal
9. Pradhan, Mr. Hari Gopal
10. Rajbanshi, Mr. Arjun Lal
11. Shrestha, Mr. Shubha Kumar
12. Sthapit, Mr. Mahesh Kumar
13. Subedi, Mr. Kiran Raj

Note: In addition 31 local enumerators were also recruited to assist in interviewing household heads and children of non-Nepali speaking families.

[Suresh]