Chapter I

INTRODUCTION

1.1 Background

Nepal, is a landlocked country situated between India and China, with a population of 26.6 million and occupying an area of 147,181 square km. It consists of 102 social groups and 92 languages (Preliminary results- National Population Census-CBS, 2011). It is a heterogeneous country in terms of topography, climate and culture. Until a recent change to a secular state, Nepal was the only Hindu state in the world. Nepal was declared a republic following the constituent parliamentary elections 2008 (Nepal in Figure, CBS, 2009).

Administratively, Nepal is divided into five development regions, fourteen zones and seventy five districts. The districts are again divided into municipality and village development committees (VDCs).

Nepal consists a wide range of climatic differences due to high variation in altitude. The climate ranges from hot tropical in the *Terai* to temperate in the midland and to Tundra in the mountains. As the climate along the southern belt is hot tropical monsoon, the *Terai* region including inner-*Terai* has dense forests and grows a variety of food and cash crops.

Caste system still persists among the major ethnic communities; social, cultural and economic conditions of a community have 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 or even as untouchables. These people, who have accepted their status in the hierarchy of Nepalese society for generation, hardly care to claim their right to equality. Earning bread is the major concern; education does not hold so much attraction for them. Besides, even the orthodox teachers discourage their children sitting together with so-called low caste children. Though in recent years this caste based discriminative treatment is diminishing, it still poses a problem in various parts of the country so that uninhibited socialization in a spirit of harmony among the pupils of a school often gets affected.

In Nepal, 80.62 percent people are *Hindus*, 10.74 percent of the *Buddhists*, 4.20 percent *Muslims*, 3.60 percent *Kirats*, 0.45 percent Christian and 0.39 percent belong to others religion (Nepal in figure, CBS, 2009). The *Hindus* and *Buddhists* live together in religious harmony. As the result of a process of symbolic growth and cross cultural interaction that has been going through the ages. Religion as a way of life has also been responsible for existence of a few religious schools. There are *Sanskrit* schools run by Hindu *Brahmins*. There are *Gumbas* run by Buddhist priest. There are *Madarasas* run by Muslims.

Nepali is the national language which understood by a large majority of the people is used as the medium of communication all over the country. It is the mother tongue of 48.61

percent population of the country. The Nepali speaking community comprise of *Brahmins, Chhetries, Damai, Sarki, Kami, Sunar* etc. There are some other languages spoken by the different communities. *Maithali* is spoken by 12.30 percent of the people, *Bhojpuri* by 7.53 percent, *Tharu* by 5.86 percent, *Tamang* by 5.19 percent, *Newari* by 3.63 percent, *Magar* by 3.39 percent and various other languages (Nepal in figure, CBS, 2009).

Cultivated land and population are unevenly distributed over the three topographical regions viz. mountains, hills and *Terai*. The *Terai* is known as the granary of Nepal because of plain fertile land and forests in this region.

Nepal is one of the poorest nations in Asia with 86 percent population living on less than U.S.D. 2 per day. The economy is dependent on subsistence farming much of which is in very difficult mountainous terrain with low accessibility to markets. Low diet and difficult lifestyle contribute to a life expectancy of merely 64 years (Population Reference Bureau, 2010). Most rural communities have not changed their lifestyle for generations due to geographical remoteness and political influence. Historically, rulers were so determined to keep the masses uneducated that schools were reserved only for the elite until 1951. Education in Nepal today remains very basic and poorly funded. This has affected traditional communities who have been starving for knowledge. As nobody has shown them other methods, communities have continued to follow only what they know, preventing improvements to their simple lifestyle.

1.2 District Profile

1.2.1 Chitwan

Chitwan is situated south west of *Narayani* river and also known as *Rapti* valley. The district lies within latitude 27°21’45’’N and 27°52’30’’N and longitudes 83°54’45’’E to 84°48’15’’E. The district is 141 meters to 1947 meters above sea level (Chitwan District Profile, 2007). It is bordered by Makawanpur and Parsa districts in the east, Nawalparasi and Tanahun districts in the west, Gorkha and Dhading in the north and Bihar state of India in south. The shape of district is somewhat triangle. It is narrower in west and north and broader in east and south. The maximum length is 88 meters and breadth ranges from 2 meters to 50 meters in north and south. The area of the district is 2238.39 square km. The Chitwan National Park is spread in 908.79 square km area which is 40.60 percent of total area. The plain covers 867.35 square km and hill covers 462.25 square km area of the district, which are 38.75 percent and 20.65 percent of total area respectively. Administratively the district is divided into 36 VDCs and 2 municipalities distributed among 13 *Ilakas*. There is a resource centre in each *Ilaka*. The distribution of primary schools in each *Ilaka* are given in the table no. 1.1. Bharatpur is administrative centre of the district.

Table 1.1: Distribution of types of primary schools in Chitwan district, 2009

S.N.	Resource Centre	Number of school		
		Government	Private	Total
1	Bhandara	39	5	44
2	Khairahani	29	21	50
3	Jhuwani	34	22	56
4	Pithuwa	31	12	43
5	Shaktikhor	34	0	34
6	Muglin	31	4	35
7	Kabilash	21	0	21
8	Lanku	34	49	83
9	Gitanagar	29	15	44
10	Parvatipur	28	12	40
11	Dibyanagar	23	8	31
12	Baruwa	21	2	23
13	Ayodhyapur	24	3	27
Total		378	153	531

Source: District education office, Chitwan 2010

1.2.2 Nawalparasi

The name, Nawalparasi, comprises of two words *Nawal* and *Parasi* which are derived from *Nawalpur* and *Parasi.* Nawalparasi lies in Lumbini zone. The area is bordered by *Daunne* Hill in east and west. The east west high way passes through the middle of district which is around 99 km long. The area of district is 2016.16 square km. The district is divided into 73 VDCs and one municipality. It lies 500 meter to 1936 meter high above sea level. The district can geographically be divided into *Terai,* inner *Terai* and hill. The 17 VDCs of northern part of district lies in of *Mahabharat* hills where are situated. The inner *Terai* lies south of *Mahabharat* and *Chure* hills. The area of inner *Terai* is narrow in east and broader in south west. In this area lie 20 VDCs of the district. The *Terai* region starts from west south of *Chure* hill. In this area lie 36 VDCs of the district. 73 VDCs and one municipality divided into 13 *Ilakas*. There is a resource centre in each *Ilaka*. Parasi is the administrative centre of the district. The distribution of primary schools according to government and private schools are given in the table no. 1.2 (Nawalparasi District Profile, 2008).

Table 1.2: Distribution of types of primary schools in Nawalparasi district, 2009

S.N.	Resource Centre	Number of school		
		Government	Private	Total
1	Amarapuri	22	4	26
2	Arunkhola	38	10	48
3	Belatanri	48	10	58
4	Bulingtar	27	0	27
5	Dainhawa	39	19	58
6	Danda	37	11	48
7	Dedhgaun	36	1	37
8	Gaindakote	28	11	39
9	Panchnagar	33	23	56
10	Parasi	37	33	70
11	Pragatinagar	24	7	31
12	Sardi	49	4	53
13	Shiv Mandir	30	11	41
Total		448	144	592

Source: District education office, Nawalparasi, 2010

1.3 Education in Nepal: A Historical Review

The universal declaration of Human Rights, adopted by the United Nations in 1948, asserted that " everyone has right to education without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social, property, birth or other status and subsequent". Pre 1951, primary education was felt necessary even during the last decades of *Rana* regime, which was otherwise known for its anti-education policy. The *Rana* autocracy felt that public education would be a political threat to its survival, so they did not encourage education for anybody other than themselves and their favored ones. The fact that there was only one college in the entire kingdom of Nepal until 1951 was indicative of their educational policy. However, even then it was not possible for the *Rana* rulers to complete stop the progress of public education, at least at the lower levels. Therefore each successive *Rana* Prime Minister opened several primary schools and one or two high schools in various parts of the kingdom, mainly urban centers. However those who went to these schools were the children of upper caste and well-off families in urban as well as rural areas. The educational development was slowed down by government to such extent that by 1950 less than 1 percent people were literate (Bajracharya, undated).

After the political change of 1951 that overthrew the *Rana* regime, the policy of successive governments was to make at least primary education accessible for all. There was a universal basic and primary education policy during the 1950s. Among the people, the thirst for education could be observed even in the remote areas. This thirst brought a great of commitment on the part of the communities for education. Many communities opened schools for their children. The enthusiasm of youth to improve the access and quality of education was remarkable. Most of these schools were started under trees, without buildings and other facilities. People were proud to be thought of as 'revolutionary'. Sending girls to school was one of their acts of revolution. Most schools were managed jointly by the teachers and the community. The role of the government in these schools was limited to providing nominal financial support, as allowed by available funds. Educated youths offered themselves to teach voluntarily or with nominal pay. Teaching was seen as a respectable job in the society.

The National Educational Planning Commission recommended universal literacy in Nepal within 25 years in1955. In 1955, the first elected government opened 1,600 primary schools in a single year and 600 primary schools in 1960. Altogether, 2,200 primary schools were established, matching the number of polling booths in the first ever elections in 1959.

The elected government work was somewhat slowed down by the political change that took place in December 1960 when King Mahendra dissolved the parliament, banned political parties, and imposed his direct rule under the "Party less *Panchayat* Democracy." The policy of universal literacy in 25 years was abandoned and a lower target was established. Then the disgruntled political groups started using schoolteachers as activists to keep their political ideologies alive. Thus, politics entered into the field of education.

The 1960s decade was a period of some confusion caused by the conflict of competing political ideologies: the party less *Panchayat* democracy and constitutional monarchy with parliamentary democracy. No new educational policy was enunciated for some time, so community participation in education continued at the local level. However, at the centre a new educational system and education plan was prepared to suit the changed political context. The educational administration, like political power, was centralized so that the new educational policy could be implemented firmly

The government announced a National Education System Plan (NESP) in 1971. Under the system all the schools running in partnership with the community were taken over by the government. The main objective was to develop mid-level managers and skilled human resources for economic development of the country. There was a clear emphasis on vocational education. The terminal goal for each level of schooling according to NESP has been stated as 'making literate' for primary level, 'character-building' for the lower secondary level and 'preparation of productive citizens' for secondary level.

The NESP also had a policy of universal primary education. Primary school enrolment rose dramatically in 1970s and 1980s. New textbooks were produced. There was a strong emphasis on Nepali as a medium of education. To bring uniformity in education, the educational administration was centralized completely.

However, NESP was not based on a realistic assessment of the country's resource situation and thus the program faced severe resource constraints. Teachers became government employees and teaching became just a job for them. Parents and communities had little role to play. Education became a state affair altogether.

There was a gradual but nominal increase in percentage of literacy, but the relevance and quality of basic education was questionable. The NESP proved a failure in terms of delivery, and the government had little choice but to allow private schools again, in contradiction to the earlier policy of nationalizing all schools and their management. However, the management skills of the people were almost lost due to exclusion from education for more than a decade, and it took a long time to reappear.

NESP faced constant political challenges from the outlawed political parties as it was closely identified with the party less *Panchayat* democracy. According to the education plan, the objective of NESP was to "produce citizens, who, with full faith in the country and the crown, will conduct themselves in accordance with the *Panchayat* system; and to meet the manpower requirements of development through the spread of scientific and technical education." However, teachers as well as students were highly politicized and they continually took to the street on every possible occasion. Unfortunately, in the process of political war, everyone forgot their responsibility towards children, and became a part in ruining their lives. Marginalized ethnic groups and children from poor families remained untouched by the national education system.

Due to public pressure on the government regarding the NESP that was perceived as a centralizing and controlling measure and was resented by the people, the government adopted a more liberal policy of privatization of education in 1980. As a result, a rapid proliferation of private primary schools and high schools has taken place since then. These private schools are mostly concentrated in urban centers and rural settlements with easier transportation. They take much higher tuition fees and other charges. The pattern of enrolment in these schools shows that parents tend to send their children to private schools according to the level of their own education/awareness and their family income. The gender breakdown of figures for private schools is not available but from school visits it is clear that there are more boys enrolled in these schools than girls are.

The political change of 1990, which restored multi-party democracy, has brought another phase in the history of educational policy in Nepal. "Education for All" has become a national slogan again. This has brought a new optimism. In 1992, the government constituted the National Education Commission to make policy recommendations for education based on

democratic values. Therefore, “Free School Education” became the policy of Nepal in 1990s. The World Conference on Education for All (EFA) and the restoration of multi-party democracy coincided in 1990. Nepal also signed the Convention on the Rights of Child (CRC) that declares education a fundamental right of every child.

However, even after the restoration of multi-party democracy, the political leadership has been unable to move ahead as fast as people expect. Successive governments have not been able to deliver services to benefit all sections of society. Education still remains the primary aspiration of the people. People are prepared to invest in their children’s education. Since government schools lack management efficiency, private schools have been established on a massive scale, not only in towns but also in remote villages. However, in the absence of a clear state policy these private schools choose their own management system and set their own policies for student fees and teacher salaries. Their costs seem to be decided without a clear basis and motivated by profit only. Education is focused on examination results – as the private schools boast of their SLC pass rates. They get children through exams; otherwise parents would not pay. However, this raises the question of whether that is the sole end of education.

Education remains a central political concern, highlighted by the fact that it has become a battleground for the Maoists’ “People’s War.” The Maoists, whose “People War” began in 1996, demanded a complete reform of the government school system and the closure of private schools accusing them of charging exorbitant fees. They have taken direct action against private schools forcing them to close down. The government formed a high level Educational Working Committee to look into ‘community’ (all government) and ‘institutional’ (all private) schools. It has also stressed that the state must provide free primary education for all, investing a specific amount and maintaining a certain level of quality. Private schools can charge fees based on investment on materials and services per child. The committee also suggested a school licensing system and mandatory training of teachers. However, as there has been no action taken by the government the future of school education is still in confusion.

In Nepal, the recent peace and political stability, combined with a growing awareness of the value of education have contributed to a significant increase in the demand for and expectations from public educational services. In spite of the significant improvements in access and enrolment over a decade or so, many children and young people leave schools without developing their potential, and without acquiring the basic skills deemed necessary for raising their standards of living and the knowledge needed to effectively function in society. Functional literacy and numeracy are essential for our economy; but approximately half of the population lacks these basic skills.

Every country has its own definition of primary education that needs to be translated into a comparable standard in order to assess progress towards international goals. For the purpose of international comparisons, primary education is defined by the International Standard Classification of Education (ISCED). Primary education is characterized by introductory and systematic provision of instruction in reading, writing and mathematics. The ISCED assumes that the duration needed for

primary level content is six years. However, duration and starting age of educational program serve only as subsidiary criteria for the classification. The implementation of ISCED leads to a cross-nationally comparable classification, although the age range for the program can differ by country.

1.4 School Education Structure

Nepal's school education is structured as early childhood development (ECD)/ pre-primary level (PPC), primary, lower secondary, secondary and higher secondary education. These schools include ECD/PPC of one to three years duration. Primary schools provide five years of education to the children 5-9 years of age and consist of grades I through V. The lower secondary education consists of three years, the grades VI-VIII. Similarly, secondary and higher secondary education comprise two years each with grades IX-X and XI-XII respectively. There are more than 31,000 primary schools in Nepal (Flash I Report, Ministry of Education, Nepal, 2007-2008).The following table shows the school education system of Nepal.

Table 1.3: School education structure in Nepal

Age	Education Year	Types of Schooling system
3		Pre-primary Education
4		
5	1	Primary Education (Grades I-V)
6	2	
7	3	
8	4	
9	5	
10	6	Lower Secondary Education (Grades VI-VIII)
11	7	
12	8	
13	9	Secondary Education (Grades IX – X)
14	10	
15	11	Higher Secondary Education (Grades XI – XII)
16	12	

Source: Department of education, Nepal, 2010

1.5 Education for All

The National Plan of Action has outlined its framework according to the following six major EFA goals set by Dakar Forum for the year 2015.

1. Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.
2. Ensuring that by 2015 all children have access to and complete, free and compulsory primary education of good quality particularly girls, children in difficult circumstances and those belonging to ethnic minorities.
3. Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programs.
4. Achieving a 50 percent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults.
5. Eliminating gender disparities in primary and secondary education by 2005 and achieving gender equality in education by 2015, with a focus on ensuring girl's full and equal access to and achievement in, basic education of good quality.
6. Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

The objective of Education for All is to ensure that children throughout the world have access to basic education actually acquire basic literacy and numeracy skill and develop the capacity for autonomous learning. The 1990 World Declaration on Education for All defined the purpose of EFA as meeting basic learning needs:

1. Every person-child, youth, adult shall be able to benefit from educational opportunities designed to meet their basic learning needs. These needs include both essential learning tools (such as literacy, oral expression, numeracy, and problem solving) and basic learning content (such as knowledge, skills, values and attitudes) human beings require to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, and to continues learning. The scope of basic learning needs and how methods to address them vary with individual countries and cultures and inevitably, changes with passage of time.

2. The fulfillment of these needs empowers individuals in any society and confers upon them a responsibility to respect and build upon their collective cultural, linguistic and spiritual heritage, to promote the education of others, to further the cause of social justice, to achieve environmental protection, to be tolerant towards social, political and religious systems which differ from their own, ensuring that commonly accepted humanistic values and human rights are upheld, and to work for international peace and solidarity in an interdependent world.

3. Another and no less fundamental aim of educational development is the transmission and enrichment of common cultural and moral values. It is in these values that individuals and society find their identity and worth.

4. Basic education is more than an end in itself; it is the foundation for lifelong learning and human development on which countries may build, systematically, further levels and types of education and training.

1.6 Enrollment in Primary school

Enrollment shows the level of participation and access in education both of total and of children of school-going age. The Government of Nepal has placed emphasis on increasing enrollment in schools by various support programs, particularly focusing on the enrollment of girls, *Dalits* (untouchable caste) and disadvantaged community children. The primary gross enrollment ratio (GER) is computed as the number of children attending primary school as a percentage of the target age group for primary school, that is the number of children 6-10 years of age . Overage children and repetitions could result in a ratio greater than 100. The gross primary school enrollment ratio is 141.4 percent for Nepal. This ratio is 137.1 percent for boys and 146.1 percent for girls for the year 2009 (School level educational statistics of Nepal, 2010).

Table 1.4: GER and NER trends in primary schools of Nepal

Year	GER			NER		
	Girl	Boy	Total	Girl	Boy	Total
2005	141.8	148.8	145.4	83.4	90.1	86.8
2006	138.4	139.2	138.8	85.5	89.3	87.4
2007	139.6	137.6	138.5	87.4	90.7	89.1
2008	145.6	140.2	142.8	90.4	93.2	91.9
2009	146.1	137.1	141.4	92.6	94.7	93.7
2010	144.8	134.5	139.5	93.6	95.3	94.5
2011	141.2	131.0	135.9	94.5	95.6	95.1

Source: Department of education, Nepal, 2010/2011

The net primary enrollment ratio (NER) is the number of 6-10 year olds attending primary school, as a percentage of the number of 6-10 years old in the population. Net primary school enrollment rates are significantly lower than the gross enrollment rates i.e. 93.7 percent for Nepal, 94.7 percent for boys and 92.6 percent for girls for the year 2009. The wide disparity in the net and gross enrollment rates seems to indicate that there are many children who start school late, or that there is a large number of grade repetition. Inter-regional disparities, differences across urban-rural locations and across ecological belts are also observed in these rates.

Table 1.5: GER and NER trends in primary schools of Chitwan District

Year	GER			NER		
	Girl	Boy	Total	Girl	Boy	Total
2005	150.2	151.7	151.0	90.6	98.9	97.5
2006	143.3	140.5	142.8	89.3	91.8	90.6
2007	143.7	139.0	141.3	92.2	93.1	92.7
2008	137.4	134.4	135.8	96.8	96.8	96.8
2009	125.0	122.1	123.5	98.0	96.7	97.3
2010	117.2	116.3	116.7	97.2	96.1	96.6
2011	116.2	115.8	116.0	96.6	96.0	96.3

Source: Department of education, 2010/2011

The gross primary school enrollment ratio is 123.5 percent for Chitwan district. This ratio is 122.1 percent for boys and 125.0 percent for girls for the year 2009.This ratios are quite low with compared to previous years. Net primary school enrollment rates are significantly lower than the gross enrollment rates 97.3% for Chitwan as a whole, 96.7 percent for boys and 98.0 percent for girls for the year 2009. The NER is observed higher for girls than boys only in the year 2009. In other years NER of boys is higher than girls (School level educational statistics of Nepal, 2010/2011).

The gross primary school enrollment ratio is 127.5.5 percent for Nawalparsi district. This ratio is 142.0 percent for boys and 153.4 percent for girls for the year 2009. Net primary school enrollment rates are significantly lower than the gross enrollment rates 96.7% for Nawalparasi as a whole, 96.1 percent for boys and 97.4% for girls for the year 2009 (School level educational statistics of Nepal, 2010/2011).

Table 1.6: GER and NER trends in primary schools of Nawalparasi district

Year	GER			NER		
	Girl	Boy	Total	Girl	Boy	Total
2005	158.3	161.3	159.8	96.0	98.9	97.5
2006	144.5	140.4	142.4	92.3	94.0	93.2
2007	149.1	140.6	144.8	92.7	95.8	94.3
2008	142.7	133.0	137.7	96.4	96.0	96.2

2009	153.4	142.0	147.5	97.4	96.1	96.7
2010	144.6	131.4	137.8	96,8	96.6	96.7
2011	136.5	124.0	130.0	96.0	96.3	96.2

Source: Department of education, Nepal, 2010/2011

Countries made international commitments towards eliminating gender disparities in primary education by 2005. Gender parity in primary education is reflected in fifth goal of Dakar Framework for Action 2000 and third Millennium Development Goal (MDG). There are many countries far from reaching this goal.

1.7 Problem statement

In the world, there are more than 800 million children under 6 years of age, less than a third of them benefit from any form of early childhood education. Out of 113 million children, 60 percent are girl, have no access to primary schooling. The UNICEF and the UNESCO Institute for Statistics estimate that around 500,000 girls and 400,000 boys of primary school age are not attending schools in Nepal. Over the last couple of decades, Nepal has made remarkable progress in achieving access to education. Primary school facilities have been extended to reach almost every village in the country, with an average of five schools per VDC. The National Living Standard Survey conducted by the Central Bureau of Statistics (CBS) in1997 found that the commuting distance between homes to schools, even in remote areas, is 15 minutes for a large majority of the primary school students. The same survey also found that 97 percent of urban households and 88 percent of rural households have a school within a commuting distance of 30 minutes.

However, Nepal is one of the poorest countries in the world, and neither the government nor the public have had enough resources to support this remarkable expansion adequately. Due to the meager supply of resources and poorly developed infrastructure in public schools, high dropout and high repetition are not unexpected. According to the statistics published in 2008 by the Department of Education (DOE), about 16.1 percent of the total enrollment in grade I drop out each year. In grades II, III, IV, and V, dropout rates are 11.7 percent, 9.7 percent, 10.1 percent, and 10.2 percent, respectively. Grade repetition is also high in the primary grades about 42 percent in grade I, and over 10 percent in the remaining primary grades. High dropout rates and high repetition rates have been common in Nepal's primary schools for the past two decades.

The dropout is defined in various ways in different countries. A drop-out can be defined as a child who enrolls in school but fails to complete the relevant level of the educational cycle. The primary school dropout means that the child fails to reach the final grade (Sattar,1984).

In Nepal, anyone who leaves a primary school, for whatever reason, is counted as a dropout, even though some soon enroll in another school (Karki, 2004).

North Carolina State Board of Education Policy of USA defines a dropout as "any student who leaves school for any reason before graduation or completion of a program of studies without transferring to another elementary or secondary school."

According to DoE (2006), the dropout rate is the percentage of students enrolled in a given grade in an academic year who are not enrolled in any grade during the following school year.

The country's internal migration in 2001 was about 13.2 percent of the total population (CBS, 2002). On the other hand, because schools receive funding on the basis of their enrollments, some schools might underestimate dropouts in their schools so as to inflate their total enrollments. Unless these two offsetting biases are exactly equal, the officially reported dropout rates possibly contain some degree of error.

1.8 Education policies in Nepal

To increase the enrollment in primary school level, the Government of Nepal has made the primary education free for all school age children. Textbooks are the main material for teaching and learning activities. The Government provides the textbooks free of cost to all primary school children. To attract Dalit and girl children, the government provides the scholarship for all *Dalit* children and 50 percent of school-going girls.

1.9 Promotion, repetition and dropout rates

The following tables show the promotion repetition and dropout rates from year 2006 to 2009 (School level educational statistics of Nepal, 2010).

Table 1.7: Promotion, repetition and dropout rates of primary school in Chitwan district from 2006 to 2009.

Grade	Status	2006			2007			2008			2009		
		Girl	Boy	Total	Girl	Boy	Total	Girl	Boy	Total	Girl	Boy	Total
I	P	66.8	62.6	65.5	73.4	70.8	72.0	79.0	76.1	77.5	80.2	81.1	81.1
	R	17.3	18.0	17.7	18.2	19.5	18.9	17.8	18.3	18.0	17.8	16.9	16.9

	D	14.1	19.4	16.9	8.3	9.7	9.0	3.3	5.7	4.5	2.0	2.1	2.1
II	P	79.8	77.2	78.5	82.0	81.4	81.7	88.8	85.4	87.1	91.5	91.3	91.3
	R	10.5	13.6	12.1	12.4	11.9	12.1	9.9	12.9	11.4	7.8	8.1	8.1
	D	9.6	9.2	9.4	5.6	6.7	6.2	1.3	1.6	1.5	0.6	0.6	0.6
III	P	80.2	82.3	81.3	85.1	84.3	84.7	88.9	85.8	87.3	90.8	90.4	90.4
	R	11.1	13.0	12.1	11.0	10.6	10.8	9.1	11.1	10.1	8.0	8.5	8.5
	D	8.6	4.7	6.6	3.9	5.1	4.5	3.0	3.1	2.6	1.2	1.0	1.0
IV	P	73.7	76.5	75.2	84.5	82.7	83.6	86.4	84.4	85.4	87.9	88.4	88.4
	R	15.2	15.3	15.2	11.8	11.7	11.8	12.1	12.1	12.1	10.4	10.6	10.5
	D	11.1	8.2	9.6	3.7	5.5	4.6	1.5	3.4	2.5	1.7	0.7	1.2
V	P	82.5	79.8	81.1	90.3	89.1	89.7	80.0	89.3	88.6	89.0	89.6	89.3
	R	11.7	13.0	12.4	8.6	8.2	8.4	8.2	8.4	8.3	8.1	8.3	8.2
	D	5.8	7.1	6.5	1.0	2.7	1.9	3.8	2.4	3.1	2.9	2.1	2.5

Source: Department of Education, Nepal, 2010

P= Promotion, R= Repetition, D= Dropout.

Table 1.8: Promotion, Repetition and Dropout rates of Primary school in Nawalparasi District from 2006 to 2009.

Grade	Status	2006			2007			2008			2009		
		Girl	Boy	Total	Girl	Boy	Total	Girl	Boy	Total	Girl	Boy	Total
I	P	45.2	40.4	42.8	48.7	49.5	49.1	55.6	58.4	57.0	61.6	61.4	61.5
	R	32.4	27.3	29.8	29.4	27.7	28.5	24.3	24.3	24.3	22.3	22.2	22.2
	D	22.4	32.3	27.4	22.0	22.8	22.4	20.1	17.2	18.7	16.1	16.5	16.3
II	P	68.8	70.3	65.6	71.4	72.8	72.1	77.4	79.1	78.3	85.3	88.8	87.1
	R	15.9	17.3	16.6	15.0	15.3	15.1	15.1	14.4	14.8	10.4	8.2	9.3
	D	15.4	12.4	13.8	13.7	11.9	12.8	7.5	6.4	7.0	4.2	3.0	3.6

III	P	74.5	73.4	73.9	77.0	78.7	77.8	80.4	80.7	80.6	86.1	86.4	86.2
	R	13.9	14.8	14.4	12.6	12.5	12.5	13.2	12.3	12.7	10.0	10.7	10.3
	D	11.6	11.8	11.7	10.4	8.8	9.6	6.4	7.0	6.7	4.0	2.9	3.4
IV	P	73.0	76.4	74.8	84.9	82.0	83.4	85.9	82.3	84.1	87.2	86.3	86.8
	R	14.0	14.1	14.1	11.9	12.2	12.0	11.6	13.2	12.5	10.6	11.6	11.1
	D	12.9	9.5	11.1	3.3	5.8	4.6	2.4	4.5	3.5	2.2	2.1	2.1
V	P	72.2	72.8	72.5	83.6	79.8	81.6	86.0	81.1	83.5	87.0	87.3	87.1
	R	10.8	9.6	10.1	9.5	8.8	9.1	8.5	9.3	8.9	8.0	7.8	7.9
	D	17	17.7	17.4	6.9	11.4	9.3	5.5	9.6	7.6	5.0	4.9	4.9

Source: Department of Education, Nepal, 2010

P= Promotion, R= Repetition, D= Dropout.

1.10 Child labor

Child labor is defined as substantial work in the household, on the household farming, or elsewhere for wages done by children under 15 years of age and that conflict with their formal education. Normal family chores or part-time work by students attending school is not considered child labor.

The International Labor Organization (ILO) Minimum Age Convention (no. 138, ILO, 1973) stipulated that the minimum age for entry into work "shall not be less than the age of completion of compulsory schooling, and, in any case, shall not be less than 15 years." The Convention stated that "child labor is any economic activity performed by a person under the age of 15 years." Using this definition, the ILO estimated that 78.5 million children under the age of 15 are economically active in the world. This definition of "economically active" does not include those who work in house hold farming and household; therefore, this estimate is under-reported.

The UNICEF has used a more liberal definition of child labor and also included work in family households and on family farms when it interferes with the child's normal development (UNICEF, 2001b). UNICEF's definition thus appears to be appropriate for poor countries like

Nepal, where working at homes and in the family farm are partly due to the culture and partly due to necessity. Hence, the definition of child labor, in this study, mostly relies upon UNICEF's definition.

The most common outcome of early dropout in developing countries is found in various forms of child labor. The proportion of dropouts who engage in child labor is not appropriately estimated. Child labor is an important source of income for many poor families, and many children work willingly, with their parents' support. Eliminating child labor might break apart the whole family support dynamic in these areas. Even the World Bank has cautioned that "missteps in trying to stamp child labor out make matters worse, for example, if legislation is unevenly enforced and results in pushing children into worse situations".

1.11 Objective

The major objectives of study are to provide information to national policymakers regarding causes of dropout & trend of dropout in government and private schools, and the associations among the different variables. Therefore, they will have a more informed base for developing policies that will better achieve the goals of providing education as a human right and as a tool for social and economic development. The main objectives of research are as follows:

1. To identify the responsible factors of dropouts viz. age, sex, grade, religion, caste/ethnic group and family background

2. To compare dropouts rates of primary levels by age, sex and grade of study districts

This study will explore the reason for dropouts and find out the associations between the different variables with dropouts in primary school children which will help the policy makers to frame education policies accordingly, so that there will be better achieve the two goals of providing education as human right to all children and a tool for social and economic development.

1.12 Research Hypothesis

The null hypotheses based on objectives are as follows:

1. Ho: There is no significant difference between boys and girls in dropout of primary school children.

2. Ho: There is no significant difference in dropout of primary school children at various the grades.

3. Ho: There is no significant difference in dropout rate of primary school children of government and private school.

1.13 Significance of study

Nepal is one of the poorest countries in the world. The Nepalese people and the government both have meager resources. Therefore they cannot afford avoidable waste in the education system. Most dropouts are assumed to leave school due to economic necessity, which makes the government relatively unconcerned about reducing the phenomenon; but no one knows the percentage of dropouts actually contributing substantially to economic welfare of their families. The dropout phenomenon not only wastes educational resources but is also alleged to incur a host of social and economic consequences. Some researches have demonstrated that in developing countries once children drop out of basic education, they rarely return to formal education (UNESCO, 1984). They rarely become fully skilled and qualified in the labour force, which in turn limits them to subsistence-level income. Thus, a vicious cycle of economic and social poverty is perpetuated from one generation to the next. Foregone national income, foregone tax revenues for the support of government services, increased demand for social services, increased crime, drug abuse, reduced political participation, reduced intergenerational mobility, and worse levels of health have all been found to be economic and social consequences of dropout (Griffith, Frase, and Ralph, 1989; Levin, 1972; Rumberger, 1987; Pallas, 1987).

This study examines and reports the major short-term outcomes of early school dropout in Nepal. The findings may move policymakers, planners, and donors in Nepal to give school dropout more attention and to frame the education policy accordingly so that the government can better achieve two goals “Education for All” as well as a tool for social and economic development. The present study also expects to advocate measures to reduce dropout and to raise the awareness and concerns among parents, schoolteachers, and planners so that the phenomenon of school dropout becomes a matter of priority for all concerned.

Chapter II

LITERATURE REVIEW

Detailed literature review has been carried out using to national as well as international publications including books, journals and research reports. The review is focused on the problem of drop out in different national and international context and causes of drop out from primary level.

2.1 Goals of Education

Two of the UN Millennium Development Goals address education:

Goal 2: Achieve universal primary education

Goal 3: Promote gender equality and empower women

Goal 3 states further that gender disparity in primary and secondary education were to be eliminated preferably by 2005 and at all levels of education no later than 2015. Data on school attendance in 2005 is not yet available but recent estimates clearify that a large gender gap continues to exist in many countries, especially in South Asia and Sub-Saharan Africa.

Table 2.1: Goal for EFA indicators of Nepal

Indicators	End of 11th Plan, 2012	2015
1 Gross enrolment rate, GER for ECD	60	80
2 % of new entrants at Grade I with ECD	65	80
3 Gross Intake Rate, GIR at Grade I	111	102
4 Net Intake Rate, NIR at Grade I	89	98
5 GER at Primary Grade I-V	110	105
6 Net Enrolment Rate, NER (Primary Grade I-V)	95	100
7 Primary Exp. /GNP	2.3	2.5
8 Primary Exp./Total Ed. Exp.	65	65
9 % of teachers with required qualification and training	100	100
10 % of teachers with required certification	100	100

11 Student Teacher Ratio	31	30
12 Repetition Rate : Grade I	14	10
Grade V	8	8
13 Survival rate up to Grade V	86	90
14 Efficiency	76	80
15 % of Learning Achievement at Grade V	70	80
16 % of Literacy Age Group 15-24	86	95
17 % of Literacy : Age Group 6+ years	85	90
Age Group 15+ years	70	75
18 Literacy GPI (15+ years)	0.9	1.0

Source: UNESCO, National plan of action, MOES, Nepal, 2003

2.2 UNICEF priority countries for girls' education

Odaga and Heneveld (1995) stated that parents worry about wasting money on the education of girls because they are most likely to get married and that once married, girls become part of another family and the parental investment in them is lost. Therefore, this factor perpetuates parents to discourage the girl child from continuing with school. The UNICEF has identified 25 priority countries including Nepal to reduce the number of girls currently out of school in the year 2005. The countries were selected with the following selection criteria:

- Female primary school net enrollment rate below 70 percent,
- Gender gap in primary education above 10 percent,
- More than 1 million girls out of school,
- Included in the Education for All Fast Track Initiative of the World Bank,
- Affected by crises like HIV/AIDS and military conflict.

2.3 Enrollment of children in primary school

In Nepal for the year 2000, the enrollment in grade one was almost universal for boys, but only 84 percent girls were enrolled. The enrollment starts to decline in later years of primary school, many repeat each grade, and the completion rates of primary school remain dismal. Almost 63 percent of the students enrolled in first grade drop out during primary education. Only about 37 percent complete their primary education between the ages of 5 and 13 years. Only 10 percent of children who are enrolled in first grade are expected to complete primary school without repeating any grade. The reasons for high dropout and repetition rates include the workload of household chores, particularly on girls, irregularity of school functioning, poverty,

physical distance, low perceived relevance of education to daily work and social lives, caste and ethnic discrimination, neglect of mother tongue for many communities and under-aged children, particularly in the first grade (Nepal - Preprimary Primary Education, undated).

Community characteristics may affect enrollment of both boys and girls through different channels: village with highly developed infrastructure may offer better employment opportunities and higher wages thus increasing benefits of the educational investments. At the same time, developed infrastructure, such as availability of piped water source or paved roads in a village, reduces direct costs of schooling. Access to piped water allows girls to spend more time in school (fetching water is the girls' responsibility in most rural households) and reduces the opportunity cost of schooling. In addition, the cost associated with sending girls to school may be higher compared to boys if transportation to school requires a long and unsafe walk. The next group of village level factors includes ethnic composition of communities. Education is traditionally valued among high castes especially *Brahmans and Chhetris*. Members of these castes send their children to school, even if it does not translate into economic benefits later in life. A higher proportion of dominant caste households in Nepalese villages often imply wealthier communities with better labor market prospects and higher demand for skilled labor. On the other hand, high fractionalization at the village level might impede development process: provision of the public goods has been found to be inversely related to ethnic fragmentation (Alesina et al.,1999), and collective actions targeted on improvements within communities are in general less frequent and efficient in highly stratified societies (Bandiera et al., 2005). (Determinants of School Enrollment in Nepal: Evidence from the Living Standard Survey: Margarita Pivovarova, December 16, 2009)

2.4 Dropout situation in Asian country

Primary school dropout rates in Bangladesh, with a population of 150 million, have always been high, but new research suggests numbers are increasing. According to a study conducted by 10 NGOs, with the Commonwealth Education Fund, the dropout rate has increased from 33 percent in 2002 to 47 percent in 2006. Moreover, the net enrolment of six to ten year-olds declined to 93 percent in 2005 from 97 percent in 2002. The downward trend took place during the second Primary Education Development Program (PEDP-II), from 2003 to 2009. According to the United States Agency for International Development (UDAID), a partner in PEDP, Bangladesh's primary-school dropout rate remains unacceptably high, especially for children living in poverty and those coming from minority families.

The Ministry of Primary and Mass Education reckons that on average, students take 6.6 years to complete the five-year primary school program. "Of those who graduate from primary school, most do not acquire the nationally defined basic competencies. There are more than 20,000 informal primary schools run by nongovernment organizations (NGOs) and the private sector where education is provided till the third grade. More than 65 percent of primary schools

are under direct government management, with the rest registered as non-governmental schools, receiving assistance and support from the government. “Primary level student enrolment is increasing but the quality of education is not. Lack of qualified teachers and poor school facilities in terms of the number of schools, classrooms, libraries and playgrounds are responsible for poor quality education at primary schools. And though the government had increased funding for education, the expenditure per student is still low.“Teachers are poorly trained and paid. Teaching methods and materials are generally sub-standard, especially in government schools. Schools are in poor condition and detrimental to learning.

In Bangladesh, primary education is free and compulsory for children aged 6-10 years. The government has recently introduced a stipend program for primary school children, from which 40 per cent of poor children in all rural schools benefit if they meet the minimum criteria for attendance (85%) and achievement (marks of 45 %). Stipends, including grants for books and stationery, are given to all unmarried girls from rural areas up to Grade 7 who have 75 per cent attendance and achieve marks of at least 45 per cent in the annual examinations. There are 78,126 primary schools in Bangladesh, serving 17.6 million children. The gross enrolment at primary schools has fallen from 116 per cent in 2000 to 113.5 per cent in 2003. Net enrolment however increased from 81.8 per cent to 82.5 per cent over the same period. The objective of 95 per cent of net enrolment could not be fully achieved by 2005 and much was needed to be done to improve the quality of education. The rate of children completing a five-year primary education cycle increased from 65 per cent in 1998 to 67 per cent in 2001. The dropout rate decreased from 35 per cent to 33 per cent over the same period. The dropout rate is high mainly due to children’s necessity to help with farming and household chores, non-child friendly teaching-learning methods, overcrowded classrooms and unattractive educational environment.

Although more children are attending school than ever before in the countries of South and East Asia, vast number of students drop out before the end of the primary cycle, and the region still accounts for the world's largest share of out-of-school youth, according to a new United Nations report in 2004. The South and East Asia Regional Report, published by the UN Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics, shows that an estimated 46 million children are out of school in the region, 32 million of them in South and east Asia. The agency calls for recruiting more teachers to cut these numbers. The study presents the latest education data for a region ranging from the Philippines in the East to Afghanistan and Iran in the West, and including five of the world's most populated nations. It notes that enrolments for boys and girls rose substantially in most countries over the decade from 1990 to 2000. In Laos and Bangladesh net primary enrolment ratios for boys and girls rose between 15 and 20 percentage points.

However, enrolments are only part of the picture. The report also reveals that only half of the children who enter primary school in India, Laos and Myanmar will reach grade five. Nepal, Cambodia and Bangladesh follow closely behind with between 35 and 38 per cent dropping out before the end of the primary cycle. This trend is confirmed by data showing that even though

many children are enrolled in primary education, very few have a chance to enroll in lower secondary education. An estimated 233 million students of all ages are enrolled in both lower and higher secondary education with girls making up about 43 percent of the total.

The report estimates there are about 13 million primary teachers throughout the region, including 9 million in East Asia. This means that, in average, there is about one teacher for every 21 students in primary school in East Asia, compared to one for every 40 in South and West Asia.

Gender equality in education is a goal reaching far beyond itself. Still, in many of the developing countries girls are less likely to be enrolled in school and to attain same level of education as boys. In some of those countries girls are not only being discriminated by gender, but also by their social class. Out of 41 million school-age girls not enrolled, about 70 percent came from "socially excluded groups" (Lewis and Lockheed, 2006). Such "socially excluded groups" are hill tribes in Southeast Asia, indigenous and Afro-descendent population in Latin America, lowest caste in India and Nepal, or the Roma in Eastern Europe. In Nepal, 49 percent of girls aged 6 - 15 who belong to low occupational castes or "untouchables" groups, do not attend school, compared to 27 percent low caste boys of the same age (Nepalese Living Standards Survey 2003/04). Only about 20 percent of 15-year-old low caste girls are in school, compared to 53 percent of low caste boys of the same age. However, the interaction between gender and ethnic or linguistic divisions has rarely been examined. Hampered by limited data and lack of comparable and definite measures, the issues surrounding excluded girls and schooling have been recognized but not addressed. Cross-country evidence show a positive association between low rates of girl enrollment compared to boys and higher level of country ethnic heterogeneity (Lewis and Lockheed, 2007). At the same time, empirical findings imply that once in school, girls from excluded groups perform as well as their peers. For instance, Banerjee et al. (2005) recorded the largest achievement gains in a randomized evaluation of a remedial education program in India for the most economically disadvantaged children.

The study on Extent of Female School Drop outs in Kangra District of Himachal Pradesh in India was conducted in 2007 to assess the factors responsible for low enrolment and dropout of girls in schools. A total sample of 150 respondents was selected from local government senior secondary schools of Bhawarna Block of Himachal Pradesh. Data were collected from respondents and their parents through specific interview schedules.

The obstacles to female education stemmed up from cultural factors like early marriage, restriction on physical mobility of girls, etc. In addition, interest of studying on the child’s part and financial conditions of the family plays the role. Among the factors related to causes of dropouts, personal and economic factors were the most prominent which came up through interview with parents. Majority of the parents agreed that lack of child’s interest in studies, financial strain, involvement of child in household tasks and teachers discriminating behavior were responsible for the dropout of their girls.

Studies by Visaria (1993) and Chatterjee (1990) reported lack of interest and financial strains of family as prominent causes of dropouts. Desai (1994) asserted that parents' reluctance to educate daughters has its roots in the situation of women. Parents have several incentives for not educating their daughters. Foremost is the view that education of girls brings no returns to parents and that their future roles being mainly reproductive and perhaps including agricultural labor, require no formal education. As more and more boys are engaged in education there is a growing reliance on the labor of girls. Also lack of conveniently located and / or adequately equipped schools and girls attaining puberty were the major reasons of dropout in addition to low parental interests and support for further schooling. The major findings revealed a significant association between family type, income and education of mothers with incidence of dropouts. Class wise and year wise analysis showed a decreasing trend of dropping out in the past two years.

In the opinion of parents, behavior of teachers, inappropriate teaching methods, unsuitable curriculum, lack of child's interest in studies, low grade in class, financial strain and girl's requirement in household work and care of siblings were important factors for low enrolment and high dropout of girls. Bangladesh, India and Nepal have the largest gender gaps. The gender gaps in secondary enrolment ratios were even wider than for primary enrolment ratios, implying that a greater proportion of girls than boys discontinued their education after secondary education. This implies that the rate of dropout increases as we go higher in studies for girls.

Chinese government has taken significant steps to provide nine years of compulsory education and eradicate illiteracy, in part by allocating special funds in poor and minority areas, however significant challenges remain. About 1 million children drop out of school each year due to poverty, particularly ethnic minorities and girls. China aims to achieve a 90 percent completion rate in primary education by 2005- a challenge, since the current completion rate is only about 75 percent. This means 5 million students a year fail to complete compulsory education on time.

A number of issues pose impediments to child development during primary school. One basic issue is lack of preparation. As kindergartens are not part of China's nine-year compulsory education system, many children simply are not prepared when they reach primary school. Private kindergartens are available, but only to families that are more affluent. Incomplete schools represent another obstacle to development. Many schools in China lack the resources to provide more than two to three years of schooling. They are poorly equipped, often providing little more than desks and chairs, and their curricula are severely limited, leading to a high drop-out rate. Gender discrimination is a perennial and systemic problem, especially in poor rural areas. Although the government has worked hard to get more girls enrolled in primary school, significant differences remain between girls and boys. An estimated two-thirds of China's school age children not enrolled are girls. Moreover, girls who are enrolled are the first to drop out when economic pressures affect their families. Gender disparity and low enrollment among girls

are linked to a deeply entrenched preference for sons, so they will be difficult to eradicate, still more attention must be paid to reduce these problems. Traditional rote learning methods used in Chinese schools fail to encourage creative expressions and independent thoughts and these things are not encouraged in extracurricular activities. Yet as China develops into a modern society, it requires administrators and managers capable of devising creative solutions to an evolving array of problems. Like gender discrimination, failure to encourage creative thought is a systemic issue and one that may be difficult to eliminate completely. However, the pressures of competing in a market economy provide China with a clear incentive for training creative and independent thinkers. To a large extent, this battle will be won or lost in the classroom. (China, 2005)

2.5 Dropout situation in other parts of world

School dropout is a serious problem in most developing countries, where the dropout phenomenon starts in the primary school. The world development indicators (World Bank, 2000) have revealed that about 130 million primary school–age children in the developing countries are out of school which amounts to almost 21 percent of the total (625 million). Out-of-school status is a function both of dropping out and of having never enrolled or attended school. The out-of-school population (ages 5 to 14) in the least developed countries averages to about 40 percent (World Bank, 2000). In the world's poorest countries, particularly in rural areas, the rates of non-enrollment and school dropout are higher for girls than boys. In India, approximately 10 percent of boys and 40 percent of girls never enroll, no more than one third of the girls complete primary school education, and in Pakistan, not far from Nepal, only 17 percent of rural girls do (Population Council, 1999).

One of study by Mildren B. Devy utilized data from 42 least developed countries to explore the relationship between social, political, economic and educational variables and variations in the dropout rate from primary schools. Regression analysis of the data leads to following tentative conclusions. School systems with high rates of repetition also have high dropout rates over the primary cycle. This suggests that automatic promotion may reduce educational wastage. High fertility rates and a high degree of social tension in a society also deter the attainment of universal literacy, while increased urbanization and development of communications systems increase school continuation. There is some evidence that the economic returns to education are important determinants of school continuation in the later grades of the primary cycle and that characteristics of the school system itself are related to dropouts after the first year.

The incidence of students dropping out of school is palpable in primary six and primary five which is 34.9 percent and 22.1 percent respectively (NSDS, 2004). The comprehensive evaluation of basic education in Uganda report (2005) asserted that UPE dropout has escalated from 4.7 percent in 2002 to 6.1 percent in 2005. It further notes that of the NER for boys and

girls is 93.01 percent, however 55 percent of boys and 54.6 percent of girls reach primary four, while 31.2 percent of the boys and 27.7 percent of girls reach primary seven. The problem of dropout is thus disquieting to policy makers since it partly reflects the inadequacy of a schooling system in terms of either school quality or quantity. Noteworthy to mention is that school dropouts are usually associated with chronically high unemployment levels, low earnings, and poor health condition (McNeal 1995; Pallas 1987; Rumberger 1987), and persistent poverty among certain segments of society (Chernichovsky,1985). Taken aggregately, these individual-level consequences of primary school dropouts are perilous to national development by undermining national human capital development efforts.

Given the glaring dropout rate of pupils and ghastly effects of primary school dropout, there is therefore a dire need to establish the socio-economic factors that influence the probability of students dropping out of school. The study therefore sought to answer the following questions;

1) What key household socioeconomic factors influence dropout of students given free education?

2) What policy alternatives to curb dropout of students can be pursued?

In the Spanish education system the overall improvement of enrolment in all educational levels has been observed for the past two decades. However, the primary school dropout rate in Spain is relatively high, and the evidence indicates that being a dropout is a permanent condition. This is the first study on dropouts in Spain, and it uses individual-level data from the Living and Working Conditions Survey (1985) to analyze the determinants of dropping out of primary school in Spain. This paper focuses on the impact of family socio-economic background and labor market conditions on dropping out. The results from logistic regression for dropping out are consistent with earlier literature. Specifically, they indicate that family socio-economic status variables are significant factors in determining the probability of dropping out, and the youth labor market conditions also have an impact on primary school dropout behavior. Finally, some policy recommendations are discussed.

The United States National Center for Education Statistics (NCES, 2000) estimates dropout rates by two different methods. One is the “event dropout rate,” which includes those who were enrolled but then dropped out before completing in the same academic year. This estimate overlooks dropouts who finish an academic year but fail to return for the subsequent year of schooling at the 11^{th} or 12^{th} grade levels. Therefore, the event dropout rate often underestimates the true extent of school dropout. In 1988-1999, the event dropout in the United States was 5 percent i.e., 5 percent of all students in grades 10 through 12 left school during the academic year (NCES, 2000). The “status dropout rate,” on the other hand, includes all those in the age group 16 through 24 years who are out of school but have not earned a high school degree. The status dropout rate thus overestimates the dropout population, as it includes all those who meet those criteria regardless of reasons or circumstances including young adults who have immigrated to the country with little schooling. As of October 1999, 11 percent of adults in the

United States neither had enrolled in nor had completed a high school program (NCES, 2000). This status dropout rate varied substantially by ethnicity: the dropout rate for Hispanic young adults was 28.6 percent, followed by 12.6 percent for African Americans, 7.3 percent for whites, and 4.3 percent for Asians (NCES, 2000).

2.6 Dropout in Nepal

A study on educational wastage in Nepal was conducted with the objective of measurement of the extent of wastage prior to implementation of new education plan, causes of drop-out and distribution of repeaters in different grades in 1972. The study had set up the five hypothesizes that girls are more likely to drop out than boys, wastage rates are higher in backward area than developed areas, educational wastage is maximum in grade I & diminishes at successive years, educational wastages are mostly due to economic conditions and social unjustice and education wastages decrease as the level education goes up. 25percent of schools were selected randomly from the three districts. The study found that the cumulative wastage at end of schooling in primary level was 91 percent and drop-out, repeaters and survival rates were 69.2 percent, 22.6 percent and 8.1 percent respectively. The study show that the drop-out decreased and repeaters increased as grade goes up. The main causes of school drop-out were work at home (20.3%), failure in examination (23.7%), poor economic condition (19.5%), illness (16.0%) and long distance of school from home (4.0%). The study inferred that there is not any significant difference between developed and backward areas in case of educational wastage (Singh,1973).

2.7 Causes of primary school drop out in Nepal

A study of the extent of the causes of drop out in primary schools of Dhankuta village (currently municipality) was conducted in 1975 to determine the common causes of drop out cases at primary level education. Grade I, II and III of five selected schools were surveyed in this study and those students who were enrolled in the academic year but no longer remain in class even after 6 months of study were considered as drop-out. Altogether, 93 students were found to be drop-out and out of them 46 were randomly selected. Headmasters and grade teachers of the schools along with the guardians of those students were interviewed to identify the factor responsible for dropping out. On the basis of comparisons made between grade I, II and III the percentage of drop-out in grade I was 23percent which was the highest of all. This percentage decreased at the rate of 7 percent in each successive grade; in grade III it stood at almost 10percent. The overall percentage of drop-out at the primary school level stood at 18 percent in each grade. The economic factor was responsible in almost 54 percent of drop-out cases. The high tuition fee, the necessity of being engage in household activities and the inability of parents to provide the most essential textbooks and stationary for their children were the prime cause of drop-out cases. Next to these factors, poor health of children due to malnutrition and poor

hygienic environment was also a strong factor causing the drop-out incidence which was rated 23percent. In order to reduce the magnitude of drop-out cases in primary schools, the study suggested, two important measures i.e. timely thorough care of the students and a well-designed adult education program for the parents through mass media or at the local level raise awareness regarding the need for providing education opportunity to their children. The study stressed that free distribution of textbooks to the students should be strictly adhered to and school be equipped with qualified teachers. The study indicates that high tuition fee was a single dominant cause of drop out. One of the predictive inferences made by the study was that even a single dominant cause was removed; the total percentage of drop-out cases could be reduced down to 4 percent. (Pradhan,1975)

A study was conducted to measure the causes of drop-out in primary education in Tansen and Madan pokhara village in 1976. The enrolled children in grade I and II who did not appeared in final examination in the same academic year were considered as drop-outs. In the study, 25 out of 100 drop-out children were selected from each sample area and only 42 were taken for case study due to unavailability of all children. Parents were contacted for identifying the factors affecting drop-out. The study observed the drop-out rate higher in grade I (19%) compared to grade II (12%).The study revealed that the drop-out rate was 2 percent higher in urban area than in rural area. The study also shows that the share of girl in the drop-out was 8 percent higher than of boy. Attitudinal, economic, education, health-related, social and geographical factors were major causes of primary school drop-out. The most important cause of drop-out is attitudinal followed by economic. The other causes of school drop-out were lack of interest in studies and school, negligence in education of girl, illiteracy of parents, and children being bound to engage in house hold activities. The study also revealed that the poor hygienic condition and malnutrition aggravated the situation(Giri,1976).

The study suggested that there must be the provision of special guidance and counseling to the children. To retain the existing enrollment, the parents should be encouraged for further enrollment of girls. The study proposed that there should be regular health check-up and information be disseminated about the nourishing food which was easily available at the community level.

A study done by CERID in 1977 to assess the problem of teaching Nepali to non-Nepali speakers at primary level, a high irregularity rate was found among the children in non-Nepali speaking areas. The study had found the following causes of irregularity and consequential dropout:

i) the distance between home and school,
ii) engagement in labor force,
iii) lack of parental influence in ensuring that children attend school regularly because the parents themselves do not realize the benefits of education
iv) inability to purchase books, copies and necessary items for school

Educated families or the families where even one member is literate tend to give greater support to their children's education than in families where no member is literate. Teachers were affected by general indifference to education among the community and they themselves lost enthusiasm. They were poorly paid and usually untrained with little hope of improving their positions. If they were not local, then they found it very difficult to survive in the area.

One of the studies on wastage in primary education before and after NESP was conducted in 1977 to identify the causes of wastage in primary grades. The study revealed that the poor socio-economic condition of the rural children was the main cause of drop-out from primary schools. The other causes were connected with poor management capability, elitist-oriented curriculum, malnutrition, poor health and urban-based education system and policies. The study suggested that the contents of primary education need to be made more relevant to rural context, much more equal opportunity adequate teachers, textbooks and other instructional material need to be provided to the children of disadvantaged rural areas and the rural school to reduce wastage. Moreover, the study hour of schools need to be adjusted seasonally so as to increase the attendance.

"A survey on Dropout Children of Dhading and Siraha districts" was conducted in 2004 with the objectives to identify common causative and most influential factors of school dropouts in the sample districts and to compare the districts to find out similarities and differences in cases of dropout children. The survey found that the percentage of dropout girl in grade I increased from 3.83 in 2001 (2057/58 B.S.) to 14.2 in 2003 (2059/60 B.S.) in Siraha whereas it decreased from 24.68 to 22.66 in Dhading in the same period. The overall percentage of dropout of grade I *Dalit* children decreased from 2.07 in 2001 to 1.59 in 2003 in Siraha whereas it increased from 4.13 to 7.07 in Dhading for the same period. An overall percentage of ethnic dropout children in Siraha decreased from 0.89 in 2002 to 0.54 in 2003 whereas it increased from 9.06 to 12.04 in Dhading for grade I during the same period. Both underage and overage children have enrolled in grade I of both the districts and this appears to be one of the causes behind student dropout.

As reported by the head-teachers of Siraha and Dhading, the common causes of dropout range from a maximum of poverty (93.10%), illiteracy (58.62%), household chores (31.03%), lack of awareness (27.59%) to a minimum of large number of children (3.45%), engagement in seasonal jobs (3.45%) and going for abroad employment (3.45%). District-wise, the head-teachers of Siraha pointed poverty (88.89%) followed by lack of parental awareness (66.67%), inability of parents to feed in time (44.44%), inability to afford stationery and books (44.44%) and household chores (33.33%) as the most common causes behind school dropout. In case of Dhading, the head-teachers outlined poverty (95.00%), illiteracy (80.00%), household chores (30.00%) and looking after the younger siblings (20.00%) were the common causes for dropouts. The majority of teachers of both the districts also pointed out poverty (79.31%) as the common cause of school dropout followed by household chores (68.97%), illiteracy (51.72%) and not getting meal in time (34.48%). Majority of the teachers in Siraha (55.56%) pointed out not

getting meal in time (55.56%) as the third common cause of school dropout whereas illiteracy was the third common cause of dropout in the eyes of teachers of Dhading.

The majority of parents mentioned financial constraints (63.45%) as the major cause followed by household chores (41.38%), work in the farms/cattle grazing (29.66%), no interest in study (22.07%) and looking after younger siblings (20.69%). The dropout children pointed out their involvement in the household chores as the major common cause (39.31%) of their dropout followed by their lack of interest in studies (17.24%), lack of books and stationery (17.24%) and overage/underage (14.48%). As 6 years of age rightly presents the appropriate age of the students enrolled in grade one the students below this age, are known as under-age students. The students beyond 6 years of age are identified as overage students for grade one. This observation about higher number of overage grade I students very much resembles with the findings where more than 50 percent dropout students show an overage pattern. Except for the major common causes, the children of Dhading and Siraha differed in their opinion about the causes of the dropout. The students of Siraha mentioned lack of interest in studied (40%) as the second common cause followed by prohibition from parents (13.33%) and difficulty in study (8.89%). However, the children of Dhading mentioned lack of books and stationery (23%) as the second common cause followed by distance and over age (19%), *dharalo* (looking after younger siblings) (16 %) and failure in exams (14%)for their dropout.

A survey on drop-out in primary education stated that the drop-out is comparatively higher in grade I. The high drop-out in grade V is due to failure in examination, non-enrollment of the grade completers for lack of secondary school facilities nearby and discontinuation of study in search of jobs. Drop-out is higher among girls, in mountain and hills as compared to *Terai*. Drop out decreases as the level of parental education goes up. Children from large families, illiterate parents and low income family usually drop-out. It also stated that the economic condition is the major cause for drop-out and other causes are engagement in household work, parent's apathy towards education and practice of early age marriage of girls. (CERID, 1991)

Primary education Project (PEP) conducted to study on impact of various instructional inputs given to some selected PEP schools and non-PEP schools with the objective to determine the trend of enrollment, drop-out, repetition and promotion of student in a academic year. The study found that the internal drop-out rate is higher by 6.7 percent in the non-PEP schools than in PEP schools. The drop-out rate in the same academic year irrespective of gender of all classes in PEP schools is lower than in non-PEP schools. (CERID, 1983)

2.8 Primary school dropout according to region of Nepal

The study on educational needs of young people without schooling or with incomplete schooling by CERID in 1981 revealed that the drop-out rates was found to be higher in mountain districts. The percentage of drop-out from grade I to II ranged from 80 percent in Mustang to 24.2 percent in Bhaktapur in 1975-76. There was a strong tendency of drop–out during transition

from primary to secondary level in the mountain regions. The main reasons of drop-out were the children responsibility at home and their poor economic condition. Girls were more confined to house hold chores. Another reason for drop-out was the attitude of economically backward parents. Their opinion was that the children need education just about enough to enable them to work as lower level helpers. The national policies regarding the educational need of out-of-school children were concerned with providing employment, education, adult literacy, skill training program, social welfare etc.

A study was conducted by New ERA on the impact of free text book distribution program on primary school enrollment in Nepal to determine the extent and nature of wastage in primary education in 1982. The drop-out rate was estimated by matching the names of children enrolled at the beginning of one year in one grade with the names enrolled at the beginning of the following year from 15 selected schools of different districts. Those students whose names were missing in the same grade or the next grade were considered to have dropped out of school. The study examined the drop-out cases for grade I - III from 1973/74 to 1979/80. The study observed that the drop-out rate appeared to decline over last two years, particularly in remote and *Terai* regions, where as the rate increased in hilly regions. In comparison to previous year, the drop-out rate in primary grades seemed to be very high in 1978/79. The drop-out rate in remote areas for grade I, II and III were 12.7 percent, 10.1 percent and 9.5 percent respectively in 1979/80. In the same year, the rates were 23.3 percent. 18.7 percent and 9.5 percent respectively for the same grade in hilly regions. For the *Terai* regions, the drop-out rates for grade I to III in 1979/80 were 13.8 percent, 13.1 percent and 5.7 percent respectively. The incidence of drop-out was found to be much higher in age group 6-9 in grade I in all regions. The highest drop-out number in grade II consisted of children of 9-11 years of age in remote and hill regions. *Terai* region had the highest drop-out number in grade II of 8-10 years old children. The reasons behind the drop-out are children's engagement in household works, changing schools to be admitted to higher grade, migration, economic condition and illness. The other reasons were children's unwillingness to go to school and reluctance on the part of their parents. The study showed that the factor associated with the socio-economic condition rather than free text book distribution program are responsible for the high drop-out rate (New ERA,1982).

A study on primary education in Nepal conducted by CERID in 1983 identified the causes of drop-out in primary education as mostly parental indifference, poor health of children, involvement of children in household work, poor teaching practice in school and distance of school. The study found that the drop-out rate was more pronounced among girls. The reason for low participation of girls in school were their involvement in household work, taking care of young siblings, low motivation among parents to send them to school and not enough awareness on the part of the parents regarding the facilities offered by the government to girl students. The problem of drop-out was also related to poor attendance in school. Students attendance in rural school was very irregular on account of frequent absence of teacher from school, lack of seriousness among the children and their parents, and the weather and road conditions. The study

also underlined that underachievement is one of the responsible factors for drop-out. In the beginning of academic year, admission record was very good but one-third of the students drop-out within ten months of the school calendar (CERID,1983).

A study on 'Determinants of Participation in Education in Rural Nepal' was conducted by CERID in 1984 at national level to determine the major factors that affect children's participation in education and their continued attendance in school. The study revealed that a girl's chance of being sent to school were much less. The mean age of school-enrollment children had been found to be 2-3 years higher than the expected age for primary levels because of the poor nutritional standard and slow physical growth of children. The study also found that about three-fourths of rural children were engaged in household work and they were most likely to be kept engaged in domestic work. Crowded classes, low standard of physical facilities, poor performance of teachers and the school running a large number of classes were more likely to increase the drop-out rate (CERID,1984).

An inquiry into the causes of primary school drop-out in rural Nepal was a study based on the field survey conducted by CERID in 1987. The objectives of the study were to assess the extent of drop-out, identify the reasons behind it and strategies in order to reduce the problem of drop-out in primary education. The study showed that the incidence of drop-out was higher in all study districts but the problem was more serious in hills and mountain areas. The incidence of drop-out was particularly higher in transition from grade I to grade II than in any other grades of primary education. As the study revealed about 75 percent of grade I entrants dropped out before completing the primary education cycle. The study also revealed that the parents of more than 66 percent drop out were illiterate. There was inverse relationship between the education status of parents and incidence of drop out. Similarly, more than 70 percent drop-outs come from economically poor family. The study found that more than 78 percent drop-out belong to those families where the main occupation was agriculture. It also found that more than 55 percent drop-outs were from large family size. There was apparently positive relationship between the size of family and incidence of drop-out.

The study identified the four factors responsible for drop-out in primary education. They were household economy, social factors, personal factors and school related factors. The major factor was household economy which compelled them to work at home and makes their parents unable to afford instructional materials and to pay high fees imposed in the school. Lack of awareness regarding importance of education among parents was the main social factor for drop-out. The early marriage of girls in rural communities was another reason that forced the girls to leave school without completing primary grades. Irregularity of children and lack of motivation in them were main personal factors which encourage the children to drop-out. Among the school factors, failure in examination was the major reason which adversely affects children's retention. Language problem was another factor for the children to drop-out of school.

The study suggested that the fees be waived and that the number of scholarship be increased substantially; flexible school schedule be prepared for children who need to work at home, priority given to promote girl's education and their participation and non-formal education to be given to the parents for raising awareness on education of their children; mobilizing the social workers. Rural development program should be launched for raising the employment opportunity for the parents and increasing their income (CERID,1987).

A study on wastage in primary education in Nepal was conducted by CERID with objective to evaluate the magnitude of wastage in 1990, to identify the causes of wastage and to suggest remedial and preventive measures and strategies for reducing wastage. The study used secondary data obtained from Department of Education (DoE), Ministry of Education and Sports (MoES). A flow model based on grade transition model was applied to estimate the wastage and internal efficiency in the primary education system. The study found that the distribution of drop-out was uneven.

The volume of drop-out of was highest (48.37%) in grade I and it was lowest in grade II (8.53%). The drop-out rate was highest in grade V (21.2%) and it was lowest in grade III (7.8%). In all grades except in grade II, the drop-out rate was higher in the hills. In all geographic regions, the drop-out rate in grade V was estimated to be the highest and the second highest in grade II. The highest drop-out in grade V included not only those who failed in that grade, but also the grade V completers who did not unroll in grade VI due to the lack of secondary school facility and who discontinued their study in search of jobs.

Analyzing the cohort, the study revealed that each drop-out stayed for 3.39 years in school and then left the school without completing the full cycle of primary education. The drop-out accounted for about 60.22 percent of the total wastage in the country. 60.22 percent of total wastage in *Terai* region, which was the highest among all regions, was laid on the drop-out. The share of drop-out in total wastage was lowest (51.05%) in the mountain region. The causes of drop-out as perceived by guardians and the children were factors related to household economy, social factor affecting children's motivation for education, personal factor etc. The study suggested various measures for reducing drop-out, among which educating parents, improving the health condition of the child and making alternative means available for releasing the child from household work are major ones. Also by improving the facilities at school and developing child centered teaching methodology, the drop-out rate can be reduced. Along with these, special effort was needed by the school and teachers to help the weaker students (CERID,1990).

A research was conducted on Perceived Antecedents and Subsequent Activities of Primary School Children with eight primary schools were randomly selected from Kapilvastu, a typical *Terai* district of Nepal in 2004 by Karki. Dropouts were randomly selected from grades I, III, and V in each school. Altogether, 44 dropouts, 47 parents of dropouts, and 25 teachers were interviewed about the reasons for dropout and the activities in which the children were engaged

after dropout. Additional data were collected from school records and from observations of school facilities. The findings of this study suggest that Nepal's officially reported dropout rates are underestimated, especially in grades III and V. The main perceived antecedents of primary school dropout were found to be family poverty, household chores, and irregularity in school. While, over 45 percent of the dropouts were found engaged in household chores, another 41 percent of the dropouts were found doing nothing, and only 14 percent of the dropouts between ages 6 and 15 were found engaged in wage labor.

Associations between the perceived antecedents and subsequent activities of dropout were also explored. Children, who were reported as dropping out because of household chores, primarily girls, were usually found heavily engaged in such chores after dropout. Those who were reported dropping out due to irregular attendance in school, mostly boys, were generally found doing nothing after dropout. The most important finding of this study is that about half of the students did not drop out because of economic necessity and that 41 percent were primarily idling their days away, doing little but playing with other dropout children. That is a huge waste in Nepal's struggle to develop its human resources and its economy, it could be reduced with policy responses (Karki,2004).

2.9 Child Labor

According to UNICEF, there is an estimated 158 million children aged 5 to 14 in child labor worldwide, excluding child domestic labour. Child labor remains a major economic and social phenomenon in Nepal. According to the National Child Labor Survey undertaken in 1997, 1.66 million children (26.6%) out of the total 6.225 million children aged between 5 and 14 years in the country are economically active. Among the 1.660 million economically active children, boys (54%) outnumber girls (46%). Many of these children do not go to schools (14.54% of the boys and 25.96% of the girls). The large part 1.576 million (94.7%), of the economically active children are engaged in the agriculture sector, mostly as unpaid family workers and partly as forced labor attached to their parents under debt bondage or similar other exploitative labor. Besides agriculture, working children are involved in the services sector (27,000) and communications and transportation sector (26,000). Based on several studies conducted under the IPEC Time-Bound Program (TBP), it is estimated that there are 127,143 children working in the worst forms of child labor as bonded laborers, rag pickers, porters, domestic workers, in mine helper, in the carpet weaver and are also being trafficked.

According to the same study, the children involved in these forms of child labor start working between the ages of 10 and 14. In addition, more than one-third of them are illiterate, and majorities are school dropouts, who have been brought to their present workplace by their parents or relatives. It also appears that they all come from landless and relatively large families.

Finally, more than 80 per cent of children trapped in the worst forms of child labor have migrated for work. With the exception of children bonded into agricultural labor and children working as long distance porters in the rural areas of Nepal, the vast majority of children work in urban areas.

The ILO convention on the worst forms of child labor (no. 182) was adopted in June 1999 (ILO, 1999). The convention was intended to protect children from some of the extreme forms of child exploitation:

- Child slavery (including the sale and trafficking of children, debt bondage, and forced recruitment for armed conflict)
- Child prostitution and pornography
- The use of children for illicit activities (such as drug trafficking)
- Any hazardous work that is likely to harm the health, safety or moralilty of children

The convention also identified several hazardous situations under which children should not work: in mines or at sea, with machinery in motion, bearing heavy loads, in extreme temperatures, in agriculture, with pesticides and herbicides, in tanneries and glass factories, with chemicals, and where there is silica dust (Global March against Child Labor, undated).

The type of work that constitutes child labor is equally problematic, as many scholars and institutions have put forward different definitions. Some have even distinguished between "child labor" and "child work" (Canagarajah and Nielsen, 1999). Some have defined child labor and a more abusive and exploitative form of labor, one that is often associated with hazardous, life threatening, and bonded labor. Child work, on the other hand, is considered to be milder and includes work in the household and on the family's farm (Grootaert and Kanbur, 1995). Child labor is an integral part of family economy for those who live under absolute poverty. Hence, child labor likely precipitates school. Researchers dealing with the economics of child labor have viewed it from two different perspectives: supply and demand. Those who have focused on the supply side have argued that child labor is due to family poverty, resulting from low economic achievement or failure of the market economy at large. Those who have focused on the demand side of child labor have argued that there are significant gains for employers to hire a child worker rather than an adult because of particular characteristics of children.

In rural areas, the size of family, land holding and possession of animals are associated with the incidence of child labor. Generally, children in landless and marginal families engage in wage labor, whereas those in families with large land holdings engage in family farm work.

Table 2.2: Population Below Income Poverty Line in South Asian Countries

Country	< $1.25	< $2
Bangladesh	49.6	81.3
Bhutan	26.2	49.5
India	41.6	75.6
Nepal	55.1	77.6
Pakistan	22.6	60.3
Sri Lanka	14.0	39.7

Source: Wikipedia, the free encyclopedia, 2010.

In Nepal, India, and Bangladesh, over 75 percent of the population earns less than USD 2 per day, whereas in some African countries over 90 percent of the population makes less than USD 2 a day. The stark economic conditions compel many families to use as many hands available to produce for family sustainability, with not much concern for age. A large number of people live in such extreme poverty that they must use their children to yield as much they can from agricultural land or to generate supplemental income from the wage market.

Basu and Van (1998) developed a model of economy for poor countries that exhibits multiple equilibria that present child labor as an important component. They argued that whether child labor exists in equilibrium depends on the economy's general level of productivity. If productivity in the economy is relatively high, wages will be relatively high, and there will be little child labor. If productivity is low, wages will be low, and there will be considerable child labor. Child labor is generally argued to be a function of family decision, one that is made to keep a balance of family income and expenditures. A household decision to send children to work is made mostly to augment household income and to mitigate better the income risk that the household faces. Child labor can be a part of the family strategy to minimize the risk of interruption of a household's income stream and thereby to reduce the potential impact of job loss of a member or of a failed family harvest. The ILO has clearly stipulated "poverty is the greatest single force which creates the flow of children into the workplaces." (ILO,1996 a, p.10).

An econometric analysis of survey results in Thailand (World Bank, 1996) found that early age dropout (below 12 years) is not synonymous with child labor. That study concluded that children are pulled out of school because of the direct cost of education rather than the need for them to work. That finding may not hold true in other countries because basic and primary education in other countries is generally free. The opportunity costs, however, could influence

family decisions to pull children out of school in these countries because children as young as six years can become economically active in the developing countries (Cain, as cited in Ravallion and Wodon, 1999).

Many poor rural societies do not consider child labor as bad; rather, they often consider it as socialization as well as a process of learning life skills. There is widespread agreement that non-hazardous forms of work can teach children self-reliance and responsibility, valuable skills and knowledge can be learnt through work. The ILO (1996a), UNICEF (1997), and the World Bank (1996) have now accepted that as long as children do not work in a hazardous, life-threatening, and/or abusive type of work, and as long as it does not interfere with their schooling, child labor is acceptable.

Premature involvement in work is believed to prevent children from accumulating human capital, to reduce their earnings in later life, to lower workplace productivity, and to stunt national economic growth (Fallon and Tzannatos, 1998). However, many families who live at subsistence level in developing countries do have to worry about their immediate lives rather than future. In addition, early labor in inherited occupations, such as weaving, tailoring, carpentering, and cobbling, may help children to master their craft.

The magnitude of child labor throughout the world largely depends on how three factors are defined by the age limit for childhood, the type of work, and the hours of work per day. It is customary in many Western societies that childhood is determined by chronological age; but in some cultures, social factors intervene in the determination of childhood (Rodgers & Standing, as cited in Grooteart and Kanbur, 1995). In some cultures, those even as young as eight years old are considered not children but adolescents. In Bangladesh, by the age of six children become economically active, and at age 14 they are net producers (Cain, as cited in Ravallion and Wodon, 1999). The tradition of early marriage is tied to this assumption of maturity at relatively early age (UNICEF, 2001). The ILO Minimum Age Convention (no. 138) stipulated that the minimum age for entry into work “shall not be less than the age of completion of compulsory schooling, and, in any case, shall not be less than 15 years” (ILO,1973 p. 2). However, only 21 developing countries had ratified this convention as of mid-1997 (Fallon and Tzannatos, 1998).

The ILO estimates that roughly 211 million children between 5 and 14 years were economically active in developing countries in 2001. An earlier study estimated that at least 120 million are full-time workers (ILO, 1996). The proportion of working children is highest in Africa, where about 33 percent children are engaged in some form of economic activity mostly agriculture. In Asia, the figure is about 14.3 percent (Fallon & Tzannatos, 1998). Nepal has the third highest rate of child labor among the poorest countries in Asia and Africa.

Table 2.3: Labor Force Activity for Children 10 to 14 Years by Country (2000).

S. No.	Country	Percent
1	Bangladesh	27.7
2	Nepal	38.0
3	Pakistan	15.4
4	India	12.1
5	China	7.9
6	Sri Lanka	2.0
7	Least developed	31.6
8	Developed	0.0

Source: Wikipedia, the free encyclopedia, 2010.

The labor force participation of age 10 to 14 years was highest (38%) in Nepal and least (2%) in Sri Lanka among the South Asian countries. It was 31.6 percent in least developed countries where as it was nil in developed countries.

2.10 Action to prevent drop-out

Most measures taken to prevent drop-out are indirect and part of a wider scheme to enhance attainment of UPE. Practically no data exists to indicate which measures work best to eliminate drop-out. All have been initiated with the intention of enhancing the holding power of the school or of persuading parents to send and keep their child in school.

Five categories of measures may be distinguished

(i) Organizational;
(ii) Pedagogical;
(iii)Incentives;
(iv)Community participation
(v) Non-formal approaches.

These categories are not exclusive. They act together and interact upon the child, the school and the society. There is also the possibility of legal action. Compulsory attendance laws for the primary level of education are in force in several countries of the Asian region. Implementation of law is not a necessary pre-requisite for attaining UPE. Malaysia, for instance, has attained UPE, but has no compulsory law. India, which has compulsory attendance laws in 16 states, has

not been able to enforce them. The utility of such a compulsory law probably lies in the timing of its passage into law and the judiciousness of its enforcement, which can be assessed only by each individual country (Sattar, 1984).

Brief description of the categories is given below

i) Organizational measures: Automatic progression between grades, or continuous progression across the primary cycle, is probably the single most important organizational action which may be taken to prevent drop-out. Repetition makes classes far larger than they need, discourages children who fail to be promoted, exacerbates problems of late entrants, and ensures that most dropouts quickly lapse to illiteracy. Some Asian countries have already instituted automatic progression, as in the Republic of Korea, Malaysia and Japan.

There are essential concomitants to automatic progression. In the Philippines, special placement tests have been worked out to enable school drop-outs to gain accreditation and return to the formal school system. This is a practical way to encourage drop-outs to complete their education. Easy re-entry of drop-outs to the education system implies an open system at all levels. Placement tests for accreditation would be useful at the primary level in many countries Re-organization of the grades within the primary school may also discourage dropout, as shown by the Indian experience with the ungraded school in several areas. Evaluations have "indicated encouraging signs in terms of reduction in drop-out rate, wastage and stagnation. In this system, the children work through learning materials at their own pace. The quicker students can receive enrichment activities and the students with particular learning problems may be given the individualized instruction they need. A variation of this re-organization is being tried out in Thailand with alternate year entrance, and thus two age-cohorts working together for two years in a combined I + II, III + IV, and V + VI grade. This has the added advantage of lessening the number of teachers required in the school although the classes may become rather large.

ii) Pedagogical measures: It has long been recognized that a highly qualified and trained teacher is the preferred teacher at all educational levels. All Member States in the region have been paying much attention to in-service training to upgrade qualifications, and to pre-service training to ensure a more effective teaching force. Gender of the teacher may be as important as training. At the primary level, female teachers are preferred in most countries, both for their gentle approach to very young children and for the model they present to girls. Several countries with far fewer female than male teachers do experience high drop-out, although no clear connection between the two has been established. Nor do trained teachers by themselves guarantee either enrolment or retention. Levels of trained teachers may be high, but drop-out may be high as well. For instance, in Andhra Pradesh state of India, 97 percent of the teachers are trained, but the State is classified as one of the educationally backward states. Bangladesh has 70 per

cent of its teaching force trained, but its drop-out rate is equally high. The important factors are probably the education level of the teacher, the quality o pedagogical training imparted, and the working conditions in which the teacher must teach.

A pedagogical measure of significance is the establishment of pre-primary schools to give deprived children a head start to the formal educational process. As a Malaysian report states, “much of the verbal and intellectual development of the child upon which success depends, occurs during the pre-school years. Poor and illiterate parents, and isolated rural environments, create an educational disadvantage prior to school entry. Enrichment activities in these schools, particularly in the area of language arts such as listening and speaking, will aid the children when they make the transition to the formal primary grades. Such a school may be attached to the primary school itself, so that a five-year primary cycle becomes in fact six, by virtue of the pre-school class. It may be a separate institution, or it may be organized in a non-formal manner and consist of several small pre-schools clustered around the primary school. Whether government, private, formal or non-formal, these schools can provide a valuable experience for the children. Vietnam and China have a wide network of these pre-primary schools and they are expanding, though mainly in urban centers, in all countries of the region. Teachers themselves have long recognized the value of such pre-school classes. In many areas of South Asia where grade I enrolment is very high, there is a hidden pre-school class. Whenever possible, head masters of large primary schools have designated one teacher for the pre-school class, knowing well that the younger children were generally unable to make the transition from home environment to grade I successfully. The first few months of school are probably crucial to the perception of the children. Those first months set the pattern. They establish either a desire to continue or an aversion to the school. As the Indian report in this volume states, “children come for the first time “and are faced with a new environment. If they are introduced to a school situation earlier, it will encourage them to come to the primary school. For this purpose, efforts should be made to open pre-primary schools, particularly in rural areas, and support such schools which are already inexistence.”

Annual examinations have long been used as a means of promotion in Asian schools. Abolishing the annual examination at the primary level will remove much stress from the system, both for the child and for the teacher. With a system of automatic promotion, the annual examination is superfluous. It is preferable to institute a system of continuous criterion-referenced evaluation, so that learning problems and difficulties are detected early and the child is helped to overcome these, rather than ignoring problems and failing the child at the examination. The primary level of education should require mastery of skills, not competitive attainment in an annual examination. Improvement of teaching methods and materials is a factor which also may have some bearing on drop-out. In the Philippines, use of individualized learning modules in experimental projects such as Project Impact, has had an appreciable success on enrolment and retention of children.

iii) Incentives: As a means to encourage enrolment of children at the primary level and to attain UPE, varying incentives have been used in almost all countries of the region over the past two decades. These have taken the form of free education, provision of textbooks, provision of mid-day meals, clothes and scholarships. Bangladesh abolished fees at the primary level in the early 1970s, and in the1980s, introduced free textbooks and some uniforms to poor girl students as incentives to enrolment. More wealthy countries, such as Malaysia, provide free medical and dental care. There is little data available which show actual decline in drop out as a direct consequence of any of these measures. However, they were introduced to benefit the poorest and the most deprived sections of society, and it is assumed that they have had an impact upon the increased enrolment and retention rates over the past two decades. It is noteworthy that the Indian state of Kerala provides over 90 per cent of primary school children with textbooks, uniforms, and meals. The dropout rate in Kerala is only 6 percent while in all other Indian States it is in excess of 50 percent. On the other hand evidence from Tamil Nadu, a neighboring state, showed that the midday meal alone might not be a sufficient incentive. One study found that 64 per cent of drop-outs had been receiving a midday meal, While there may be other factors accounting for success in Kerala or for the failure in Tamil Nadu, the widespread provision of incentives is assumed to have been significant, but to what extent is unknown.

Free or subsidized transportation facilities may be necessary to encourage children to attend school in sparsely populated areas, or in regions of difficult terrain. Where the primary level terminates at grade IV in rural schools, transportation for the students to more distant schools for grades V and VI may be necessary. Thailand has initiated a project to provide students with bicycles for just this purpose.

iv) Community participation: Involving the community in management of primary level education may be a means of enhancing enrolment and preventing drop-out. When parents are active in the educational process, it is more likely that their children will stay in school. Community participation may range from the establishment of a parent-teacher and school open days, to actually building a school. In China and in Vietnam, many communities donated a building or provided land and labor to build

Schools. In the Meher WE project in Bangladesh and in the Pamong project in Indonesia; any village structure may be utilized for a school. In a former project, as well, the community built over one dozen schools.

In some cases, the community needs awareness about the importance of education, especially of girls. This may be done by mass media, political parties, district administration, folk media and the teachers themselves. Involving the community in primary education may enable governments to share the costs with the community. This may be particularly important in

highly populous countries where provision of basic facilities might be prohibitively expensive if the usual formal model is followed.

v) Non-formal measures. Many new models are being investigated at the primary level in the Asian region, usually involving a non-formal component, either on a supplementary or a complementary basis. In the formal model, non-formal programs using community resources are applied at one or two grades of the primary level and the children are then sent to a formal school. The non-formal component supplements the formal school. This has been successfully done on a small scale in the models in Bangladesh and Indonesia cited above. In India, many programs use such non-formal components especially to reach the deprived and disadvantaged groups. The DACEP and CAPE projects discussed in the India report are examples of this. In Pakistan *Madarasas* are used to supplement he formal system in areas where schools are scarce. This has been considered a viable model and during 1978-1983, 8200 *Madarasas* were in existence, taking intake in grades I-III, thus reducing overcrowding in the existing primary schools for grades IV and V.

Other countries have used non-formal programs to impart primary education. The Republic of Korea, China and Myanmar have used primary level evening schools. Such aspects of primary education usually held outside the formal system, use non-professionals as teachers, although teachers may also be used, as in the CAPE project, either for direct teaching, or as supervisors. One of the objectives of CAPE project is "to develop a non-formal system of education as an alternative to formal schooling". In this project the aim is to give accreditation to the children so that they may either enter the formal school system or continue on another training track using their accreditation for entrance. Complementary programs may utilize school premises or school teachers, but do so in a manner which is quite separate to the formal system. They aim to give the child a primary school education but in a manner which suits his life circumstances. In *Madhya Pradesh* State in India, the primary school course has been condensed into two years, consisting of 18 graded units. The child can attend the course at the non-formal education centre and do his job at the same time. The UCEP scheme in Bangladesh is similar, with a school "day" consisting of two hour shifts, six days a week. These models have simplified and condensed the primary school course and have provided a flexible structure into which the child can fit his time. They are suitable for the older drop-out of 9-11 years or for the older child who never enrolled. The older age level enables the child to pass rapidly through the primary learning sequence and quickly attain the necessary skills. The shortened school day enables him to give time to the process of earning his living at the same time. These and other new ideas are bound to increase over the next decade, particularly in the highly populated countries in the region. Non-formal education at the primary level will become a viable and practical supplement to the formal system. Such a system may place stress in one of several ways. As a supplement the formal system, the non-formal approach would enhance the efficiency of the formal system and thereby

help to reduce drop-out. As a complementary system, the non-formal system, usually in a shortened learning cycle, would be concerned with minimum learning competencies rather than the complete primary curriculum. In this way the non-formal system would be helping to attain basic education for all.

The Asian region presents a scene of wide diversity between countries, and even within countries, with respect to repetition and dropout during the primary education cycle. Repetition and drop-out are main indices of wastage. While drop-out prevails in a country, it cannot reach UPE. There is so much variation between countries and within countries that general observations are extremely difficult to make. Added to this is the dearth of comprehensive data on drop-outs. What is available comes usually from samples or case studies and little up-to-date data is available. The country reports presented in this volume serve to point up the data gaps for the rest of the region. In general, countries with high drop-out rates have high repetition rates, inadequate school provision, low female enrolment, and disparities of drop-out between urban and rural children. The issue of girls' enrolment and retention is particularly crucial for UPE. The low enrolment of girls depresses the total enrolment rate. Girls' drop-out rates especially in South and West Asia, further depletes the number of girls attending school, with adverse consequences for female literacy rates. High repetition and high drop-out rates are usually common in the early grades. Patterns of different from this are due to exceptional circumstances. It is clear that the war against drop-out will be lost or won in the lower grades, particularly grade I. This fact calls for careful attention to the grade I school environment, the physical setting, teachers, and instruction materials. This underlines the need for extensive pre-school classes especially for the rural poor and the deprived and disadvantaged groups of children of all localities. Utilizing both community resources and non-formal education, consolidation of the present school system and improvement of it s efficiency is possible, with consequent reduction in drop-out rates.

There is need for continuous investigation in this area, to explore newer methods to solve the problem. The community resources are hardly tapped except in very few countries in the region, but the potential is great. There is no one single or simple answer to the problem of drop-out. There are many desirable measures which may be taken to enhance the holding power of the school, but their effectiveness and importance will vary according to numerous socio-cultural factors. The surveys by UNESCO found little correlation between wastage and selected socio-economic indicators in1967 and1980. The rather more complex 1980 analysis concluded that while drop-out was more closely related to overall economic, educational and demographic factors, repetition seemed more related to fact ors within the educational system. When the primary cycle is too long or too short it can be changed. For instance Thailand shortened its primary cycle from seven to six years in 1974 In India, some states count the first five years as the primary cycle and some count only the first four, leading not only to some overall statistical confusion about what constitutes the primary level, but probably also contributing to the drop-out rate at grade IV. In the Philippines as well, rural schools that end the primary level at grade IV

probably account for part of the drop-out rate observed there? Lengthening the primary cycle by one year may be helpful to upgrade the quality of literacy retention and of primary education in general. The incomplete schools must be upgrading as well. School with one or two-teachers are mostly inadequate for the attainment of UPE and elimination of drop-out. In some cases, shortening the school day may be useful in preventing drop-out. In the large urban slums, a school day of only two to three hours is far more attractive to working children than one of five or six hours. In some pilot projects, a two-hour school day enables street children to gain an education, while at the same time not neglecting to earn their own livelihood. Shortening the school cycle from five to two years for older students may be a way of imparting primary education to them and preventing drop-out. For the late entrant to the primary school, a shortened primary cycle would be more attractive than being placed in the beginning grade with very much younger children. From very limited data presented here, there appears to be a strong link between repetition and drop-out with repetition predisposing children towards eventual drop-out. As it would be easier to improve internal conditions inductive of wastage than external ones, it seems that one way to prevent drop-out would be to tackle the problem of repetition first. Measures taken to abolish repetition and to improve the holding power and attractiveness of the school might be an indirect way of helping to reduce drop-out as well. For children of the poor and disadvantaged groups, the onus should surely be on the school to help them stay in the system and complete the primary cycle. There are no clear cut answers. However, in the region as a whole, much progress has been made between 1960 and 1980 with respect to increased enrolment ratios, increased retention, decreased drop-out rates and decreased rates of repetition.

During this time, several countries have increased enrolment to 95 per cent or more of the primary school age-group, and retention to the end of the primary cycle of 100 percent. These countries include Malaysia, Singapore, and the Republic of Korea. Another group of countries have enrolled 90 to 100 percent of their students but experience drop-out during the primary level. These countries are the Philippines, Sri Lanka, Indonesia, Thailand, Burma and Vietnam. The third group which comprises Afghanistan, Pakistan, India, Nepal, Bhutan, and Bangladesh, enroll less than 90 percent of their age-group and they experience high drop-out rates usually in excess of 50 per cent. As compared with 1960 however these countries have also improved their positions. The elimination of drop-out is possibly the most vital factor. As H.M. Phillips stated, in his comprehensive world survey, “the greatest single quantitative contribution to be made would be to eliminate drop-out.” The schools could retain all those who enroll, the boost to the literacy rate would be significant and the efficiency of the school system greatly enhanced. Unfortunately drop-out occurs even in those countries with fairly high literacy rates, while the problem in those with literacy rates less than 40 percent is severe.

In general, factors affecting drop-out, both those internal as well as external to the educational system are well known. The importance of these factors will vary between countries and between regions within the countries. The use of more incentives needs consideration, and

continued encouragement should be given to disadvantaged groups especially to very poor and to girls. Involvement of the community in primary educational process has hardly begun, but several experimental models illustrate ways of community participation. In the same way, non-formal structures and approaches may be extended to supplement the existing formal primary school system. Measures taken need not be costly. Structural reorganization is almost cost free and yet can be effective. Automatic promotion to abolish repetition is not an expensive measure, particularly if skilled community persons are used to help children overcome difficulties and keep up with their grade level. Tapping community resources may be the most cost-effective measure and also the most rewarding educationally, particularly in provision of basic educational infrastructure. The measures are not simple, but with the political and administrative will to eliminate drop-out in the drive for UPE, much can be accomplished to bring equality to every child who enrolls, as experiences of the countries reported here illustrate.

Chapter III

Methodology

In this research, a tracer design was used to identify the primary school dropouts and possible relationships of drop out with different variables and retrospective cohort study was used to find the trend of dropouts and primary school completion rate. Children who seem to have dropped out of school were traced to ascertain their homes whether they were enrolled in another school or not and, if not, they or their parents were interviewed. Their class teachers before they dropped out were also interviewed.

The independent variables were examined related to child, family and school stated as follows.

1. Child Related Factors: age, sex, grade, child interest in study / school and interviews with dropout children, their parents and last class teachers.
2. Family Related Factors: family income, occupation and education status of parents, and parent's apathy towards the children's education.
3. School Related Factors: promotion, dropout and grade repetition, qualification of teachers and availability of physical and other facilities in schools.

3.1 Study Design

This study used a descriptive cross-sectional tracer design to identify the primary school dropout. Children identified as dropouts in the sampled schools during one academic year were traced to their current location and then interviewed along with their parents to determine causes of the dropout.

A retrospective study design was used for collecting data on cohorts of students in school and following those who subsequently drop out to examine the causes of dropout trend and completion of primary school. The model was initially proposed to identify dropout and possible associations between the drop out and family background.

3.2 Sampling

There are more than 31,000 primary schools in 75 districts of Nepal. Of the total primary schools, 12.58 percent are located in the mountains, 53.39 percent in the hills, 27.92 percent in the *Terai* and 28.19 percent in the valley. Of the total population, 6.75 percent live in the mountains, 43.1 percent live in the hills, and 50.15 percent in the *Terai* region (CBS, 2011).

The mountainous and hilly nature of large part of the country and poor transportation both made data collection from a national random sample of schools very time-consuming and expensive. The formidable mountains, scattered settlements, and low population would have made it laborious and time-consuming to locate dropout students and parents in the mountain districts.

In addition, Maoist activities in many of the districts made random sampling of districts inadvisable. In Maoist-controlled areas, there has been substantial out-migration and schools have frequently been closed. Thus, in these areas the pattern of school attendance and dropout has been seriously affected. In addition, the physical safety of the investigator would have been at risk when traveling in areas with heavy Maoist activity, since this study requires visiting not just the schools but also the dropouts and their parents, living in the villages and sometimes in remote places.

3.3 Sampling of Districts

To moderate the risk and costs, the research was conducted in just two districts of the *Terai* region. The schools in this region generally have high enrollments and also tend to have high repetition and dropout rates. *Terai* is also accessible and relatively less effect of Maoist activities. The research was conducted in Chitwan district from Narayani zone and Nawalparasi district from Lumbini zone which were selected purposively. Both the districts are composed of plain as well as hilly areas. *Nepali* is commonly spoken language throughout the country; however, in these districts, people also speak a different local language like *tharu*, *tamang*, *newari* etc.

Conducting the present study in the capital city would have been easier than in Chitwan and Nawalparasi, but locating dropout students and their parents in Kathmandu would have caused considerable problem. Generally, government schools in Kathmandu cater to children of poor and labor class families. These families tend to be unstable, changing residence from one place to another as their working place change. Frequent student turnover is a common phenomenon in urban schools, which may also cause significant problems in determining the real dropout rate.

3.4 Sampling of Schools

Sample design is one of the crucial parts of research survey, which is expected to be statistically representative for the variables. To determine the size of sample, 95% confidence interval is set with the normal value ($Z_{\alpha/2}$) of 1.96, and marginal standard error (φ) of estimate at 4%. Moreover, the coefficient of variation (π) set at 8% is used for sample size (n) estimation.

$$n = \frac{no}{1+\frac{no}{N}}$$

Where, $n_o = (Z_{\alpha/2}\ \pi / \varphi)^2$ and N is total number of schools in the district.
When the above formula is applied to estimate the sample schools, approximately 15 primary schools are size of sample schools in each Chitwan and Nawalparasi districts.

Department of Education (DOE) has recently prepared a comprehensive database that includes enrollment, promotion, repetition and dropout data by regions and districts. The database provided an opportunity to use a stratified random sample of schools. Estimated

dropout, repetition, and promotion data for each school in *Chitwan* and *Nawalparasi* districts were obtained from the DOE, but when those data were checked against some of the schools' own records during preliminary visit, many substantial differences were found. The district is geographically divided into 13 *Ilakas* by DOE. For the present research, *Ilakas* are considered as strata. Therefore, the stratified random sampling method was used to select sample schools from each stratum.

For the present research, 15 schools, 13 government and 2 private schools, were randomly selected from each districts. The 13 government primary schools were randomly selected from each stratum *(Ilaka)* and two private schools were selected randomly from all private schools in each district.

The following steps were used to draw the sample school.

1. The DOE data includes all kinds of schools, including government, private and religious schools. This research focuses on the government and private school; therefore, the DOE database was filtered to exclude all religious schools.

2. A preliminary visit was made to the selected schools to obtain basic information such as number of grades in school, number of teachers, student enrollment, number of dropouts and other relevant information

3. Only those schools were included in this study, in which they must teach at least grades I through V.

Since sources of dropout data from both DOE and the schools are presumed to be unreliable, the real dropouts could not be identified from school registers and DOE data. Especially the dropout data contain two kinds of errors

i. Students who have dropped out are still listed on the register, perhaps deliberately in order to secure more funds from DOE.
ii. Students whose names are on the register but are no longer attending and have not graduated would be counted as dropouts but they may have soon enrolled in another school (after not more than one year) and then remained enrolled. Using daily attendance records in the school registers, selected possible dropouts were identified in grades I to V from selected schools.

The dropouts were discussed with their last class teachers and classmates. Many of the dropouts were known to be enrolled elsewhere, but they were identified as dropouts. The enumerators also enquired asked about present resident of these students and their parents.

All dropouts and studying children at the primary grades I to V are included in the study. In addition, the official dropout statistics and other researches have suggested that the rates of dropout vary considerably by grades, generally declining after first grade, although sometimes spike again during the final grade of primary school because of the tough graduation examinations.

The 154 and 171 parents of recorded dropout children were interviewed from sampled schools of Chitwan and Nawalparasi districts respectively. The 2376 and 2324 studying children from grades I to V were also interviewed from same sampled schools for comparative study from Chitwan and Nawalparasi district respectively. If the location of dropout children could not be traced and studying children were absent on the day of visit, their information were collected from the last class teachers. To fit the logistic regression model, stratified random sampling technique was used to select 250 parents of studying children (i.e. 5 percent of total studying children) and they were interviewed.

3.5 Research Question

Question I:

1. The officially recorded primary school dropout in the sample school,
2. The number of drop out children, who really had transferred out and enrolled in another school or not. To answer these questions an elaborate procedure was used. First, Nepal's process for estimating official national dropout rates was applied to each school as follows:

i. Copies of the "Flash Report" each school submits annually to DOE were obtained from each of sampled schools. This form should be verified by the school's resource person before it is sent to the DOE through the District Education Office (DEO). The DOE uses the same school data forms to estimate dropouts and other education statistics nationally.
ii. The DOE uses a model developed by UNESCO to estimate dropout, promotion and repetition rates. A copy of the same model was obtained from DOE and was used to estimate dropout rates for each sampled school and for the overall sampled schools.
iii. The dropout rates were also estimated for each grade within each school and district.

Question II:

What are the causes of dropout? This question has three sub-questions:

i. What are children characteristics?
ii. What is their family background?
iii. What are school factors?

3.6 Data Collection Procedures

Interviews with the parents of dropouts children and their last class teachers constitute the main sources of data on dropouts. To conduct the interview, enumerators were selected after consultation with resource persons. Mostly the school teachers were selected as enumerator. They were provided thorough briefing regarding all data collection forms. Additional data such as school facilities and student enrollment were collected from school records, the enumerator's brief observations of the school, and a new school database created by DOE. The factors were

sought from each source. Each of these factors was identified in the literature review as being potentially important to understanding the causes of dropout in Nepal.

Most dropouts and their families were expected to be found in the community served by the sampled school. In most cases, the dropouts' last teachers or classroom peers who had remained in school usually reported knowing the whereabouts of the dropout. With permission of the schools' headmaster, such students were requested to introduce the enumerators to the families. Twenty-five parents of drop outs came to the school upon the school teachers' requests and agreed to be interviewed in the school.

When introduced to the parents, the enumerators indicated the desire to interview one of the parents. By tradition, the male is supposed to deal with external matters, including dealing with strangers like the enumerator, whereas taboo discourages women and young girls from talking alone with strangers. The enumerators also indicated their desire to interview the child who dropped out. Verbal consent was taken from the parents of dropout children prior to interviews.

The data collection process involved different steps: preparatory work, preliminary data collection, interview with teachers', parents' of dropout children, and parents' of studying children. Activities that were conducted in each step are described below.

3.6.1 Preparatory Work

The preparatory work included working out the necessary paperwork and finalizing the school visit plans. The following activities were conducted to ensure necessary support from the district education office and the school:

- Taken permission from head teacher/ principals of sample schools and request to provide necessary support to the researcher and help to conduct the research in selected schools
- Pre-informed the selected sample schools about the visit

3.6.2 Preliminary Data Collection

As indicated above, preliminary visits were made to the sampled schools in the order in which they had been selected to determine the possible dropout children. The following activities were conducted to complete the preliminary work and to determine possible dropouts:

a. The daily attendance registers of grades I to V of the sample schools were checked. Attendance of students is taken in the first class of the day. All students with no attendance for a period of four weeks or more were noted as possible dropouts. An eyeballing method was used to identify these possible dropouts.
b. Former classes of each possible dropout were visited to determine probable status of the possible dropouts and their current locations. This determination was made through discussions with teachers and students.

c. The resident of recorded dropout children were visited later to identify actual dropouts.

3.6.3 Interviews with class teachers

i. The last teacher who taught the student before he or she dropped out was considered the most appropriate for interviews but frequent transfers sometimes meant that teacher was no longer present at the schools. In such cases, the researcher met all teachers in the school to discuss which teacher knew the most about the dropout student for each of the identified probable dropouts. An interview was arranged with these teachers.
ii. Interviews with the teachers were conducted during their leisure period. Form was used to maintain consistency in the interview.

3.6.4 Interviews with parent's of dropout children

The residences of dropout children were visited for the interview. Usually the father answered the questions. The parents were interviewed in the dropout's absence. Form was used to guide the parents' interviews.

All visits with parents of dropouts were pre-arranged. The interviews with parents went smoothly, perhaps in part because of the prior introduction of the researchers by last teacher or a classmate of the dropout.

3.6.5 Interview with studying children

All non-dropout children of sampled schools of grades I to V were also interviewed by using pro-forma. The information of the children absent on the days of visit was collected from the class teacher.

3.6.6 Interview with parent's of studying children

To fit the logistic regression model, parents of studying children were selected by using stratigifed random sampling from the both study districts and interviewed by using same questionnaire.

3.7 Data Collection Tools

The interview technique was used for data collection. The questionnaires were designed as tools for collection of necessary information. The questionnaire was used to identify the dropouts and various causes related to family, children and school characteristics. The questionnaire was pre-tested in two study schools of Chitwan district and based on the feedback

received from these pilot studies, the questionnaire was revised through consultation with experts. (Please see annexure E for questionnaire)

3.8 Dropout Information

The purpose of this questionnaire was to identify possible dropout students from school registers and then to determine the ones likely to be actual dropouts. The questionnaire also allows collecting some background information of dropouts, such as age, gender, ethnicity, and grade achievement.

3.9 Condition and Resources of School

This questionnaire was used to gather information on availability and conditions of physical and educational resources of the school. This information was collected in order to examine the existence of any relationship between these characteristics and school dropout.

3.10 School Information

This questionnaire provided necessary education information such as school enrollment, number of teachers, number of classrooms, class size, teacher-student ratios and teacher quality information, such as teaching experience, education, and training.

3.11 Class Teacher, Parent's of dropout and studying children Interview Form

This questionnaire guided interviews were conducted with most recent teacher of each dropout children to collect information on the dropout's peer group relations and other factors that might have provoked him/ her to drop out. The teacher's perceptions of the student's reasons for dropping out were also requested.

Parents were interviewed to assess family background characteristics that may be associated with dropout and to identify their perception of the reasons for their child's dropout.

Children were interviewed about their reasons for dropping out. The interview also explored whether they were using their past education and, if so, how.

For comparative study, information of studying children and parents of studying children were also collected.

3.12 Variables in questionnaire

Response (Dependent) variable: Dropout (1= Yes, 0 = No)

3.12.1 Child related (Demographic) variables:-

The child related (demographic) variables consisted of age in years, grade at dropout or studying, sex of children, caste (*Dalit, Janajati, Brahmin/Chhetri*), religion (*Hindu, Buddhist, Muslim*, Others), need to work at home, child not interest in study, transfer to other school, disable, illness, performance in last exam and frequent absent from school.

3.12.2 Family related variables

The family related variables consisted of could not purchase books/stationary (poverty), parents apathy toward education, father's education status father's occupation status, mother's education status, mother's occupation status, migration of family and number of children in family.

3.12.3 School related variables

The school related variables consisted of type of school, distance of school from home, bench/ desk available in class room, toilet (present/ absent) in the school, fencing (present/ absent) in the school compound, frequently absent of teacher, and discriminated by teacher. (Pease see annexure C for detailed coding of study variables)

3.13 Reliability and Validity

Reliability is the extent to which the procedures are described in sufficient detail that another investigator could replicate the study and get the same result. The questions of most interest regarding dropouts are the factor causing dropouts and the factor reducing it. In that case the dependent variable is whether or not the child drops out of school.

Validity has two components internal and external. Internal validity is commonly used to mean the extent to which an experiment or quasi-experiment has correctly inferred whether the experimental treatment actually made the difference noted.

External validity is commonly used to mean the extent to which the results from an experimental or quasi-experimental study can be generalized beyond the given research situation. Campbell and Stanley's initial discussion on this focused exclusively on threats to validity caused by interactions and reactivity with the treatment, which is not applicable in this study, because there were no treatment variables. Subsequently, Bracht and Glass (1968) expanded the concept of external validity considerably. Several of their identified threats to validity also involve the experimental treatment, but they also note that external validity depends on the research subjects being representative of the population and on measurement validity. *Terai* districts, where most population of Nepal lives, are likely not to be fully representative of Nepal.

Thus the results of this study may not be representative of Nepal. Consequently, these results are better considered promising hypotheses for further study than definitive findings.

Measurement of reliability assesses consistency of responses on the questionnaire used. Commonly it is assessed by Cronbach's alpha, which gauges the internal consistency of multiple items thought to measure the same construct, or by the correlation of two administrations of same questionnaire to the same group of people. Measurement of validity on the other hand focuses on whether or not the items in the instrument actually measure what is intended to be measured. Low reliability compromises validity, but high reliability does not assure validity.

Many of the variables measured in this study have been measured by similar means in prior researches in Nepal. The questionnaire was also reviewed by experts, in order to identify problems in the questionnaire and to judge their face validity. Face validity involves a judgment of both content and construct validity. The former assesses the degree to which studied variables represent the universe of content that is of interest, and the latter assesses whether the variables studied actually represent theory underlying the research.

To increase reliability and validity, manuals were developed for data collection form. To ensure high quality of data collection, the researcher, the resource persons and the school teachers conducted the interviews.

The problem with the data collection came during the interviews with parents, some of whom had difficulties reporting their income. This may have been because their incomes were highly unstable or because they were embarrassed to reveal their meager incomes. Several proxy measures of family income were requested in the interviews, such as major and secondary occupations, landholdings, and ownership of livestock and poultry; the parents showed no difficulty in reporting those. Hence, family income was estimated from these proxy measures and was coded into survival wage, sufficient mix of land/livestock and wage labor, and surplus categories.

3.14 Data Analysis

Collection of data from schools and interviews produced both quantitative and qualitative data. Most of the data collection tools consisted close-ended questions but had pre-coded responses to allow quick recording, as well as space to record other responses that might be given. Other responses were seldom cited; but when several were given, they were carefully noted and then later categorized. The causes of school dropout were categorized into three broad areas: child characteristics, family background and school factors.

Since more than one source generates information on causes, cross validation is desirable. The causes of dropout were reported from three sources dropout children, their parents and schoolteachers. It had been conjectured that schoolteachers would mostly report family background of dropout, whereas the parents would generally report school factor of dropout. The

distribution of responses from dropouts children, parents, and teachers were compared in a cross tabulation, with a column for each source.

Overall school quality was assessed using several indicators suggested by the literature review, organized into three categories: physical condition, educational condition, and school instructional capacity. A school's physical condition was assessed by number of buildings, condition of buildings, adequacy of the number of classrooms for grade levels offered and the number of students enrolled, adequacy of the furniture, adequacy of the toilets, availability of separate girls toilets, classroom environment (sunlight, ventilation, sanitation, and displays), availability and condition of playground, existence of fencing of school compound, availability of drinking water, school environment (sanitation), and distance of school from the students' homes. The school's educational condition was assessed by the presence of library, availability of necessary school materials, availability of sports materials, arrangement of sports activity, educational tours outside school, scheduled parents' days, and frequency of parent-teacher interactions. A school's instructional capacity was assessed by teachers' qualification and training status, space per student, and teacher-student ratio (CERID, 2002c, 2003).

The following formula by the DOE uses two consecutive years' enrollments (ENR_1 and ENR_2) and one year's repeaters' (RPT_2) data for calculation of dropout rate. In the formula, the first thing computed is the promotion rate, followed by repetition rate, and finally the dropout rate. The estimate of dropout rates, the last equation of the model, is simply one minus the promotion rate and the retention rate (grade repetition rate). The formula is as follows:

For grade I,

$P_1 = (ENR_{22}-RPT_{22}-NEW_{22})/ENR_{11}$

$R_1 = (RPT_{21}/ENR_{11})$

$D_1 = (1-P_1-R_1)$

where P_1 is the promotion rate for grade I, ENR_{22} is the enrollment number in year 2 in grade II, RPT_{22} is the number of repetitions in year 2 in grade II, NEW_{22} is the number of new entrants (transfers) in year 2 in grade II, and ENR_{11} is the number of enrollments in year 1 in grade I. The R_1 is the repetition rate for grade I, and RPT_{21} is the number of repeaters in year 2 in grade I; D_1 is the dropout rate (DOE, 2002).

In short, the estimated dropout rate is the residual of promotion and repetition rates. The formula assumes that the number of those in grade II in year 2 is the sum of promotees from grade I and those retained in grade II from the previous year because of inadequate progress.

The developers of the formula have identified three common errors and warned that they may distort the calculated dropout rates:

1. Over-reporting of enrollment and repeaters or both particularly in grade I can be done deliberately by schools for a financial incentive. For example, if the number of teachers paid by the government is related to the number of pupils enrolled. A different type of over-reporting occurs in countries where parents have incentives to register their children at school at the

beginning of the school year, but where a large number of those registered do not attend school or attend only for a short period.

2. Incorrect distinction between new entrants and repeaters leads, all other things being equal, to an under-reporting of repeaters in grade I and thus to an over-estimation of dropout from this grade.

3. Yearly variation in the coverage of data assumes that, for one reason or another, data available for year *t* are complete while those for year *t+1* are incomplete. Disregarding other types of errors, this implies that the number of promotes and repeaters in the year *t+1* will be underestimated and that the number of dropouts in the year *t* is overestimated. If, the data for the year *t+2* are complete, this implies that some of the promotes and repeaters that year were not included in the previous year's enrolment, leading to overestimation of the promotion and repetition rates and underestimation of the dropout rates, which may be negative in some cases.

All these error types lead to biases in indicators of internal efficiency. Since the dropout rate is determined as a residual, it often serves as a test for some types of error. Particularly, a negative dropout rate is a sign of errors in the raw data, i.e., enrollment and repeaters reported (UNESCO, undated).

The three points described above apply to Nepal's case; hence, the estimate of dropout and promotion rates using this formula is subject to serious error. In addition, if the number of students transferring into grades II through V differs from the number of students transferring out of the school, the difference will introduce errors into the computed dropout rates for a school. When the inter-school transfers are enrolled in other government schools, they will not introduce error into the computed dropout rates for the whole country; but when they have transferred to and from private schools, that will bias the national dropout estimates for the government school system.

This research also estimated actual dropout rates via a lengthy process. From the school records, possible dropouts were identified based on attendance records for the previous year. The possible dropouts were then discussed with class teachers and peers. Some were known to be enrolled in other schools, and the rest were considered to be probable dropouts. Samples of probable dropouts were traced to their homes to determine if they were actual dropouts. The dropout ratios were calculated against the total enrollment in the school. The dropout rates computed from the school records using Nepal's official procedure were compared with the actual dropout rates.

Data entry and analyzed were conducted with Statistical Program for Social Sciences (SPSS version 16.0). The different statistical models were used to analysis data.

3.14.1 Chi-square ($\chi 2$) test

The data was analyzed to find out the association for dependant variable with independent variables by Chi-square test.

$$\chi^2 = \Sigma \left\{ \frac{(O - E)^2}{E} \right\}$$

where O is observed frequency

E is expected frequency

$$E = \frac{\text{Row total x Column Total}}{\text{Grand Total}}$$

For 2X2 Table

$$\chi^2 = \frac{(f11\, f22 - f12\, f21)^2 . N}{\sqrt{C1C2R1R2}}$$

Where N =Grand Total,

C1=Column1 Total, C2= Column2 Total

R1= Row1 Total, R2= Row2 Total

3.14.2 Odds Ratio (OR)

Odds ratio was also calculated for dropout with each independent variable individually. The OR is defined as the ratio of probability of an event happening over the chance that will not happen. If OR is greater than 1, then the probability of dropout is increased. If the OR is less than 1, then it is decreased (Zar 2006; Rao 2006).

$$OR = \frac{ad}{bc} \text{ or } OR = \frac{f11 f22}{f12 f21}$$

Where fij is the frequency of i^{th} row and j^{th} column and i and j=1and 2.

The 95% confidence interval (CI) will be used to assess the significance of OR and it will be given by

$$CI = OR . e^{\left(\pm 1.96 \sqrt{\frac{1}{a} + \frac{1}{b} + \frac{1}{c} + \frac{1}{d}} \right)}$$

where a=f11, b=f12, c=f21, d= f22 (Hannan 2007).

3.14.3 Cramer Coefficient (Phi)

Cramer Coefficient (φ) is the measure of strength of association between the categorical (qualitative) variables (Zar, 2006; Rao 2006).

$$\text{Phi} = \sqrt{\frac{\chi^2}{N}}$$

Or,

$$\text{Phi} = \frac{(f11\,f22 - f12\,f21)}{\sqrt{C1C2R1R2}}$$

For larger than 2x2 table,

$$\text{Phi} = \sqrt{\frac{\chi^2}{N(k-1)}}$$

Where k is the number of row or column, whichever is smaller.

3.14.4 Logistic Regression Model

Logistic regression analysis will be carried out to assess the causative factors for primary school dropout and model will be fitted for dropout with other independent variables. The logistic regression model was first introduced by Berkson, who showed how the model could be fitted using iteratively reweighed least squares. Logistic regression is now widely used in research when the dependent variable is categorical and independent variables are categorical or numerical. Binary logistic regression will be used if the dependent variable has only two responses (Hosmer 2002; Hair 2011; Field 2005; Aryal 2008).

Assumptions of logistic regression are as follow:

1. Logistic regression does not assume a linear relationship between the dependent and independent variables.
2. The dependent variable must be a dichotomy (2 categories).
3. The independent variables need not be interval, nor normally distributed, nor linearly related, nor of equal variance within each group.
4. The categories (groups) must be mutually exclusive and exhaustive; a case can only be in one group and every case must be a member of one of the groups.
5. Larger samples are needed than for linear regression because maximum likelihood coefficients are large sample estimates. A minimum of 50 cases per predictor is recommended.

We look at basic notation underlying a logistic regression model. The logistic regression model will be given as

$$P = \frac{e^{(\beta 0 + \sum \beta i Xi)}}{1 + e^{(\beta 0 + \sum \beta i Xi)}}$$

where i=1,2,……..n

We can draw inference from logistic regression. The main contribution in this case is that of, who provided general asymptotic results for maximum likelihood estimator; it follows that parameter estimator in the logistic models having large sample normal distribution. Thus a large sample 100(1-α) % confidence interval for parameter has the form

$\hat{\beta} + Z_{\alpha/2}\, \sigma(\hat{\beta})$

Where, $\sigma(\hat{\beta})$ is the estimated asymptotic standard error.

Let $\gamma = \gamma_1, \gamma_2, \gamma_3, \ldots\ldots\ldots\ldots \gamma_q$ denote a subset of normal parameters. Suppose we want to test H_0. Let M_1 denote the fitted model, and M_0 denote the simpler model with $\gamma=0$. Large sample test can use, likelihood ratio approach, with statistic test based on twice the log of ratio of maximized likelihood's for M_1 and M_0. Let L_1 denote the maximized log likelihood for M_1 and let L_0 denote the maximized likelihood for M_0 under H_0, the statistic test $-2(L_1 - L_0)$ has a large sample χ^2 distribution with q degree of freedom. The statistics has some limiting null distribution in large sample, this is called Wald statistic. When γ as a single element, this χ^2 statistic with degree of freedom 1is the square of ratio of parameter estimate to its estimate standard error, that is

$\text{Wald} = (\hat{\beta}/SE\hat{\beta})^2$

In order to estimate the parameter we suppose that binomial data of the form y out of n trails i = 1, 2, 3,...., n are available. Where the logistic transform of the corresponding success probability p, or logit (Y) is to be modeled as a linear combination of n explanatory variable, i.e., x_1, x_2, x_3,..... , x_n. where i= 1, 2,……, n

So that

$\text{logit}(Y) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + ... + \beta_n x_n$

In order to fit a linear logistic model to a given set of data the unknown regression coefficients, β_0, β_1, β_2, β_3,....,β_n have first to be estimated. These regression coefficients are estimated using the method of maximum likelihood. The statistical significance of individual regression coefficients (β's) was tested using the Wald chi-square statistic.

The logistic regression model has been fitted to a given set of data, the adequacy of the model is examined by overall goodness-of-fit tests, area under the receiver operating characteristic (ROC) curve, and examination of influential observations. The purpose of any overall goodness-of-fit test is to determine whether the fitted model adequately describes the observed outcome experience in the data

3.14.4.1 Log-likelihood Statistics

A logistic regression model is said to provide a better fit to data if it finds an improvement over the intercept-only model (the null model). An improvement over the null model is examined by using the log-likelihood ratio (Peng, 2002). The log-likelihood is based on summing the probabilities associated with the predicted and actual outcomes. The log-likelihood statistics is an indicator of existence unexplained information after the model has been fitted. The improvement of model is calculated by the difference of log-likelihoods of model with predictors and model with only constant. The result is χ^2 distribution which makes it easy to calculate the significance of the value.

$$\text{Log likelihood ratio} = -2\ln\left(\frac{L(1)}{L(2)}\right)$$

or, Log likelihood ratio= -2{ Log L(1) – Log L(2) }

where L(1) is log likelihood of the model containing all the predictors in the model.

L(2) is log likelihood of null model containing only the constant.

This ratio is same as $\chi^2$and p value was estimated for degree of freedom (k-1).

3.14.4.2 Hosmer-Lemeshow test

The overall goodness-of-fit tests of logistic regression model will be tested by Hosmer-Lemeshow test based on χ^2 and more powerful than the traditional χ^2 test which is calculated as follows (Ainsworth, 2010):

1. Subjects are ordered on their predicted probability
2. Subjects are divided into 10 groups based on the probabilities (all subjects with 0.1or lower in lowest decile and 0.9 or higher in the highest decile, etc.)
3. Divide subjects into groups according to their actual outcome creating a 2 X 10 matrix of observed frequencies.
4. Expected frequencies are calculated and the observed frequencies are compared to the expected frequencies in a χ^2 test.

The fit of model is indicated by a non-significant of chi-square.

3.14.4.3 Nagelkerke R^2

Nagelkerke R^2 was calculated in logistic regression analysis which is similar to R^2 in regression analysis. (Newsom J., 2010)

$$R^2 = \frac{1 - \left\{\frac{L(1)}{L(2)}\right\}^{2/n}}{1 - \{L(2)\}^{2/n}}$$

Where L(1) is log likelihood of the model contains all the predictors in the model.

L(2) is log likelihood of null model with just the constant.

R^2 is the proportion of the variation in the dependent variable that can be explained by predictors in the model.

3.14.4.4 Receiver Operating Characteristic (ROC) Analysis

Receiver Operating Characteristic (ROC) Curves are useful visualization tools that allow a quick assessment of the quality of a logistic regression model. They are usually plotted in reference to a baseline or random model, with the area under the ROC Curve as a popular indicator of the quality of logistic regression model.

Sensitivity is the probability that a test identifies true positives among dropout and specificity is the probability that a test identifies the true negative among non-dropouts. A measure of goodness of fit is often used to evaluate the fit of a logistic regression model. A ROC curve can be plotted on the basis of sensitivity and 1-specificity. Area under ROC curve gives a good indication to model performance which lies between 0.5 and 1 (Forthofer2007, Analysis studio free edition 2010, Okeh 2012). This value should be as high as possible and indicates as follows:

0.5 – No distinguish ability (the model has no meaning).
0.51 – 0.7 – Low distinguish ability (not a very good model yet the model can be used).
0.71 – 0.9 – Very good distinguish ability.
0.91 – 1 – Excellent distinguish ability

3.14.5 Collinearity Analysis

The multicollinearity was measured by tolerance statistics and variance inflation factor (VIF). The VIF measures the strength of inter relationship among the independent variables.

Tolerance = $1 - R^2$, where R^2 is the square of multiple correlation. A tolerance of less than 0.02 was presence of problem. The corresponding VIF is 1/tolerance.

The presence of muliticollinearity also was examined by VIF. The presence of high pair-wise correlation between the regressors indicates multicollinearity. The variance inflation measures the inflation in variance of the parameters estimated due to collinearity between dependent variable and other variables. If VIF exceeds 10, then it is the indication of the presence of multicollinearity (Field 2005).

3.15 Retrospective Cohort Analysis

Retrospective cohort analysis will be used to calculate the completion rate of primary grades in five consecutive years. The scientific study of drop-outs by the cohort method wherein a particular batch of students joining grade I during a particular year are followed during the successive years in the next higher classes, till the end of that stage. A major problem in such a

study is the non-availability of earlier records and the time involved in the collection of appropriate data. Further, the data should also be amenable to analysis on the basis of variables which are directly responsible for this phenomenon such as rural/urban characteristics and sex and information about children belonging to certain communities who have been largely responsible for the large drop-out. Such details are not readily available in the periodical statistics collected annually by official agencies. It is observed that at the primary level there is a likelihood of more drop-outs either at grade I or at the end of grade V. A few students from the primary school having grades I - V may drop out since there may not be facilities for education at the lower secondary level in the neighborhood.

Analysis will carry out for:

i) Dropout by age, sex, grade for study districts
ii) Dropout in different religion / caste group
iii) Dropout rate according to education status / occupation of parents.

The results will be compared with different national and international past studies of similar nature. After calculation and comparison of the results, conclusion will be drawn and necessary recommendation will be provided.

3.16 Limitations

This study only examines dropout from primary grades I to V. It does not examine dropout from lower secondary and secondary school. This study is also limited to schools having grades I to V were included. The study is limited to two *inner-Terai* and *Terai* districts of Nepal. Although these districts are fairly typical of *Terai* districts, there is no way to be certain whether the results are representative of major part of Nepal. In the analysis, migrated children are excluded. This study uses a cross-sectional as well as a longitudinal analysis that reduces the ability to infer causality and also makes results susceptible to biases from exogenous events, such as economic boom or recession, floods and drought, and changes in education policy although none of those is known to have occurred during the year preceding the dropout.

Most of the data come from human reports and are thus subject to biases. The precision of the estimates will be low to modest, the power of analyses will be modest, and the possibility of Type II errors will be moderate.

3.18 Ethical Precautions

The study believes that there was minimum ethical risk to the respondents. Some of the requested information could have been found intimidating, such as family background, occupation, educational level, and financial conditions. To reduce the discomfort of respondents, a school teacher introduced the researcher to the parents and the dropout students and explained the purpose of the visit. The respondents were assured of confidentiality for their responses. Informed consent was secured prior to interviewing each respondent. The researcher conducted all interviews with parents of the dropout and non-dropout students and the schoolteachers. The resource persons helped in the collection of data from school records, and he was clearly instructed to maintain a high degree of confidentiality about the information collected.

CHAPTER IV

RESULTS

This chapter primarily reports the result of this research after the collection and analysis of data to answer the research questions. The different statistical tests have also been applied where ever required.

4.1 Distribution of school children according to school record

In this research, the number of children, who were enrolled in the grades I to V from the sampled primary level schools for the academic year 2009 were included in the study.

Table-4.1: Distribution of school children by sex and grade of Chitwan district, 2009

Grade	Dropped out			Regular			Total		
	Girl	Boy	Total	Girl	Boy	Total	Girl	Boy	Total
I	21 (13.6)	18 (11.7)	39 (25.3)	185 (7.9)	191 (8.1)	376 (16.0)	206 (8.2)	209 (8.4)	415 (16.6)
II	15 (9.7)	18 (11.7)	33 (21.4)	229 (9.8)	232 (9.9)	461 (19.7)	244 (9.8)	250 (10.0)	494 (19.8)
III	12 (7.8)	13 (8.4)	25 (16.2)	217 (9.3)	217 (9.3)	434 (18.6)	229 (9.2)	230 (9.2)	459 (18.4)
IV	15 (9.7)	15 (9.7)	30 (19.4)	284 (12.1)	263 (11.2)	547 (23.3)	299 (12.0)	278 (11.1)	577 (23.1)
V	12 (7.8)	15 (9.7)	27 (17.5)	259 (11.0)	268 (11.4)	527 (22.4)	271 (10.8)	283 (11.3)	554 (22.2)
Total	75 (48.7)	79 (51.3)	154 (100.0)	1174 (50.1)	1171 (49.9)	2345 (100.0)	1249 (50.0)	1250 (50.0)	2499 (100.0)

Figures represent number of student and those in parenthesis represent percentage.

The table 4.1 represents the sex and grade wise distribution of the children of Chitwan district under study. In the present study of drop out children, boys (51.3%) dominated girls (48.7%) in Chitwan district. The maximum drop out children (25.3%) belonged to grade I followed by grade II, III, IV and V with 21.4 percent, 16.2 percent, 19.4 percent and 17.5 percent respectively. The maximum regular children (23.3%) were belongs to grade IV. In other grades, there were 16.0 percent, 19.7 percent, 18.6 percent and 22.4 percent of regular children in grades

I, II, III and V respectively. Among the regular children, percentage of girls and boys were almost the same.

Table-4.2: Distribution of school children by sex and grade of Nawalparasi district, 2009

Grade	Dropped out			Regular			Total		
	Girl	Boy	Total	Girl	Boy	Total	Girl	Boy	Total
I	24 (14.0)	28 (16.4)	52 (30.4)	221 (9.5)	222 (9.6)	443 (19.1)	245 (9.8)	250 (10.0)	495 (19.8)
II	23 (13.5)	22 (12.9)	45 (26.3)	252 (10.8)	201 (8.6)	453 (19.5)	275 (11.0)	223 (8.9)	498 (20.0)
III	16 (9.4)	16 (9.4)	32 (18.7)	246 (10.6)	232 (10.0)	478 (20.6)	262 (10.5)	248 (9.9)	510 (20.4)
IV	10 (5.8)	10 (5.8)	20 (11.7)	242 (10.4)	264 (11.4)	506 (21.8)	252 (10.1)	274 (11.0)	526 (21.1)
V	8 (4.7)	14 (8.2)	22 (12.9)	229 (9.9)	215 (9.3)	444 (19.1)	237 (9.5)	229 (9.2)	466 (18.7)
Total	81 (47.4)	90 (52.6)	171 (100.0)	1190 (51.2)	1134 (48.8)	2324 (100.0)	1271 (50.9)	1224 (49.1)	2495 (100.0)

Figures represent number of student and those in parenthesis represent percentage.

The table 4.2 represents the sex and grade wise distribution of the children of Nawalparasi district under study. Boys (52.6%) dominated girls (47.4%) in Nawalparasi district. The maximum dropped out children (30.4%) were belong to grade I followed by grade II, III, IV and V with 26.3 percent, 18.7 percent, 11.7 percent and 12.9 percent respectively. The maximum regular children (21.8%) were belongs to grade IV and around 19% in all other grades I, II, III and V. Among the regular children, girls (51.2%) were more than boys (48.8%).

Table-4.3: Distribution of school children by sex and grade of both Chitwan and Nawalparasi districts, 2009

Grade	Dropped out			Regular			Total		
	Girl	Boy	Total	Girl	Boy	Total	Girl	Boy	Total
I	45 (13.8)	46 (14.2)	91 (28.0)	406 (8.7)	413 (8.8)	819 (17.5)	451 (9.0)	459 (9.2)	910 (18.2)
II	38 (11.7)	40 (12.3)	78 (24.0)	481 (10.3)	433 (9.3)	914 (19.6)	519 (10.4)	473 (9.5)	992 (19.9)
III	28 (8.6)	29 (8.9)	57 (17.5)	463 (9.9)	449 (9.6)	912 (19.5)	491 (9.8)	478 (9.6)	969 (19.4)
IV	25 (7.7)	25 (7.7)	50 (15.4)	526 (11.3)	527 (11.3)	1053 (22.6)	551 (11.0)	552 (11.1)	1103 (22.2)
V	20 (6.2)	29 (8.9)	49 (15.1)	488 (10.5)	483 (10.3)	971 (20.8)	508 (10.2)	512 (10.3)	1020 (20.4)
Total	156 (48.0)	169 (52.0)	325 (100.0)	2364 (50.6)	2305 (49.4)	4669 (100.0)	2520 (50.5)	2474 (49.5)	4994 (100.0)

Figures represent number of student and those in parenthesis represent percentage.

The table 4.3 represents the sex and grade wise distribution of the children of the study districts. In the present study of drop out children, boys (52.0%) dominated girls (48.0%) in study districts. The maximum dropped out children (28.0%) were belong to grade I followed by grade II, III, IV and V with 24.0 percent, 17.5 percent, 15.4 percent, and 15.1 percent respectively. The maximum studying children (22.6%) were belongs to grade IV. In other grades, there were 17.5 percent, 19.6 percent, 19.5 percent and 20.8 percent of studying children in grades I, II, III and V respectively.. Among the non dropout children, girls (50.6%) were slightly higher than boys (49.4%).

The trend of reported drop out student was demonstrated that more boys than girls dropped out in both districts and was highest in grade I.

Among the total dropout children, there were 52.0 percent of boys and 48.0 percent of girls were found to dropped out in the combined figure of both districts. Overall, there was significant difference in grade wise distribution of dropout children since the p-value was less than 0.05 but no significant difference in sex wise distribution of dropout children since the p-value was more than 0.05. (Please see annex A for detailed of χ^2 test)

4.1.1 Dropout rate from school record for grade and sex wise in study districts

The table 4.7 demonstrates the distribution of dropout rates of both districts by sex and age. The dropout rate was calculated for recorded dropout children against the total enrolled of children in the sample schools. The dropout rate was highest in grade I and reduced gradually in the higher grades. Overall, the dropout rate was observed to be higher in Nawalparasi district (6.85%) than Chitwan district (6.16%). The dropout rate of boys was revealed to be higher than that of girls in both districts except in grade I of Chitwan where dropout rate (10.19%) girls was higher than that of boys (8.61%). The total dropout rates 9.39 percent and 10.5 percent were observe highest in grade I in both study districts. It was observed to be lowest (4.47%) in grade V and (3.8%) in grade IV of Chitwan and Nawalparasi districts respectively.

Table 4.4: Distribution of dropout rate by district, grade and sex, 2009

Grade	Chitwan			Nawalparasi			Total		
	Girl	Boy	Total	Girl	Boy	Total	Girl	Boy	Total
I	10.10	8.61	9.39	9.79	11.2	10.50	9.98	10.0	10.00
II	6.15	7.20	6.68	8.36	9.86	9.04	7.32	8.46	7.86
III	4.01	5.65	5.44	6.11	6.45	6.27	5.70	6.07	5.88
IV	5.01	5.30	5.20	3.97	3.65	3.80	4.54	4.53	4.53
V	4.43	5.30	4.47	3.37	6.11	4.72	3.94	5.66	4.80
Total	6.00	6.32	6.16	6.37	7.35	6.85	6.19	6.83	6.51

4.1.2 Dropout rate of Government and Private schools

The table 4.5 presents the comparison of dropout rates for government and private schools. When dropout rate was studied for private schools, it was observed less than one percent in primary grades I to IV and 1.5 percent in the grade V of Nawalparasi district. It was observed to be around 1 percent in all primary grades of Chitwan district. Dropout rates of government schools were quite higher compared to private schools. It was observed highest 9.7 percent and 11.4 percent in grade I and lowest 5.3 percent and 5.8 percent in grade V respectively for both the districts.

Table 4.5: Distribution of dropout rates for government and private schools, 2009

Grade	School	Chitwan			Nawalparasi		
		Girl	Boy	Total	Girl	Boy	Total
I	Private	1.9	1.8	1.8	0.7	0.5	0.6
	Government	10.5	9.3	9.7	10.9	12.5	11.4
	Total	10.10	8.61	9.39	9.79	11.2	10.50
II	Private	1.36	1.04	1.18	0.5	0.8	0.7
	Government	7.2	7.9	7.45	10.3	12.9	11.5
	Total	6.15	7.20	6.68	8.36	9.86	9.04
III	Private	1.22	0.44	0.77	1.2	0.8	0.9
	Government	5.76	5.94	5.85	7.5	8.1	7.8
	Total	4.01	5.65	5.44	6.11	6.45	6.27
IV	Private	0.59	1.23	0.94	0.0	0.7	0.4
	Government	5.22	6.42	5.82	6.1	7.2	6.6
	Total	5.01	5.30	5.20	3.97	3.65	3.80
V	Private	1.01	0.56	0.76	1.6	1.4	1.5
	Government	4.97	5.72	5.34	3.7	8.0	5.8
	Total	4.43	5.30	4.47	3.37	6.11	4.72
Total	Private	1.2	1.0	1.1	0.8	0.8	0.8
	Government	6.22	6.94	6.38	9.0	11.4	10.1
	Total	6.00	6.32	6.16	6.37	7.35	6.85

4.2 Distribution of actual dropout children

By interviewing the parents of dropout children who were recorded as dropout in the school register, the following status was observed.

4.2.1 Grade wise status of actual dropout children of both districts

The table 4.6 represents the grade wise distribution of the actual dropout, transferred to other school and migrated children of the study districts. In the present study of actual drop out children, boys (52.4%) were more dropout than girls (47.6%) in study districts. The maximum actual drop out children (28.6%) were belong to grade I followed by grade II, III, IV and V with 24.3 percent, 16.7 percent, 12.9 percent, and 17.6 percent respectively. Among the recorded drop out children, 15.08 percent children transferred to other school and 20.31 percent children migrated. Boys (51%) were more transferred than girls (49.0%) and it was highest in grade I (36.7%).

Table 4.6: Grade wise distribution of children for both Chitwan and Nawalparasi districts after interviewed, 2009

Grade		Regular	Transferred	Migrated	Actual dropout	Total
I	No.	819	18	13	60	910
	Percent	17.54	36.73	19.70	28.57	18.2
II	No.	914	8	19	51	992
	Percent	19.58	16.33	28.79	27.14	19.9
III	No.	912	9	13	35	969
	Percent	19.53	18.37	19.70	16.67	19.4
IV	No.	1053	10	13	27	1103
	Percent	22.55	20.41	19.70	12.85	22.2
V	No.	971	4	8	37	1020
	Percent	20.8	8.16	12.12	17.52	20.4
Total	No.	4669	49	66	210	4994
	Percent	100.0	100.0	100.0	100.0	100.0

The transferred rate, among the total transferred children, was found to be highest (36.7%) in grade I. It was 16.3 percent, 18.4 percent, 20.4 percent and 8.2 percent in grades II, III, IV and V respectively. At the beginning of the school, parents send their children to the government school to make their children habituate to the school in *"Shishu Kakchha"*(pre-primary level) because they do not need to pay any admission fee. Then, the parents who can afford try to send their children to private school. In the village, it was the prestige issue for the parents to send their children to private school. Hence more sons were transferred from government school to private school.

The table 4.7 demonstrates the distribution of actual dropout rates of both districts by sex and age. The dropout rate was calculated for actual dropout children against the total enrolled of children in the sample schools. The migrated children were excluded. The dropout rate was highest in grade I and reduced gradually in the higher grades. Overall, the dropout rate was observed to be higher in Nawalparasi district (4.63%) than Chitwan district (4.09%). The dropout rate of boys was revealed to be higher than that of girls in both districts except in grade I of Chitwan where dropout rate (6.93%) girls was higher than that of boys (6.28%). The total dropout rates 6.60 percent and 6.76 percent were observe highest in grade I in both study districts. It was observed to be lowest (2.89%) and (1.92%) in grade IV of Chitwan and Nawalparasi districts respectively.

Table 4.7: Distribution of actual dropout rate by district, grade and sex, 2009

Grade	Chitwan			Nawalparasi			Total		
	Girl	Boy	Total	Girl	Boy	Total	Girl	Boy	Total
I	6.93	6.28	6.60	6.61	6.91	6.76	6.76	6.62	6.69
II	2.94	4.47	3.72	6.64	6.88	6.75	4.91	5.60	5.24
III	3.54	3.54	3.54	3.47	4.08	3.77	3.50	3.82	3.66
IV	2.70	3.27	2.89	1.61	2.21	1.92	2.20	2.75	2.48
V	4.07	4.27	4.17	2.13	3.98	3.04	3.17	4.32	3.66
Total	3.89	4.29	4.09	4.14	4.72	4.63	4.02	4.50	4.26

4.2.2 Distribution of actual dropout children by age, sex and grade

The age of a child is one of the most important variables to be considered while studying dropout from primary school. The normal age of primary school children is ranged from six to ten years. More specifically, whether the children start primary school at the prescribe entry age and thereafter, whether they are in the appropriate grade for their age. When children start late or repeat grades, it increases the likelihood that they will drop out before completion of primary level (UNESCO, 2007).Gender discrimination exists in almost every society. In many societies there continues to be a lower valuation of education for girls, lower expectation of girls and the practice of early marriage.

Most of the primary school dropout children were found in grade I and then gradually decreased with increase in grade.

4.2.2.1 Age, sex and grade wise distribution for Chitwan district

The table 4.4 presents the distribution of dropouts in Chitwan district. There were 101 actual drop out children interviewed in Chitwan district. Among them 101 interviewed dropout children, the maximum volume of drop out (26.7%) were found in grade I followed by grade II, III, IV and V with 17.8 percent, 15.8 percent, 16.8 percent and 22.8 percent respectively. The maximum dropout (20.8%) were observed in age seven year followed by 18.8 percent, 13.9 percent, 13.9 percent, 10.9 percent, 4.0 percent and 17.8 percent in ages ten, six, eight, nine, eleven, five and eleven & more than eleven years respectively.

Table 4.8: Distribution of actual drop out children by age, sex and grade in Chitwan district, 2009

Grade	Sex	Age in years							Total	Percent
		5	6	7	8	9	10	≥11		
I	Girl	0	7	5			2		14	13.8
	Boy	4	5	4			0		13	12.9
	Total	4	12	9			2		27	26.7
II	Girl		0	5	2			0	7	6.9
	Boy		2	5	3			1	11	10.9
	Total		2	10	5			1	18	17.8
III	Girl			0	2	5	1		8	7.9
	Boy			2	4	1	1		8	7.9
	Total			2	6	6	2		16	15.8
IV	Girl					0	2	6	8	7.9
	Boy					1	4	4	9	8.9
	Total					1	6	10	17	16.8
V	Girl					6	4	1	11	10.9
	Boy					1	5	6	12	11.9
	Total					7	9	7	23	22.8
Total		4	14	21	11	14	19	18	101	100.0
Percent		4.0	13.9	20.8	10.9	13.9	18.8	17.8	100.0	

4.2.2.2 Distribution of actual drop out children by age, sex and grade in Nawalparasi district

The table 4.9 presents the distribution of actual dropouts in Nawalparasi district. There were 109 reported drop out children interviewed in the district. The maximum volume of drop outs (30.3%) were found in each grades I and II followed by grade, III, IV and V with 17.4 percent, 9.2 percent, and 12.8 percent respectively. The maximum dropouts (22.9%) were observed in age six year followed by 22.0 percent, 20.2 percent, 13.9 percent, 11.0 percent, 10.1 percent and 0.9 percent in ages eight, seven, ten, nine, eleven and more than eleven and five years respectively.

Table 4.9: Distribution of actual drop out children by age, sex and grade in Nawalparasi district, 2009

Grade	Sex	Age in years							Total	Percent
		5	6	7	8	9	10	≥11		
I	Girl	0	13	1	2				16	14.7
	Boy	1	10	5	1				17	15.6
	Total	1	23	6	3				33	30.3
II	Girl		0	9	7	0	2		18	16.5
	Boy		2	6	5	2	0		15	13.8
	Total		2	15	12	2	2		33	30.3
III	Girl			1	3	4	1		9	8.3
	Boy			0	4	4	2		10	9.2
	Total			1	7	8	3		19	17.4
IV	Girl				1	0	0	3	4	3.7
	Boy				1	1	1	3	6	5.5
	Total				2	1	1	6	10	9.2
V	Girl					0	2	3	5	4.6
	Boy					1	6	2	9	8.3
	Total					1	8	5	14	12.8
Total		1	25	22	24	12	14	11	109	100.0
Percent		0.9	22.9	20.2	22.0	11.0	12.9	10.1	100.0	

4.2.2.3 Distribution of actual dropout children by age, sex and grade for both districts

The table 4.10 presents the distribution of dropouts in the study districts. There were 210 actual dropout children in both the districts. Among them, the maximum dropouts (20.5% & 18.6%) were observed in age seven & six years followed by 16.7 percent, 15.7 percent, 12.4 percent, 13.8 percent and 2.4 percent in ages eight, ten, nine, eleven & more than eleven and five years respectively.

Table 4.10: Distribution of actual dropout children by age, sex and grade for both Chitwan and Nawalparasi districts, 2009

Grade	Sex	Age in years							Total	Percent
		5	6	7	8	9	10	≥11		
I	Girl	0	20	6	2		2		30	14.3
	Boy	5	15	9	1		0		30	14.3
	Total	5	35	15	3		2		60	28.6
II	Girl		0	14	9	0	2	0	25	11.9
	Boy		4	11	8	2	0	1	26	12.4
	Total		4	25	17	2	2	1	51	24.3
III	Girl			1	5	9	2		17	8.1
	Boy			2	8	5	3		18	8.6
	Total			3	13	14	5		35	16.7
IV	Girl				1	0	2	9	12	5.7
	Boy				1	2	5	7	15	7.1
	Total				2	2	7	16	27	12.8
V	Girl					6	6	4	16	7.6
	Boy					2	11	8	21	10.0
	Total					8	17	12	37	17.6
Total		5	39	43	35	26	33	29	210	100.0
Percent		2.4	18.6	20.5	16.7	12.4	15.7	13.8	100.0	

The percentage of dropout children was highest (28.6%) in grade I followed by 24.3 percent, 16.7 percent, 12.8 percent and 17.6 percent in the grades II, III, IV and V respectively.

4.2.3 Distribution of actual dropout children according to caste, grade and district

The table 4.11 presents the distribution of dropouts for Chitwan district by caste and grade. In this study, the caste is categorized into three groups according to DOE. The first group is *Dalit* which are socially untouchable and considered lowest caste such as *Damai, Kami, Sarki* etc. The second group is indigenous groups like *Tamang, Gurung, Newar* etc. Third group is *Brahmin* and *Chhetri* which are considered superior caste. (Please see annex B for detail of caste categories.)

Table 4.11: Distribution of actual dropout children according to caste and grade for Chitwan district, 2009

Caste	Grade	I	II	III	IV	V	Total
Dalit	Girl	3	2	2	5	6	18
	Percent	60.0	40.0	50.0	55.6	75.0	58.1
	Boy	2	3	2	4	2	13
	Percent	40.0	60.0	50.0	44.4	25.0	41.9
	Total	5	5	4	9	8	31
	Percent	100.0	100.0	100.0	100.0	100.0	100.0
Janajati	Girl	7	0	1	1	2	11
	Percent	46.7	.0	50.0	25.0	28.6	32.4
	Boy	8	6	1	3	5	23
	Percent	53.3	100.0	50.0	75.0	71.4	67.6
	Total	15	6	2	4	7	34
	Percent	100.0	100.0	100.0	100.0	100.0	100.0
Brahmin/ Chhetri	Girl	4	5	5	2	3	19
	Percent	57.1	71.4	50.0	50.0	37.5	52.8
	Boy	3	2	5	2	5	17
	Percent	42.9	28.6	50.0	50.0	62.5	47.2
	Total	7	7	10	4	8	36
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

The *Dalit* caste comprised of around 30.7 percent drop out children in Chitwan district. The *Janjati* caste comprised 33.7 percent whereas *Brahmin/Chhetry* was in highest (35.6%). Among the dropout children of *Dalit* caste, girls (17.8%) were more than boys (12.9%) whereas in other caste group boys were more than girls.

The table 4.12 presents similar data of Nawalparasi district. The distribution of the drop out children according to ethnicity/caste, *Dalit* which caste is considered as untouchable comprised of 30.3%. The *Janjati* occupied 41.3% and *Brahmin / Chhetri*, the so-called higher caste, occupied 28.4 percent. Among the dropout children of *Dalit* caste, girls (17.4%) were more than boys (12.8%) whereas among the other caste boys were more than girls.

Table 4.12: Distribution of actual dropout children according to caste and grade for Nawalparasi district, 2009

Caste	Grade	I	II	III	IV	V	Total
Dalit	Girl	7	5	4	2	1	19
	Percent	63.6	55.6	66.7	66.7	25.0	57.6
	Boy	4	4	2	1	3	14
	Percent	36.4	44.4	33.3	33.3	75.0	42.4
	Total	11	9	6	3	4	33
	Percent	100.0	100.0	100.0	100.0	100.0	100.0
Janajati	Girl	7	0	3	2	2	14
	Percent	38.9	0.0	30.0	33.3	50.0	31.1
	Boy	11	7	7	4	2	31
	Percent	61.1	100.0	70.0	66.7	50.0	68.9
	Total	18	7	10	6	4	45
	Percent	100.0	100.0	100.0	100.0	100.0	100.0
Brahmin/ Chhetri	Girl	2	13	2	0	2	19
	Percent	50.0	76.5	66.7	0.0	33.3	61.3
	Boy	2	4	1	1	4	12
	Percent	50.0	23.5	33.3	100.0	66.7	38.7
	Total	4	17	3	1	6	31
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

The table 4.13 presents the caste and grade wise joint distribution of the actual dropout children in both the district. The *Dalit* caste comprised of around 30.5 percent of drop out children in both district. The *Janjati* caste was observed to be 37.6 percent where as *Brahmin/Chhetri* was observed to be the highest (37.5%). Among the dropout children of *Dalit* caste, girls (17.6%) were more than boys (12.9%) whereas in *Janjati* caste, boys were more than girls.

Table 4.13: Distribution of actual dropout children according to caste and grade for both Chitwan and Nawalparasi districts, 2009

Caste	Grade	I	II	III	IV	V	Total
Dalit	Girl	10	7	6	7	7	37
	Percent	62.5	50.0	60.0	58.3	58.3	57.8
	Boy	6	7	4	5	5	27
	Percent	37.5	50.0	40.0	41.7	41.7	42.2
	Total	16	14	10	12	12	64
	Percent	100.0	100.0	100.0	100.0	100.0	100.0
Janajati	Girl	14	0	4	3	4	25
	Percent	42.4	.0	33.3	30.0	36.4	31.6
	Boy	19	13	8	7	7	54
	Percent	57.6	100.0	66.7	70.0	63.6	68.4
	Total	33	13	12	10	11	79
	Percent	100.0	100.0	100.0	100.0	100.0	100.0
Brahmin/ Chhetri	Girl	6	18	7	2	5	38
	Percent	54.5	75.0	53.8	40.0	35.7	56.7
	Boy	5	6	6	3	9	29
	Percent	45.5	25.0	46.2	60.0	64.3	43.3
	Total	11	24	13	5	14	67
	Percent	100.0	100.0	100.0	100.0	100.0	100.0

4.2.4 Distribution of actual dropout children according to religion, grade and district

The table 4.14 presents the religion wise distribution of dropout children in the study area. In Nepal, *Hindu* religion dominated other religions. In this study also,

Table 4.14: Distribution of actual dropout children according to religion, grade and district, 2009

District	Religion	Grade	I	II	III	IV	V	Total
Chitwan	*Hindu*	Number	19	12	14	11	20	76
		Percent	70.4	66.7	87.5	64.7	87.0	75.2
	Buddhist	Number	6	5	2	3	1	17
		Percent	22.2	27.8	12.5	17.6	4.3	16.8
	Muslim	Number	2	1	0	3	2	8
		Percent	7.4	5.6	0.0	17.6	8.7	7.9
	Total	Number	27	18	16	17	23	101
		Percent	100.0	100.0	100.0	100.0	100.0	100.0
Nawalparasi	*Hindu*	Number	20	28	12	5	13	78
		Percent	60.6	84.8	63.2	50.0	92.9	71.6
	Buddhist	Number	11	5	6	5	1	28
		Percent	33.3	15.2	31.6	50.0	7.1	25.7
	Muslim	Number	2	0	1	0	0	3
		Percent	6.1	0.0	5.3	0.0	0.0	2.8
	Total	Number	33	33	19	10	14	109
		Percent	100.0	100.0	100.0	100.0	100.0	100.0
Total	*Hindu*	Number	39	40	26	16	33	154
		Percent	65.0	78.4	74.3	59.3	89.2	73.3
	Buddhist	Number	17	10	8	8	2	45
		Percent	28.3	19.6	22.9	29.6	5.4	21.4
	Muslim	Number	4	1	1	3	2	11
		Percent	6.7	2.0	2.9	11.1	5.4	5.2
	Total	Number	60	51	35	27	37	210
		Percent	100.0	100.0	100.0	100.0	100.0	100.0

majority (75.2%) were *Hindus* followed by *Buddhists* (16.8%) and *Muslims* (7.9%) in Chitwan district.

Similarly majority (71.6%) were *Hindus* followed by *Buddhists* (25.7%) and *Muslims* (2.8%) in Nawalparasi district.

The research revealed that 73.3% of actual dropout children were from *Hindu* religion in total. 21.4 percent from *Buddhist* religion where as 5.2% were of *Muslim* religion.

4.2.5 Education status of parents of actual dropout children

The educational level of parent is often related to the enrollment and dropout of the children. The table 4.15 presents the education status of the parents of dropouts of *Chitwan* district.

Table 4.15: Education status of parent of actual dropout children for Chitwan district, 2009

Education Status of Parents	Father		Mother	
	No.	Percent	No.	Percent
Illiterate	47	47.5	52	52.5
Primary	35	35.4	22	22.2
Secondary	15	15.2	21	21.2
Higher secondary	2	2.0	4	4.0
Total	99	100.0	99	100.0

About 47.5 percent of the fathers of the actual dropout children were found to be illiterate. Similarly, 35.4 percent, 15.2 percent and 2.0 percent of the fathers education status was recorded as primary, secondary and higher secondary level respectively. None of the fathers of dropout children have completed bachelor or above.

The data of education status of mothers of dropout children presented that, majority (52.5%) were illiterate and around 22.2 percent were just literate or had the primary education in the both districts. Around 21.2 percent and 4.4 percent of mother's education of dropout children was upto secondary level and higher secondary respectively in both the districts. None of the mother's had completed bachelor or above.

Table 4.16: Education status of parents of the children of Nawalparasi district,2009

Education Status of Parents	Father		Mother	
	No.	Percent	No.	Percent
Illiterate	45	42.5	46	43.8
Primary	33	31.1	30	28.6
Secondary	22	20.8	26	24.8
Higher secondary	6	5.7	3	2.9
Total	106	100.0	105	100.0

The table 4.16 presents the education status of the father and mother of actual dropouts of Nawalparasi district. About 42.5 percent of the fathers of the dropout children were found to be illiterate. Similarly, 31.1 percent, 20.8 percent and 5.7 percent of the fathers education status was recorded as primary, secondary and higher secondary level respectively. None of the fathers have completed bachelor or above.

The data of education status of mothers of dropout children presented that, majority (43.8%) were illiterate and around 28.6 percent were just literate or had the primary education in the both districts. Around 24.8 percent and 2.9 percent of mother's education of dropout children was upto secondary level and higher secondary respectively in both the districts. None of the mother's had completed bachelor or above.

Table 4.17: Education Status of parents of the actual dropout children of both Chitwan and Nawalparasi districts, 2009

Education Status of parents	Father		Mother	
	No.	Percent	No.	Percent
Illiterate	80	39.0	98	48.0
Primary	80	39.0	52	25.5
Secondary	37	18.0	47	23.0
Higher secondary	8	3.9	7	3.4
Total	205	100.0	204	100.0

The table 4.17 presents the education status of the parents of actual dropouts children for both districts and the parents who were expired not included. About 39.0 percent of the fathers of the actual dropout children were found to be illiterate and same percent of father have completed primary level. Similarly, 18.0 percent and 3.9 percent of the fathers education status was recorded as secondary and higher secondary level respectively. None of the fathers of actual dropout children had completed bachelor or above.

The data of education status of mothers of actual dropout children presented that, majority (48.0%) were illiterate and around 25 percent were just literate or had the primary education in the both districts. Around 23 percent and 3.4 percent of mother's education of dropout children was upto secondary level and higher secondary respectively in both the districts. None of the mother's had completed bachelor or above.

4.2.6 Occupation status of parents of actual dropout children

The occupations of the parents also effect the enrollment and drop out of children. The table 4.18 presents the occupation status of the parents of the actual dropout students.

Table 4.18: Occupation status of parent of actual drop out children in Chitwan district, 2009

Occupation Status of Parents	Father		Mother	
	No.	Percent	No.	Percent
Housewife	-	-	29	29.3
Agriculture	33	33.3	38	38.4
Labor	27	27.3	23	23.2
Service	21	21.2	4	4.0
Pet Business and others	18	18.2	5	5.1
Total	99	100.0	99	100.0

The occupation status of the fathers of actual dropout children revealed that maximum (33.3%) are practicing agriculture as their major occupation and 27.3 percent belong to occupation of labor. About 21.2 percent and 17.2 percent of father's occupation of dropout children were belongs to service and pet business respectively.

The data of the occupation status of mother of the actual dropouts, the highest percentage (38.4%) of mother's occupation was agriculture. About 29.3 percent of their mothers were housewives. About 23.2 percent, 5.1 percent and 4.0 percent of mother's belonged to labor, pet business and service respectively.

Table 4.19: Occupation status of parents of actual dropout students in Nawalparasi district, 2009

Occupation Status of Parents	Father		Mother	
	No.	Percent	No.	Percent
Housewife	-	-	26	24.8
Agriculture	57	53.8	56	53.3
Labor	23	21.7	17	16.2
Service	11	10.4	3	2.9
Pet Business and others	15	14.1	3	2.9
Total	106	100.0	105	100.0

The table 4.19 presents the occupation of the parents of the actual dropout students of Nawalparasi district. The occupation status of father of dropout children showed that majority of them (53.8%) belonged to agriculture and 21.7 percent belong to occupation of labor. Around

10.4 percent and 13.2 percent of father's occupation belonged to service and pet business in Nawalparasi districts respectively.

Similarly, in the occupation status of mother, majority of them (53.3%) belonged to agriculture and around 24.8 percent of mother of actual dropout children belonged to housewives. Around 16.2 percent, 2.9 percent and 2.9 percent of mother's occupation belonged to labor, service and pet business respectively.

Table 4.20: Occupation Status of parent of actual drop out children for both Chitwan and Nawalparasi districts, 2009

Occupation Status of parent of actual drop	Father		Mother	
	No.	Percent	No.	Percent
Housewife	-	-	55	27.0
Agriculture	90	43.9	94	46.1
Labor	50	24.4	40	19.6
Service	32	15.6	7	3.4
Pet Business and others	33	16.1	8	3.9
Total	205	100.0	204	100.0

The table 4.20 presents the occupation status of the parents of the students. The occupation status of the fathers of actual dropout children revealed that maximum (43.9%) are practicing agriculture as their major occupation and 24.4 percent belong to occupation of labor. About 15.6 percent and 15.1 percent of father's occupation of dropout children were belongs to service and pet business respectively.

The data of the occupation status of mother of the actual dropouts, the highest percentage (46.1%) of mother's occupation was agriculture and 19.6 percent belong to occupation of labor. About 27 percent of their mothers were housewives. About 3.4 percent and 3.9 percent of mother's belonged to service and pet business respectively.

4.2.7 Distribution of actual dropout children according to their work

Nepal is one of the poorest countries in the world. More than 50 percent people are below poverty line. The Nepalese people have to work day to day for their daily meals. The school age children also have to support their parents for their survival.

The present study revealed that more than 50 percent of actual dropout children were engaged in different types of work which is presented in table 4.21.

Table 4.21: Distribution of actual drop out children according to work for both Chitwan and Nawalparasi, 2009 (Multiple responses)

Type of work	Grade				
	I	II	III	IV	V
Household	15	18	22	18	23
	(27.78)	(35.29)	(42.31)	(43.90)	(60.53)
Agriculture field	7	8	11	7	8
	(12.96)	(15.69)	(21.15)	(17.07)	(21.05)
Sibling rearing	19	14	10	5	0
	(35.19)	(27.45)	(19.23)	(12.20)	(0.0)
Domestic animal rearing	9	7	1	1	0
	(16.67)	(13.72)	(1.92)	(2.44)	(0.0)
Servant	4	3	3	7	2
	(7.41)	(58.8)	(5.77)	(17.07)	(5.26)
Labor	-	1	5	3	5
	-	(1.96)	(9.62)	(7.32)	(13.16)
Total	54	51	52	41	38
	(100.0)	(100.0)	(100.0)	(100.0)	(100.00

(Note: The figures in parentheses present the percentage of total in table 4.21)

When the types of work of dropout children were enquired, the highest percentage, around 45.7 of actual dropout children needed to do house hold works. Around 19.5 percent of actual dropout children were helping in agricultural works. 22.8 percent of dropout children were taking care of their younger siblings and 8.7 percent were engaged in live stock rearing. 9 percent were working as household servants. The eight boys of dropout children were found working as conductor in three wheelers. About 6.7 percent of dropout children were found working as laborer.

4.2.8 Distribution of actual dropout children based on ethnicity and causes

The parents of dropout children and teachers were enquired for the individual causes of primary school dropout. The maximum (42.2%) of the actual dropout was due to illiteracy and negligence of parents in the education of their children.

Table 4.22: Distribution of actual drop out children based on ethnicity and causes for both Chitwan and Nawalparasi, 2009 (Multiple Responses)

Causes of drop out	Chitwan (n=101)				Nawalparasi (n=109)			
	Ethnicity			Total	Ethnicity			Total
	Dalit	*Jana jati*	*Brahmin /Chhetri*		*Dalit*	*Jana jati*	*Brahmin /Chhetri*	
Household work	23	17	14	54	15	15	12	42
	(38.98)	(27.87)	(24.14)	(30.33)	(23.81)	(19.74)	(21.81)	(38.5)
Poor economic status	9	10	8	27	11	14	4	29
	(15.25)	(16.39)	(13.11)	(15.17)	(17.46)	(18.42)	(7.27)	(14.95)
Parents apathy in education	10	14	10	34	13	24	9	46
	(16.94)	(22.95)	(17.24)	(19.10)	(20.63)	(31.58)	(16.36)	(23.71)
Lack of interest in study	5	3	2	10	12	2	1	15
	(8.47)	(4.92)	(3.45)	(5.62)	(19.05)	(2.63)	(1.18)	(7.73)
Migration	9	7	16	32	6	13	15	34
	(15.25)	(11.47)	(27.59)	(17.98)	(9.52)	(17.11)	(27.27)	(17.53)
Transferred	3	10	8	21	6	8	14	28
	(5.08)	(16.39)	(13.79)	(11.80)	(9.52)	(10.53)	(25.45)	(14.43)
Total	59	61	58	178	63	76	55	194
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(Note: The figures in the table are number of students. The figures in parentheses present the percentage of total in table 4.22)

Other causes of dropout were household work (38.5%) and poor economic status of parents (26.6%). The maximum Dalit students dropped out due to household work and poor economic status. The highest percentage of parents had apathy towards the education of their children with compared to others ethnic group. More percentage of *Dalit* children had lack of interest in education. The maximum dropout children from other caste group migrated or transferred to other schools.

In total, 1.7 percent of dropout children in one academic year were readmitted in next academic year. The readmission trend was increasing in *Dalit* and girls because they were getting some incentives such as money, dress or bag after admission. It was also told that the some children were admitted in two schools for the same academic year just to get the incentive.

4.3 Distribution of studying children

To fit the logistic regression model, 250 parents of studying children were interviewed. The following status of children and parents were observed.

Table 4.23: Distribution of studying children by grade and sex, 2009

Grade	Sex		Total
	Girl	Boy	
I	22 (8.8)	23 (9.2)	45 (18.0)
II	26 (10.4)	24 (9.6)	50 (20.0)
III	25 (10.0)	24 (9.6)	49 (19.6)
IV	28 (11.20	27 (10.8)	55 (22.0)
V	25 (10.0)	26 (10.4)	51 (20.4)
Total	126 (50.4)	124 (49.6)	250 (100.0)

The table 4.23 represents the sex and grade wise distribution of the studying children. In the present study, girls (50.4%) were more than boys (49.6%). The maximum studying children (22.0%) belonged to grade IV followed by grade V, II, III, I and with 20.4 percent, 20.0 percent, 19.6 percent and 18.0 percent respectively.

Table 4.24: Distribution of studying children by caste for both Chitwan and Nawalparasi, 2009

Caste	**Number**	**Percent**
Dalit	59	23.6
Janjati	98	39.2
Brahmin/Chhetri	93	37.2
Total	250	100.0

The *Dalit* caste comprised of around 23.6 percent of studying children. The *Janjati* caste comprised 39.2 percent whereas *Brahmin/Chhetri* was in highest (37.2%).

Table 4.25: Distribution of studying children by religion, 2009

Religion	Number	Percent
Hindu	189	75.6
Buddhist	46	18.4
Muslim and others	15	6.0
Total	250	100.0

The research revealed that 75.6% of studying children were from *Hindu* religion in total. 18.4 percent from *Buddhist* religion where as 5.2% were of *Muslim* and other religion.

The table 4.26 presents the education status of the parents of studying children and the parents who were expired not included. About 52.6 percent of the fathers have completed primary level. Similarly, 40.5 percent and 5.3 percent of the fathers education status was recorded as secondary and higher secondary level respectively. 1.6 percent of the father was found to be illiterate.

The data of education status of mothers of studying children presented that, majority (59.3%) were just literate or had the primary education. Around 22.6 percent and 2.8 percent of mother's education was up to secondary level and higher secondary respectively. 15.3 percent of the mother was found to be illiterate.

Table 4.26: Distribution of education status of parents of studying children for both Chitwan and Nawalparasi, 2009

Education status	Father		Mother	
	Number	Percent	Number	Percent
Illiterate	4	1.6	38	15.3
Primary	130	52.6	147	59.3
Secondary	100	40.5	56	22.6
Higher secondary and above	13	5.3	7	2.8
Total	247	100.0	248	100.0

Table 4.27: Distribution of occupation status of parents of studying children for both Chitwan and Nawalparasi, 2009

Occupation status	Father		Mother	
	Number	Percent	Number	Percent
House wife	-	-	91	36.7
Agriculture	79	32.0	99	39.9
Labor	13	5.3	0	0
Service	86	34.8	52	21.0
Pet business and others	69	27.9	6	2.4
Total	247	100.0	248	100.0

The table 4.27 presents the occupation status of the parents of the studying children. The occupation status of the fathers of studying children revealed that 32.0 percent are practicing agriculture as their major occupation. About 34.8 percent and 27.9 percent of father's occupation were belongs to service and pet business and others respectively and 5.3 percent belong to occupation of labor.

The data of the occupation status of mother of the studying children, the highest percentage (39.9%) of mother's occupation was agriculture. About 36.7 percent of their mothers were housewives. About 21.0 percent and 2.4 percent of mother's belonged to service and pet business and others respectively. None of mother belong to occupation of labor

4.4 Physical facilities of the Schools

Physical facilities of the school contribute to increase enrolments and minimize the dropout. In order to assess the physical settings of the schools, availability of the physical and instructional facilities was recorded and analyzed. The table 4.26 presents the picture of existing facilities of the schools in the two study districts.

All the sample schools of Chitwan have class-room facility available for grades I to V whereas it was available in majority (95%) of the sample schools of Nawalparasi. The majority of the sample schools in Chitwan have separate toilets for girls (70%), fencing of the school compound (89%) and drinking water facilities (99%). Similar situation was observed in Nawalparasi with separate girls' toilets in 68 percent school and fencing of the school compound (78.0%). Toilets were found adequate in Chitwan (90%). However, they were found less adequate in Nawalparasi (87%).

Table no. 4.28: Physical and instructional facilities of the schools by districts, 2009

Available Facility	Chitwan (in %)	Nawalparasi (in %)
Classroom	100.0	93.3
Toilet	100.0	86.7
Toilet (Girls)	86.7	80.0
Furniture	93.3	86.7
Play ground	80.0	80.0
Drinking water	93.3	86.7
Instructional materials	73.3	66.7
Fencing	80.0	73.3

It can be observed from the table that physical environment of the sample schools in Chitwan district was found better than that of Nawalparasi with respect to availability of facilities such as school building, classroom and toilet. Other facilities such as furniture, play ground and instructional materials were found adequate in the sample schools of both the districts. It was also observed that drinking water facility was present in majority of the schools (93.3%) in Chitwan whereas in Nawalparasi this facility was present in 86.7 percent of the schools.

4.5 Primary School Teacher's profile

The table 4.29 presents the qualification of primary teachers in the study area. Majority of teachers (62.9%) teaching primary level in Chitwan have intermediate qualification followed by 21.2 percent have bachelors and above, 11.8 percent have SLC and 3.1 percent under SLC. The qualification of teachers in Nawalparasi district was similar to those in Chitwan district. The percentage of teachers with intermediate qualification was highest (63.2%) followed by 21.0 percent, 11.3 percent, and 4.5 percent teachers with qualification bachelors and above, SLC and under SLC with respectively.

Table 4.29: Teacher's qualification by district, 2009

Qualification	Chitwan (in %)	Nawalparasi (in %)
Under SLC	3.1	4.5
SLC	11.8	11.3
Intermediate	62.9	63.2
Bachelor and above	21.2	21.0

72 percent of primary school teachers had taken minimum 2 moths training in Chitwan with almost similar 70 percent in Nawalparasi district. The proportion of female primary school teacher was 45 percent and 42 percent in Chitwan and Nawalparasi respectively.

Chapter V

ANALYSIS

The statistical models are applied to the data of actual dropout children from sample schools in Chitwan and Nawalparasi districts of Nepal. The fitted statistical models for study variables with primary school dropout are presented separately for the study districts and sex of the students of two districts. The fitted model estimates the probability of dropout from primary school.

5.1 Demographic variables of actual dropout children for Chitwan District

The table 5.1 presents the age of the students studying in primary level in Chitwan district. The normal age of primary school children is ranged from five to nine years. Ideally, the mean age of primary school children is supposed to be seven years. The mean age of primary school actual dropout children in Chitwan is 9.01 years with standard deviation of 1.95 years. The mean age of dropout boys (9.02 years) was higher than that of girls (8.69 years). This difference may be due to the higher number and overage enrollment of boys in primary level of school. When the mean age of dropout children was compared that of studying children, it was found to be higher for dropouts in all grades.

Table 5.1: Mean age of primary students of Chitwan district by grade, 2009

Grade	Dropout		Studying	
	Mean	Std. Deviation	Mean	Std. Deviation
I	6.48	1.221	5.96	0.860
II	7.44	1.294	6.77	0.764
III	8.50	0.894	7.95	0.843
IV	11.24	2.016	9.18	0.999
V	10.22	1.242	9.85	1.161

The dropout rate (6.5%) and the volume of dropout (26.7%) were highest for grade I. There was significant difference in number of dropouts in different grades. There were more boys (52.5%) than girls (47.5%) who dropped out of primary level but this difference is not significant. Also, the difference between the enrolment of boy's and girls was not significant.

5.2 Demographic variables of dropout children for Nawalparasi district

The table 5.2 presents the age of the students studying in primary level in Nawalparasi district. The mean age of primary school dropout children in Nawalparasi district is 8.23 years

with standard deviation of 2.343 years. The mean age of boys (8.58 years) is higher than girls (8.43years). This difference may be due to higher number and overage enrolment of boys in primary level. When the mean age of dropout children was compared to that of studying children, it was found to be higher in all grades.

Table 5.2: Mean age of primary students of Nawalparasi district by grade, 2009

Grade	Dropout		Studying	
	Mean	Std. Deviation	Mean	Std. Deviation
I	6.33	0.692	5.81	0.725
II	7.61	0.933	6.78	0.932
III	8.68	0.820	8.08	1.086
IV	10.90	2.131	9.24	1.293
V	10.64	1.447	9.95	1.080

The dropout rate of 6.59 percent was observed in grade I. The maximum volume of primary level dropout (30.0%) was observed in grade I. There was significant difference in dropout children according to grade. The dropout among boys (52.7%) was found to higher than girls (47.3%) in primary level but this difference was not significant.

5.3 Demographic variables of dropout children for both districts

The table 5.3 presents the age of the students studying in primary level in both districts. The mean age of dropout children in both districts is 8.74 years with standard deviation of 2.021 years. The mean age of dropout boys (8.78 years) was higher than girls (8.69 years). This difference may be due to the higher number and overage enrolment of boys in primary level. When the mean age of dropout children was compared to that of the mean age of studying children, it was found to be higher in all grades.

Table 5.3: Mean age of students of both Chitwan and Nawalparasi districts by grade, 2009

Grade	Dropout		Studying	
	Mean	Std. Deviation	Mean	Std. Deviation
I	6.40	0.960	5.87	0.792
II	7.55	1.064	6.78	0.849
III	8.60	0.847	8.02	0.977
IV	11.11	2.025	9.21	1.154
V	10.38	1.302	9.90	1.126

The highest dropout rate (6.59%) as well as the maximum volume of primary level dropout (28.0%) was observed in grade I in both districts. There was significant difference in dropout children according to grade among the dropout children. The boys (52.4%) were found to dropout more than girls (47.6%) in primary level but this difference was not significant.

5.4 Bivariate analysis for study districts

A bivariate analysis was conducted before the multivariate analysis, to better understand the quality and nature of the variables used and to get a general idea of the associations existing at the univariate level. Moreover, performing a bivariate analysis of all the independent variables with dropout before the multivariate analysis permits detection of one or more variables or categories rendered invalid by in sufficient frequencies. Chi-square test was used and Cramer coefficient, odds ratio and 95 percent confidence interval were calculated for each of the independent variables.

5.4.1: Bivariate analysis of Child-related variable of study districts

Table 5.4 discusses the bivariate analysis of child-related variables of dropouts for the study area. The bivariate analysis was performed to identify the individual association of dependent variable with independent variables, with the objective of testing and fitting the best model. Among the child-related variable, grade, age and work at home were found to have significant difference with primary school drop out where as sex, religion, caste and lack of interest in studies of the child were found to be insignificant .The significance of variables were also shown by the 95 percent confidence interval. The odds ratio of all child related-variables were greater than one which mean that there was positive association with drop out except the grade and age whose odds ratio were not calculated. Higher the odds ratio there was more chances of dropout. The child will have more chances of dropout who need to work at home since it have highest odds ratio (3.73) .

Table 5.4: Bivariate analysis of child related variables of both Chitwan and Nawalparasi districts

Variable	Chi-square	Phi	P-value	Odds Ratio	95% Confidence Interval	
					Lower	Upper
Grade	12.894	0.167	0.012	-	-	-
Age	49.83	0.329	0.000	-	-	-
Sex (Girl)	0.353	0.028	0.552	0.89	0.61	1.31

Caste (*Dalit*)	2.755	0.077	0.097	1.42	0.92	2.19
Religion (*Hindu*)	0.309	0.026	0.578	0.89	0.57	1.38
Work at home	39.901	0.295	0.000	3.73	2.40	5.81
Lack of interest in education	2.981	0.081	0.084	1.74	0.88	3.45

5.4.2: Bivariate analysis of family related variables of study districts

Table 5.5 discusses the bivariate analysis of family-related variables of dropouts for the study area. When the bivariate analysis was carried out for family related variables of study districts, all the variables parents' apathy toward their education, education of parents, occupation of father, and number of children per family were significant with primary school dropout at 1 percent level of significance. The variables poverty and occupation of mother were insignificant at 5 percent level of significant. The variables education of father (3.769) and education of mother (5.39) have highest value of odds ratios. From the data analysis, it can be inferred that child from a family with the illiterate parents are most likely dropout from primary school. The child from family with parent's apathy toward the education of the child is 2.59 times more chances of dropout.

Table 5.5: Bivariate analysis of family-related variables of both Chitwan and Nawalparasi districts

Variable	Chi-square	Phi	P-value	Odds Ratio	95% Confidence Interval	
					Lower	Upper
Poverty	2.860	0.079	0.091	1.45	0.92	2.30
Parents apathy	20.290	0.210	0.000	2.59	1.67	4.03
Education of father (Illiterate)	89.88	0.505	0.000	3.769	2.814	5.047
Occupation of father (Agriculture)	6.798	0.123	0.009	1.66	1.11	2.49
Education of mother (Illiterate)	56.955	0.355	0.000	5.39	3.37	8.66
Occupation of mother (Agriculture)	1.735	0.062	0.188	1.29	0.87	1.90
No. of children	68.796	0.387	0.000	-	-	-

5.4.3: Bivariate analysis of school-related variables of study districts

Table 5.6 discusses the bivariate analysis of school-related variables of dropouts for the study area. When the bivariate analysis was carried out for school-related factors, type of school was found to be significant and distance of school from home was not significant with primary school dropout. The child studying at government school has 15 times more chances than that of private school.

Table 5.6: Bivariate analysis of school related variables of both Chitwan and Nawalparasi districts

Variable	Chi-square	Phi	P-value	Odds Ratio	95% confidence Interval	
					Lower	Upper
Type of school (Government)	222.806	0.211	0.000	15.61	8.75	30.39
Distance of school(>1km)	0.031	0.002	0.860	0.928	0.405	2.126

5.4.4: Bivariate analysis of child-related variables for girls

When bivariate analysis for girls was carried out with child related variable age, caste and work at home were found to be significant different with primary school drop out where as grade, religion and lack of interest in study of the child were found to be insignificant. This is presented in table 5.7. The girl has more chances of dropout if she needs to work at home (1.88) since it has highest odds ratio. The girl from *Dalit* family has 1.80 times more chances of dropout from primary school in comparison to *non-Dalit*. The variables religion and lack of interested in studies have odds ratio less than one.

Table 5.7: Relation of child-related variables of both Chitwan and Nawalparasi districts for girls

Variable	Chi-square	Phi	P-value	Odds Ratio	95% Confidence Interval	
					Lower	Upper
Grade	8.268	0.191	0.082	-	-	-
Age	38.768	0.414	0.000	-	-	-
Caste (Dalit)	4.073	0.134	0.044	1.80	0.98	3.33
Religion (Hindu)	0.608	0.052	0.436	0.78	0.40	1.53
Work at home	4.718	0.144	0.030	1.88	1.02	3.47
Lack of interest in study	0.318	0.038	0.573	0.74	0.23	2.32

5.4.5: Bivariate analysis of family-related variables for girls

Table 5.8 presents the bivariate analysis of family-related variables for girls. When bivariate analysis of girls was carried out with family related variables, among which apathy of parents toward the children's education, education status of fathers and mothers, father occupation and number of children in family were significant to primary school dropout. Poverty and mother occupation were insignificant with primary school dropout. The variables education of father (2.64) and education of mother (6.05) have highest value of odds ratios. The girl students from illiterate parents were most likely dropout from primary school. The girl belong to the mother whose occupation is agriculture and parent's apathy toward the education of the child is more 1.8 times more chances of dropout.

Table 5.8: Relation of family-related variables with dropout for both Chitwan and Nawalparasi district for girls

Variable	Chi square	Phi	P value	Odds Ratio	95% Confidence Interval	
					Lower	Upper
Poverty	0.051	0.015	0.822	1.04	0748	1.441
Parents apathy	4.142	0.135	0.042	1.80	0.98	3.31
Education of father (Illiterate)	22.041	0.466	0.000	2.64	1.70	4.10
Occupation of father (Agriculture)	5.296	0.154	0.021	1.95	1.06	3.60
Education of mother (Illiterate)	36.527	0.404	0.000	6.05	3.16	11.67
Occupation of mother (Agriculture)	0.007	0.006	0.932	1.02	0.58	1.81
No. of children	37.865	0.409	0.000	-	-	-

5.4.6: Bivariate analysis of child-related variables for boys

Table 5.9 presents the bivariate analysis of child-related variables for boys. When bivariate analysis for boys was carried out with various child related variable, age, work at home and lack of interest in studies were found to cause significant difference in primary school drop out where as grade, caste and religion were found to be insignificant . The odds ratio of all the child related variables were greater than one which mean that there is positive association with drop out except grade and age whose odds ratio were not calculated. Higher the odds ratio there was more chances of dropout. The boys who have to work at home (8.11) have more chances of dropout followed by lack of interest in studies (3.03).

Table 5.9: Relation of child-related variables with dropout for both Chitwan and Nawalparasi for boys

Variable	Chi-square	Phi	P-value	Odds Ratio	95% Confidence Interval	
					Lower	Upper
Grade	5.002	0.146	0.287	-	-	-
Age	24.800	0.326	0.000	-	-	-
Caste (Dalit)	0.043	0.014	0.836	1.07	0.56	2.03
Religion (Hindu)	0.000	0.000	0.994	1.00	0.74	1.35
Work at home	44.832	0.438	0.000	8.11	4.02	16.54
Lack of interest in studies	6.687	0.169	0.010	3.03	1.19	7.93

5.4.7: Bivariate analysis of family-related variables for boys

Table 5.10 presents the bivariate analysis of family-related variables for boys. When bivariate analysis of these variables was carried out for boys, poverty, apathy of parents towards the education of children, education status of father, education status of mothers and the number of children in the family were found significant difference in primary school dropout. The occupation of fathers and occupation of mothers were found to be insignificant. The variables, education of father (5.795) and education of mothers (4.52) have highest value of odds ratios. The boys with illiterate parents were most likely to drop out from primary school. The boy whose parent's showed apathy toward the education of the child has more than four times chances of dropout.

Table 5.10: Relation of family-related variables with dropout for both Chitwan and Nawalparasi for boys

Variable	Chi-square	Phi	P-value	Odds Ratio	95% Confidence Interval	
					Lower	Upper
Poverty	9.040	0.197	0.003	2.92	1.423	5.972
Parents' apathy	19.980	0.292	0.000	4.17	2.175	7.993
Education of father (Illiterate)	87.531	0.019	0.000	5.795	3.847	8.729
Occupation of father (Agriculture)	1.916	0.091	0.166	1.45	0.83	2.54
Education of mother (Illiterate)	22.284	0.313	0.000	4.52	2.25	9.18
Occupation of mother (Agriculture)	3.033	0.115	0.082	1.60	0.91	2.80
No. of children	32.993	0.375	0.000	-	-	-

5.5 Logistic regression analysis of dropout children in study districts

The logistic regression analysis is better than multiple regression analysis in the present research for fitting the models since the dependent variable primary school dropout is dichotomous. The logistic regression analysis was carried out for total study children for the independent variables of study districts.

5.5.1 Logistic regression analysis of primary school dropout children with independent variables

The Wald statistics was used to test the statistical significant of estimated coefficients. It is distributed as chi-square with (n-1) degree of freedom (d.f.) where n is the number of categories. From logistic regression analysis of dropout with child-related variables, grade, age, and work at home were found to be significant at 1 percent level of significance. The chances of dropout will decrease with increase in grades. Sex, caste, religion and lack of interest in study were not used in the logistic analysis since these were found to be insignificant in bivariate analysis at 5 percent level of significance.

Table 5.11: Logistic regression analysis of study variables for both Chitwan and Nawalparasi districts (by Enter Method)

Variable	B	S.E.	Wald	df	P value	Odds Ratio	95% C.I. for Odds Ratio	
							Lower	Upper
Grade I (Reference)**			53.133	4	0.000			
Grade(II)**	-2.426	0.416	33.982	1	0.000	0.088	0.039	0.200
Grade(III)**	-2.094	0.363	33.291	1	0.000	0.123	0.061	0.251
Grade(IV)**	-0.999	0.330	9.171	1	0.002	0.368	0.193	0.703
Grade(V)	0.219	0.317	0.478	1	0.489	1.245	0.669	2.318
Age**	-0.460	0.070	43.305	1	0.000	0.631	0.550	0.724
Work at home**	1.184	0.207	32.834	1	0.000	3.267	2.179	4.899
Parents apathy**	0.654	0.249	6.905	1	0.009	1.923	1.181	3.131
Education of father (Illiterate)**	3.789	0.270	197.298	1	0.000	44.204	26.053	74.999
Occupation of father (Agriculture)	-0.074	0.236	0.099	1	0.754	0.929	0.585	1.474
Education of mother (Illiterate)**	0.876	0.246	12.684	1	0.000	2.401	1.483	3.889
No. of child	-0.172	0.089	3.774	1	0.042	0.842	0.708	1.002
Constant	-4.264	1.175	13.173	1	0.000	0.014		

* Significance at 5 percent,
** Significance at 1 percent

From logistic regression analysis of dropout with family related variables, education status of father, education status of mother, occupation of father and number of children per parent were found to be significant at 5 percent level of significance and parent's apathy towards the children's education was insignificant. From the analysis of odds ratio of above variables at 95 percent confidence interval found significant difference since the lower and upper limit did not include one. The variables poverty and occupation of mother did not cause significant difference in primary school dropout from bivariate analysis so these two variables were not considered in the logistic regression analysis.

Table 5.11 presents the logistic regression analysis of study variables for study area. From model summary, the model log likelihood chi-square was 300.742 at d.f. 8 and p-value was 0.000. Nagelkerke R square was found to be 0.657 and considered moderate. From Hosmer and Lemeshow test, the chi-square value was 3.464 at d.f. 8 which was insignificant at 5 percent level of significant since the p-value was 0.902. From the classification table, it was observed that 85.2 percent of the dropouts were correctly classified by the model.

The odds ratios for grade, sex, caste, lack of interested in studies and work at home were less than one which show that dropout decreased with increase in these variable values. Similarly the odds ratios for age and religion were higher than one which means that the probability of dropout increased in these variable values. The 95 percent confident interval for odds ratio of age and sex were below and above one, hence there were no significant difference in dropout with these variables. Both the lower and upper limits for grade and caste were below one, therefore these two variables had significant difference in dropout from primary school, which was also shown by the p-values.

Out of seven selected independent child related variables, backward elimination was carried out for insignificant variables whose probability was more than 5 percent and entered the variables grade, age and work at home whose probability was less than 5 percent. The grade V is merged with grade IV since it is found insignificant.

Similarly, out of eight selected independent family-related variables, backward elimination was carried out for insignificant variables whose probability was more than 5 percent and entered the variables parents' apathy toward education of children, education of father, education of mother and number of children whose probability was less than 5 percent.

Table 5.12: Determinants of primary school dropout for both Chitwan and Nawalparasi district by conditional backward logistic regression analysis

Variable	B	S.E.	Wald	d. f.	P value	Odds Ratio	95.0% C.I. for Odds Ratio	
							Lower	Upper
Grade I (Reference)**			53.914	3	0.000			
Grade(II)	-2.461	0.416	35.074	1	0.000	0.085	0.038	0.193
Grade(III)	-2.119	0.363	34.099	1	0.000	0.120	0.059	0.245
Grade(IV and V)	-1.024	0.331	9.587	1	0.002	0.359	0.188	0.687

Age**	-0.469	0.069	45.700	1	0.000	0.626	0.546	0.717
Work at home**	1.190	0.200	35.436	1	0.000	3.286	2.221	4.861
Parents apathy**	0.756	0.213	12.550	1	0.000	2.130	1.402	3.236
Education of father (Illiterate)**	3.814	0.264	208.631	1	0.000	45.309	27.006	76.019
Education of mother (Illiterate)**	0.879	0.245	12.888	1	0.000	2.408	1.490	3.890
No. of children **	0.833	0.179	21.601	1	0.000	2.300	1.619	3.268
Constant	-3.615	1.093	10.935	1	0.001	0.027		

* Significance at 5 percent 0
** Significance at 1 percent

From model summary, the model log likelihood chi-square was 994.94 at 8 d. f. and p-value was 0.000. Nagelkerke R square was found to be 0.470 and considered moderate. From Hosmer and Lemeshow test, the chi-square value was 13.525 at 8 df which was insignificant at 5 percent level of significance since the p-value was 0.095.

The variables grade, age, and work at home were significant at 1 percent level of significance when conditional backward logistic regression analysis was applied among the child related variables. Among the grades, grade II, grade III and grade (IV and V) were found significant with reference grade I. The variables parent's apathy towards the children's education, education of father, education of mother and number of children were significant at 1 percent level when applied conditional backward logistic analysis and fitted logistic regression model shown by equation 5.1.

Logit (Dropout) = -3.615 - 2.461 Grade II - 2.119 grade III – 1.024 Grade (IV and V) - 0.469 Age + 1.190 Work at home + 0.756 Parents apathy + 3.814 Education of father + 0.879 Education of mother + 0.833 No. of children ….……(5.1)

The age of a child is one of the most important variables to be considered when analyzing dropout from primary school. More specifically, it is whether the children start primary school at the prescribed entry age and thereafter, whether they are in the appropriate grade for their age. When children start late or repeat grades, it increases the likelihood that they will drop out before completion of primary level (UNESCO, 2007). Most of the primary school dropouts are observed in young age.

The maximum volume of primary school dropout was found in grade I and then gradually decreased with increase in grades. As the grade of primary school children increased, the probability of dropout was decreased.

Sex was not significantly associated with the probability of being out of school in 29 countries of the 68 studies countries of developing countries (UNESCO, Institute of statistics, 2007). In the present study too, dropout rate for boys is higher than that of girls. There is no significant difference in dropout rate from primary school between the boys and girls since the p-value is more than 0.05.

The *Dalit* have higher probability of drop out in comparison to other castes. There was 1.3 times higher chance of drop out of *Dalit* with compared to other caste from the primary level.

Majority of study children are from *Hindu* religion. There is more chance of drop out of primary school children from Hindu family in comparison to other religions.

The education status of a child's parent is often related to the child's own participation in schooling. In this study, the education status of parent's was found to be inversely proportional to primary school drop out. As the education status of father increased by one unit the chances of dropout reduced by 5.7 percent where as it decreased by 3.6 percent in case of education status of mother. This shows that the education of father was more influences the primary school dropout more than education of mother.

The occupation status of father also affected the drop out of children. There is higher chance of drop out if the occupation of father is agriculture and labor.

The primary school dropout is directly proportional to the number of children per parent. The factor came into the picture of primary school drop out in the form that there were more chances of dropout who were having younger siblings because they had to look after them when their parents go to work.

5.6 Multicollinearity analysis of independent variables of study districts

Collinearity means that two or more independent variables in a regression have a linear relationship. This causes a problem in interpretation of the result of regression analysis. If the variables have a close linear relationship, then the estimated regression coefficient and t-statistics may not be able to properly isolate the effect of each variable.

Table 5.13 presents the collinearity analysis for independent variables of study area. When the tolerance value for child-related variables grade , age , sex, caste, religion, work at home and lack of interest in studies were examined, all the values were greater than 0.321. Again when the variance inflation factors (VIF) were examined, all the values were less than 3.116.

Since all tolerance values are greater than 0.1 and variance inflation factors are less than 10, the problem of collinearity is not evident in the fitted model. If tolerance value less is than 0.1 and variance inflation is more than 10, the variable is said to possess high collinearity.

Table 5.13: Collinearity analysis for independent variables for both Chitwan and Nawalparasi districts

Variable	Tolerance	VIF
(Constant)		
Grade	0.320	3.124
Age	0.323	3.101
Sex	0.992	1.009
Caste(Dalit)	0.915	1.093
Religion (Hindu)	0.932	1.073
Work at home	0.760	1.315
Lack of interest	0.848	1.179
Poverty	0.679	1.472
Parents apathy	0.564	1.774
Education of father (Illiterate)	0.758	1.319
Occupation of father (Agriculture)	0.777	1.287
Education of mother (Illiterate)	0.567	1.763
Occupation of mother (Agriculture)	0.592	1.688
No. of child	0.946	1.057

Similarly when the researcher examined the tolerance values and variance inflation factors for family-related variables poverty, parent's apathy towards the education of their children, education and occupation status of parent's and number of children per parents, all the tolerance values were more than 0.564 and all variance inflation factors were less than 1.771.

Since all tolerance values were more than 0.1 and variance inflation factors were less than 10, the problem of collinearity is not evident in the fitted model.

5.7 Receiver Operating Characteristic (ROC) Analysis

The ROC curves are useful visualization tools that allow a quick assessment of the quality of a logistic regression model. The ROC curve was fitted for various sensitivity and (1-specificity) obtained at various cutoff probabilities.

5.7.1: ROC analysis for the children of study districts

The probabilities were predicted from the equations 5.1 for all child- and family-related variables and were compared with observed values of the variables. The fitted model containing seven variables developed by the child- and family-related variables fitted well since the area under ROC curve was 0.854. Figure 5.1 and table 5.23 presents the ROC curve and ROC analysis for all dropout children of the study area.

Fig. no. 5.1: ROC Curve for study variables for all dropout children

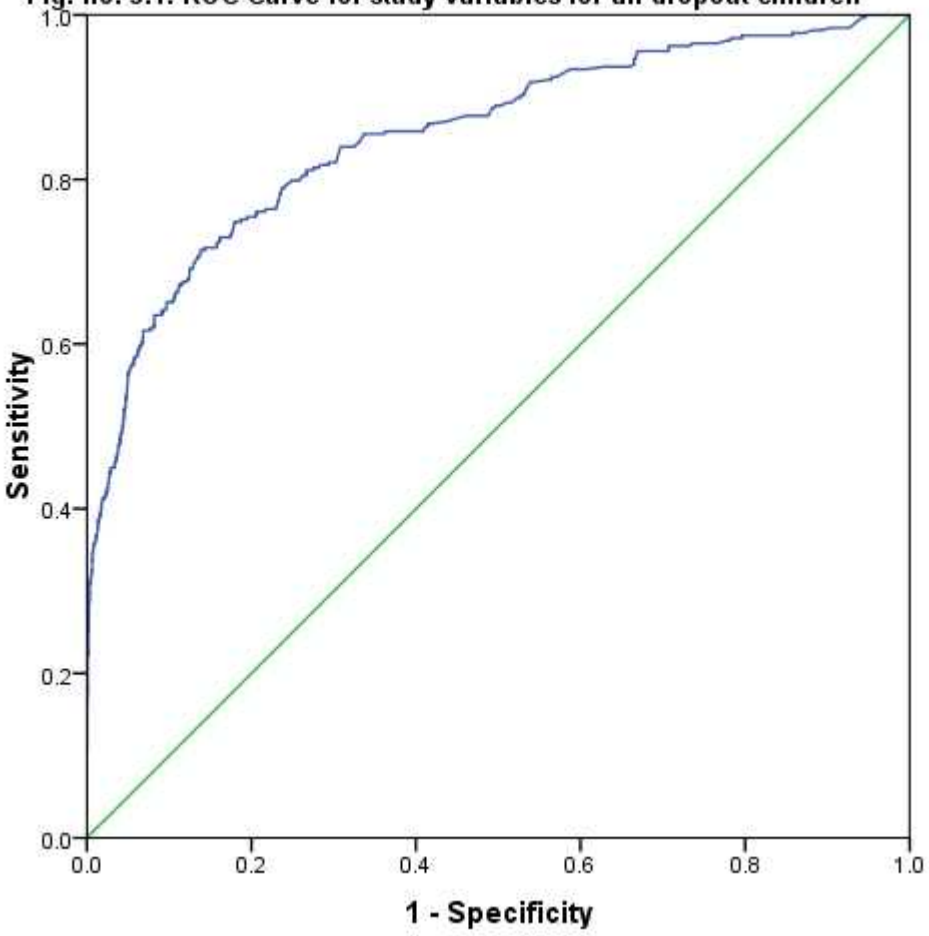


Table 5.14: Area under the curve of study districts

Test Result Variable	Area	Std. Error	P value	95% Confidence Interval	
				Lower	Upper
Predicted probability of all study variables	0.854	0.013	0.000	0.829	0.879

5.8 Retrospective cohort analysis

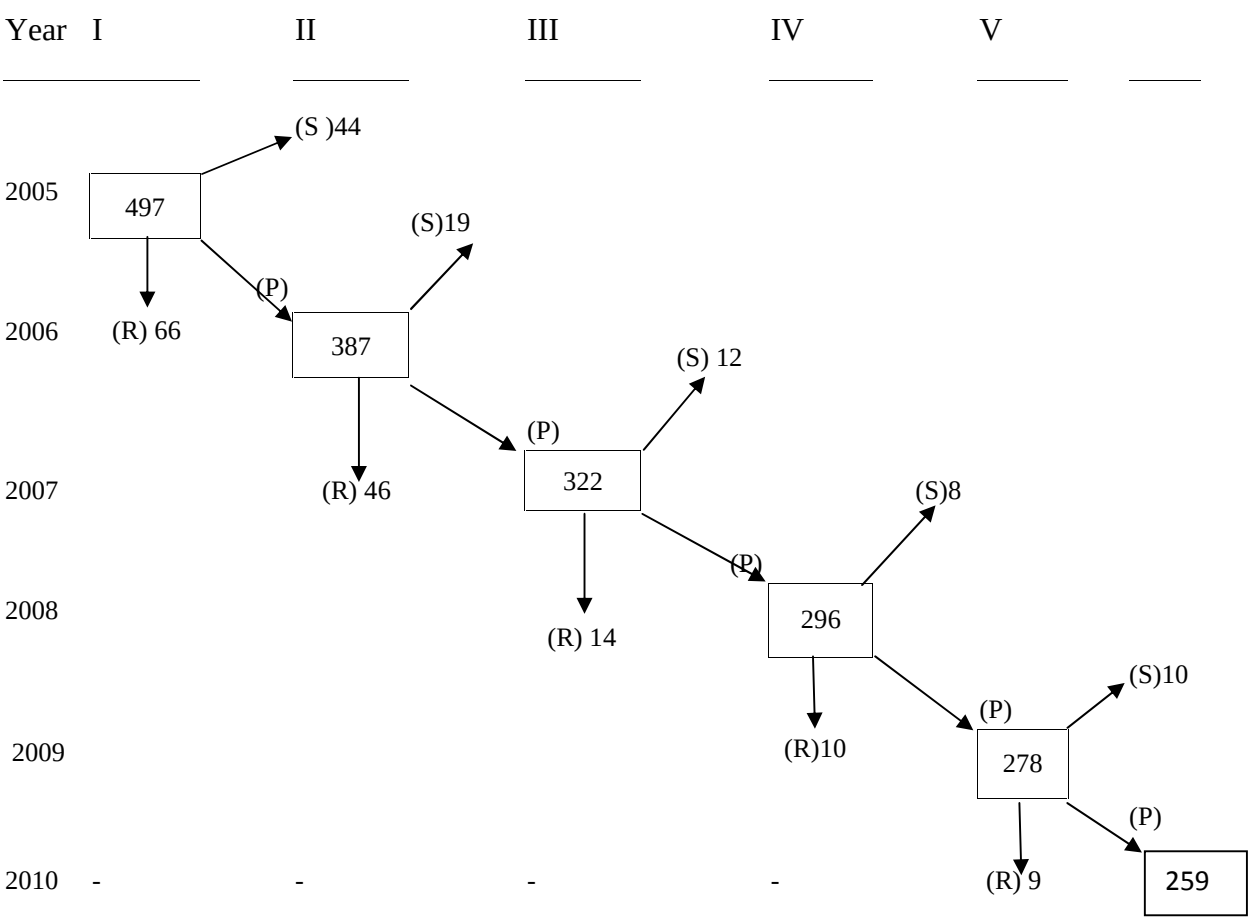
The retrospective cohort analysis was carried out from the record of attendance register for five years from 2005 to 2009. In cohort study, only children enrolled in the year 2005 at grade I were included and other children enrolled at grades II to V and enrolled in successive years in all grades were not included. For complete cohort study, long time period is needed and tedious to follow up the all children who were failed and school leavers i.e. dropout and migrated. It is not feasible in present research. Therefore the children who failed in any grade and school leavers were not followed up in the present study.

5.8.1 Retrospective cohort analysis for Chitwan district

The attendance register was available only in ten schools out of fifteen sample schools in Chitwan district. In the year 2005, total of 497 children were enrolled in these ten sample schools in grade I. The number of girls and boys are almost same but more boys (57%) were enrolled in private schools.

A total of 497 children enrolled in grade I for the year 2005. 44 children left the school from grade I, 66 repeated and 387 were promoted to grade II for next year 2006. Out of total 387 promoted children in grade II for the year 2006, 19 children left the school, 46 repeated same grade II and 322 were promoted to the grade III for the year 2007. In grade III, 12 children left the school, 14 children repeated same grade and 296 were promoted to grade IV. In the year 2008, among 296 promoted children in grade IV, 8 children left the school, 10 repeated in grade IV and 278 were promoted to grade V for the year 2009. Only 278 children reached the grade V in five successive years among them 259 children completed the primary education in five consecutive years. The primary education completion rate was 52.11 percent in five consecutive years. Figure 5.2 provides the details of the cohort analysis of primary students of Chitwan district.

Figure 5.2: Cohort analysis of total enrolled children from the year 2005 to 2010 in Chitwan district

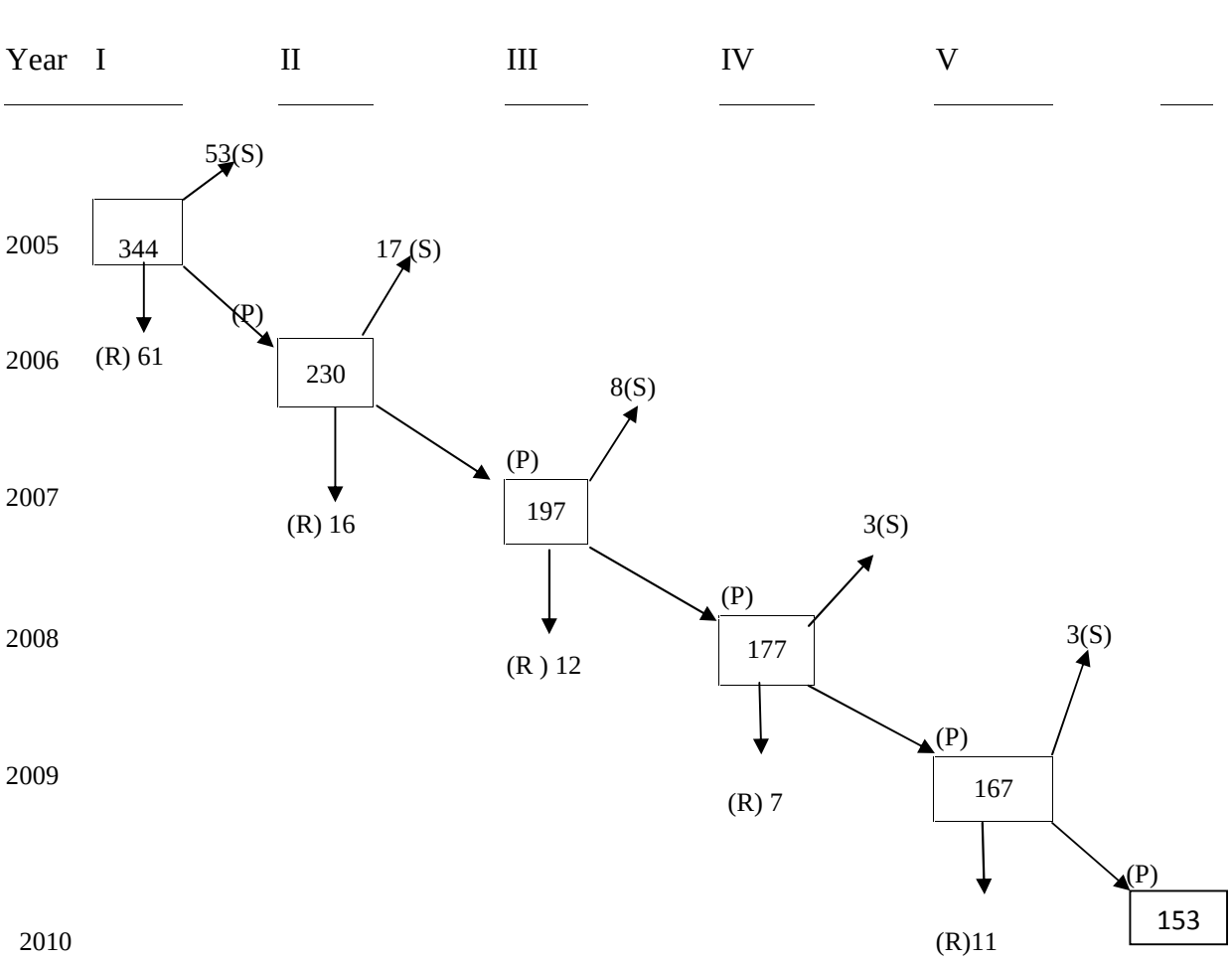


Note: P=Promoted, S=School Leavers (Dropout + Migrated), R= Repeater,

5.8.2 Retrospective cohort analysis for Nawalparasi district

The attendance record for five years from 2005 to 2009 was available only in nine schools out of fifteen sample schools in Nawalparasi district. The number of girls and boys are almost same but more boys (55%) were enrolled in private schools. In 2005, total of 344 children were enrolled in grade I; out of which, 53 children dropped out or migrated from the school, 61children repeated in same grade and 230 children were promoted to grade II for next year 2006. Of the children promoted to grade II for the year 2006, 17 children left the school, 16 children repeated in grade II and 197 children were promoted to the grade III for the year 2007. In grade III, 8 children left the school, 12 children repeated in same grade and 177 children were promoted to grade IV. Among 177 children promoted to grade IV, 3 children left the school, 7 children repeated the same grade and 167 children were promoted to grade V in the year 2009. Only 167 children reached grade V in five successive years among them 153 children completed the primary education. The primary education completion rate was 44.48 percent in five consecutive years. Figure 5.3 provides the details of the cohort analysis of primary students of Nawalparasi district.

Figure 5.3: Cohort analysis of total enrolled children from the year 2005 to 2010 in Nawalparasi district

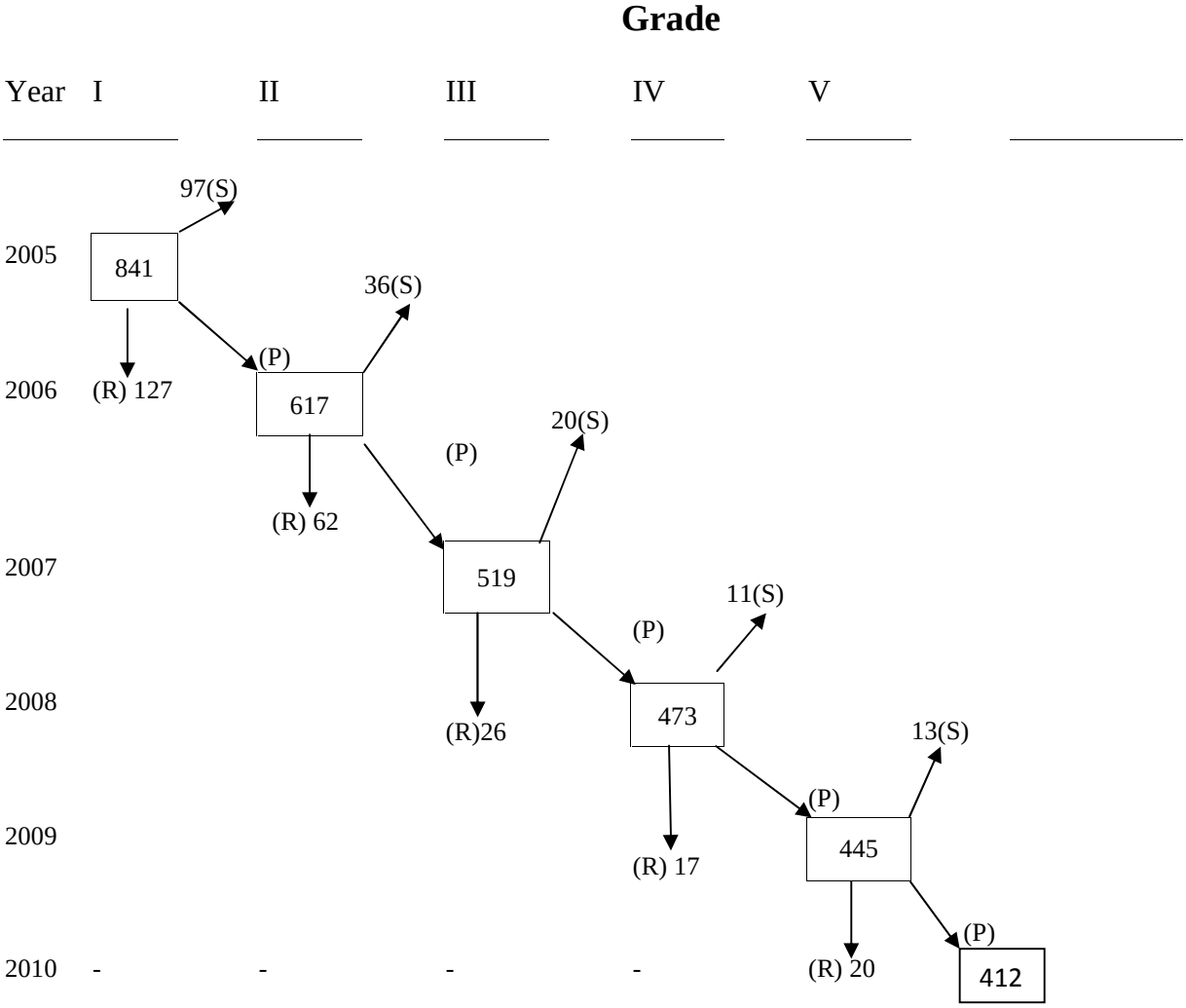


Note: P=Promoted, S=School Leavers (Dropout + Migrated), R= Repeater

5.9.3 Retrospective cohort analysis for both study districts

The attendance record for five years from 2005 to 2009 was available only in nineteen schools out of thirty sample schools in study districts. A total of 841 children enrolled in grade I for the year 2005, 97 children left the school from grade I, 127 children repeated the same grade I and 617 children were promoted to grade II for the next year 2006. Out of total 617 children promoted to grade II in the year 2006, 36 children dropped out or migrated, 62children repeated same grade II and 519 children were promoted to the grade III for the year 2007. In grade III, 20 children left the school, 26 children failed in grade III and 473 children were promoted to grade IV. In the year 2008, among 473 children promoted to grade IV, 11 children left the school, 17 children repeated grade IV and 445 children were promoted to grade V for the year 2009. Only 445 children reached in the grade V in five successive years among them 412 children completed the primary education. The primary education completion rate was 48.99 percent in five consecutive years. Figure 5.4 provides the details of the cohort analysis of primary students in both study districts.

Figure 5.4: Cohort analysis of total enrolled children from 2005 to 2010 for both Chitwan and Nawalparasi districts.



Note: P=Promoted, S=School leaver (Dropout+ Migrated), R= Repeater.

The consecutive five years completion rate is almost 49 percent in the present study which is consistent with the figure (47%) given by DoE in 2006. There are different methods for computation of primary cycle completion rate. A cohort, all students enrolled in grade I for an academic year, will follow up till they do not complete grade V. For this method, long duration of time is required to follow up for repeaters, which is not feasible for the present study. A retrospective cohort analysis was conducted for five years only and students who migrated and repeaters were not followed up in present study. Therefore the primary completion rate may be different from result of other studies. The cohort dropout (school leaver) rate was observed

highest (11.53%) in grade I. It was observed 5.83 percent, 3.85 percent, 2.32 percent and 2.92 percent in grades II, III, IV and V respectively. The trend of cohort primary school dropout rates are consistent with the national dropout rate where these rates are 16.3 percent, 3.6 percent, 3.4 percent 2.1 percent and 4.9 percent in grade I, II, III, IV and V respectively (DoE, 2010).

Using cohort data used in figure 5.4, the probability of dropouts in successive grades are found as shown in the following table 5.14

Table 5.15: Probability of dropouts in Primary schools for both Chitwan and Nawalparasi districts, base 2005

Years	Grade	Cohort	Fixed base	Chain base
2005	I	841	1	1
2006	II	617	0.27	0.27
2007	III	519	0.38	0.16
2008	IV	473	0.44	0.09
2009	V	445	0.47	0.06
2010	VI	412	0.51	0.07

The table 5.15 shows that for the cohort of 2005, the probability of the overall dropouts for combine of Chitwan and Nawalparasi districts is nearly fifty percent.

CHAPTER VI

DISCUSSION

In this chapter, the results of research study have been discussed and compared with the results of other national and international studies.

6.1 Trend of primary school dropout rate

The different studies observed that the primary school drop-out rate was highest in grade I and showed a declining trend from the grades II to V. In the present research, the dropout rates were also observed highest in the grade I and gradually decreased in the following grades II to V. The dropout rates which came out to be 6.60 percent, 3.72 percent, 3.54 percent, 2.84 percent, and 4.17 percent for grades I, II, III, IV and V respectively in Chitwan district. According to DOE report, these rates were 4.5 percent, 1.5 percent, 2.6 percent, 2.5 percent and 3.1 percent for grades I, II, III, IV and V respectively for same year. The dropout rates for primary levels estimated by DOE were very low as compared to present research result in all grades. These differences may be due to different calculation method. In present study it was calculated by interviewing the reported dropout children, the parent and the school teachers. DOE used the formula to calculate the dropout rates. In this formula new enrollment for next academic year was also considered. In Chitwan district, in-migration was increasing very rapidly hence there was increasing in new enrollment in recent years. When the new enrollment was added, it reduced the dropout rate drastically in Chitwan district which was not in reality.

The dropout rates observed in the present research were found to be 6.76 percent. 6.75 percent, 3.77 percent, 1.92 percent, and 3.04 percent for grades I, II, III, IV and V respectively in Nawalparasi district. According to DOE report, these rates were 16.3 percent, 3.6 percent, 3.4 percent, 2.1 percent and 5.0 percent for grades I, II, III, IV and V respectively for same year (DEO, 2009). The dropout rate estimated by DEO for the grade I was very high. In contrast dropout rate was very low almost half for grade II in comparison to the present study result and slightly higher for grade III and V. The dropout rate for grade IV of present research was almost inconformity with DOE data.

Some of the differences in these reported rates are due to different in definitions of dropout and different methods of estimating the rate, there is good reason to worry that they also result from unreliable data reported by schools and used without verification of accuracy.

One study (CERID, 2002b) reported that there was either over-reporting or under-reporting of dropout and repetition. The study identified several possible reasons for error of data recording;

1. The process of counting repetition and dropout proved to be difficult for data managers;
2. The form has incomplete directions and instructions;
3. Most of the teachers of the government and private schools have not received training to fill up the form; and
4. Most of the schools did not have a complete records system.

Another study (CERID, 2002c) found that there appears to be some fraudulent inflating of initial enrollment data, due to the fact that DOE assigns teachers and provides fund for school according to the number of students enrolled which later results in inflated apparent dropout. Schools are required to report their educational statistics annually at the beginning of the school year. Schools have to maintain the required teacher student ratio to receive the incentive from DEO. The schools may be giving inflated enrollment records at the start of new session. Once the enrollment at the beginning of school year is inflated, reporting inflated dropout helps to maintain balance with the real enrollment to avoid being caught at periodic school supervisions. In short, the inflated student numbers appear on the record as new enrollment at the beginning of the school session and disappear as reported dropout at the end of the session. Still another study (CERID, 2002a) found in Chitwan district, which was piloting a liberal promotion policy for students in grade I through III, that one school hid its continued high retention rates by reporting many students as dropouts when they had actually re-enrolled them in the same grade for a second year.

The dropouts were mostly recorded in government schools and negligible in privates. This may be because of the private schools own policy not to reveal the drop out as well as repeaters to the community. If the public school shows the dropout and repetition, there may be less attract to get new students.

6.2 Causes of dropout

The causes of primary school dropout were studied taking into account the child-related variables, family-related variables and school-related factors. Various studies have observed the main causes of primary school dropout as child-related variables, family-related variables and school-related factors. Major child related causes are work at home, failure in examination, poor economic condition, illness or poor health condition

of children, poor hygienic environment and lack of interested in studies. Major family related factors are found to be poor economic condition, illiteracy of parents, and negligence in girl's education where as common school related factors are poor hygienic environment and long distance of school from home.

6.2.1 Child-related variable

6.2.1.1 Age

The age of a child is one of the most important variables to be considered while analyzing dropout from primary school. The enrollment of children in primary school at the prescribe age for grades is very important and they should be in the appropriate grade for their age. When children start late or repeat grades, the chances of dropout before completion of primary grades increases (UNESCO, 2007). The entry age of child in grade I is five years (DEO, 2009). Most of the primary school dropout was observed in early age because the majority of student's dropouts from grade I. The maximum dropout was found to be around 20.5 percent in age seven years followed by 18.6 percent and 16.7 percent in ages six and eight respectively. This result was consistent with the findings of New ERA. The mean age of primary school dropout children as observed by the present research is 8.49 years. There is significant difference in primary school dropout with age. This result is consistent with the finding of the various literatures (DoE 2010, Teacher Educators' Society, Nepal, 2004, Singh, 1972, Pradhan, 1975) (Please see annexure A for Chi-square test of study variables).

6.2.1.2 Sex

Gender discrimination against girls and women exists in almost every society. In many societies, a lower valuation of education for girls, lower expectation of girls and the practice of early marriage continues, although banned by the law of the country. Parents worry about wasting money and time on the education of girls because they are most likely get married and that once married, girls become part of another family and parental investment on them is lost. These factors directly reduce enrollment of girls and their persistence in school, thus indirectly influencing their educational opportunities through undermining their confidence and self esteem. In the present research, dropout among boys (52.4%) was observed to be higher than among girls (47.6%). The null hypothesis that there is no significant difference in primary school dropout with the sex is true since the p-value was more than 0.05. This result is consistent with the result of UNESCO (2007) and Rumberger (2001).

6.2.1.3 Grade

The maximum (6.59%) actual primary school dropout rate and highest (28.57%) volume of dropouts was observed in grade I with gradual decrease with increase in grade. There is significant difference in primary school dropout with grades. This result is consistent with the various other studies (Singh, 1973; Pradhan, 1976; CERID, 1991; Karki, 2004), which too report the highest dropout rate in grade I.

This high dropout rate in grade I may be because they were not enrolled in appropriate age for grade and false reporting of enrollment at the beginning of academic year. The same reason was stated in the studies conducted by CERID (2002b), CERID (2002c) and Karki (2004).

6.2.1.4 Caste

Human Rights Watch (2007) as found that children suffer discrimination in access to education, based on race, ethnicity, religion or other socio-cultural status. The investigations in the various countries have revealed that migrant children, children from rural areas, ethnic or religious minorities, children of internally displaced people (IDPs), indigenous children and *Dalit* children were often denied equal access to education, or in some cases, any access to education at all. For children in detention, opportunities for education are often grossly deficient.

Caste discrimination is one of the major reasons for low education among the lower caste girls. In some upper castes, girls' education is hindered by the taboo about women in out-of-home employment (Girls' and Women's Education in Nepal, 2010).

In India, *Dalit* or so called untouchable and low caste children routinely face discrimination in education. Most of the governments schools in which *Dalit* students are enrolled, which exist minimally, are deficient in basic infrastructure, classrooms, teachers and teaching aid. *Dalit* students often sit at the back of the class and are often ill-treated by upper-caste teachers, staffs and students also. (Durston, 2008).

Caste discrimination is significant in Nepal. Caste discrimination, entrenched over many generations, has led to a combination of economic poverty and profound social exclusion creating excluded communities with very little experience of potential benefits of education and self esteem, putting them at great educational disadvantage.

In Nepal, share of *Janajati* and *Dalit* enrolment in primary level were 35.58 percent and 20.00 percent respectively for the year 2009. In the present study, share of primary school drop out for *Janajati* and *Dalit* were 37.6 percent and 30.5 percent. When we compared the share of dropout with the proportion of enrolment, it revealed that the probability of dropout for *Dalit* children was higher than non-*Dalit*. This statement is also supported by the bivariate and logistic regression analysis of caste with dropout.

The UNICEF believes that treating education as a basic human right will address the basic inequalities in our society, especially gender inequalities. It focuses on the most disadvantaged children through a range of innovative programs and initiatives. Working with local, national and international partners, UNICEF is contributing to the realization of the second millennium development goals (MDG) by 2015.

6.2.1.5 Religion

In Nepal, majority of people belong to Hindu religion. Hence the majority (73.3%) of dropout children, in the present research, are from Hindu family. There is no significant difference in dropout of children with religion.

6.2.1.6 Household work

The studies have found that most dropout children were engaged in household activities. The present research found that 45.7 percent of actual dropout children were involved in household work, 22.9 percent, particularly girls, in rearing young siblings, 19.5 percent in agricultural activities and 9.0 percent were working as household servants. According to the study conducted at Dhading and Siraha districts of Nepal, the major cause of primary school dropout are household chores (41.38%), agriculture/livestock (29.66%), lack of interest in studies (22.07%) and looking after younger siblings (20.69%).

Household work by children has been recognized by several other research studies as the most prevailing cause of dropout in developing countries (Anker & Melkas, 1996; Basu & Van, 1998; Cain et al., 1980; Canagarajah & Nielsen, 1999; CBS, 2001; CERID, 1981; CERID, 1983: CERID, 1984a; Fobih, 1987; Grootaert & Kanbur, 1995; Halpern & Myers, 1985; Karki, 2004; Koirala, 1977; New ERA, 1982; Pradhan, 1975; Singh, 1972, Sharma, 2007).

Poverty is widespread in Nepal and is obviously one of the most important causes of dropout. While poverty can indirectly contribute to dropout through the need for childcare so that both parents can work, it also contributes directly to dropout because some parents cannot afford to buy books and educational materials or pay the fees collected by some government schools, despite the fact that the Government of Nepal has announced free primary education, including free admission, tuition and textbooks distribution.

Primary level government schools receive NPR 42,000 as administrative and logistic expenses from the Department of Education (DOE, 2011), and the amount is often not sufficient. They make up the shortfall by charging fees from the students. The government schools often collect minimal fee from each student to help cover the cost of supplies required by the school and day-to-day administration and management. The fee is usually low but varies from school to school, and many of the poorest families find it hard to pay. Dropout from Nepal's primary schools could be reduced if the government made provision to pay these fees for the poorest families. In addition, schools usually do not have contingency funds to avoid dropout due to lack of educational materials, as simple as schoolbag. Making a small amount of petty cash available to schools for such purposes could reduce the association that currently exists between poverty and dropout. A possibility for misuse of those funds always exists, but reporting and audit measures could minimize that potential and the risks appear to be outweighed by the benefits for children of the poorest families.

6.2.1.7 Lack of interest in studies

The present study revealed that around 11,9 percent of actual dropout children are not interested in studies. This finding is less than the figure of 18 percent presented by Sharma (2007). This difference may be due to increase in awareness about the importance of education among the parents.

Among several child-related characteristics found in the literature to be associated with dropout, those most appropriate for the study of primary schools in Nepal are late entry into school, irregular attendance, failure in examinations, poor personal health and adverse peer group influences (CERID, 1983; Fobih, 1987; Giri, 1976; Janosz et al., 2000; Koirala, 1977; New ERA, 1982; Pradhan, 1975).

6.2.2 Family related factors

The family-related variables might be causes of primary school dropout in Nepal, such as, parent's apathy towards the education of children, presence of young siblings in the family, economic conditions, parents' occupation and education status, agricultural and laborer by occupation.

6.2.2.1 Economic status of parent

Poor children are less likely to enroll in schools; even if enrolled, they are less likely to complete the primary phase or achieve satisfactory learning outcomes. Poor children are required to work to support themselves or their families, which affects their attendance school, especially at certain times or seasons. Most of the poor children have low health and nutrition, which puts them at a disadvantage in learning and are more likely to be absent and finally dropout from school.

Poverty is still the main cause of school dropout in Nepal. In most cases, rural children are discouraged from going to school during the planting and harvesting seasons. While their parents work in the farm, children are tasked to baby sit their younger siblings and perform some household chores. (Lynette Lee Corporal, 2008)

In the present research, 26.7 percent of children were found to have dropped out from primary school due to poor economic status of the parents, which is in contrast with the result of study in Dhading and Siraha districts of Nepal and Kandara district of India where the figures are 63.45 and 13.3 percent respectively. This difference may be due to free primary education and free textbook distribution to all primary school children.

Poor economic status of parent has been identified by several other research studies as the main cause of primary school dropout. (CERID, 1981; CERID, 1983; CERID, 1990; Karki, 2004; Koirala, 1977; New ERA, 1982; Pradhan, 1975; Singh, 1972 Rumberger, 2001).

6.2.2.2 Education status of parents

The education status of father plays an important role in the education of their children. The children, whose fathers have higher level of education status, are very less likely to dropout from primary school. In the present research, majority of dropout children (39.0%) belonged to illiterate fathers. This result is consistent with the study, *A*

Survey Report on Dropout Children of Dhading and Siraha Districts, conducted in 2004, where majority of the parents in the sample were illiterate and the dropout children from illiterate families were recorded in the largest number. Parental education status is one of the important variables which influence the primary school dropout. Father's education plays an important role than mother's education in enrollment and dropout of the children.

Parents play an important role in how children perceive and cope with school, and they influence the decisions their children make. Children whose parents are actively involved with their schooling are less likely to experience attendance problems and dropout from school (Rumberger, 2001; Schwartz, 1995). The majority of researchers believe that parents provide the encouragement and stability that is vital for the success of a student (Bryk and Thum, 1989; McNeal, 1999; Rumberger, 2001). Recent studies have confirmed strong relationships existing between dropout of children and the role of the parents. The role of the parents can decrease the likelihood of dropping out of school at any level (Rumberger, 2001). Family-related factors that place children at risk of dropping out include a dysfunctional home life, lack of parental involvement in their education, low parental expectations, home environment, ineffective parenting or abuse, and high mobility (Wells, 1990).

Studies have identified many of the key reasons for students to drop out of school and steps to prevent them from doing so. Decreasing the dropout rate requires the active participation of schools, districts, local communities, parents and the government, working in conjunction with one another. Research has also indicated that to decrease the dropout rate, active partnership between business, economic and social sectors of the community is necessary to bring about change (Woods, 1995).

6.2.2.3 Number of children with parent

The number of children in the family also affects the dropout. The elder children have to take care of their younger siblings when their parents go to work. In the present research, the average number of children per parents was approximately 3 for the dropout children. Among the causes of primary school dropout, around 10 percent children dropped out from primary school to take care of their younger siblings. This result was consistent with Rumbeger (2001) and a survey report on dropout children of Dhading and Siraha districts (2004) where majority of the dropout children in the sample were found to be from the large families, ie., more than six members (A Survey Report on Dropout Children of Dhading and Siraha Districts, 2004).

6.2.2.4 Migration

Parents and their children may move into urban areas to access education, but also may migrate to gain better employment, limiting educational chances. Child migration can be linked to both increased and decreased educational opportunities. Migration can also lead to temporary withdrawals from school, while access is gained to other schools. In the present research, 20.3 percent of dropout children had migrated among the total recorded dropout in study schools which is consistent with internal migration of Nepal where it was 13.2 percent of the total population in 2001 (CBS, 2002).

The rate of internal migration is in increasing trend in Nepal since the Maoist People's War. Also there is increase emigration to other countries as well. When the family migrates, they never think of their children's education. The migration of a family highly influences drop out of children.

A Human Rights Watch investigation in July and August 2004 found that children of IDPs in Colombia face significant hurdles in continuing their education. In many cases, there was simply no space available, despite legal provisions that required state schools to enroll displaced children who arrived in their communities. The children of IDPs are far more likely to dropout than children in the general population. It was found that dropout displaced children of school age only 8.8 percent were enrolled in school

The need to flee their communities has already interrupted the education of many children of IDPs. As a result of missed schooling, many have already fallen behind when they try to resume their education. However, many schools will not admit children who are in a grade lower than usual for their age. In Sri Lanka, two decades of civil conflict created more than 800,000 IDPs,, including 220,000 children displaced in the northern and the eastern part of the country. About 85 percent of displaced children were *Tamil*, an ethnic group that constitutes 18 percent of the Sri Lankan population and is concentrated in the northern and the eastern part. An additional 16,000 Muslim children have also been displaced from the Northern part. Obstacles to education for the children of IDPs in Sri Lanka include poverty, which renders school supplies and uniforms unaffordable and forces the children into the workforce, unavailability of schools in the vicinity of welfare centers, overcrowding in schools and shortage of teaching staffs and the misallocation of available teachers. Migrant children are less likely to be in school than other children.

6.2.3 School related factor

Both study districts are located in Terai region of Nepal. There are primary schools at an average of 15 minutes of walking distance from home. Distance of school from home is not a significant factor for dropout in both the districts. This result is consistent with the result of Rumbeger (2001) which too has stated distance of school from home as insignificant factor for school dropout.

There is a highly significant difference in types of school in the present study. Majority of dropouts were from government schools and negligible from private schools. It may be due to the difference in enrollment of children in government and private schools. The children from poor and poorly-educated families were enrolled in government schools and those from educated families were enrolled in private schools.

A comprehensive approach to dropout prevention also focuses on keeping students in school and ensures that time spent in the classroom is engaging and useful. This approach focuses individual student support services around motivating students to learn. A key component of this reform is a review of current school-based policies and practices to redesign and reform the ones not working. Studies have shown that, as the disconnection between students and schools increases, so does the likelihood that a student will drop out of school (Wehlage & Rutter, 1986).

Several studies identified different school factors that contribute to dropout. These include the quality of the school they are enrolled in and the teachers to whom they are exposed (Heyneman and Loxley, 1986), as well as poor academic performance, grade repetition and their lack of interest (Cervantes, 1965; CERID, 1987; Battin-Pearson et al., 2000; CBS, 2001)

6.4 Cohort study for study districts

From the retrospective cohort study in the present study, the primary school completion rates were found to be 52.11 percent and 44.48 percent for Chitwan and Nawalparasi districts respectively in five consecutive years from 2005 to 2009. The combine primary school completion rate of both district was found to be 48.99 percent in five consecutive years which is consistent with national cohort completion rate (45.4%) (DOE,2007) and cohort completion rate (54%) (MoE,2009). It is low when compare to figure of Population reference bureau (70%) for the year 2010. It may be due to the different method used in computation of primary completion rate and repeaters were not followed up in the present study.

6.5 Model developed for the primary school drop out

One of the objectives of the present research is to develop the best model to identify the causes of primary school dropout for child- and family-related variables for all the students. The model was developed after applying backward conditional logistic regression analysis. The overall goodness of fit of the model was tested by log likelihood ratio statistics, Hosmer-Lemeshow, area under ROC curve and multicollinearity test.

When the model was developed for the independent variables to primary school dropout, among child-related variables, grade, age, and work at home were significant at 1 percent level of significance with primary school dropout. Sex, religion, caste and lack of interest in study were not significant with primary school dropout.

Among the family-related variables of study districts, the variables parent's apathy towards their children's education, education of father and mother, occupation of father and number of children per parents were found to be significant at 1%. The variables, poverty of family and occupation of mother were not significant to primary school dropout.

The model developed for all study children, was fitted well and supported by Wald's statistics, Hoshmer and Lemeshow chi-square and ROC curve. The ROC curve showed that the data fit well into the model and had excellent predictive power since the area under curve was above 0.90.

The variables, grade, age, and work at home were significant at in the model. The grade was inversely proportional to the primary school dropout. As the grade increases, the chances of dropout decrease. *Dalits* have 1.42 times higher chance in dropout compared to non-*Dalit*. The chance of dropout is 1.74 times higher for children not interested in studies; however, it is not significant for girls. The child who needs to work at home increases the chances of dropout by 3.73 times.

The poverty of family increased the chances of dropout approximately 1.45 times. The parents' apathy toward the education of children played an important role in primary school dropout since it had 2.59 odds ratio with dropout. There were 2.59 times higher chances of primary school dropout for the children whose parents did not show any interest in the education of their children.

The variables, parent's apathy towards education, education of father, education of mother, and number of children per parents were found to be significant in the model. Hence these family-related variables can be considered to be the major causes of primary school dropout.

Chapter VII

CONCLUSION AND RECOMMENDATION

This chapter states the conclusions drawn from this research and recommendations devised in relevance to the conclusions, which may be useful for policy makers and as a keystone for future research on primary school dropout in Nepal.

7.1 Conclusions

The present study was conducted in 15 sampled schools each in Chitwan and Nawalparasi districts. The primary school dropout rates were calculated after examining attendance records and discussing with teachers and peers about the status of students no longer attending the school. The actual dropout rates in the studied districts were 6.69 percent, at grade I, 5.24 percent at grade II, 3.66 percent at grade III, 2.48 percent at grade IV, and 3.66 percent at grade V. The primary school dropout rates calculated by DOE are very low for Chitwan district and very high for Nawalparasi districts at the all primary grades. These differences may be due to poor record keeping in some government schools resulting to erroneous data sometimes being reported to DOE. As the government of Nepal provides incentives for all *Dalit* primary school children and 50 percent for girl students in primary school, it may increase the false reporting of enrollment of primary school children. Consequently, education policy making in Nepal suffers a lack of proper information on primary school dropout, which has forced policymakers to make decisions without adequate knowledge of the extent of the problem or of trends over time. The results suggest that the official statistics either underestimate or overestimate primary school dropout probably in all primary grades I to V.

7.1.1 Child related variables

Among dropouts in the studied schools, the mean ages at the commencement of grade I was found to be almost 5.3 years, whereas the ideal age for commencement is five years. The mean age at the time of dropout is found to be 8.74 years, while the mean age of the primary school child is supposed to be seven years. Thus, the dropouts are mostly late starters and failure in examination make them further over-aged at the time of dropout. Nevertheless, it appears that parental apathy toward educating their children, the lack of mandatory laws for compulsory education, and the failure to recognize the relevance of education to local economy, are some of the possible reasons for late enrollment. It is also possible that the dropouts have repeatedly failed in their existing grades and that has resulted in being over-age.

Boys are more likely to dropout than girls are at all primary grades. In the present research, 52.4 percent of boys and 47.6 percent of girls dropped out of primary level. Dropout among boys is far more likely to report lack of interest in studied and family poverty as the primary cause than among girls. Girls are more likely to report household work as the cause of their dropout, even though the household work reduces punctuality and regularity before they drop out. Sex is not significantly associated with the probability of drop out from primary school.

The maximum primary school dropout rate is observed in grade I and then gradually decreases with increase in grade. This high dropout rate in grade I may be due to inflated reporting of enrollment at the commencement of academic year. As they climb up, the probability of dropout decreases. The grade is significant different with the primary school dropout.

The *Dalit* have a higher probability of drop out compared to other castes in the primary level. Majority of dropped out and study children are from Hindu families. There is no significant difference between dropped out according to religions.

Due to widespread poverty in Nepal, poor personal health and malnutrition are expected to be important cause of dropout. However, only few dropouts reported poor health as the cause of dropout. It is possible that many children with serious and chronic health problems never enrolled in school and therefore never dropped out.

The primary school age children were found playing in the neighborhoods during school hours. Out of school children in the village were the major source for playing during school hours for dropout children. If out of school children are present in the village, there are more chances of dropout of other school children because they also begin to lose interest in studies. Children feel some courses are difficult to learn, and the knowledge they grasp isn't useful in real life. They lose interest, which leads to dropouts.

Several personal characteristics of students add to the risk of dropping out, including mental retardation, physical disabilities, non-Nepali language used at home, various learning disabilities, and emotional disturbance. In Nepal, students with severe disabilities rarely enroll in school, but it is quite likely that students with mild undiagnosed disabilities do enroll and are more likely to drop out.

7.1.2 Family-related variables

The family-related variables household work, presence of young siblings in the family, economic conditions, occupation and education status of parents and migration might be causes of primary school dropout in Nepal. Large family size, a predominantly agricultural economy,

and ownership of livestock all require intensive labors which are filled in by the children of school age.

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This research found that the family-related variables, viz. parent's apathy toward the education of children and poverty of family are among common causes of primary school children dropout. 42.2 percent and 26.6 percent of actual dropout are due to parent's apathy toward the education of children and poverty of family respectively. Poverty of family sometimes resulted in parents' inability to purchase required material and pay the addition fees imposed by the school.

Household work may be considered as child or family-related variable for primary school dropout. Household works mainly includes taking care of younger siblings when their parents go to work, helping in agriculture and pet businesses of the parents. It contributed to 38.5 percent of primary school dropout in the present study.

The educational level of the parents is often related to the child's own participation in education and school. In this study, the education status of parents was inversely proportion to the primary school dropout. As the education status of the father increased, the chances of dropout are reduced. The education of father influences the dropout rates more than education of mother.

The occupation of parents also affects the dropout of children. In agriculture, parents need helping hands during plantation and harvesting seasons. There are more chances of dropout if the parents' occupation is agricultural.

The rate of internal migration is in increasing trend in Nepal since the Maoist People's War. Also external migration from Nepal to other countries is also increasing. When the family migrates, they never think of their children's education. The migration of the family highly influences the dropout of children.

The primary school dropout is directly proportional to the number of children in the family. The factor came into the picture of primary school dropout as a triggering factor to increase the chances of dropout, if they have younger siblings, because they had to take care of their siblings when their parents go for work.

7.1.3 School related Factors

In the present study, quality of the sampled schools was assessed using several indicators of physical conditions, educational conditions and capacity of the schools. Most of the schools met the minimum standards threshold for physical, educational or capacity indicators of primary

level education. Some schools lack separate toilets for girls, drinking water, clean school environment, sufficient furniture, proper ventilation and properly lighted classrooms and adequate playground.

School conditions appear to interfere with student learning, thus resulting to grade repetition and eventually dropout. It was expected that an inverse correlation would be found between overall school quality ratio and dropout rates. Inverse correlations do exist for primary level but are not statistically significant difference in the results may have occurred by chance. Although correlations might have been larger, had it been possible to simultaneously control family background characteristics. Consequently, the role that school conditions in Nepal play on dropout is unclear.

All the respondents, viz., parents of dropout and non-dropout children, teachers, revealed that the most important causes of primary school dropout were household work and family poverty resulting in inability to purchase required educational materials, parents' apathy towards the education of children, lack of interest in studies / school, low education status of parents and agricultural involvement of parents.

Several causes explored in this study are probably more complex than they appear. For example, "lack of interest in studies / school" could be a function of child's dislike towards school, mild physical or mental disability, health problem and so forth. It could also be due to failure in examination that leads to frustration and humiliation, thus resulting to irregularity. Failure in examination on the other hand could also be caused by irregular attendance that in turn might be caused by various other things. Thus there appears to be a complex construct of several intertwined factors. Child care at home is another constraint that could be partly a function of family requirements and partly the result of a child's dislike towards school.

The findings of this study do not depart noticeably from those of the prior researches on primary school dropouts in poor countries, but they do offer a new perspective. The literature has suggested that dropout is primarily due to the requirement of poor families to utilize all hands available to work as soon as they can be productive. Nepal is one of the least developed countries in the world. Majority of dropouts is due to economic pressure, but it is also clear that a good portion of it is not. Many dropouts are caused due to anxiety over examinations, humiliation of academic failure and boredom. Some of them primarily engaged in household works appear to have engaged so because of personal desire than mere necessity. Altogether, it is likely that about half of all the dropouts have not quit because of economic necessity. That is a huge unnecessary waste in Nepal's struggle to develop its human resources and economic waste that could be reduced with appropriate policy responses.

From logistic regression analysis, grade, age, work at home and lack of interest in studies were found to be statistically significant among child-related variables. Similarly, poverty, parent's apathy toward the education of children, education of father, education of mother and number of children per parents were significant at 1 percent level of significance.

The model is developed from conditional backward logistic regression analysis. Grade, age and work at home were found to be the determinants of primary school dropout among child-related variables. Similarly, parents' apathy toward the education of children, education of father, education status of mother and number of children were found to be determinant of primary school dropout among the family-related variables.

7.2 Recommendations

A definitive study of the causes of primary school dropout would require longitudinal study of minimum duration of 5 years. We should not wait for another 5 years to address the serious problem of primary school dropout, which has been documented by several studies over the past three decades.

Primary school dropout has almost been ignored in the policy debate in Nepal. Virtually no policy gives particular attention to dropouts. As a result, very few specific programs have been developed either for prevention of dropout or for the children who have dropped out.

Despite the exploratory nature of the study, the results offer some new perspectives to view the dropout in at least central *Terai* and suggest several strategies for reducing dropout and inducing dropouts to return to school.

1. Every study in the past decade has revealed highest dropout rates from Grade I in Nepal. In the present research too, the dropout rate was observed highest in grade I and gradually decreased in the following grades. The dropout rates were found to be 6.51 and 6.67 percent in grade I for Chitwan and Nawalparasi districts respectively. Many students appear to be leaving school because they find it anxiety-producing, humiliating or boring at the commencement of schooling. Nepal should start pilot tests for making school more interesting and joyful places. That would be likely to reduce dropout and induce some dropouts to return to school. Several countries, such as Vietnam and Thailand, have already implemented child-friendly school approach of UNICEF in their disadvantaged communities. Such schools should not be notably expensive than traditional ones.

2. The primary schools receive NPR 42,000/- per year from DOE for the administrative expenditure which may not be sufficient for the entire academic year. To fill up the gap, some government schools charge some fees for admission, examination, construction, etc. Nepal's free

primary education policy is partly undermined by schools forcing parents to pay fees. Therefore, the government should provide all required budget of administrative expenditure for one academic year and there should not be charge of any amount as fee to the student.

3. During the commencement of academic year, a house-to-house visit program is conducted to increase the enrollment in primary school. However, there is no regular follow-up program on students who stop attending school. Government should pilot a program and direct primary school officials to contact the families of students who have stopped attending for more than two weeks and to urge the student's return to school.

4. A pilot text should be conducted to use the school premises as sports and recreation centers for the community during the off-school hours. This might contribute to reduce the dropout rate and could help in keeping some dropouts linked to the school and thus motivate them to return to classes. There would be some costs for the sports equipments and the people supervising the activities.

5. The government of Nepal may provide vocational training for dropout children relevant to their immediate needs, such as baby care, cooking, weaving and knitting, kitchen gardening and livestock rearing. The teaching programs should not be loaded with the formal academic instruction methods due to which many students have fled. Rather, the approach should be learning by doing. This training should be provided at convenient times to meet local needs. It should also be aimed at improving the economic well-being of the community and country.

6. Government should strictly implement the national legislation prohibiting discrimination in education based on race, ethnicity, gender and socioeconomic status. Protection from discrimination should include mechanisms for victims and their guardians to lodge complaints and receive rapid redress; these mechanisms should be publicly communicated.

7. Government should allocate educational resources to ensure that underserved populations, including particularly vulnerable children, have equal access to education. This may entail building additional schools in these areas and allocating additional teachers.

8. The MOE should develop concrete plans and mechanisms to identify and reach out to children underserved by the education system. Such mechanisms should include a special office or unit to focus on effective strategies for ensuring that these groups have equal access to schooling. The MOE should take initiative for tracking the students by ID number based on database throughout the country so that the actual dropout rates can be calculated.

9. Government of Nepal should make the provision of automatic up-gradation at primary grades so that any child will not dropout due to failure in examination or repetition.

Examination-oriented education imposes too much pressure on students. Automatic up-gradation or continuous up-gradation across the primary grades, is probably the single most important action which may highly reduce the dropout rate. Repetition makes classes having far larger number of children and discourages children who fail to be promoted.

Annual examinations have long been used as a means of promotion in primary schools of Nepal. Abolishing the annual examination at the primary level will remove a lot of stress and strain from the system, both for the children and the teachers. With a system of automatic promotion, the annual examination is superfluous. It is preferable to institute a system of continuous criteria-referenced evaluation, so that learning problems and difficulties are detected early and the child is helped to overcome them, rather than ignoring their problems and failing the children in examinations. The primary level of education should require mastery of cognitive skills, not competitive attainment in an annual examination. Improvement of teaching methods and materials is a factor which also may have some bearing on dropout.

It has long been recognized that highly qualified and trained teachers are preferred at all educational levels. All member states in Asian region have been paying much attention to in-service training to upgrade qualifications and to pre-service training to ensure effectiveness of the teaching force. Sex of the teacher may be as important as training. At the primary level, female teachers are preferred in most countries, both for their gentle approach to young children and for the model they present to girls. Several countries with far fewer female than male teachers do experience higher dropout rate, although no clear connection between the two has been established. Nor do trained teachers guarantee either enrolment or retention. Levels of trained teachers may be high, but dropout may also be high.

To encourage enrolment of children at the primary level to achieve universal primary education various incentives should be provided as in other countries. These have taken the form of free education as well as provision of textbooks, mid-day meals, clothes and scholarships.

10. Parents play an important role in perception and coping of children with school and they influence the decisions children make. Children whose parents are actively involved with their schooling are less likely to experience attendance problems or drop out from school. The majority of researchers believe that parents provide encouragement and stability that is vital for a student's success. Recent studies have confirmed that strong relationships between students and parents can decrease the likelihood of dropping out at any level. Family-related factors that place children at risk include a dysfunctional home life, lack of parental involvement, low parental expectations, home environment, ineffective parenting or abuse and high mobility. With the parents' awareness of the risks to dropout from these factors, strict enforcement of free primary education, more comfortable conditions and better environment in the schools and enactment of pre-primary education, primary schools might actually reduce late entry and low attendance of

students. Developing after-school hour sports or recreation centers might bring the dropouts who are doing nothing back to school. However, these measures would add to the costs incurred by the government. Perhaps, at less cost, the government could induce community based organizations (CBOs) and local clubs to provide such services.

Studies have identified many of the key reasons that cause the students to drop out and actions to be taken to prevent them from doing so. Decreasing the dropout rate requires active participation of schools, local communities, parents and government working in conjunction with one another. Research has also indicated that to decrease the dropout rate, active partnership between business, economic and social sectors of the community is necessary to bring about the change.

Involving the community in primary level education may be a means of enhancing enrolment and preventing dropout. When the parents are active in the education process, it is more likely that their children will stay in school. Community participation may range from establishment of a parent-teacher and function day of schools, to actually building a school.

This study was conducted in two districts in central *Terai* of Nepal. A larger study could be more representative of the nation, would provide better opportunity for finding statistically significant results when examining associations between dropout and other variables and would allow multivariate data analysis that could examine the relative effects of various variables simultaneously.

For some dropouts, there may be multiple causes for leaving the school. This appears to be the case for irregular school attendance and some childcare activities. The present study examined children who had dropped out no more than a year earlier. A longitudinal study could examine the family conditions of the children prior to entering school, which might affect dropout and could also provide information on longer term.

Finally, the above recommendations suggest pilot testing several different interventions that are expected to reduce primary school dropout and attract dropout children back to the school. The effects of these interventions and their costs should be evaluated.

Chapter VIII

SUMMARY

Nepal has 26.6 million populations and consists of 102 social groups and 92 languages. The literacy rate is only 64.4%. Nepal is one of the ten countries with least female literacy rate (53.4%) in the world. Nepal's school education is structured as early childhood development (ECD)/ pre-primary level (PPC), primary level, lower secondary, secondary and higher secondary education. These schools include ECD/PPC of one to three years duration. Primary level provides five years of education to the 5-9 years of school-going age children and consists of five grades I-V. The lower secondary education consists of three years with the grade VI-VIII. Similarly, secondary and higher secondary education comprise two years each with grades IX-X and XI-XII. There are more than 31,000 primary schools in Nepal.

In schools record, anyone who leaves a primary school, for whatever reason, is counted as a dropout, even though some soon enroll in another school. In the present study, North Carolina State Board of Education Policy of USA was used to compute the actual dropout rate. It defines a dropout as "any student who leaves school for any reason before graduation or completion of a program of studies without transferring to another elementary or secondary school."

Everyone has the right to education without distinction of any kind, such as race, color, sex, language, religion, national or social origin, property, birth or other status. After the 20 years of the UN Convention on the Rights of the child, large numbers of children in the South Asia are still denies to free, quality basic education. At present about 80 percent of primary school age children are enrolled in school and Primary school completion rate was 76 percent for boys & 63 percent for girls.

School dropout is a social problem for which there is no simple solution. It needs attention on every problem. Many educators and others who are concerned with the dropout problem are advocating policies, which involve a broad range of institutions and agencies. Increasingly, it is being recognized that the issues of drop out and its prevention cannot be separated from issues affecting our total economic and social structure. These issues include poverty, unemployment, gender & caste discrimination, child abuse, drug abuse in the family, and many other factors, which are associated with it. A substantial portion of Nepali children between the ages of 5 and 14 are involved in various forms of child labor, such as bonded labor, carpet industries and child prostitution.

The objective of research is to find out the causes of dropout in primary schools of the study districts. The null hypotheses based on objectives are as follows:

1. Ho: There is no significant difference between boys and girls in dropout of primary school children.
2. Ho: There is no significant difference in dropout of primary school children at various the grades.
3. Ho: There is no significant difference in dropout rate of primary school children of government and private school.

A cross-sectional tracer design study was conducted in 30 sampled schools of Chitwan and Nawalparasi districts. School recorded dropout children are identified from school register, consultation with class teachers and finally from the families. The pre-designed questionnaire was used for interview method to collect information about dropout and non-dropout children. The interviewed were taken from 101 and 109 parent of recorded dropout children or dropout children or school teacher and 2366 and 2352 non dropout children respectively from Chitwan and Nawalparasi districts. To assess the reliability of response given by the non dropout children, 272 parents of non dropout children were randomly selected from the study districts. Cronobach's alpha is calculated for study variables separately and it is found high consistency since the value of alpha is greater than 0.7 for all variables.

The highest actual dropout rate was found to be 6.69 percent in grade I and followed by 5.24 percent, 3.66 percent, 2.48 percent and 3.66 percent in grades II, III, IV and V respectively. The dropout rate for girl (4.04%) was less than boys (4.50%). The overall primary school dropout rate was found to be 4.26 percent in these study districts.

The mean age of primary school dropout children in both districts is 8.74 years with standard deviation of 2.021 years. The mean age of dropout boys (8.78 years) was higher than girls (8.69 years).

Among the total actual dropout children, there were 52.6 percent of boys and 47.6 percent of girls in combine of both districts. Among them, the maximum dropouts (20.5% & 18.6%) were observed in age seven & six years followed by 16.7 percent, 15.7 percent, 12.4 percent, 6.7 percent, 3.8 percent, 3.3 percent and 2.4 percent in ages eight, ten, nine, eleven, twelve, thirteen & more than thirteen and five respectively. The percentage of dropout children was highest (28.6%) in grade I followed by 24.3 percent, 16.7 percent, 12.8 percent and 17.6 percent in the grades II, III, IV and V respectively. The mean age of dropout children was 6.45 years in grade I followed by 7.89, 9.71, 10.58 and 11.70 years in the grades II, III, IV and V respectively

In the distribution according to ethnicity/caste of the actual drop out children, the *Dalit* caste comprised of around 30.5 percent of drop out children in both district. The *Janjati* caste was observed to be the highest 37.6 percent where as *Brahmin/Chhetri* was observed to be

(31.9%). Among the dropout children of *Dalit* caste, girls (17.6%) were more than boys (12.9%) whereas in *Janjati* caste, boys were more than girls.

The research revealed that majority (73.3%) of dropout children were found to be *Hindu* by religion followed by *Buddhist* (21.4%) and *Muslim* and others (5.2%). There is no significant difference in dropout of children with religion.

In the education status of father of actual dropout children, maximum 39.0 percent were found to be illiterate and same percent had attained primary level in both districts. Similarly, approximately 18 percent and 3.9 percent of father education status were recorded as secondary and higher secondary level respectively in combine of both study districts. None of the fathers of actual dropout children had completed bachelor & above.

In education status of mother of dropout children, majority (48.0%) were just literate or had the primary education and around 25 percent were illiterate in the both districts. Around 23 percent and 3.4 percent of mother's education of dropout children was upto secondary level and higher secondary respectively in both the districts. None of the mother's had completed bachelor or above.

In the occupation status of father, majority 43.9 percent were belonging to agriculture and 24.4 percent belong to occupation of labor. Around 15 percent of father's occupation each was belongs to service and pet business in both districts. Similarly, in the occupation status of mother, majority 43.9 percent were belonging to agriculture and 27 percent of mother of actual dropout children were belong to housewife. Around 19.6 percent of mother's occupation was recorded as labor. About 3.4 percent and 3.9 percent of mother's belonged to service and pet business respectively.

On causes of primary school dropout, the maximum (42.2%) of the actual dropout was due to illiteracy and negligence of parents in the education of their children. Other causes of dropout were household work (38.5%) and poor economic status of parents (26.6%). The maximum *Dalit* students dropped out due to household work and poor economic status.

Parents play an important role in children education and cope with school, and they influence the decisions children make. Children whose parents are actively involved with their schooling are less likely to experience attendance problems and drop out from school. The factors education status of father, education status of mother, occupation of mother and numbers of children per parent were found to be most significant factor for primary school dropout.

All the sample schools of Chitwan district have class room facility available for grades I to V where as it was available in majority (95%) of the sample schools in Nawalparasi district. The majority of the sample schools in Chitwan district have separate toilets for girls (70%), fencing of the school compound (89%) and drinking water facilities (99%). Similar situation was observed in Nawalparasi district with respect to separate girls' toilets (68%) and fencing of the school compound (78.0%). Toilets were found adequate in Chitwan district (90%). However, they were found less adequate in Nawalparasi district (87%).

The bivariate analysis was performed to identify the independent association of dependent variable with independent variables individually, with the objective of testing and fitting the best model. Among the child related variable, grade, age, work at home and lack of interest in studies were found to be significant different with primary school drop out where as sex, religion and caste of the child were found to be insignificant. Among the family related variables, all the variables poverty, parent's apathy toward their children education, education status of father, education status of mother, occupation status of father, occupation status of mother and number of children per family were significant with primary school dropout.

To develop the model and to find out the determinants of primary school dropout, logistic regression analysis was applied. From logistic regression analysis of child related variables, grade, age and work at home were found to be significant variable at 1 percent level of significance. Sex, religion, caste and lack of interest in study were not significant with primary school dropout. Similarly among family related variables, parent's apathy towards their children education, education status of father, education status of mother and occupation status of mother were found to be significant at 1% level of significance. The variables, poverty of family, occupation of father and number of children per parents were not significant to primary school dropout. Hence the determinants of primary school dropout are grade, age, work at home, parent's apathy towards their children education, education status of father and education status of mother and occupation of mother.

Retrospective cohort analysis was carried out to find out the primary school completion rate in five successive years. In the present study, the primary education completion rate was found to be 48.99 percent in five consecutive years.

The government of Nepal has made free primary education and free books distribution for all students. There is also scholarship program for all Dalit students and fifty percent of girl students. In spite of that a high dropout rate in grade I was observed in the current study. It shows that the making free education is not sufficient to catch up all the school age children to continue in primary school.

Primary school dropout is a complex problem. So Government alone cannot solve it. Community must be made aware about the problem of dropout & parents are to be motivated for

sending their children to schools. To reduce dropout rate in primary school, only free education will not solve the problem. Government of Nepal should make the provision of automatic upgradation at primary grades so that any child will not dropout due to failure in examination or repetition. Automatic upgradation or continuous upgradation across the primary grades is probably the single most important action which may highly reduce the dropout rate. The community participation in primary level education may be a means of enhancing enrolment and preventing dropout. When parents are active in the educational process, it is more likely that their children will stay in school. Community participation may range from the establishment of a parent-teacher and school open days, to actually building a school. Decreasing the dropout rate requires active participation of schools, local communities, parents and government working in conjunction with one another. Research has also indicated that to decrease the dropout rate, active partnership between business, economic and social sectors of the community is necessary to bring about the change.

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Annexure

A. Chi-square test of dependant variable primary school dropout with independent variables.

Table A 1: Chi-square test of dropout with grade

Grade	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
I	30	22	52	30	23	53	60	45	105
II	25	26	51	26	24	50	51	50	101
III	17	25	42	18	24	42	35	49	84
IV	12	28	40	15	27	42	27	55	82
V	16	25	41	21	26	47	37	51	88
Total	100	126	226	110	124	234	210	250	460
Chi-square=8.268, p-value=0.082 Significant				Chi-square=5.002, p-value=0.287 Significant			Chi-square=12.89, p-value =0.012 Significant		
Phi = 0.191				Phi = 0.146			Phi = 0.167		

Table A 2: Chi-square test of dropout with age

Age in year	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
5	0	20	20	5	2	7	5	22	27
6	20	17	37	19	20	39	39	37	76
7	21	14	35	22	30	52	43	44	87
8	17	24	41	18	20	38	35	44	79
9	15	38	53	11	34	45	26	72	98
10	14	11	25	19	16	35	33	27	60
≥11	13	2	15	16	2	18	29	4	33
Total	100	126	226	110	124	234	210	250	460
Chi-square=38.768, p=0.000 Significant at 0.01 level				Chi-square=24.800, p=0.000 Significant at 0.01 level			Chi-square=49.82, p=0.000 Significant at 0.01 level		
Phi= 0.414,				Phi= 0.326,			Phi=0.329		

Table A 3: Chi-square test of dropout with sex

Sex	Actual drop out	Studying	Total
Girl	100	126	226
Boy	110	124	234
Total	210	250	460
Chi-square=0.353, p=0.552 Not Significant			
Phi=-0.028, OR = 0.941			

Table A 4: Chi-square test of dropout with caste

Caste	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Dalit	37	31	68	27	29	56	64	59	123
Non Dalit	63	95	158	83	95	178	146	191	337
Total	100	126	226	110	124	234	210	250	460
Chi-square=4.073, p-value=0.044 Significant at 0.05level				Chi-square=0.043, p=0.836 Not Significant			Chi-square=2.755, p=0.097 Not Significant		
Phi= 0.134, OR = 1.365				Phi= 0.014, OR = 1.034			Phi=-0.077, OR = 1.201		

Table A 5: Chi-square test of dropout with religion

Religion	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Hindu	75	100	175	79	89	168	154	189	343
Non Hindu	25	26	51	31	35	66	56	61	117
Total	100	126	226	110	124	234	210	250	460
Chi-square=0.608, p-value=0.431 Not Significant at 0.05 level				Chi-square=0.053, p-value=0.994 Not Significant at 0.05 level			Chi-square=0.309, p=0.578 Insignificant		
Phi= 0.010, OR = 0.78				Phi= -0.005, OR = 1.002			Phi= 0.026, OR =0.887		

Table A 6: Chi-square test of dropout with work at home

Work at home	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Yes	38	31	69	58	15	73	96	46	142
No	62	95	157	52	109	161	114	204	318
Total	100	126	226	110	124	234	210	250	460
Chi-square=4.718, p-value=0.030 Significant at 0.01 level				Chi-square=44.832, p-value=0.000 Significant at 0.01 level			Chi-square=39.901, p=0.000 Significant at 0.01 level		
Phi= 0.144, OR = 1.878				Phi= 0.438, OR=8.105			Phi= 0.259, OR =3.735		

Table A7: Chi-square test of dropout with lack of interest in studies

Lack of interest in study	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Yes	6	10	16	19	8	27	25	18	43
No	94	116	210	91	116	207	185	232	417
Total	100	126	226	110	124	234	210	250	460
Chi-square=0.318, p-value=0.573 Not Significant at 0.05 level				Chi-square=6.687, p=0.010 Significant at 0.01 level			Chi-square=2.981, p=0.084 Not significant at 0.05 level		
Phi= 0.038, OR =0.884				Phi=0.169 OR = 3.027			Phi=0.081, OR = 1.742		

Table A 8: Chi-square test of dropout with family poverty

Poverty	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Yes	28	37	65	13	28	41	56	50	106
No	72	89	161	111	82	193	154	200	354
Total	100	126	226	124	110	234	210	250	460
Chi-square=0.051, p-value=0.882 Not Significant at 0.05 level				Chi-square=9.040, p-value =0.003 Significant at 0.01 level			Chi-square=2.860, p-value =0.091 Not significant at 0.05 level		
Phi= 0.015, OR=1.038				Phi=0.197, OR=2.916			Phi= 0.079, OR=1.455		

Table A 9: Chi-square test of dropout with parents' apathy towards the education of children

Parent apathy towards education	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Yes	38	32	70	42	16	58	80	48	128
No	62	94	156	68	108	176	130	202	332
Total	100	126	226	110	124	234	210	250	460
Chi-square=4.142, p-value=0.042 Significant at 0.05 level				Chi-square=19.980, p value=0.000 Significant at 0.01 level			Chi-square=20.290, p value=0.000 Significant at 0.01 level		
Phi= 0.135, OR=1.800				Phi= 0292, OR=4.169			Phi= 0.210, OR=2.590		

Table A 10: Chi-square test of dropout with education status of father

Literacy Status	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Illiterate	37	437	474	43	245	288	80	682	762
Literate	62	1936	1998	63	2080	2143	125	4016	4141
Total	99	2373	2472	106	2325	2431	205	4698	4903
Chi-square=22.041, p-value=0.000 Significant at 0.01 level				Chi-square=87.531, p-value=0.000 Significant at 0.01 level			Chi-square=89.881, p-value=0.000 Significant at 0.01 level		
Phi= 0.094, OR = 2.64				Phi= 0.190, OR=5.795			Phi= 0.135, OR=3.769		

Table A 11: Chi-square test of Dropout with Education status of Mother

Literacy Status	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Illiterate	55	22	77	43	16	59	98	38	136
Literate	43	104	147	63	106	169	106	210	316
Total	98	126	224	106	122	228	204	248	452
Chi-square=36.527, p-value=0.000 Significant at 0.01 level				Chi-square=22.284, p-value=0.000 Significant at 0.01 level			Chi-square=56.955, p-value =0.000 Significant at 0.01 level		
Phi= 0.404, OR =2.442				Phi= 0.313, OR =1.955			Phi=0.355, OR =5.109		

Table A12: Chi-square test of dropout with occupation status of father

Occupation status	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Agriculture	39	31	70	51	48	99	90	79	169
Non Agriculture	60	93	153	55	75	130	115	168	283
Total	99	124	223	106	123	229	205	247	452
Chi-square=5.296, p-value = 0.021 Significant at 0.05 level				Chi-square=1.916, p-value = 0.166 Not Significant at 0.05 level			Chi-square=6.798, p-value = 0.009 Significant at 0.01 level		
Phi = 0.154, OR= 1.421				Phi= 0.091, OR=1.218			Phi= 0.123, OR=1.331		

Table A13: Chi-square test of dropout with occupation status of mother

Occupation status	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
Agriculture	41	52	93	53	47	100	94	99	193
Non Agriculture	57	74	131	53	75	128	110	149	259
Total	98	126	224	106	122	228	204	248	452
Chi-square=0.007, p-value=0.932 Significant at 0.01 level				Chi-square=3.033, p-value =0.082 Significant at 0.01 level			Chi-square=1.735, p-value = 0.188 Not significant at 0.05 level		
Phi= 0.006, OR= 1.013				Phi= 0.115, OR= 1.280			Phi= 0.062, OR= 1.147		

Table A14: Chi-square test of dropout with number of children

No. of children	Girl			Boy			Total		
	Actual drop out	Studying	Total	Actual drop out	Studying	Total	Actual drop out	Studying	Total
1	2	31	33	6	32	38	8	63	71
2	15	26	41	20	29	49	35	55	90
3	53	30	83	46	18	64	99	48	147
4	23	23	46	26	25	51	49	48	97
≥5	7	16	23	12	20	32	19	36	55
Total	100	126	226	110	124	234	210	250	460
Chi-square=37.865, p-value=0.000 Significant at 0.01 level				Chi-square=32.993, p-value =0.000 Significant at 0.01 level			Chi-square=68.796, p-value = 0.000 Significant at 0.01 level		
Phi= 0.409				Phi= 0.375			Phi= 0.387		

B. Classification of caste

B1. The following caste are included in the Dalit
1. Lohar 2. Sunar 3. Kami. 4. Damai. 5. Sarki (B.K.). 6. Wadi. 7. Gaine. 8. Kasain. 9. Kusule. 10. Kuche. 11. Chyame. 12. Pode. 13. Chamar. 14. Dhobi. 15. Pasawan (Dusadh). 16. Tatma. 17. Dom. 18. Vatar. 19. Khatwe. 20. Musahar. 21. Santhal. 22. Sattar. 23. Halakhor.

B2. The following caste are included in Janajati
1. Kishan. 2. Kumal. 3. Kushwadiya. 4. Kusunda. 5. Gangai. 6. Gurung. 7. Chepang. 8. Chhantyal. 9. Chhairotan. 10. Jirel. 11. Jhangad. 12. Dolpo. 13. Tanwe. 14. Tajapuriya. 15. Tamang. 16. Thakali. 17. Teen Gaunle thakali. 18. Topkegola. 19. Thami. 20. Tharu. 21. Thudam. 22. Dunuwar. 23. Darai. 24. Dura. 25. Dhimal. 26. Newar. 27. Dhanuk (Rajbanshi). 28. Pahari. 29. Phri. 30. Nakariya. 31. Baramo 32. Bahra Gaunle. 33. Bote. 34. Bhujel. 35. Bhote. 36. Magar. 37. Majhi. 38. Marphali Thakali. 39. Meche (Bodo). 40. Mugali. 41. Yakkha. 42. Rai. 43. Raute. 44. Rajbanshi (Koch) 45. Rajhi. 46. Larke. 47. Limbu. 48. Lepchha. 49. Lhomi (Shinsawa). 50. Lhopa. 51. Walung. 52. Byasi. 53. Sherpa. 54. Satar (Santhal). 55. Siyar. 56. Sunuwar. 57. Surel. 58. Hayu. 59. Hyolmo.

B3. The following caste are included in Others
1. Brahmin. 2. Chhetry. 3. Other Castes.

C. Detailed of the variables entered in SPSS program

S. No.	Name of Variable	Label	Code of Variable	Data Scale
1	Typeofschool	Type of school	{1= Govt. 0=Priv.}	Dichotomus
2	Vdc	Village name	None	Nominal
3	Distrct	Name of district	{1= Chitwan 0=Nawalparasi}	Nominal
4	Dropout	Dropout of child	{0= no, yes=1 }	Dichotomus
5	Grade	Grade of child	None	Nominal
6	Surname	Sur name of child	None	String
7	Castegrp	Caste	{1= Dalit, 2=Janjati, 3=Brah/Chhet. }	Nominal
8	Age	Age of child	None	Nominal
9	Sex	Sex of child	{0= girl, 1= boy}	Nominal
S. No.	Name of Variable	Label	Code of Variable	Data Scale
10	Religion	Religion of child	{1,=Hindu,	Nominal

			2=Buddhist, 3=Muslim, 4= Christian, 5=Others}	
11	Workathome	Work at home	{0=no, 1= yes}	Dichotomus
12	Ifyeswork	If yes what work at home	{1=Home 2= Farming/Field 3= Rearing live stock 4=Rearing young siblings 5= Earning work }	Nominal
13	Ifincome	If engage in income generating work	{1=Labour, 2= Servant 3= Other work}	Nominal
14	Hourwork	Average hour of work in a day	{1=0-2, 2= 3-4 3= 5-6 4= 6-8 5= >8}	Nominal
15	Ntpurchgst	Could not purchase stationary	{0=no, 1= yes}	Nominal
16	Ifysntpurc	if yes what	{1= Book/Copy 2=School dress/ bag 3= Others }	Nominal
17	Extrafee	Could not pay extra fee	{0=no, 1= yes}	Nominal
18	Ifysextrafee	If yes which fee	{1 = Admission, 2=Exam, 3= Building construction 4= Sport 5= Other}	Nominal
19	Distance	Distance of school from home	{0=no, 1= yes}	Dichotomus
20	Ifyesdist	If yes what is the distance	{1= 0-1km, 2=1-2 km, 3=>2km }	Nominal
21	Cntcop	Cannot adjust /cope in school	{0=no, 1= yes}	Dichotomus
S. No.	Name of Variable	Label	Code of Variable	Data Scale
22	Ifyescntcope	If yes with whom	{1= Peer 2= Teacher}	Nominal
23	Result	Result of past examination	{0= Failed 1=Passed}	Dichotomus

24	Parentsapathy	Parents apathy towards their children education	{0=no, 1= yes}	Dichotomus
25	Freqabsent	Frequently, periodic absent from school	{0=no, 1= yes}	Dichotomus
26	Ifysabnt	If absent from school due to	{0= other child in family 1=friend in home}	Dichotomus
27	Ntoppurtunity	Did not get any opportunity in school	{0=no, 1= yes}	Dichotomus
28	iIllness	Illness of child	{0=no, 1= yes}	Dichotomus
29	Disable	Disable child	{0=no, 1= yes}	Dichotomus
30	Punishment	Punishment given at school	{0=no, 1= yes}	Dichotomus
31	Ifpunish	If yes, how punished	{0= Scolding 1=Bitten}	Dichotomus
32	Ifypunis	If yes ,who punished	{1=parent 2= Teacher 3= Friend}	Nominal
33	Fretcrab	Frequent absent of teacher	{0=no, 1= yes}	Dichotomus
34	Languagepbm	Language problem at school	{0=no, 1= yes}	Dichotomus
35	Ntintrest	Not interested in study	{0=no, 1= yes}	Dichotomus
36	Deathofparent	Death of parent	{0=no, 1= yes}	Dichotomus
37	Ifdthofpnt	If yes whose	{1=father, 2=mother, 3=both}	Nominal
38	Pntothermarig	Parents other marriage	{0=no, 1= yes}	Dichotomus
39	Ifysmarriege	If yes who did	{1=father, 2=mother, 3=both}	Nominal
40	Migration	Migration of child/ family	{0=no, 1= yes}	Dichotomus
S. No.	Name of Variable	Label	Code of Variable	Data Scale
41	Discrimination	Discrimination at school	{0=no, 1= yes}	Dichotomus
42	Ifysdiscri	if yes which discrimination	{1= Low cast 2= Backward caste 3= Schedule caste 4=Poor economic status }	Nominal

43	Transfer	Transferred to other school	{0=no, 1= yes}	Dichotomus
44	Fthredu	Father education status	{1= Illiterate 2=Primary 3=Secondary 4=Higher secondary 5= Diploma and above }	Nominal
45	Fatoccupation	Father occupation	{1= Agriculture 2=Service 3=Business 4=Laborer }	Nominal
46	Mtredu	Mother education status	{1= Illiterate 2=Primary 3=Secondary 4=Higher secondary 5= Diploma and above }	Nominal
47	Mothroccupa	Mother occupation	{1= Housewife, 2=Agriculture 3=Service 4=Business 5=Laborer }	Nominal
48	Noofson	Number of sons with parent	None	Nominal
49	Noofdaugh	Number of daughter with parent	None	Nominal
50	Nochild	Number of children with parent	None	Nominal
51	Prcapincome	Per capita income	None	Nominal
52	Remark	Remarks	None	Nominal

D. Syntax used in SPSS

Descriptive Statistics

```
COMPUTE filter_$=(distrct = 1).
VARIABLE LABEL filter_$ 'distrct = 1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
FREQUENCIES VARIABLES=grade,age sex religion caste workathome couldnotpurchase, par
entsapathy notinterest migration fatheredu fatoccupation mtredu mothroccupa no.child
```

```
 /STATISTICS=STDDEV MEAN MEDIAN MODE
  /ORDER=ANALYSIS.
```

Chi-square Test and Odds Ratio

```
CROSSTABS
  /TABLES= Variables BY dropout
  /FORMAT=AVALUE TABLES
  /STATISTICS=CHISQ RISK
  /CELLS=COUNT
  /COUNT ROUND CELL.
```

Logistic Regression

```
USE ALL.
COMPUTE filter_$=(distrct = 1).
VARIABLE LABEL filter_$ 'distrct = 1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
LOGISTIC REGRESSION VARIABLES dropout
  /METHOD=ENTER grade Age Sex Rligion castegrp workathome ntintrest
  /SAVE=ZRESID
  /CLASSPLOT
  /CASEWISE OUTLIER(2)
  /PRINT=GOODFIT CORR CI(95)
  /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
```

E. Questionnaire

Determinants of Primary school children drop out in

Chitwan and Nawalparasi

<u>Information about study Children</u>

Dropout: Yes □ / No □

Name: Age: Gender: Boy □ / Girl □

Address: Village/ Municipality: Ward No.:

Caste: Religion: Grade:

1. Need to work: Yes □ / No □
   If yes: House work □ / Farming □ / Live stock rearing □ / Rearing of young siblings □ / Earning work □ (Labour □ / Servant □ / Other work…….)

   Hours of work in a day: 0-2 □ / 3-4 □ / 5-6 □ / 7-8 □/ > 8 □

2. Inability to purchase study material: Yes □ / No □
   If yes, Book or Copy □ / School Dress □ / Other Stationary Material □

3. Could not pay extra fee imposed by school : Yes □ / No □
   If yes, Admission fee □ / Exam fee □ / Building construction □ / Sports □ / Other …..

4. Long Distance of school from home: Yes □/ No □
   If Yes, distance in Km: 0-1 □ / 1-2 □ / >2 □

5. Problem of adjustment: Yes □ / No □
   If yes, with Peers □ / Teachers □
6. Result in examination : Promotion □ / Failure □ / Repetition □
7. Carelessness / Apathy / Lack of motivation of parents towards his/ her study: Yes □ / No □

8. Periodic absence from school: Yes □ / No □

   If yes, due to Absence of school going: a) Other child in the family □

   b) Friends near home □

9. Limited opportunities to participate in extracurricular activities in school: Yes □ / No □
10. Disable: Yes □ / No □
11. Illness : Yes □ / No □
12. Punishment given at school: Yes □ / No □

    If yes, Scolding □ / Bitten □

    By: Parents □ / Teachers □ / Friends □

13 Frequent absence of Teacher in class: Yes □ / No□

14. Language problem (Non-Nepali mother tongue): Yes □ / No□

15. Personal dislike of the school: Yes □/ No□

16. Death of Parent: Yes □ / No □.

    If Yes, Father □/ Mother □ / Both □

17. Other marriage of parent: Yes □ / No □.

    If Yes, Father □ / Mother □ / Both □

18. Migration of Parent: Yes □ / No □
19. Discrimination done in school : Yes □ / No □

    If yes, due to: Low caste □ / Backward caste □ / schedule caste □ / Poor economic status □

Information about Parents of Drop Out Children

Name of Father: Age

Educational status: Illiterate □/ Primary□/ Secondary □/ Higher Secondary □/ Graduate and above □

Occupation: Agriculture □/ Service □/ Petty Business □/ Labour □

Name of Mother: Age:

Educational status: Illiterate □ / Primary □ / Secondary □ / Higher Secondary □ / Graduate and above □

Occupation: House wife □ /Agriculture □ / Service □ / Petty Business□ / Labour □

No. of family member: No. of earning member: Total income:

Per capita income:

No. of Children: No. of Son: No. of Daughter:

Information about Primary School Teacher

No. of teacher: Male: Female:

S. No.	Name of Teacher	Designation	Qualification	Training
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Information about School

Name of School:

Type: Govt. □/ Semi Govt. □/ Community□ / Private□

Level: Primary □/Lower Secondary □/ Secondary □/Higher Secondary □

Medium of Teaching: Nepali □ /English □ / Other …...

Address:

Location: Urban □/Rural □ District: Chitwan □ / Nawalparasi □

No. of Student per class room:

Drinking water: Available □ / Not available □

Play ground: Available □/ Not available □

Bench / Desk: Available □ / Not available □

Toilet: Available □ / Not available □

Separate Toilet for girls: Available □ / Not available □

Drop Out in last five years

Year	Student No.	Grade										Total	
		I		II		III		IV		V			
		B	G	B	G	B	G	B	G	B	G	B	G
2061	Total												
	Dropout												
	Promoted												
2062	Total												
	Dropout												
	Promoted												
2063	Total												
	Dropout												
	Promoted												
2064	Total												
	Dropout												
	Promoted												
2065	Total												
	Dropout												
	Promoted												

F. Thesis articles

Published articles

1. Determinants of primary school dropout in Nawalparasi district: Journal College of Medical Sciences- Nepal, Vol. 6, No.4, Dec, 2010. 14-18
2. Statistical analysis on causes of primary school dropout in Nawalparasi distrct of Nepal : European Journal of Social science, Volume 24, Number 3 (2011), 370-375
3. Logistic regression model for primary school dropout children of Chitwan, Nepal, International Journal of Asian Social Science, Vol. 3, No. 2 (2012), pp. 35-43
4. Retrospective Cohort Study on Primary School Dropout Children of Chitwan & Nawalparasi Districts of Nepal: Global Journal of Human Social Science, Volume XII Issue X Version I, 2012, 35-40.

Under publication

1. Discriminant analysis for primary school dropout children of Chitwan, Nepal(Accepted).