

CHAPTER I

1. INTRODUCTION

1.1 Context

A nation's prosperity is closely linked to the stock of human capital, and its human capital depends on the quality of its educational system. It is therefore not surprising that countries around the world, whether developed or developing, have adopted education as a major instrument of development policy. Never in the history of humankind has there been so much faith in formal education. Almost everybody –from the policymaker to the desperate parent living in a remote village – sees in education a potential for attaining nation-building, economic growth, peace, freedom, social justice, human rights, social inclusion, scientific advancement, human development, and so on. Education is believed to cure all illnesses – political, economic, and social –facing today's troubled societies. In retrospect, education has played a significant role in transforming societies into knowledge and information societies. It is now unimaginable to survive in such societies without being educated. Education gives the power and tools that are required to function and grow in information-driven societies. It will not be an exaggeration to say that the future of countries depends on the type and quality of education they can create for their citizens. Nepal certainly is no exception to this. Our nation's future, economic strength, social cohesion, political stability, and national development depend on all the children being educated.

While there have been several efforts since the early 1950s to establish a national system of education in the country, education has taken the center-stage in the overall process of modernization and nation-building only in the recent decades. In particular, it has received a high priority since 1990 following the people's movement to restore democracy in the country. The new political atmosphere combined with renewed international commitment to achieve *Education for All* and the preparedness among the multilateral and bilateral agencies to support the education sector provided new impetus and climate for educational development in the country.

Throughout the 1990s, the Government of Nepal remained engaged in school reform and continues to do so. The decade saw numerous planning exercises – all aiming at improvement in the access to and quality of education. For instance, the newly elected Government established a National Education Commission (NEC) in 1991 to recommend appropriate educational policy in the wake of the new political environment. A second Commission, known as the High Level National Education Commission (HLNEC), was established in 1998 with almost similar mandates. Two Master Plans were prepared in the basic and primary education sub-sectors alone. Two perspective plans (one for secondary and the other for higher secondary education) were prepared. A strategic plan was formulated for higher education. Likewise, a number of education reform projects (e.g., Basic and Primary Education Project I, Basic and Primary Education Project II, Primary Education Development Project, Secondary Education Development Project, Higher Education Project) were developed and implemented with external support, and some (e.g., Education for All 2004-2009, Secondary Education Support Program) continue to be implemented within the sector-wide framework. The two periodic

plans (e.g., the Ninth Plan, 1997-2002; and the Tenth Plan, 2003-2007), both of which pursued poverty reduction as the main agenda, placed education at the heart of the national development efforts. The Government's financial allocation to education increased from a low of 10% of the total national budget in 1990 to a high of 15% in recent years. Evidently, policy-makers and planners in Nepal do recognize that inadequate education can be a critical impediment to economic growth and national development.

As part of the school reform, the Government has launched a number of initiatives and interventions. The reform, in a nutshell, includes improving the physical learning atmosphere of schools through classroom construction and provision of school furniture, toilets, and drinking water; preparing children for schooling through pre-school education and early childhood development programs; increasing access to education of girls and children belonging to ethnic and linguistic minorities, Dalits, and those coming from difficult circumstances through targeted scholarships; providing education through the means of alternative schooling to those who cannot be served through formal schools; developing, revising, and improving the quality of curriculum materials; introducing a continuous and/or formative assessment system; providing for teacher support and supervision through education and training centers; upgrading teachers' professional qualifications through certification and recurrent training courses; developing teacher support materials; upgrading the capacity of head teachers to lead, manage, and support educational change at the school level; and developing professional capacity of different categories of educational personnel. Recent initiatives, among others, include the following: initiation of the bottom - up planning process where each school is engaged in preparing a School Improvement Planning (SIP); transfer of school management to local communities; greater parental involvement in school management; increased local autonomy in the management of schools; and introduction of block grant method in school financing. One key feature of the educational policy has been to promote larger involvement of the private sector in the delivery of educational services. As a result, private schools have been a major provider of education, especially at the secondary and higher secondary levels. In sum, school reform in Nepal has a two-pronged approach involving both system wide restructuring and school restructuring. The former entails building institutional capacity to plan and manage the education sector and shifting structural, organizational, and financial dimensions of schooling, while the latter involves changing practices at the school level. Many of the reform initiatives have moved beyond initial conception and implementation. Some of them have already been sustained and institutionalized.

These efforts and investments have resulted in impressive gains in the education sector. According to the second Nepal Living Standard Survey (NLSS II) of 2003/04, literacy for the population group aged 6 years and more has reached 51 percent as opposed to 34 percent in 1990. The Survey reported a male literacy rate of 63 percent, compared to 39 percent for females. The NLSS II estimated Gross Enrollment Rates (GER) of 112 percent, 71 percent, and 54 percent for the primary (1 to 5), lower secondary (6 to 8), and secondary (9 to 10) grades respectively. Net Enrollment Rates (NER) stood at 72 percent, 29 percent, and 15 percent for the primary, lower secondary, and the secondary levels respectively. In recent years, there has been a significant surge in the enrollment of girls and children belonging to the ethnic and linguistic minorities, Dalits, and children coming from poor and difficult households. The country now has a network of 26,000 schools, 8,000 lower secondary, and 4,000 secondary schools. A study reported that schools in Nepal are located within a time distance of 5 to 10 minutes for a great majority of the primary school age children. Secondary schools have been established in most villages of the country. The incidences of grade repetitions and dropouts at

the primary level, an indicator of system efficiency, have declined substantially. The most recent evaluation study of BPEP II revealed a number of encouraging achievements: increased teacher access to in-service training, professional support and supervision, increased availability of textbooks, improved physical atmosphere of schools, increased local involvement in school management, increased institutional capacity within the Ministry of Education and Sports (MOES), increased planning capacity at the school level, increased availability of female teachers in schools, etc. The study concluded that the investments made in basic and primary education have been worthwhile.

While these achievements are important, many argue that the outcomes of schooling must not be measured in terms of the availability of resources alone. It is being increasingly recognized that the outcomes of schooling need to be assessed in terms of student learning. As some say, 'reform must focus on learning acquisition and outcomes, rather than merely on enrollment' (Kellaghan and Greaney 2004, p.2). The bottom line, therefore, is whether children have learned or achieved what they were supposed to learn or achieve. While it is important that schools have good physical facilities, trained teachers, adequate funds, good libraries, good textbooks, and good learning materials, their availability does not automatically lead to student achievement. Many therefore emphasize that a 'good' school must be judged based on its output rather than the input. It is not to suggest that resources are not important. They are important but the intent of schooling that is student learning, cannot be sacrificed or ignored. It should be noted that there is a sort of consensus, both international and national, that the learning achievement of children should form the core of schooling. The output-oriented educational policy is a recent phenomenon, which emerged in the 1990s.

The growing recognition that schooling should produce learning achievement on the part of students has suddenly increased public interest in examinations and assessments as the key instruments of measuring learning achievement. Policy-makers, from both the developed and developing countries, are calling for increased use of examination and assessment to acquire information about what students have learned as a result of teaching learning in schools. It is believed that the information generated from assessments and examinations serves in a number of ways. Kellaghan (2004) argues that such information is useful in making educational decisions about students (e.g., repetition, promotion, and certification of learning achievement); giving feedback to students about their progress, their strengths, and weaknesses; motivating students for further learning; judging instructional effectiveness and curricular adequacy; describing the achievements of an education system; assessing effectiveness of schools; monitoring student achievement over time; and guiding policy formation and decision-making. In recent years, worldwide interest in assessments, and examinations has moreover, resulted in the use of three different types of procedures in assessing and examining student achievement: (a) public examinations¹, (b) national assessments,² and (c) international assessments of educational achievement³ (Kellaghan, 2004).

¹ Examinations conducted at the end of a particular level (e.g., secondary level) that are administered by agencies external to the school for purpose of certification and selection are called public examinations.

² A national assessment is designed primarily to assess and describe the level of learning achievement of the entire education system or a particular segment of the system (such as assessing students of a particular grade or age-group). It does not describe and report the learning achievement level of individual students. Normally, students are tested in two or three core subjects such as language, foreign language, mathematics, or science. It does not necessarily cover the entire set of subjects taught in schools.

The importance of public examinations has long been recognized in Nepal. The School Leaving Certificate (SLC) Examinations, instituted as early as 1934 when the concept of modern schooling had not begun yet, are designed to assess the learning achievement level of Grade 10 students, the terminal grade for the school education. The SLC examinations are administered centrally by the Office of the Controller of Examinations (OCE), a constituent organization within the MOES. The purpose of assessing the learning achievement of students at the end of ten years of schooling is mainly two-fold: certification of school achievement of students and selection of students for higher education and/or employment. Most importantly, SLC results also provide measures of how well children are learning, what strengths and weaknesses exist in the education system at a given point in time, and how the education system is performing over the years. It should be emphasized that the SLC results provide the only strong and easily available measure of success or failure of our efforts and investments that we have made in the education sector. For these reasons, the policy-makers, planners, educators, and the public as a whole look to the SLC results to make sense of how their children, schools, and the education system are doing.

The education sector in Nepal has witnessed remarkable quantitative gains, perhaps as a result of the several efforts and initiatives launched by the Government in recent years as discussed above. Sadly enough, the gains in terms of learning achievement of children are far from satisfactory. Over the years, student performance in SLC has stagnated, if not deteriorated. Table 1 displays the number of students appearing in the SLC examinations and overall pass rates for the years 2041 BS (1985) to 2061 BS (2005). Apparently, the percentage of students who manage to pass the SLC examinations in the first attempt is alarmingly poor. Many who cannot do so in the first attempt either struggle persistently to pass SLC for several years or give up their bid for passing SLC altogether.

Table 1. Number of SLC Candidates and Pass Percentage

Year (BS)	Candidates	Pass %	Year (BS)	Candidates	Pass %
			2051	79,588	42.97
2041	33,428	28.60	2052	90,458	38.30
2042	53,689	28.16	2053	116,002	36.52
2043	49,351	34.85	2054	113,257	47.54
2044	50,495	36.44	2055	139,202	49.20
2045	56,870	33.92	2056	205,539	45.72
2046	64,166	44.13	2057	132,210	31.62
2047	100,382	48.47	2058	152,334	31.22
2048	94,534	24.56	2059	170,389	32.05
2049	77,455	31.49	2060	175,418	46.18
2050	79,420	31.30	2061	216,303	38.72

It will not be incorrect to say that disappointing achievements in secondary schools remain the number one educational problem facing the country today. There are serious disparities in

³ International assessments have many things in common with the national assessments, but there is one difference. That is, international assessments involve assessing the learning achievement of a group of students (belonging to a particular grade or age-group) of two or more than two countries. Since it involves more than one education system, it is necessary that test papers become comparable across the participating systems. The Third International Mathematics and Science Study (TIMSS), Progress in International Literacy Study (PILS), and Program for International Student Assessment (PISA) of the OECD are a few examples of international assessments.

student performance in terms of gender, school type (public and private), caste/ethnicity, language group, geographical location, and socio-economic status of families. The incidence of failure and/or under-performance can be commonly observed in subjects like English, Mathematics, and Science. No wonder, every year, when SLC results are made public, many unsuccessful children take their lives in despair, and the toll continues to grow. Many others give up their studies and either leave the country for employment or join rebel forces.

Evidently, student failure and/or under-performance is not just a phenomenon taking place only at the secondary level. It occurs at all levels of education. For instance, four national assessments of learning achievement of Grade 3 and 5 children conducted by MOES in the last ten years or so also reveal poor learning achievement at the primary level. Assessment of learning achievement of lower secondary children has also revealed the same pattern. Thus, the failure and/or under-performance of children remains an inherent feature of the Nepalese public schooling system.

While student failure at any level or grade is not acceptable, the failure in SLC has drawn particular attention of the policy-makers, planners, managers, parents, scholars, teachers, journalists, and the entire nation in recent years. Whether or not SLC represents the quality of education is a different debate altogether, but the 'production' of failure of this magnitude annually is certainly unacceptable. The intended and unintended consequences of failure are serious. It is an irony that education believed to be an 'equalizer' has been a major divider of the Nepali society. While social and political activists are heavily engaged to root out the traditional caste structure, a new form of caste structure is in the offing as a result of persistent, massive, and troubling failure in the SLC examinations. The private provision of schooling has further contributed to widen the divide between the haves and have-nots. Analysts say that the two parallel systems of education, one serving the rich and the powerful and the other serving the poor and the helpless will, eventually, ruin the entire society.

The importance of SLC need not be over-emphasized. It will not be an exaggeration to say that one's 'life-chances' are intimately tied to his/her performance in SLC. The SLC examinations open the door to the 'world of higher education' and the 'world of employment.' Given that education has become an instrument of economic policy, the 'fate' of the nation also depends on the performance of children in the SLC examinations. Therefore, in recent years, pressure on the schools is building gradually that they must produce successful graduates – graduates who are prepared to pursue further education, learn a vocation or trade, and lead a productive and meaningful life. The higher the investment in education, the greater the pressure on schools and children to perform and do well.

Therefore, the big question ahead of all of us is – why is the school achievement of school children so low? For several years, this question was dismissed because 'failure' was considered to be a natural phenomenon. Failure has long been equated with 'high standard.' Many take it as a sign of high quality education. Even today, there is no shortage of policy-makers, planners, and so-called educationists who find this question trivial. Many accept poor performance and failure as the rule rather than the exception. In recent years, public schools have been abandoned by politicians, planners, policy-makers, administrators, university professors, businesspersons, schoolteachers, and many others who manage to afford the costs of putting their children in expensive private schools. Following the withdrawal of children belonging to the upper class of the society, public schools in Nepal are left with the girls and children coming from poor households and those living in difficult circumstances. It is, therefore, not surprising that the problem of massive failure tends to be ignored, not seen as a national problem, mainly because

those who fail happen to be girls and children coming from poor households and those living in difficult circumstances. We might also ask why there has been so little progress toward solving this problem despite the fact that it has existed for several decades. The ‘theory of rejection’ and ‘dismissive attitude’ toward the problem can be costly. The failure is not just an academic problem, a problem often interpreted in terms of a teacher not teaching appropriately and a child not learning properly. In fact, low achievement or failure is not the only cause for concern; indeed, it may be just a symptom of more profound difficulties. For these reasons, the problem persists forever despite numerous efforts to improve teaching and learning materials.

It is not that this problem has not been studied in the past. There have been some studies on issues involving the SLC examinations. Most of these studies have been anecdotal and descriptive and have focused on the narrow ‘technical’ aspects of the SLC examination. Further, the scope of many of these studies has remained rather limited; since they do not represent the national perspective. It is often difficult to get a complete picture of the student performance in the SLC examinations from these studies. These studies were conducted on very small samples. As a matter of fact, there has not been a single study on the topic carried out with an extensive sampling of the multiple population groups that make up the nation. Moreover, many cultural, linguistic, pedagogical, institutional, economic, social and procedural factors that might affect student performance in the SLC examinations remain largely unexamined. While current research has given us some understanding about the SLC examinations, but they fail to provide illuminating insights into the complexity surrounding the SLC examinations. The present study, therefore, is an attempt to build a comprehensive understanding about student performance in the SLC examinations. In sum, it originated from a desire to answer a very simple question: Why some schools and children do well, whereas many others do not do?

1.2 Objectives of the Study

It should be said, at the outset, that this is an ambitious project, which aims at building a comprehensive understanding of student performance in the SLC examinations. Along the way, the study also has examined the different components and elements that constitute the education system. As a policy-based research, the ultimate objective is to develop the immediate-term and long-term strategies for improving student achievement in schools. The study employed multiple perspectives and methods in accomplishing the objectives of the study, which are summarized below:

The first objective of the study is to prepare a *genealogy* of the SLC examinations to find out how policies and practices concerning the SLC examinations have evolved over the years. This is done with the assumption that a close scrutiny of the policies and practices over a period of time would help us build understanding of the current functioning of the system.

Second, the study has gathered and analyzed the perceptions of the Nepali public about the SLC examinations. An attempt has been made to describe public views on the persistent student failure in the SLC examinations. Does the public have faith in the system? What factors are believed to contribute to student performance? What is the level of public faith in the SLC examinations? Attempts have been made to answer some of these questions. In that regard, media can be one important source of public perceptions. Therefore, a media analysis was carried that examines materials reported in the print media.

The third objective is to assess the institutional capacity of the Office of the Controller of Examinations (OCE) to plan and manage the SLC examinations and examine if the institutional

set-up and functioning has any impact on the conduct and outcomes the SLC examinations. OCE is one of the oldest institutions within the education sector. It operates within the MOES. All exams related operations are initiated, planned, and executed by the OCE, although in recent years there have been some efforts to decentralize some of the exam operations. Should OCE function as a part of the educational bureaucracy or should it be developed as an autonomous professional testing institution? What immediate and long-term changes are necessary to evolve it as an efficient testing institution? What does it take to develop the OCE? These are some of the questions that will be examined.

Another objective of the study is to undertake the financial analysis of the SLC examinations and explore possibilities for developing OCE as an independent and financially self-supporting institution. Exams are costly undertakings. There are both apparent and hidden costs. There are costs to the parents, the school and the Government. The study examines the issues involving the costs of examinations.

Fifth, the study seeks to analyze the extent and nature of disparity in student performance in the SLC examinations. Schooling produces unequal outcomes. Unfortunately, not all children perform on the same level. A descriptive analysis has been performed to assess the magnitude of disparity in terms of region, sex, ecological zone, school type (public/private), etc. SLC data are rarely analyzed. These data are reported in raw numbers, but never analyzed. The numbers do not tell anything unless they are analyzed. The quantitative analysis of the SLC results has been very enlightening in terms of locating the problems of student under-performance.

Sixth, the study examines various processes involved in the preparation and execution of SLC operations and analyzes how these might affect student outcomes in the SLC examinations. As a part of this, the critical stages of the SLC examinations such as test construction/development, printing of test papers, administration, marking and scrutiny of answer books, publication and reporting, and finally, the use of SLC results, were examined. The study team observed the actual conduct of examinations in order to assess the physical and social conditions under which examinations are conducted.

The seventh task is to undertake a technical assessment of test materials to examine how they affect student performance in the SLC examinations. It involves examining alignment between curriculum, textbooks, and test materials. A sample of answer books was reexamined by a group of experts to assess fairness, objectivity, and consistency in marks allocation.

Eighth, the study examines assessment, grading, and promotion practices at the school level to find out if these practices have any impact on student performance in the SLC examinations. How are students assessed at the different levels of education? What are the grading and promotion policies and practices at the school level? What is the relationship between school-based examinations and externally conducted terminal examinations? These questions were considered under this objective to assess whether the test materials, testing procedures, and conditions favor certain groups of students, not others and how these might ultimately lead to unequal outcomes in the SLC examinations. Many believe that students fail because of weak academic foundations and that failure in SLC is the expression of the past failures.

One other objective of the study involves comparing the examination systems operating within the SAARC region in order to draw lessons, if any, for improving the examinations system of Nepal.

The tenth objective is to identify the determinants of student performance in the SLC examinations. A nationwide survey was undertaken using representative samples of secondary schools, students, teachers and parents. The purpose has been to identify factors that might be associated with school performance. Advanced statistical analyses have been conducted for this purpose.

Still another objective of the study is to prepare case studies of very effective and ineffective schools of Nepal to find out what makes schools ineffective or effective. Case studies of 28 schools have been prepared. While the survey has gathered quantitative information from the field, the case study preparation has primarily used qualitative information. Several factors associated with effective and ineffective schools have been developed.

The twelfth task is a *tracer study* of school leavers. The main objective of the tracer study is to find out the whereabouts of school leavers and examine whether secondary education has any value in relation to pursuing higher studies, taking up employment and leading a satisfying personal and social life.

Thirteenth, the study assesses how far the test materials and testing conditions favored different groups of students sitting for the SLC examinations. It examines whether the test papers and testing procedures were responsive to the needs and life realities of girls and children coming from poor households, ethnic and linguistic minorities, and children living under difficult conditions.

Finally, the study presents a set of recommendations and policy options for enhancing student performance in the SLC examinations.

1.3 Significance of the Study

The findings of the study should be of immense value on different levels. These are briefly discussed below.

Annually, when the SLC results are published, the entire nation goes in shock due to the unacceptable, troubling, and alarmingly poor performance of public school students. Admittedly, there are no instances of these shocking results producing big debates on the policy arena, nor do they produce any 'sensation' among the academics. Fortunately, the Nepalese media, which are becoming more and more specialized, inquisitive, and investigative in recent years, pick up the issue of student failure and run stories for a couple of days. The eager young journalists try to squeeze the policy-makers and experts to get answer to the deceptively simple question of why children fail in the SLC examinations. Often, these debates center around two things. First, there are a lot of public-schools bashing, almost everybody criticizing the poor performance of public schools, their teachers, and students. Some commentators have gone to the extent of suggesting that there is no point that the Government should continue to fund the poorly performing schools (Wagley, *The Himalayan Times*, June 21, 2005). Second, both experts and policy-makers start making speculations about the possible causes of massive student failure. More often, the causes identified happen to be poor teaching by teachers, unmotivated students, reduced school days, poor teacher attendance, and so on. The row that gets reported in the media is certainly helpful to inform the public about the problem, but it does not take us anywhere in terms of finding solutions to the problem. Although the magnitude and apparent causes of the failure have been discussed and debated several times, it is often difficult to formulate well-argued, evidence-based, and a carefully crafted educational policy to address the problem in the absence of hard evidence generated through rigorous and scientific research.

Much policy-making has relied on peoples' hunches, beliefs, speculations, and unfounded assumptions. Much debate surrounding the SLC failure is also largely uninformed. Therefore, the logic of this study lies in informing the policy-makers and the general public by producing information that could help us understand why some schools and some children do well but others cannot do. The study is expected to yield information that can be a basis for informed public debate and data-based decision-making.

In recent years, in the wake of persistent student failure, public schools and their teachers are being asked to be accountable for performance. Increasingly, it is being emphasized that the existing system of school financing should be replaced by outcome-based funding where funds to schools flow based on their performance in the SLC examinations. The Government already has a policy of withdrawing support to schools that fail to maintain a pass rate of 15% for three consecutive years. Very recently, a new policy has been adopted whereby schools that produce good results (50% or more pass rates) get additional funds. Such a scheme of school financing may spur good results in schools. This scheme assumes that good results in SLC are the outcome of the actions of schools and teachers alone. Research, however tends to suggest that school and teacher actions alone do not always lead to good academic performance. Often, factors outside the school can also determine school performance. Performance-based funding that uses test scores as the sole measure of school outcome can be unfair to the several poorly performing schools. By exploring the factors associated with school and/or student performance, the study will help devise appropriate school financing schemes.

Educationists and researchers often tend to compare the schooling process with that of a 'black box,' which is believed to be mysterious, unknown, and intractable. In recent years, however, the situation is different. New advances in both the qualitative and quantitative research traditions make it possible to understand and explain most human phenomena, if not all. Studies examining the factors associated with learning achievement have been undertaken around the world, although such analyses are seldom undertaken in the developing countries. While studies undertaken elsewhere can give us some insight and idea about how various factors might affect performance, we need to build our own knowledge base on the issue at hand. From a methodological perspective, the significance of this research lies in its attempt to use both quantitative and qualitative methods to understand and explain the problem of student failure. The added value of this is enlarged understanding about school performance.

Public schools and their teachers are subjected to harsh criticisms and humiliation for the persisting under-performance of students in the SLC examinations. There is a natural tendency to compare the results between the public and private schools. While under-performance of public schools cannot be accepted, it is essential to know what makes them under-perform in comparison to the private schools. The question of what makes private schools do better in comparison to public schools remains unknown because this topic has not been examined adequately. It will also be useful to know the factors and practices that place private schools ahead of schools. The political and social consequences of wide gaps in student performance between public and private schools can be serious. The SLC examinations have been one key factor dividing the already divided society. It needs no over-emphasis that public schools' performance must remain at par with the private schools in order to achieve the national goals of social cohesion, inclusion, social equality, and national integration.

Poor SLC results produce a lot of 'blame game' annually. Educational planners and administrators are quick to blame head teachers and teachers for not teaching children properly. Schools place the responsibility for this extraordinary record of failure upon the children

themselves, their families, and communities. Parents either criticize their teachers or their own children. Experts start criticizing the donors who bring money to fund school reform in Nepal. Teachers will criticize the Government for not providing sufficient funds, preparing a tough curriculum, and not supplying enough teachers. Students will relate their failure to their misfortune and bad luck. Least concerned with school achievement, donors are busy fixing planning, financing, monitoring, and community participation. Most recently, the ongoing conflict is believed to have caused poor performance, and this 'theory' protects everybody. Much of this 'blame game' results from hard data that explain student performance.

School reform in Nepal has in the past focused on technical inputs such as new classrooms, new curricula and textbooks, teacher training, teaching learning materials, etc. The assumption has been that new classrooms, trained teachers, and newly developed and revised curriculum materials will produce learning in classrooms. In recent years, the new wave of school reform emphasizes a greater role for the local communities and parents, with the assumption that when communities and parents are given a greater role, they will keep an eye on the unmotivated, unaccountable, and unprofessional teachers. More local supervision and monitoring of teachers will lead to higher performance. Likewise, local planning is being promoted under the expectation that it will lead to school effectiveness. The study's findings will help firm up appropriate reform strategies – strategies that are likely to boost student performance. School reform is a costly endeavor. Considerable savings could perhaps be made by reducing expenditure in activities and elements that are not directly linked to student achievement. Currently, school reform takes the form of trial and error where interventions for reform are selected without sufficient understanding of the results they are going to produce.

In recent years, public faith in the SLC examinations seems to be eroding. If stories published in the media carry a true picture of what happens in the OCE and how it does its business, the OCE may be on the verge of losing public faith. Often, inefficiency, corruption, misappropriation of funds, poor administration of SLC examinations, failure to publish results in time, increasing incidence of cheating and malpractices, poor quality of test papers, use of test papers that only measure lower-order knowledge, poor phrasing of questions, inconsistent marking of answer books, lack of public accountability, etc. are the themes frequently reported by the media. Most recently, CIAA has decided to investigate malpractices taking place within the OCE. While SLC has been a part and parcel of the educational history of Nepal, it will continue to be so as there is an increasing trend toward centrally administered public examination system. The study is expected to come up with strategies for developing OCE as an autonomous and professionally competent testing institution.

Assessment and evaluation experts argue that examinations can be damaging to the quality of education (Kellaghan and Greaney, 1992). Public examinations like the SLC examinations determine what will be taught in schools and how it will be taught. For the most part, teachers' and students' actions are influenced by the types and contents of test instruments. Often described as 'backwash effects,' examinations often produce a new phenomenon of selective teaching and/or teaching to the test at the cost of real learning. The unintended and negative consequences of the examination on the education system – instruction, curriculum, student learning and many others – must be examined and addressed to improve the quality of education. In fact, any change in curriculum, teacher training, and instruction is unthinkable without really changing the contents, processes, and practices of external examinations.

Countries around the world are engaged in a constant search for factors associated with student achievement. Now that the importance of education has further heightened in the current

information age, countries will accelerate their search for the variables and factors that produce learning. On the theoretical level, the evidence generated by this study will add to the body of literature on student learning and school effectiveness.

Finally, one major activity of the study has been to closely examine effective and ineffective schools. This activity has been very worthwhile and we have been able to detect specific actions and elements at the site level directly linked to increased learning achievement of students. This has been a first ever attempt to build a model of school effectiveness grounded in Nepalese educational settings which can be valuable to schools, educators, parents, teachers, and practitioners for improving school effectiveness and student achievement.

1.4 Understanding School Achievement: Multiple Perspectives

Unequal differences in educational achievement are a worldwide phenomenon, as old as the history of formal schooling. These differences in educational achievement and attainment are often based on social class, economic status, caste, ethnicity, gender, school type, family background, and a host of other factors. This topic has attracted many scholars, thinkers, and researchers alike for a long time. Most recently, anthropological and sociological studies of schooling have provided critical awareness about school achievement. The main purpose of this section is to review the theories and research studies that explain school achievement. What is reviewed here is the western literature. The review will reveal that despite several decades of thinking and research, we are nowhere near knowing what makes one perform well in schools and others poorly. There is not just one way of understanding the phenomenon of school achievement and is almost impossible to be conclusive. The review will show that there are multiple perspectives on educational achievement. Each perspective has been labeled as a 'theory,' which is used in a loose sense. The readers will notice that these explanations contradict with each other and often represent an ideology. The readers will also notice that the concern with unequal educational performance of children coming from the working class and those belonging to ethnic minorities is at the heart of these inquiries and scholarly work. Also, at the heart of these debates is the student achievement in public schools. This makes the present directly relevant to our context. The idea here is to introduce the various perspectives or explanations, not to critique them. We have not followed any particular order in presenting the various theories. Here follows an overview of each theory.

Theory of intelligence

Intelligence has long been considered as an important component of educational achievement or success. For the last several decades, the psychologists have been emphasizing that it is one's intelligence that makes a difference in schools, meaning that people are born with unequal intelligences and those who have more intelligence are able to learn in comparison to those who have less intelligence. To believe that some people are born smarter than others implies that nothing can be done to improve one's learning because it is pre-determined. For decades, the intelligence theory led to believe that good students stay good but the bad ones stay bad throughout their lives. Jensen (1972) argued that lower class children, especially blacks in the United States, suffer from a specific cognitive deficit, an inability to engage in conceptual learning, and this inability is a result of genetic inheritance. For Jensen, genetic differences in intelligence explain unequal educational performance in schools by different groups of children. He was not optimistic about the likelihood that the academic performance of black children in the US could be substantially improved despite social and economic policies as he believed that

the root of the problem was biological. Jensen's work was later challenged by Ginsberg, who demonstrated that children, black or white, possess fundamental competencies in mathematical thinking and that there is no evidence of pervasive cognitive deficit.

Racial, ethnic, and class differences in IQ test scores, said to determine school performance, were believed to have occurred due to differences in genetic endowment, differences in home environment and parental childrearing practices, and cultural differences. Later studies have indicated that these differences in intelligence are in part due to the cultural bias of IQ test questions, the conditions under which they are administered, and cultural and family differences (Bowles and Gintis, 1976).

Theory of cultural reproduction

Bourdieu's (1973) work can enlighten us to build our understanding of school outcomes. Unlike liberal thinking, which sees schooling as a means of upward mobility and social inequality, Bourdieu and others (Bourdieu & Passeron, 1990) do not see schools as neutral sites. By examining the functioning and role of schools in the French society, he came to the conclusion that those who are likely to perform well in schools are those of 'superior social standing,' who are believed to possess 'cultural capital' is valued in schools. The schools as social and political institutions recognize the elite tastes, consumption patterns, skills, manners, and actions as 'intelligence.' The structures and processes that constitute the schools such as curriculum, methods of instruction, exams, and disciplinary procedures favor those who possess the 'intelligence' that schools recognize as legitimate and genuine. Thus schools give the elites an unfair advantage. The ones who are of lower social standing are believed to lack cultural capital, and hence, are without the intelligence that the school calls for. He argues that non-elite children or those with a lower social standing cannot identify with the schools because of the lack of resemblance between what they possess and what is valued in the school. Bourdieu believes that the possession of cultural capital leads to economic and social advancement because of the convertibility of cultural capital into economic capital. For Bourdieu, schools not only reproduce the value and content of the cultural capital of elite groups but also impose symbolic violence on non-elite students.

Bourdieu's work seems to suggest that it is the poor, socially deprived groups, non-elites, and the working class children who are destined to fail or perform poorly in schools. These children are presented with an alien environment and the knowledge, experience, language, taste, and manners they possess do not help them meet the standards of schools that are consistent with and set for the elites.

Correspondence theory

The correspondence theory was propounded to explain the schooling phenomenon in industrial countries, but it is equally helpful to understand the same in non-industrial societies. The theory holds that education in a capitalist society is bound to work against the interests of the poor because the role of the school is to prepare wage labor for capitalist enterprises. The school will prepare docile and disciplined workers to serve the interests of the capitalists. The school certifies the workers for a position at the bottom of social hierarchy. Many working class children have little realistic opportunity for mobility through the schools. Bowles and Gintis (1976) argued the social relations of the larger society are reproduced in the school in a way that tends to reproduce the social class structure. Social relations of schooling and of family life correspond to the social relations of production. In other words, the economic and

technological characteristics of a society cause the families and schools to take on characteristics that fit in with the socio-economic structure. If seen from the perspective of the correspondence theory, school achievement is a function of the child's place in the society. Correspondence theorists have a deterministic view and refuse to accept that schools function to provide meaningful opportunity to the working class. Schools that serve the working class children have a climate and conditions that do not promote their achievement.

Theory of cultural deprivation

Cultural deprivation theory emerged during the 1960s. This theory posits that working class and nonwhite children perform poorly in schools because they enter school without the intellectual and social resources that is required to be able to achieve success in schools. The lack of cultural resources puts these children at a significant disadvantage. The poor have a deprived culture, one that lacks the value system of the middle-class culture represented by hard work, initiative, and importance of schooling as a means to future success, without which it is less likely to excel in the school. Deutsch (1967), for instance, believed that working class and nonwhite children did not have the upbringing in their families required for satisfactory academic achievement.

Hunt (1969) argued that poor children develop in a deprived environment that stunts their intellectual growth. The environment fails to provide sufficient stimulation or provides the wrong kind of stimulation. As a result, poor children suffer from cognitive deficits. The environment also fails to provide sufficient stimulation or provides the wrong kind of stimulation. The cognitive deficit (whatever its origins) prevents poor children from learning the conceptual material taught in school.

This theory provided impetus to the adoption of the compensatory education programs in the US. The Head Start Project was the direct outcome of the cultural deprivation theory. It was believed that the various disadvantages and deprivations that children bring from their families could be compensated with the Head Start Program that was designed to prepare children academically for formal schools.

Theory of cultural difference

In line with the cultural deprivation theory, cultural difference theorists also believe that working class and nonwhite students differ from the middle class students culturally. It is also true that the working class and nonwhite children enter school with different cultural dispositions and without the skills and attitudes often required by the schools. This is not due to deficiencies in their homes but rather to being part of an oppressed minority. Cultural difference theorists attribute unequal educational outcomes to social forces such as poverty, racism, discrimination, and unequal life chances. John Ogbu (1978), for instance, argued that African American children do less well in school because they adapt to their oppressed position in the class and caste structure. A caste society is one where different roles are assigned more or less rigidly to different sub-groups and where everybody belongs by birth to one or another of the sub-groups. To be born into a lower caste or caste-like minority is to grow up with the conviction that one's life will eventually be restricted to a small and poorly rewarded set of social roles. Individuals in caste-like minorities cannot realistically aspire to the kinds of social positions for which education is important. A 'job ceiling' restricts their opportunities even if one or two members of the caste manage to break through the ceiling. It is generally supposed that blacks cannot get good jobs because they have done poorly in school. Ogbu argues that blacks do poorly in school because they are sure that they are not going to get good jobs anyway. Like members of caste-

like minorities, many blacks do not expect to lead the kinds of lives for which education is required.

Another variety of cultural difference theory does not agree with the notion of cultural deprivation (Ginsburg, 1972). Ginsburg demonstrated through his study that the basic abilities required for mathematics and other school subjects are equally present in every cultural group. Poor children do not suffer from massive intellectual deficiency. He argues that poor children do not suffer from fundamental cognitive deficits. Instead, there is evidence for the existence of universal cognitive processes. Cultures develop distinctive techniques for dealing with distinctive problems. These cognitive differences are an expression of distinctive adaptations to unique environments. The basic argument is that cognitive differences are an expression of the school failure of poor children that cannot be explained primarily in terms of cognitive development deficit. School failure does not originally derive from deficient cognition. Why do children exhibit school failure? According to Ginsburg, three factors contribute to failure in schools: bad teaching, motivation, and style. The simple truth is that many schools teach badly, therefore, the root cause of failure is bad teaching. There is no evidence that under stimulating conditions poor children cannot learn quite well. Motivation is central to learning. Children make great intellectual strides if they are motivated, when there is interest in and passion for learning. Most children fail in school not because they are stupid (cognitively deficient) but because they are afraid, turned off, and the like. Ginsburg further argues that children prone to school failure may experience some form of distress that prevents them from exhibiting their capability or realizing their potential. And, once they fall behind, the prophecy becomes self-fulfilling. Some children's learning style or cognitive style may not correspond effectively with the teaching environment in schools. Children fail not solely or primarily because they are dumb, but because of the way they are treated by their teachers in their classrooms, because of political-economic factors beyond control. Education is a social-political phenomenon as much a psychological one. Achievement test scores do not tell the whole story.

According to the cultural difference approach, ethnic and linguistic minorities fail in schools insofar as they do not successfully adapt themselves to the schools' dominant cultural styles, or conversely, insofar as the schools could not provide appropriate activity settings to accommodate minorities. Ogbu suggested in one of his works that school success requires that African American students deny their own cultural identities and accept the dominant culture of the schools, which corresponds to the white middle class model. It would mean that the black children would not make much progress unless they learn to behave and act like white children.

Theory of language code

Bernstein (1975) worked with middle-and working class boys in London and found that in the working-class sub-culture there is, on the whole, a particular mode of speech that is characterized by its very restricted nature. He noted that sentences were short, abstract ideas were infrequent, vocabulary was small, and gesture was commonly used in addition to or in place of speech. This very simple language used by the working class boys was called 'restricted code.' Bernstein believed that those who are brought up to speak this code will automatically be brought to think in the same uncomplicated way regardless of whether they are genetically capable of far more complex thought. On the contrary, children in the middle-class were exposed to sophisticated language, which gave the speakers the possibility of thinking of a much more complex and abstract quality. Those who are exposed and are able to use a complex mode of speech, termed as elaborated code, will not be limited to mental development, unlike those

who only use a restricted code. Bernstein's theory thus suggests that working class children cannot achieve as much as the middle class children due to inadequate language. School achievement, which demands high language proficiency, will be higher for the upper class due to their advantage of the language. Schools reward middle class communication codes, not working class codes. Bernstein's thesis is close to the cultural deprivation theory because of his theoretical position that working class children have a different language and communication code, which disadvantages them in the schools.

The most recent work of Ogbu also supports Bernstein's language theory. Ogbu noted a relationship between language and educational achievement among the low income, inner-city Afro-American students. He documented that school success often called for standard English, while the language commonly used by the Afro-Americans was one of slang English or Black English, which differed from the standard English.

Theory of familial effects

Coleman and colleagues (1966) in their much debated work demonstrated that school achievement is linked to family background and that poor children do poorly in school because there is something intrinsically disabling about being poor. Based on their study, they reported that school differences were not the most significant explanatory variable for the lower educational achievement of working class and nonwhite students in the United States. Their work implied that children coming from poor households have intrinsic cognitive, linguistic, and intellectual disabilities as a result of which these children perform poorly. The reason why students from lower socio-economic backgrounds did well in school had more to do with the students themselves, their families, their neighborhood and communities, their culture, and perhaps even their genetic make-up. Those who see the family background playing a major role in school achievement argue, student achievement will not improve unless families' economic status is lifted. They also argue that the key to improved achievement for low income minority depends on getting those children to learn in the ways schools teach. Throughout the 1960s and 1970s, these explanations remained dominant and are in currency even today.

Theory of fear

John Holt (1964) in his book *How Children Fail* postulated that children fail because of fear in schools. The boredom, confusion, fear, limitless hopes, and expectations of adults all contribute to failure. Fear is one tactic or strategy that schools and teachers have used for a long time to control, discipline, and motivate teachers. Fear destroys intelligence, and affects a child's whole way of looking at, thinking about, and dealing with life. A fearful mind cannot learn. Fear and failure are very closely linked. Schooling is about fears, and throughout their schooling children are taught to be afraid of failure. The fear of failure and subsequent experience of humiliation, insult, punishment, and scolding prompts children to refrain from working hard. Children then begin to perceive themselves as incompetent learners. Incompetence has one advantage. It not only reduces what others expect and demand but also reduces what one expects from himself or herself. Holt concludes that the best bet is to help children overcome fear so that they come to believe that they have the ability to learn. He further argues that the experience of failure is humiliating and it does not lead to more learning. Children should be subjected to honorable and constructive experience that inspires them to learn. Schools need to be organized in such a way that even children with learning difficulties learning think that they have the ability to succeed and excel. Holt is of the view that learning in schools is fragmentary, irrelevant,

distorted, and short-lived and does not meet the real needs of children. School experiences are often dull, trivial, redundant, and narrow and that there is limited opportunity to further expand their intelligence, capabilities, and talents. The reality they experience on a day-to-day basis is so different from the reality they are taught in schools that they find school learning meaningless.

Theory of cultural production

Unlike cultural deprivation and cultural reproduction theories, the cultural production theory does not see individuals as passive recipients of the middle-class ideology of the school. Students are merely not objects manipulated by the school. Instead, it recognizes that schooling is a dynamic process, where different forces and power relations come into play. Educational outcomes are not necessarily pre-determined or established. As a result, different educational outcomes are produced. Working class children are informed, conscious, and creative actors who do not accept repression, domination, and subordination pushed through the schooling process. These are opposed to the operative structures and processes that exist in schools. By way of interacting, contesting, and challenging the oppression, these actors produce new cultures, knowledge, ideas, and values. It would mean that school achievement results from learners' engagement in the learning process and it is not that working class children always perform poorly.

The school is not necessarily a sacred place. It is a site with an interplay of multiple discourses, realities, voices, ideologies, and practices. Levinson and Holland (1996) argue that it is a complex site where hegemonies and counter-hegemonies are practiced and these interactions produce an educated person, with a new political and social awareness who could be different from the one envisaged by the State.

Theory of school effectiveness

Many other researchers, however, are not prepared to accept the logic of causal interaction between achievement and family background. Edmonds (1979) provided an alternative interpretation of the interaction between student performance and family background. What is often described as the theory of school effects, now popularly known as the school effectiveness research, asserts that variability in the distribution of achievement of school age children derives from variability in the nature of schools to which children go. School achievement is therefore relatively independent of family background, at least when achievement is defined as acquisition of basic skills. Under the school effectiveness tradition, it is argued that the key to improved achievement among school-age children depends on the ability to compel or persuade schools to embrace practices and factors that are directly linked to effectiveness, measured in terms of student mastery of the subject matter. An effective school is defined to be one where the proportion of low-income children demonstrating good performance is identical to the proportion of middle-class children who do so. Using this definition, a school that fails is not an effective school. Early school effectiveness researchers found a number of organizational and institutional characteristics in the effective schools: instructional leadership role of the principal, instructional emphasis in school, school climate, high expectations, teacher behavior in classrooms, time-on-task, frequent monitoring of student progress, etc. Edmonds (1979) concluded that the most powerful force in school achievement is the school itself. He further argued that the school effect is more powerful than the familial effect, but it is also more powerful than the teacher effect. That is, the effectiveness of the teacher is much more a

function of the nature of the schools in which they work than of any set of characteristics that they possess as individuals.

Edmonds' concept of effective schools has remained widely influential in the contemporary thinking and research on school achievement in both developed and developing countries. A genre of research, known as the effective school research, has grown over the years around his concept.

Theory of differential treatment effect

This view suggests that classroom practices and instructional methods used in classrooms produce unequal student outcomes. Some researchers have argued that the instructional methods often used in classrooms do not favor the poor, girls, linguistic and ethnic minorities, and children coming from difficult households, which eventually contribute to widen the gap between successful and unsuccessful students. Teachers often treat poor children differently from non-poor children. Also, smart ones get more attention than the non-smart ones. Poor children and minorities are sometimes not familiar with the classroom and school procedures and conventions. This explanation would imply that the performance of such children can be improved by improving the instructional methods and teacher-student relationships.

School effectiveness studies have been very popular in developing countries. Bruce Fuller (1986), from his review of 72 such studies undertaken in developing countries over a period of 15 years, concluded that unlike industrialized countries where child's family background appears to be a strong predictor of school achievement, in developing countries the academic achievement of children is influenced by the quality of the school. Measures of school quality that were frequently found to correlate to student achievement are: (a) school expenditures (expenditure per pupil); (b) material inputs (availability of instructional materials, availability of additional reading materials, quality of school building, library size and activity, science laboratories, provision of nutrition and feeding program); (c) teacher quality (years of tertiary and teacher training, in-service teacher training, teacher's verbal proficiency, teacher's social background, school's percent age of full-time teachers); (d) teaching practices (length of instructional program, homework frequency, teacher's expectations of public performance, and time spent on class preparation); (e) school management (quality of principal and student boarding). A number of quality factors believed to be related to achievement and found not to influence student achievement are: class size, laboratories, and individual teacher salary levels.

To conclude, school achievement is not just an academic question. It is equally a political, economic, cultural, and social question. Therefore, understanding about school achievement is possible only through a multidimensional approach, which is precisely what we have done in our study of student performance in the SLC examinations.

1.5 Nature and Functions of Public Examinations

Public examinations, which constitute an inherent feature of the education systems around the world, originated in China as early as 606 AD. These examinations were used for the purpose of selecting students and civil servants on the basis of ability. It was only in the 16th century that competitive examinations were introduced into European schools and colleges. Subsequently, European educational institutions started using both written and oral examinations as a means of improving the standards of education. During the nineteenth century, examinations were used widely to provide entry into the universities and select competent people for various professions.

The use of examinations ended the age-old practice of using wealth, social prestige, and family connections in selecting people for public service. It was believed that examinations possess the power to differentiate between the competent and the incompetent persons. Over time, European countries developed their own examination systems. For instance, in Great Britain, the *matriculation* system of examinations came to exist, which was later exported to former colonies. These and several other developments led to the widespread use of written examinations across the world.

Key features of public examinations

Greaney and Kellaghan (1995) have identified at least six key characteristics of public examination systems. First, public examinations are generally summative and formal and are controlled and administered by an authority outside the school. It would mean that those who teach are not directly involved in examining their students. Second, examinations are based on a syllabus or curriculum defined by a curriculum authority outside the school. Students are examined against a common curriculum regardless of the type (public or private) of schools or their location. Third, examinations can be limited to a few core subjects such as language(s), mathematics, and science, or may include the entire subjects in the curriculum. Fourth, public examinations are normally terminal in nature, administered at the end of a level of education (primary, lower secondary, secondary, or higher secondary) or a course of studies. Examinations are routinely conducted annually and results published. Examination conditions are normally uniform and standardized. There can be one public examination for the country as a whole administered nationally. Or, there can be more than one system of examinations. Fifth, examinations generally seek written answers, using essay or short-answer type questions or both. Some systems also use objective type of test items (e.g., multiple choice items). In some subjects, oral and practical components are also included. Finally, students' works are examined by external examiners, leading to award of a grade or mark in each subject.

Public examinations also have some other features. First, the results of individual students and, in some cases the results of the individual schools or districts are made public for a purpose of placing a heavy pressure on them to perform. Second, there might or might not be any formal relationship between internal and external examinations. Third, countries may hold public examinations at the end of school level education or may hold at the end of each cycle of education (primary, lower secondary, or secondary). Fourth, public examinations normally constitute large-scale standardized assessments conducted by national entities or other nationally recognized entities. These assessments are mandated, so a teacher cannot simply opt out of participation.

Functions of public examinations

Public examinations around the world have more or less similar functions. One common function is to provide information concerning the level of educational achievement of a student based on which he or she is selected for the subsequent levels of education. This function is often characterized as the selection function of the public examinations. Based on the performance, universities or institutions of higher learning decide whether to accept or reject a student. It is assumed that one's academic performance at a lower level determines the level of academic performance at a later stage. In recent years, many have started to question the ability of public examinations to predict one's future academic performance. Where places are limited, universities or institutions of higher learning use their own screening devices in selecting the

students. The pyramid structure of education systems, where very few manage to reach the top of the educational ladder, results from the selection that takes place through the public examinations.

The second function, often known as the certification function, relates to providing information on the level(s) of competence acquired by students on definite pre-established standards or learning outcomes. Based on performance in the public examinations, students are given certificates which serve as the basis for being employed in the labor market or for being enrolled in vocational training courses. Not all students aspire to move to higher levels of education. Certifying the skills and competencies one has acquired is essential in cases where students decide to abandon their formal studies to join the world of work. It should be noted that selection and certification call for different types of information. The selection function has to do with the identification of students who are likely to succeed in their subsequent studies, while the certification function has to do with the measurement of attainment of a clearly specified standard of competence. Most countries use the same test for both purposes.

Characteristics of a Good Examination System

- Fitness for purpose. The exam papers and the marking system should produce scores that are both reliable and valid.
- Equity, integrity, and public confidence. The conduct of the public examination system should be deemed fair and achieve a high level of public acceptance. The exam should ensure that no particular candidate or group of candidates has an unfair advantage over others.
- Efficiency and cost-effectiveness. The Exams authority should deliver the required services making the best possible use of physical, financial, and human resources. Public exams should be administered according to the agreed schedules and, in particular, results should be issued on time.
- Transparency. The examination process should, as far as possible, be open to public scrutiny. Exams should not be shrouded with mystery.
- Beneficial effect on classroom practice. The public examination system should promote good teaching and learning practices. It should provide a systematic feedback of information to teachers.

Source: www.worldbank.org/exam

In addition to the selection and certification functions, public examinations have to perform another important task, often known as the ‘accountability’ function. Many countries use the results of public examinations as measures of school effectiveness or school performance, identifying schools with high pass rates as good schools and those with poor pass rates as bad schools. Often, schools and teachers are rewarded or punished based on the results of public examinations. The accountability function implies that test scores should be used for the purpose of incentive and administrative control. In view of the fact that public schools are being funded through public resources, many argue that the performance of schools and teachers should be measured in terms of student achievement in public examinations. The accountability function is emphasized from the reasoning that all investments made in education should result in increased pass rates or test scores. Critics, however, argue that the use of test scores for the purpose of accountability and control might not favor poorly performing schools. The test score-based accountability system does not take account of differences between schools in terms of the availability of human and physical resources and characteristics of student population, which may have a role in school results.

Testing experts advise that, whatever the function, large-scale tests should be valid, reliable, and fair. By validity, testing professionals mean that the test measures what it claims to measure – in this case, what students were actually taught. In addition, public examinations should be reliable;

in other words, they should produce very similar if not identical scores if the same student took the test on two different occasions (assuming no learning occurs in between) or in two different settings. The exams should also be fair. This means that the test questions should not be culturally biased; that the exam should be administered in a way that treats students equitably; that test takers should have an opportunity to learn the material being tested; and that the scores should not underestimate or overestimate the competencies of members of a particular group, such as a racial or ethnic group. It needs to be noted that, in practice, it is almost impossible to design a test that is totally free of error and, thoroughly valid, reliable, and fair.

Positive and Negative Consequences of Public Examinations

Public examinations bring both positive and negative consequences. Many argue that public examinations can help raise academic standards in a number of ways. Kellaghan and Greaney (2004) see the potential in public examinations to act as a 'lever for school reform.' Public examinations are often characterized as a powerful and inexpensive method of influencing the quality of teaching and learning in schools. Some of the positive consequences of public examinations are listed below:

First, examinations encourage schools and teachers to do better and be accountable for performance. This is true for public examinations whose results are made public.

Second, external examinations force teachers to cover course contents. In countries where teachers must teach externally developed curricula and textbooks without much training and supervision, there is a tendency to leave certain portions of the curriculum untaught. Where examinations are centrally set, teachers are under pressure to cover the entire course of study.

Third, public examinations ensure alignment between curriculum and instruction. They drive curriculum implementation in schools. Curriculum represents the knowledge, skills, and attitudes that children acquire, what is often referred to as learning outcomes or competencies. Instruction is a process that helps transform these desired learning outcomes into actual student learning. Public examinations bring the two elements together by expecting on the part of students the mastery of the knowledge, skills, and attitudes emphasized in the curriculum. This keeps teachers focused on the curriculum.

Fourth, public examinations provide motivation to the students to learn more. Some research tends to suggest that external examinations can influence students' level of effort to learn course materials. Some argue that public exams provide an incentive to study, thus improving their achievement and school performance.

Fifth, examinations create a competitive environment between and/or among schools, thereby, making the entire education system competitive and productive.

Sixth, they provide a criterion for measuring schools' progress. One major task of the school is to contribute to the overall development of the child. This objective is 'fuzzy' as there are no concise and commonly agreed measures of overall development. The test scores of public examinations therefore provide a good measure of school achievement. When test scores are the agreed measures of school performance, they provide a relatively simple means of controlling schools.

Seventh, public examinations provide a basis for devising remedial and other special courses for students at risk of failing the examinations.

Finally, public examinations, as argued by many, also act as a vehicle for educational reform. Examination results, if analyzed properly, can provide feedback to schools, teachers, educational planners, administrators, curriculum and textbook writers, and parents.

It should be noted that the above positive benefits are likely to differ for different groups of students. Public examinations, despite several pay-offs, can have numerous, often unintended, negative effects. These are listed below:

First, public examinations give rise to a phenomenon of ‘teaching to the test’ or ‘selective teaching,’ what is often known as the ‘backwash’ effects of examinations. Public examinations signal what is important and what is not important, what should be taught and what should not be taught, what should be done in classrooms and what should not be done, and what should be learned and what should not be learned. Teachers and students act in classrooms the way they will be tested and examined through external examinations. Their actions are geared toward direct preparation for a particular test, such as drilling students in model questions, focusing instruction on a limited subset of skills and knowledge most likely to show up on the test, and ignoring materials that do not appear in the examinations. But, if these test preparation exercises are done with the sole purpose of inflating test scores, they can distort the meaning of education and schooling. Children go to school not just to learn the contents of curricula, but also to develop the personal, intellectual, and social skills that enable them to become productive members of a democratic society. Unfortunately, a heavy emphasis on the public examinations threatens the broad goals of schooling by forcing schools and teachers to focus on test scores. As a result, learning becomes a test-taking or test-passing exercise. Clearly, high-stake public examinations change the focus of education from the demonstration of learning to the attainment of high scores. As teaching becomes ‘coaching for the test,’ real learning and thinking are crowded out.

Second, educationists often classify learning into higher-order cognitive skills and lower-order cognitive skills. Being able to recall simple facts would be an example of lower-order cognitive skills, while ability to solve problems, think critically and analytically, draw conclusions and verify results, investigate situations, and organize and interpret the data are examples of higher-order cognitive skills. For the most part, public examinations focus on the former rather than the latter. Since higher-order skills are not easily examinable, public examinations use questions that test lower-order skills, encouraging the examinees to improve their performance by memorizing by rote and by imitating ready-made answers found in commercially produced exam support materials. Keeves (1994) is of the view that public examinations through recognition of particular learning outcomes have the possibility of either raising or lowering the quality of teaching in schools.

Third, public examinations are too academic and too contents-oriented. They do not test the knowledge and skills that are relevant to life outside the school. Examinations thus produce people who may have ‘facts’ but not know how to conduct life in real life situations.

Fourth, public examinations promote malpractices and cheating. Because of the high stakes attached to these examinations, students, teachers, administrators, parents, and others will use whatever legitimate or illegitimate means is available to boost the pass rates. Cheating is widespread in countries with high-stake examinations. Some research has reported that high-stake tests provide increased motivation to cheat. The commonly reported exam malpractices include hiring substitutes to take exams, bringing and using concealed cheat sheets and notes, bribing exam officers, communicating with outside confederate, etc. The higher the stakes, the

greater the incidence of cheating. In some countries, we see widespread use of test coaching courses and centers and prolific print and video publication of books and software on test-taking skills. In fact test-coaching schools, tutorial services, and test preparation publications are a multi-million dollar industry in many places.

Fifth, public examinations also induce psychological and behavioral problems. The anxiety of preparing for tough examinations and the disappointment of doing poorly often leads to numerous incidents of pathological behavior. Repeatedly failing the public examinations, promoted and respected by the state and society in general, can result in severe psychological toll on the failed candidates. Effects of failure can range from mild cases of low self-esteem to suicide or physical violence directed at others. Exam-induced psychological problems are not as apparent in the Western societies, possibly because the stakes attached to the exams are not as high as in the Asian countries. Waves of exam-caused suicides are common in Korea, Hong Kong, Japan, Singapore, Taiwan, and Vietnam. In recent years, some cases of suicides in Nepal too, have been reported. A study in the US found that low-achieving students who failed the state exam showed increased tendencies toward alienation, anxiety, and apprehension after the test (Richman, Brown, and Clark, 1987).

Finally, public examinations are known to create inequities and further widen the existing disparity between social groups. The claim that tests can be 'objective' and 'neutral' is false. Some research tends to suggest that the so-called objective instruments often produce results that are inaccurate, inconsistent, and biased against minorities, females, and students from low-income families. The language, structure, and contents used in the tests favor some, not others. One study reported that the tests used in standardized tests in the United States reflect the language, culture, or learning style of the middle to upper class whites. Thus, scores on these tests are as much measures of race or ethnicity and income as they are measures of achievement, ability, or skill.

Recent Thinking and Trends in Assessment and Examinations

Assessment as an ethical act

Generally, assessment and examinations generate high stakes. The results of public examinations determine one's life chances. Whether or not one qualify for a job, college or university degree or a training course is based on the assessment outcomes. Therefore, it is imperative to view assessment as an ethical act. It needs to be ensured that assessment tools, procedures, and methods are fair, valid, accurate, and reliable.

Multiple rather than a single test

Modern theories on child development emphasize the complexity of human intelligence. Researchers have observed that knowledge, learning, and thinking have multiple dimensions and that a high level of achievement in one area does not necessarily indicate a high level of development in others (Gardener, 1983). Therefore, no single method of assessment is capable of showing achievement of a student on a full range of learning objectives. Unitary test scores ignore the true complexity of human intelligence and thus provide a deceptive picture of individual achievement. A test score is an estimate, not an exact measure. A student's performance may vary depending on which content and skills are tested, when and how the test is administered, whether the formats of tests are familiar or new, whether the material being tested was actually taught, and a variety of other factors. Testing experts strongly urge that

decisions having life-altering consequences, such as whether a student will graduate, should not be made on the basis of a single test score, but should take into account other relevant information. Most terminal public examinations, by their very nature, essentially operate as a single measure. These examinations place too much weight on a single imperfect measure. Testing experts recommend that one single test should not be the sole determining factor in a major decision like awarding of a certificate, but should be used in conjunction with other measures. Multiple assessments need to be used to provide adequate opportunities for learners to demonstrate their achievement.

Assessment for learning rather than assessment of learning

Examinations typically designed for the assessment of learning estimate how much learning has taken place. Then the information generated from the assessment is used to make decisions about the learner. There is little opportunity for improvement. It is being increasingly emphasized that assessment should exist for learning, meaning that it should be used as a means rather than an end. The most important purpose of assessment is to improve teaching and learning. Assessment should make sense to students, and their performance should be reported and interpreted in terms they can understand. Assessment experiences should be part of a positive learning process; therefore, assessments should not erode students' sense of worth. Current thinking on child learning holds that all learners are born curious and can acquire new knowledge, skills, and attitudes. When learning has not taken place, it is not the fault of the learner alone.

Socio-cultural approach to assessment and examination

Assessment and examinations have been traditionally dominated by psychometrics, the science of measurement of skills, knowledge, and abilities, often believed to meet the strict criteria for validity and reliability. The psychometric approach seeks to standardize conditions of administration and scoring in order to ensure reliability. The aim is also to assure validity to make sure that results of an assessment reflect student's learning accurately. A socio-cultural approach to assessment recognizes the influence of students' culture, language, ethnicity, and a host of other social factors on teaching, learning and assessment. This approach acknowledges the role of context in one's learning and performance. It means that learning is not influenced by the classroom environment and in-school experiences but also by socio-cultural factors such as students' background, home experiences, languages and dialects, and gender. Unlike psychometric approach that defines learning as an individual psychological event, the socio-cultural approach views learning as a social process. One's ways of learning and demonstrating what has been learned are influenced by how he or she is socialized. If learning is a social process, then student performance should be evaluated and understood in the light of socio-cultural information about the student, the school and the course of study. The psychometric approach seeks to avoid influence of external factors on performance by administering examinations under uniform and standardized conditions. On the contrary, the socio-cultural approach seeks to accommodate student differences by contextualizing examinations and using varied methods of administration.

Emergence of the national assessment movement

The World Declaration on Education for All held in Jomtien, Thailand in 1990, where governments, non-governmental organizations, and international aid agencies expressed their commitment to provide a basic education of high quality to all the children of the world,

contributed to the emergence of the national assessment movement. The Conference made the point that all schooling efforts should lead to student learning and that quality education should strictly mean student achievement. This was a major departure in the thinking about educational reform. One should be reminded that most national and international efforts from the 1960s to 1980s may have succeeded in bringing more children into schools, but these efforts did not result in increased student achievement. It was recognized that improved access to education has little or no meaning if it fails to enhance student learning. The world community reiterated its commitment for Education for All (EFA) at the Dakar Conference in 2000 with particular focus on quality education. Although national assessments have existed in developed countries for a long time, the repeated international calls for 'quality education' provided impetus to the emergence of national assessment in developing countries as an instrument for measuring student learning. Countries, both developing and developed, soon realized that the focus of school reform should shift from 'inputs' orientation to a new orientation that emphasizes 'processes' and 'outcomes.' It would mean that school reform should lead to increased learning. Donors have been particularly interested in promoting national assessments. Nepal is no exception to this new belief: four national assessments in six years is in itself an evidence of donors' relationship with the assessment.

Kellaghan and Greaney (2004), who have been consistently researching on issues of assessment and examinations, have discussed the importance and features of national assessment in their recent work. According to them, national assessment describes the level of achievements of the entire education system or a clearly defined part of one (for example, grade 4 pupils or 11-year-olds). With the national assessment gaining currency, most countries found their educational management information system (EMIS) inadequate because the existing data systems were mainly focusing on inputs.

National assessments are primarily interested in student learning, their purpose being to assess the extent to which students are learning in schools. Policymakers are the primary users of the information obtained from the assessments. Unlike public examinations whose primary purpose is to select and certify each individual student, the purpose of national assessments is to assess the extent to which students belonging to a particular grade or age have been able to acquire what they were supposed to acquire. The purpose then is to find out the status of the education system in terms of its ability to educate children. These data help the policymakers to identify policy interventions directly related to student learning and redirecting investments in areas likely to boost student learning. National assessments undertaken at different times suggest progress in student learning over time. Teacher trainers, curriculum and textbook writers, administrators, teachers, and parents alike benefit from the availability of assessment data. Since the idea is to find out the level of achievement of a group or sub-group of students rather than the individual learner, national assessments are administered on a sample of schools and students. Normally, these assessments test students' ability in core learning: language, mathematics, or science. Every subject does not need to be tested.

Increasing trend toward international comparisons

There is an increasing trend toward international comparison of student achievement. So far, there have been three major efforts to conduct international achievement studies. These are: SACMEQ, PISA, and TIMSS. SACMEQ represents a consortium of 15 ministries of education in Southern and Eastern Africa that was established to promote among the member countries the technical ability to monitor and evaluate schooling and the quality of education (Kellaghan

and Greaney, 2004). SACMEQ I was launched in 1995 in which six countries participated in the testing. SACMEQ II took place in 2000 with 14 countries participating in the assessment. It tests grade 6 students for the reason that grade 6 is the last grade of primary education. It gathers information pertaining to educational inputs, general conditions of schooling, equity assessments for human and material resource allocations, and literacy levels among grade 6 students.

OECD countries have been collaborating since 1997 to monitor the outcomes of education in terms of student performance on a regular basis and within an agreed internationally agreed framework, what is known as the Program for International Student Assessment (PISA). It seeks to 'measure how well young adults, at age 15 and therefore approaching the end of compulsory schooling, are prepared to meet the challenges of today's knowledge societies' (OECD, 2003). Its focus is on testing the ability to use knowledge and skills in real-life situations rather than on the mastery of school curriculum. In addition to student assessment, it collects data on student, family, and institutional factors that can help to explain differences in performance. The first PISA was conducted in 2000 in 32 countries (including 28 OECD member countries). PISA 2003 was conducted in 41 countries, including all 30 OECD countries. The first PISA primarily focused on reading, while the 2003 PISA included an in-depth assessment of mathematics. A third PISA is planned for 2006 with the primary focus on science. PISA was initially designed as a policy tool for OECD countries, but in recent years countries from Southeast Asia, Eastern Europe, the Middle East, South America, and North Africa are also participating in this international assessment movement.

The Trends in International Mathematics and Science Study (TIMSS), formerly known as the Third International Mathematics and Science Study, provides data on the mathematics and science achievement of US students compared to that of students in other countries. TIMSS data has been collected in 1995, 1999, and 2003. The TIMSS 2003 focuses on the performance of US fourth and eighth grade students in mathematics and science in comparison with 45 other countries.

Localization of assessment: increasing emphasis on school-based assessment

While public examinations and national and international assessments provide important information about the learner, school, and the education system as a whole, it is being argued that education can be better served by less formal, formative, progressive, continuous, diagnostic, localized, and teacher-managed assessments, popularly known as school-based assessment. School-based assessment allows the teacher to match the assessment more closely to both the curriculum and the individual student. One of the aims of school-based assessment is to alleviate the heavy pressure of a single final examination – the one-shot test on which everything depends. School-based assessment involves multiple assessments and allows the learners to demonstrate their achievement.

Unlike public examinations that can lead to 'narrowing of the curriculum,' school-based assessments offer broadening of the curriculum by allowing the assessment of all the intended learning outcomes. Three things are crucial in school-based assessment: demonstration of student learning through evidence, collection of evidence of learning over time in a student portfolio, and identification of performance standards against which performance of the individual learner is to be judged. Student portfolio, which is documentation of the learner's achievement over time, plays an important role in school-based assessment. In reporting the progress made by the student in a subject, what is of interest is the final state of student's knowledge and capability, what is referred to as exit portfolio. The exit portfolio should

represent the fullest and latest information on the student's knowledge and capability. For school-based assessment to be effective, it is essential that teachers have skills in conducting assessment programs and judging the quality of student performance against the defined assessment standards.

Introducing the public examination system in Nepal

The SLC was instituted at a time when the public schooling system had not even been conceived. Initially, it served children attending a handful of schools operating in the country. Over the years, it has become an inevitable part of the Nepalese education system. It has gone through different stages since its inception in 1934. A separate chapter in this report provides a historical perspective on the SLC examinations.

The purpose of the SLC examinations is to test the learning achievement of Grade 10 students, which is the terminal grade of secondary education.⁴ These examinations take place annually. The OCE, a central entity within the MOES, is responsible for all aspects of the SLC, including test development, printing and distribution, marking, marks processing, and publication of results. There is a SLC Board to make policy decisions concerning the SLC examinations. Chaired by the Secretary of Education of MOES, the Board draws members from different central institutions within MOES and educationists, who are nominated by the MOES. The day-to-day administration of the OCE is overseen by the Controller of Examinations, an official of Class I rank. The key staff members of OCE are civil servants within the Education Service Category, who are managed by the MOES. These staff members are not necessarily text and measurement experts or subject specialists. The fact that they belong to the Education Service Category means they can be transferred to any position within the MOES. Or, anyone within the Education Service Category can occupy these key positions. The OCE mainly functions as an administrative entity. An institutional analysis of OCE was undertaken to examine how it functions as a testing institution. Details on the functioning of the OCE are discussed in a separate chapter of this report.

The SLC examination is conducted in eight subjects, six of which are compulsory subjects: Nepali, English, Mathematics, Science, Social Studies, and Health, Physical Education and Environmental Education (HPE). The two other subjects are optional subjects. Each subject, popularly known as paper, carries a full mark of 100, with a pass mark of 32. The SLC is a group certificate, meaning that to be able to obtain SLC one must pass all eight subjects. The candidates who appear in SLC the first time are called 'regular' examinees. Students who fail in one or two subjects are allowed to re-appear in the examinations the same year. These examinations are known as supplementary examinations. In the case of supplementary examinations, the pass mark is 35. Students who fail in more than 3 subjects can re-take examinations the following year. These candidates are categorized as 'exempted' candidates. The exempted candidates must take the entire papers. Earlier, one could re-take SLC for a maximum of three times. Those failing to pass all eight subjects in three 'tries' were required to re-enroll in Grade 10 in their respective schools and appear as regular candidates. In recent years, however, students can take the SLC examinations any number of times.

As mentioned earlier, students' performance in each subject is marked out of 100. Students' marks are divided into four major performance categories. Those obtaining marks higher than

⁴ Plans are underway to make Grade 12 as the terminal grade of school level education.

80% are awarded 'distinction' and those obtaining 60 to 79% marks are awarded 'first division,' 45 to 59% second division and 32 to 44% third division respectively. Student performance in SLC is often used by universities or institutions of higher learning for admission to higher education. Naturally, higher marks carry a higher value. But these performance categories are in no way related to the students' level of real understanding and knowledge. In other words, it cannot be said how much a person with distinction marks knows or what he/she can do.

Pre-SLC examinations, which are popularly known as 'send-up' examinations, are conducted at the school level to screen students. Normally, schools decide whether or not a Grade 10 student will be allowed to sit for SLC. Since student performance in SLC is used for accountability purpose, schools pre-select students to boost their performance or pass rate in SLC. As per the curriculum policy of MOES, which normally falls within the domain of the Curriculum Development Center (CDC), students are tested based on Grade 9 and 10 curriculum outcomes. For the most part, the SLC examinations involve written tests. But, in English students need to go through 'oral' examinations as well. There are subjects with practical component: science; health, physical education and environment; computer science, etc. The 'practical' component is tested by the individual schools and marks sent to the OCE.

The OCE does not have in-house expertise in test construction, moderation, and marking of answer answerbooks. Therefore, it must rely heavily on school teachers, university professors, or subject specialists outside for a number of tasks such as the development of test papers, marking of answer books, and a host of other tasks. Test papers are printed India. Security is often cited to be the only reason for choosing to print question papers in India. Examinations are conducted nationwide annually, pre-designated sites, which happen to be secondary schools for the most part. As per OCE rule, students cannot take SLC in their own schools, what is called home centers. It means that students need to remain away from families to be able to sit for the SLC examinations. There are over 900 exam centers altogether. It is the policy of OCE to appoint primary school teachers as invigilators. This is done under the expectation that primary teachers cannot help students in exam halls.

The marking of answer books is decentralized. Some 40 marking centers have been developed throughout the country. A conference method of marking has been followed in recent years replacing the old method where answer books were delivered to the examiners in their homes. In the conference method, examiners mark the copy at pre-designated places. Answer books are transported to the marking centers from the exam sites. Normally, the answer copies of one region or district are moved to a different region or district. It prevents markers from identifying their relatives or students. The OCE has in recent years developed marking schemes to help the markers in being accurate and consistent in marking. Normally, it takes two months to publish the results.

HMG/Nepal announces the name and school of the highest scoring student (SLC topper), including the one who achieves the highest marks from among the girls throughout the whole country (topper among the girls). Earlier, the names and schools of 10 best performing students were made public. Schools that perform well in SLC in the country as a whole and within each region are provided with medals and cash prizes annually. In recent years, public schools with a pass rate of 50% or more are also given cash prizes.

1.6 Methodology

The present report provides a synthesis of several studies undertaken to build understanding about student performance in the SLC examinations. As mentioned earlier, at least 13 different studies were undertaken. The methodology used in these studies varied from documentary analysis to surveys. These studies combined both deskwork and fieldwork, and used both qualitative and quantitative data. In the main, the various studies used the following approaches and methodologies:

Archives and documents analysis

The genealogical study and equity analysis primarily relied on deskwork and involved review of policy papers, study reports, Government circulars, plans, programs, decisions, and rules and regulations. Media analysis mainly analyzed the texts as represented by stories, news, editorials, and articles published in some national newspapers. Disparity analysis used secondary data on school performance which was made available to the study team by OCE.

Documents analysis combined with limited fieldwork

The financial analysis draws heavily from the secondary data supported by limited field data. Institutional analysis uses both qualitative and quantitative information gathered through interviews, focus group discussions, and small surveys.

Observation

Process mapping study, which basically seeks to map the processes involved in the planning and execution of SLC operations, used actual observation as a means of data collection. Where possible, the researchers observed the events as they took place in natural settings.

Contents analysis

Assessment of the technical quality of test materials mainly involve contents analysis. Some portion of the equity analysis also involved contents analysis.

Case preparation

School effectiveness study was mainly a qualitative study which involved an in-depth investigation of everyday life of schools. It included analysis of archives and documents, classroom observation, individual and group interviews, focused group discussions, etc.

Field survey

The tracer study and study on student achievement (determinants analysis) adopted survey methods collecting primarily quantitative data using multiple sets of structured questionnaires. Retrospective tracer techniques were used to locate the school leavers.

Table 2. Survey Details

Sample	Number
District covered	42
Schools	551
Public	409
Private	142
Head Teachers	551
Teachers	4,500
Students	26,267
Families/parents	5,600
Focus group discussions	
FGDs conducted at the community level	3,851
FGDs conducted at the district level	82
FGDs conducted at the central level	24
Total FGD participants	47,554

Details on the methodology adopted in each study have been summarized in the respective chapters of this report. Further details can be found in the individual reports concerned. Table 2 displays the number of institutions and individuals contacted and the focus group discussions conducted as a part of the entire study.

1.7 Chapter Organization

This report is organized into seven parts. Part I, containing Chapter I, sets the context for the study, followed by objectives and rationale. The Chapter also presents varying theoretical and empirical works that attempt to explain the phenomenon of educational achievement in schools. It also discusses the nature and functions of public examinations as well as the emerging trends in assessments and examinations. Part II, entitled Learning from the Past, contains a genealogy of the SLC examinations. Part III tries to provide understanding of the problems of student performance and contains seven chapters: descriptive analysis of the disparities in student performance in SLC; equity analysis of the SLC examinations; public perceptions of the SLC examinations in Nepal: a study based on print media coverage; analysis of technical quality of the test materials; analysis of the processes involved in the preparation and execution of the SLC examinations; institutional analysis of the Office of the Controller of Examinations; and financial analysis of the SLC examination system. Part IV, Explaining and Predicting Student and/or School Performance, contains two chapters: determinants of student performance in the SLC examinations: evidence from survey data and case study of effective and ineffective schools. Part V, Learning from Comparing, contains a comparative study of School Leaving Examinations in SAARC countries. Part VI provides a chapter on the tracer study of school leavers. Finally, Part VII summarizes the key findings, conclusions, and recommendations of the study. Since two calendars remain in vogue in the country – the Bikram Samvat (BS) and the Gregorian, both have been used in the text, as per the relevance.