ANALYSIS OF COST OF EDUCATION AND ACADEMIC PERFORMANCE IN PUBLIC AND PRIVATE SCHOOLS IN BHAKTAPUR DISTRICT

A Thesis

Submitted to the Department of Economics, Patan Multiple Campus, Faculty of Humanities and Social Sciences, Tribhuvan University, Nepal, in Partial Fulfillment of the Requirements of the Degree of

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By

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DECLARATION

I hereby declare that this thesis entitled "ANALYSIS OF COST OF EDUCATION AND ACADEMIC PERFORMANCE IN PUBLIC AND PRIVATE SCHOOLS IN BHAKTAPUR DISTRICT" which I have submitted to the Department of Economics, Patan Multiple Campus, in partial fulfilment of the requirements for the Degree of MASTER OF ARTS in ECONOMICS, is entirely my original work prepared under the guidance of my supervisor. I have made due acknowledgements to all ideas and information borrowed from different sources in the course of writing this thesis. The results of this thesis have not been presented or submitted anywhere else for the award of any degree. I shall be solely responsible for any evidence found against my declaration.

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Kapil Ranabhat

LETTER OF RECOMMENDATION

This thesis entitled "ANALYSIS OF COST OF EDUCATION AND ACADAMIC PERFORMANCE IN PUBLIC AND PRIVATE SCHOOLS IN BHAKTAPUR DISTRICT" has been prepared by Mr. Kapil Ranabhat under my guidance and supervision. I, hereby, recommend it in partial fulfillment of the requirements for the Degree of MASTER OF ARTS in ECONOMICS for final examination.

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LETTER OF APPROVAL

We certify that this thesis entitled "ANALYSIS OF COST OF EDUCATION AND ACADAMIC PERFORMANCE IN PUBLIC AND PRIVATE SCHOOLS IN BHAKTAPUR DISTRICT" submitted by Mr. Kapil Ranabhat to the Department of Economics, Faculty of Humanities and Social Sciences, Patan Multiple Campus, Tribhuvan University, in partial fulfillment of the requirements for the Degree of MASTER OF ARTS in ECONOMICS has been found satisfactory in scope and quality. Therefore, we accept this thesis as a part of the said degree.

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ABSTRACT

This study examines the relationship between the cost of education and academic performance in public and private schools in Nepal. Utilizing a quantitative approach, the study analyzes direct cost components and its impact on student academic outcomes. The research focuses on both the financial expenditures by the government and the private costs incurred by students and their families. Significant disparities in educational expenditures and academic achievements between public and private institutions are highlighted. Public schools, often constrained by limited resources and government funding, exhibit lower academic performance compared to private schools, which benefit from better funding, infrastructure, and resources. Data collection involved surveys and statistical analysis, including chi-square tests and weighted mean analyses, to explore the correlation between educational investment and student performance. The findings indicate that higher investment in education correlates with improved academic results. In particular, private schools, with their ability to allocate more resources per student, consistently outperform public schools in key academic indicators. The impact of the new federal government system and recent educational policies, including the School Education Examination (SEE) reforms and the introduction of the letter grading system, are also examined. The thesis concludes with policy recommendations aimed at reducing the performance gap between public and private schools. It suggests increased investment and resource allocation to public schools, improving teacher training, and enhancing learning materials to uplift educational outcomes. This research contributes to the understanding of educational economics in Nepal, offering valuable insights for policymakers to improve the quality of education across different school types and ensure equitable access to quality education for all students.

ACRONYMS AND ABBREVIATION

CGPA	Cumulative Grade Point Average
COVID	Corona Virus Disease
DEO	District Education Office
ECD	Early Child Development
EDCU	Education Development and Coordination Unit
EDIS	Electronic Delivery Instruction Slip
GPA	Grade Point Average
HRC	Human Resource Cost
ICT	Computer and Information Technology
MoEST	Ministry of Education Science and Technology
NASA	National Assessment of Students Achievement
NEB	National Examination Board
SEE	School Education Exam
SLC	School Leaving Certificate
UN	United Nation

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CHAPTER I
INTRODUCTION

1.1. Background of the Study

The term educational investment refers to the allocation of time and money towards education. The primary motivation behind this investment is the potential for future employment opportunities and increased income, which often leads individuals to prioritize education over immediate consumption. Many believe that higher levels of education correlate with improved prospects for securing well-paid jobs in the job market. However, the quality of higher education largely hinges on the foundational education received at the secondary or school level (Lugaz & Grauwe, 2016). Educational costs represent the resources that students, educational institutions, or society forego in order to educate individuals or groups. Education is viewed as both a personal and societal investment, contributing to economic growth and raising the income levels of the less affluent, akin to investments in physical capital. Consequently, successive governments in the region have continued to prioritize investments in education (Akpotu, 2008).

Education is constitutionally mandated as a government responsibility, leading to a significant and growing demand for education at all levels. However, this demand also increases educational expenditures. Costs in education are generally categorized into social and private costs. Social costs denote government investments or expenditures on education, while private costs are borne by students and their families. These costs further break down into direct and indirect costs. Direct social costs include both recurrent and capital expenditures. Recurrent social costs pertain to annual expenditures on educational inputs and services, covering personnel costs (salaries, benefits for teachers and administrators) and non-personnel costs (materials, supplies, maintenance, utilities, student welfare). These are financed from current revenues. In contrast, capital costs are financed through loans from international agencies and other sources. Direct social costs encompass all financial outlays by the government for education, encompassing salaries, allowances, book purchases, equipment, maintenance, and other goods and services. In a broader context,

educational costs represent the financial resources and efforts invested to educate individuals (Aghenta, 1993).

There is a growing body of study on student performance around the world, especially focused on factors affecting student performance. The topic is overwhelming even more interesting among researchers, policymakers, educational planners, and program practitioners in developing countries, where the student academic performance is very poor (Thapa, 2015; Shahzadi & Ahmad, 2011). However, there has been an inadequate study on the issue of discovering the level of student performance from the perspective of subject-wise, nature of course, type of school, and type of local government, and socio-demographic variables such as age, gender, and ethnicity in the context of new federal government system in Nepal. Student academic performance is one of the major indicators of quality education (Joy, 2013).

Students' academic performance is seen as the result of the learning process and its quality. This performance is evaluated by comparing students' achievements in terms of knowledge, skills, and experience aligned with the educational system's objectives. Scholars argue that student performance is influenced by both cognitive and non-cognitive factors as well as the socio-cultural context of their learning environment. Therefore, academic performance represents the proficiency attained in school subjects, often measured by the percentage of marks obtained in examinations. The importance of academic performance is universally acknowledged because it is linked to social value and future success. However, numerous reports indicate that student academic performance is unsatisfactory on a global scale. According to the World Bank (2018), many school children lack basic skills such as conducting simple transactions or understanding bus schedules. The World Bank also provides evidence of low academic performance across various nations.

In the SEE 2018 examination, there was a stark contrast in the performance of students from community and private schools. Only 4 percent of students from community schools achieved a GPA between 3.20 and 4.00, whereas a much higher 40.84 percent of private school students reached this grade range (Dixit, 2019). This significant disparity highlights the superior performance of private school students compared to their counterparts in public schools. Dixit further emphasizes that

students from private schools have consistently demonstrated outstanding academic performance relative to those from private schools.

Thapa (2015) established that students from private schools in Nepal have performed better than similar students from public schools in the grade 10 examination. Thapa's research corroborates Dixit's findings, providing additional evidence of the academic achievement gap between private and public schools. These fragments of evidence collectively indicate that the overall performance of school students, particularly in public schools, is not at an optimal level. The academic success of private school students suggests that factors inherent to the private education system may be contributing to better outcomes. Moreover, numerous reports and studies have concluded that there is a significant relationship between socio-demographic factors and student performance on a global scale. These factors include the socio-economic status of the students' families, access to educational resources, the quality of teaching, and the overall learning environment. Students from wealthier backgrounds, who can afford private education, often have access to better resources, more experienced teachers, and a more conducive learning environment, which can lead to higher academic achievement (Khanal, 2017).

Conversely, students in public schools, often from less affluent backgrounds, may face numerous challenges, including limited access to educational materials, less qualified teachers, and a less supportive learning environment. These socio-demographic disparities can have a profound impact on students' academic performance, perpetuating a cycle of educational inequality. However, in Nepal, there have been no studies that have inferentially examined the relationship between grade 10 SEE students' performance and student-related variables such as age, gender, ethnicity, type of school, and the type of local government that manages school-level education in their areas. Additionally, there has been a lack of descriptive presentation of overall school education examination results in terms of local government type. This study aims to address this gap in the literature by analyzing the results of grade 10 students for the academic year, utilizing both descriptive and inferential approaches (Smith et al., 2022)

By doing so, the study will provide valuable insights into how various factors influence student performance, which can inform policy and guidelines at local,

provincial, and central government levels. The findings will be instrumental in developing innovative programs and improving school education within the framework of Nepal's new federal government structure and letter grading system. This comprehensive analysis will contribute to a better understanding of educational outcomes and support efforts to enhance the quality of education across different regions and demographic groups in Nepal. Sharma (2019)

This study will also serve as a landmark in examining and reassessing the policies related to the school education examination system, particularly the newly introduced policy on SEE administration. The education policy of Nepal allows schools to conduct the grade ten School Education Examination (SEE) and submit students' final scores to the central government through the district office (EDCU) for approval and publication of results. (Chapagain, 2021)

Under the Education Act (1971), Nepal recognizes two types of schools: public schools and private schools. Community schools receive governmental funding following approval, while private schools operate independently of government funding after obtaining approval. Thus, community schools rely on governmental support for funds, services, and programs, whereas private schools sustain themselves primarily through student tuition fees. Despite differences in funding sources and language of instruction, both types of schools adhere to the same national curriculum throughout the education system (Mathema & Bista, 2007).

According to data from MoEST (2019), Nepal is home to 27,704 community schools (80 percent) and 6,787 private schools (20 percent). Despite facing challenges such as limited funding and technical support from the government, the number of private schools has surged since 1990 and continues to attract a significant number of students (Neupane et al., 2018)

The 2015 constitution of Nepal introduced significant changes by devolving power and jurisdiction to the school education system, marking a shift from a highly centralized approach that had been in place for six decades. This decentralization was further supported by the Local Government Operating Act (2017), which granted local governments 23 rights to manage school education in collaboration with provincial and state authorities. The School Education Examination (SEE), formerly

known as the School Leaving Examination (SLC), is a pivotal component of Nepal's education system, equivalent to grade ten. Established in 1934 and conducted annually at the national level, the SEE holds several critical roles. First, it serves as a primary indicator of educational attainment and quality for both community and private schools (Bhatta, 2005). Second, the SEE results are essential credentials for students aiming to pursue higher education, secure employment, or advance professionally, including within government positions (Mathema & Bista, 2006; Thapa, 2015). Third, the outcomes of the SEE strongly influence policymakers, government officials, program implementers, and school stakeholders in shaping educational practices moving forward (Singh, 2004). Given its significance, the SEE results command widespread attention from policymakers, planners, school communities, parents, supervisors, journalists, and the entire nation. Consequently, student performance in the SEE remains a critical concern and a focal point for educational discourse and policy-making in Nepal.

The result of SLC now called SEE in Nepal is not satisfactory. The failure is more common than success in the SLC examination in the percentage evaluation system and overall SLC result status is around 45 percent only (Mathema & Bista, 2006; MoEST, 2019; Thapa, 2015). After the letter grading system as well, student performance is not satisfactory. Maximum SEE students are at only a satisfactory level. Based on the data, only 45 percent of students are over the satisfactory level in the academic year 2018 and year 2019 whereas 78 percent of students in the academic year 2020.

1.2. Statement of the Problem

The substantial investment of resources by individuals and society in education has sparked interest in studying the relationship between investors and consumers. At the societal level, there is a focus on whether increasing funds can enhance educational quality in terms of academic performance and reduce high school dropout rates. At the individual level, the decision to continue or discontinue schooling is influenced by weighing the costs and benefits (Hansen, 1972). According to Pacharopoulos & Woodhall (1997), cost analysis provides insights into educational efficiency, assessing the optimal use of resources. Cost analysis is commonly used to identify opportunities for cost reductions. The imperative for cost-saving measures and

policies aimed at maximizing cost-effectiveness is increasingly apparent in today's context.

The findings of the Coleman Report show that school resource investment does not have a significant impact on student performance (Coleman, et al., 1966). This finding has sparked a lot of research and debate about the relationship between school resources and student achievement. Since then, the use of educational production functions to study the relationship between school resources and student performance has become a hot topic in related fields. But until today, no consensus has been reached on such studies. But Hedges and others have criticized and questioned Hanushek's research methods, research data, and research results. They used meta-analysis to re-analyze the data used by Hanushek in 1989, and obtained the opposite of Hanushek's conclusion. The meta analysis results show that most of the school's resources have a significant impact on student performance, including the average student expenditure; teachers' quality (teacher education, experience, and ability) has a positive and significant positive impact on student performance.

Expectation of the parents, influence of the group, socio-economic status, structure of the family, involvement of the parents in their children's schooling, behavior of the children, academic self-concept, and environment of the school are some of the major factors which can affect the achievement and learning activities of the students (Neupane & Gurung, 2021). Several studies carried out in Nepal and elsewhere have revealed a strong association between spending per student and school performance, implying that schools with high expenditure per child do a better job in terms of their students' achievements (Mathema, 2006).

Even though education is included as a fourth basic need of human beings, it is always the subject of debate how much capital resources should be invested in education. A nation invests a large amount of resources in education. Likewise, the Nepal government is also investing its huge resources in education. Therefore, it is important to conduct further research to better understand the cost of education in Nepal. Cost affects most of the dimensions. The research problem is to examine the impact of cost on students' academic performance in Nepal. Still, it is the debate and endless quarrelling, among public and private academic institutions about which one

is better for the quality of academic performance. Therefore, educational planners need to find the answer to the following research questions:

1. What is the unit cost of the students at secondary graduates?
2. What are differences between the SEE result in public schools and private schools?

1.3. Objectives of the Study

The general objective of the study is to analyze the cost of education and its impact in academic performance of public and private school in Nepal. The specific objectives of the study are as below;

1. To estimate the unit cost of the secondary students.
2. To compare the academic performance between public schools and private schools.

1.4. Significance of the Study

Understanding how the cost of education affects academic performance can inform educational policies and funding decisions. Policymakers can use the findings to advocate for more accessible and affordable education options, potentially leading to improved academic outcomes for students across different socio-economic backgrounds. The study can shed light on disparities in academic achievement based on economic factors. The study can serve as a foundation for future research on related topics. The findings may push policymakers, planners and donors in Nepal to give academic excellency more attention and to frame the education policy accordingly. So that, the government can better achieve the goals of 'Education for all' as well as a tool for social development in context of Nepal it is always an issue of discussion whether the academic performance in private schools is superior to public schools. People have the perception that private schools have better academic performance than public schools.

1.5. Scope and Limitations of the Study

The study focuses on the cost of education in public and private schools of the Bhaktapur District, covering various types of costs and comparing the academic

performance of SEE graduates in both types of schools. However, it does not encompass the entire secondary level education in the country, limiting its scope to the impact of unit cost on academic performance of students in Surya Binayak Municipality. There are thirty public schools in the municipality, but only ten of these are secondary schools, which are included in the research. Out of twenty-six private schools, only six were willing to provide data and have thus been surveyed. The study excludes any additional charges paid in public schools beyond government costs. While multiple dimensions of education costs, such as opportunity costs, incremental costs, drop-out costs, and social costs, could have been included, constraints have restricted the coverage of these aspects.

1.6. Outline of the Study

This study is divided into five chapters. The first chapter includes a general background of the study, a statement of the problem, objectives of the study, significance of the study, scopes and limitations of the study, outline of the study. The second chapter is the review of literature that includes an introduction, international and national literature review and research gap. The third chapter is the research methodology describes the introduction, conceptual framework, research design, nature and source of data, data collection method, tools of analysis and operational definition of the variables. The fourth chapter is the data presentation and analysis which describes the introduction, overview of the study, unit cost of students at different levels in public /private schools, academic performance in public schools, academic performance in private schools, relationship between cost of education and academic performance, chi-square test and discussions. The fifth chapter is summary and conclusion which includes an introduction, summary, conclusion and recommendation. In addition, the reference list and list of schools and questionnaire are in the annex

CHAPTER II
LITERATURE REVIEW

2.1. Introduction

This chapter is a review of previous research articles, books, and journals, related to the research topic conducted. This study is concentrated on only the cost of education and its impact on academic performance and its reasons. This chapter gathered the previously conducted analytical research work on the education system and government expenditure.

2.2. Literature Review

2.2.1. International Context

Ogundiran et al. (2023) examined the impacts of facilities management practices on academic performance of public senior secondary school. The study adopted the quantitative survey design. Data were collected from 44 public schools with a sample size of 337 respondents. The findings of the study, revealed a significant effect of ICT/internet, library and classrooms facilities management have significant effect on academic performance of students in the selected schools in Lagos state. Hence, the study concluded that public senior secondary schools in Lagos State and Nigeria at large should focus more on embracing the facilities management practices in every area of education so that the state and the nation will experience a drastic improvement in the academic performance of public secondary school students in both internal and external exams. However, the study faces certain limitations. First, the reliance on self-reported data via questionnaires may introduce response biases. Second, the study is limited to public schools in a specific district of Lagos State, which may not be representative of other regions or private institutions. Third, while the quantitative approach provides valuable statistical insights, it lacks the depth that qualitative data could offer in understanding the nuances of facilities management practices. Lastly, the cross-sectional nature of the study limits the ability to establish causality between facilities management practices and academic performance

Bibb (2022) examined the relationship between high school student achievement, per pupil expenditure, school district enrollment, selected student demographics in

Tennessee. Multiple regression models were employed to estimate the relationship between educational spending and student performance Two of the achievement tests given to Tennessee high school students are the ACT and TCAP writing assessments.. There are 136 school systems in the state of Tennessee, with only 119 of those systems operating at least one high school. The 119 systems that operate at least one high school were examined in this study. Findings indicate that the average ACT score in Tennessee in 2008 was 20.7, and the average Writing Assessment average was 4.1. The average per pupil expenditure was $8,345. This research concluded that per pupil expenditure did not have a significant relationship to ACT scores or to the TCAP Writing Assessment scores.The study conclude that giving schools more money does not necessarily raise student achievement, but rather how the money is spent can raise student achievement.

Durbin (2021) investigated patterns in student achievement and spending based on school size. The study employed a quantitative research methodology, utilizing data from various educational institutions The study data from a sample of all eleventh graders across 192 South Carolina public high schools who took the MAT-7 in the spring of 1998. Socioeconomic status was used as a control variable to isolate its effects on the outcomes. After controlling for SES, a positive relationship between larger school size and higher student achievement was identified, while there was a negative relationship between school size and per pupil expenditure. These differences were most significant between the smallest 50% of schools (with 17-174 eleventh-grade students) and the largest 25% (with 254-629 eleventh-grade students). The study suggests that larger schools are more likely to achieve better educational outcomes at a lower cost, without the need for higher per pupil expenditures typically seen in smaller schools, when SES is controlled.

Glewwe (2021) examined relationship between school resources and educational outcomes in developing countries. The study used comparative analysis method to compare different contexts and countries, taking into account the variations in education systems, economies, and government policies Both randomized control trials (RCTs) and observational studies are reviewed. While RCTs provide high-quality evidence, observational studies give a broader perspective of educational systems. The study concluded that school resources can play an important role in

improving educational outcomes in developing countries, their impact varies greatly depending on the type of resource and the context in which it is implemented. The study highlighted the complexity of educational challenges in developing countries and underscored the need for nuanced policy approaches that go beyond simple resource allocation to address the broader determinants of educational success.

Hanushek (2021) assessed the efficiency of educational production by examining the relationship between school operating costs and student performance. The study utilized an econometric approach, panel data from multiple school districts to analyze how variations in per-pupil spending affect academic outcomes. Multiple regression models were employed to estimate the relationship between educational spending and student performance. The study also employs methods like Data Envelopment Analysis (DEA) or Stochastic Frontier Analysis (SFA) to measure the efficiency of schools or districts in converting financial resources into educational outcomes. However, one significant limitation is its reliance on available data, which may not capture all relevant variables influencing educational outcomes, such as socio-economic factors and parental involvement. Additionally, the analysis predominantly uses standardized test scores as the measure of student performance, which may not fully reflect the comprehensive educational development of students. The cross-sectional nature of much of the data limits the ability to make causal inferences about the impact of specific inputs over time. The study finds mixed results regarding the impact of increased spending on academic performance, suggesting that how money is spent is as important as how much is spent. The study found that there is not a straightforward positive correlation between higher educational spending and improved student performance. While some schools or districts achieve better outcomes with higher spending, others do not, indicating varying levels of efficiency. Effective allocation of funds towards quality teaching, targeted interventions, and supportive learning environments is crucial for enhancing student achievement. The study concluded that simply increasing educational spending is not a guaranteed way to improve student performance. The efficiency with which resources are used is critical. The study advocate for evidence-based financial management in schools to ensure that investments translate into tangible educational improvements. Furthermore, the variability in educational contexts across different regions and school systems may limit the generalizability of the findings.

Jackson et al. (2021) analyzed changes in school funding affect various long-term outcomes for students, such as educational attainment, earnings, and socio-economic mobility. The study used a quasi-experimental design, regression models to estimate the impact of increased spending on long-term outcomes. The study leveraged the exogenous variation in school spending generated by court-mandated reforms as a natural experiment. The study indicates that a 10% increase in per-pupil spending each year for all twelve years of public schooling leads to significant improvements: an additional 0.27 years of education, a 7.25% increase in wages, and a 3.67 percentage-point reduction in adult poverty rates. The effects are particularly pronounced for children from low-income families. The increased spending is associated with notable enhancements in school quality, such as reduced student-to-teacher ratios, higher teacher salaries, and longer school years. The findings indicate that higher spending leads to significant improvements in academic performance, particularly for students from low-income backgrounds. Students exposed to higher spending levels are more likely to graduate from high school and attend college. The study concluded that increased school spending resulting from finance reforms has substantial and lasting positive effects on students' educational and economic outcomes. The study also concluded that strategic investment in education can reduce achievement gaps and promote long-term economic mobility. The study's reliance on historical data limits its ability to account for more recent changes in educational policies and economic conditions. The generalizability of the results may be constrained by the specific context and time period of the study. Finally, the study focuses on long-term outcomes, potentially overlooking short-term impacts that could be relevant for current policy decisions.

David et al. (2020) investigated the relationship between long-term orientation and the impact of school operating costs on student academic performance. The study employed a mixed-methods approach, utilizing both quantitative and qualitative analyses. The study employed econometric models to control for socioeconomic factors and isolate the effects of school spending. Case studies of selected schools and districts that have implemented long-term oriented spending strategies are conducted. Interviews with school administrators, teachers, and policymakers provide insights into the planning and implementation processes of these strategies. The research finds a positive correlation between higher school operating costs and improved academic

performance, particularly in districts with sustained long-term investments in educational resources. Schools that allocate funds towards teacher salaries, educational materials, and extracurricular programs show significant improvements in student achievement. The study concludes that a long-term orientation in school spending significantly enhances educational performance. Investments that focus on sustainable improvements rather than immediate gains are more effective in promoting student success. The study underscores the importance of consistent and strategic financial planning in enhancing educational outcomes.

Jackson (2020) reviewed recent literature on the impact of school spending on academic performance. The study employed a comprehensive review of recent literature and studies that utilize advanced econometric techniques to isolate the causal effects of school spending. The recent quasi-experimental and Longitudinal Data Analysis literature overwhelmingly supports a causal relationship between increased school spending and student outcomes. All but one of the several multistate studies find a strong link between spending and outcomes—indicating that money matters on average. The study found that increased school spending has a significant positive impact on student achievement, particularly for low-income and disadvantaged students and Higher spending is associated with improvements in test scores, graduation rates, and college attendance. The study concluded that school spending does indeed matter, and the new literature provides robust evidence that increased and well-targeted school funding leads to better educational and economic outcomes for students.

Surur et al. (2020) investigated the relationship between educational operational costs and education quality, considering school productivity as a moderating variable. The study employed a quantitative research methodology, utilizing data from various educational institutions, including detailed records on operational costs, school productivity metrics, and indicators of education quality such as student performance and graduation rates. The study indicated that higher operational costs are generally associated with improved education quality, as evidenced by better student outcomes and higher graduation rates. However, the impact of these costs was significantly moderated by school productivity; schools that utilize resources more efficiently achieve higher education quality even with lower operational costs. The study

suggested that the effectiveness of financial investments in education is contingent on the productivity and management practices of the schools. However, the study had limitations of the variability in measuring education quality and productivity across different contexts, and the potential for unobserved factors that might influence the relationships examined.

Dan (2018) investigated whether higher government spending on education translates into better academic outcomes in US. The methodology included a comparative analysis of education spending trends alongside student performance data, with a focus on how funds are allocated across different categories, such as instructional versus administrative costs. The findings reveal that much of the additional spending has been directed toward non-instructional areas, such as administration, and that increasing teacher salaries without improving teacher quality or accountability has not yielded significant results. International comparisons further suggest that countries spending less on education often outperform U.S. schools, highlighting inefficiencies in resource utilization.The study concluded that simply increasing education budgets is insufficient for improving academic achievement.

Ray (2018) examined the financial management aspect of public funding in public school districts and attaining student academic achievement outcomes. The study employed a mixed-methods approach, utilizing both quantitative and qualitative analyses. Data were obtained from public, online databases in Georgia. Purposive sampling identified the Economically Disadvantage (ED) students who took the Grade 8 Writing Assessment (EGWA), the test used to measure the ED students' academic performance levels (n = 27,136). Results from Pearson correlation analyses indicated an inverse relationship between the number of ED students who passed the EGWA and the median sale prices of homes, and school districts with higher public funding were more likely to have higher test scores than school districts located in areas with lower public funding. Multiple regression analyses showed that the academic performance of 8th grade ED students who passed the EGWA was predicted by the total number of 8th grade students who passed the test. The study concluded that it is not the amount of public funding that affects student academic achievement, but how the funds are spent that can change academic achievement.

Herbert (1987) examined how public school districts can achieve greater efficiency in terms of both expenditure and size. The study employed a quantitative analysis methodology The study reviewed district budgets, administrative costs, and instructional spending, while also measuring student achievement indicators such as test scores and graduation rates. The findings indicated that while larger school districts may benefit from some economies of scale, there are diminishing returns as district size increases. Beyond a certain point, larger districts often experience inefficiencies due to bureaucratic overhead and increased administrative costs, which can negate the cost savings associated with economies of scale. Smaller districts, on the other hand, may struggle with resource limitations but can be more nimble and responsive to local needs. The paper concluded that there is no one-size-fits-all solution to achieving expenditure and student performance in public school districts.

2.2.2 National Context

Rowan et al. (2024) examined the factors contributing to differences in student achievement between public and private schools in the Western Chitwan Valley of Nepal. The study involved an exploratory analysis of data collected from a sample of public and private schools in the Western Chitwan Valley and used a mixed-methods approach, combining quantitative data on student test scores with qualitative insights from school governance structures and instructional practices. The study controlled for various socio-economic factors to isolate the effects of governance, monitoring, and instruction on student achievement. The study revealed significant differences in governance and instructional quality between public and private schools. Private schools tend to have more robust governance structures, with higher levels of accountability and external monitoring, which in turn lead to better instructional quality. Public schools, on the other hand, suffer from weaker governance and less rigorous monitoring, which often results in lower-quality instruction and poorer academic outcomes. Student achievement, as measured by standardized test scores, was consistently higher in private schools, even after controlling for socio-economic factors. The study argued that governance and external monitoring are key factors in explaining the differences in student achievement between public and private schools in the Western Chitwan Valley of Nepal. The study concluded that reforms aimed at enhancing governance structures and increasing external monitoring could help close

the achievement gap between public and private schools in the region, leading to improved educational outcomes for all students.

Nepal (2022) examined how academic achievement in Nepal was affected by excellent administration. An urgent and fascinating topic in Nepal's educational profession is good governance and how it affects student performance. The secondary sources serve as the sole foundation for this article. The study's conclusion is that Nepalese school performance is significantly influenced by effective governance practices. In addition, low student achievement, minimal stakeholder participation, a lack of accountability and transparency, and corruption in the education system are among the study's other key conclusions. The absence of sound governance is the cause of Nepal's low educational achievement. this may simply guarantee or attain a better school if we use strong governance practices in the educational system;

Pandey (2022) examined the financial aspects of providing secondary education in Nepal, aiming to understand the various cost components and their implications for educational policy and planning. Utilizing a detailed cost analysis methodology, the study examines data from various secondary schools across Nepal, including public, private, and community schools. The study highlighted significant variations in the costs of secondary education across different types of schools. Private schools generally incur higher costs due to better facilities, higher teacher salaries, and additional services, while public and community schools operate with more limited resources and lower overall expenditures. Despite these cost differences, the study revealed that higher spending does not always equate to better educational outcomes, as efficiency in resource utilization plays a crucial role. The study identified key cost drivers, such as teacher salaries, infrastructure, learning materials, and administrative expenses. However, the study has limitations, including potential data inconsistencies and the challenge of capturing all cost-related variables. The reliance on available financial records and self-reported data from schools may also affect the accuracy of the findings.

Kunwar (2021) investigated the causes behind the academic performance gap between public and private secondary schools in Nepal. Utilizing a case study design with qualitative data analysis method to interpret the findings, the research focused on a target population in Ramchaur, involving 8 secondary school students, 8 educators, 8

parents, 2 school principals, and a district secondary education officer. with qualitative data analysis used to interpret the findings. The study showed a significant disparity in academic performance, with private secondary schools achieving a 100% passing rate compared to a 48-54% passing rate in public schools over the past three academic years. This evidence clearly indicated that private schools outperformed public schools. The study's findings revealed that the commitment of instructors, financial resources, capable school managers, and active inspectorate personnel were critical factors in the success of private schools. Furthermore, the study noted that delegation of duties was a key incentive used by school heads to enhance teacher performance in private schools.

Peng et al. (2021) investigated the relationships between education financing, cost structures, and student outcomes across various Asian countries including Nepal. The study involved a comparative analysis of educational expenditure data across multiple Asian nations Data is drawn from national education systems, international assessments, and financial records to provide a comprehensive understanding of how resources are utilized in different contexts. The study showed wide variation in both spending levels and educational outcomes across the region. Lower-income countries like Nepal often struggle with resource shortages and inefficiencies in spending. However, the study finds that increased spending does not always guarantee better outcomes, particularly when funds are misallocated or inefficiently used. The study concluded that while increasing funding for education is important, it is the efficient and equitable use of those funds that ultimately leads to improved educational outcomes. The study advocated for a balanced approach to education financing that ensures both efficiency and equity, thereby promoting long-term development and educational success across the region.

Thompson (2021) examined school effectiveness in the Kathmandu Valley, Nepal, where there are two overlaid school sectors, the government sector and a large sector of private fee-charging schools. A mixed-method approach was used to address three research questions: What are the key characteristics of these two sectors: government and private schools. Data to address the study objectives were collected through semi-structured interviews, survey data from sample schools and the testing of Grade 5 students. The findings showed that there is great diversity of schools in both sectors

with some schools best classified as public/private hybrids. Limited government funding means fee charging continues while the necessary community cost-sharing is problematic. Quantitative study of student achievement using international norms showed private schools out-performing government schools at Class 5 and also, from secondary data, in Class 10; both sectors outperform national averages. These findings have implications for discussion of models of school effectiveness, the centrality of the school and school leadership in increasingly decentralized systems, and the private provision of social goods.

Roy and Sharma (2019) examined the economic cost of absentee and drop-out students. They observed that absentees and dropouts impose a large resource cost on the educational system and the society. The economic cost of those students who are absentees and dropouts in public schools of the Parsa District of Nepal is the subject of this study. The unit cost of absentee and dropout students was estimated by the level. The components of Human resource cost, stationery cost, utility-cost, and fixed cost of the building and furniture cost were the elements used to estimate the unit cost of a student. The unit cost of students is around U.S. $295, 130 and 143 were for primary, lower-secondary, and secondary levels, respectively, and an average of U.S. $189 among all. The resource loss resulted from dropout was found to be around 28, 12, and 11 percent of the total resource spent for primary, lower secondary, and secondary level with an average of around 16 percent. The combined resource loss was due to drop out and absentees were found to be 39, 23, and 20 percent of the total resource for either the level. Average public school resource was lost 26 percent due to drop out and absentees. Lack of interest, parents' motivation to send the children and children motivation causes dropout and absentees. Hence, the study recommends that it is just a glimpse. For an effective policy to address the problem than much more comprehensive and in-depth study was needed.

Wagle et al. (2017) examined the cost of education in a book named 'Cost of Public Education' containing their empirical observation in the field of education. Three types of financial data were gathered from the sample schools: annual funding for public schools from 2012–13 to (May) 2016–17; annual expenditure details for public schools from 2012–13 to (May) 2016–17; and fee structures for the ten institutional schools and the 28 public schools for all basic education grades in 2015–16. In addition, the researchers collected annual data on student enrollment, repeat, pass-out,

and retention for eight years, from 2010–11 to 2016–17. Based on information gathered from the primary survey, researchers computed the cost per student in the public schools under investigation. General cost (GC) per child, retention-based cost (RBC) per child, and outcome-based cost (OBC) per child are the three categories of cost per child. Three types of financial data were gathered from the sample schools: annual funding for public schools from 2012–13 to (May) 2016–17; annual expenditure details for public schools from 2012–13 to (May) 2016–17; and fee structures for the ten institutional schools and the 28 community schools (where applicable) for all basic education grades in 2015–16. In addition, the researchers collected annual data on student enrollment, repeat, pass-out, and retention for eight years, from 2010–11 to 2016–17. Based on information gathered from the primary survey, researchers computed the cost per student in the community schools under investigation. General cost (GC) per child, retention-based cost (RBC) per child, and outcome-based cost (OBC) similarly, outcome-based cost (OBC) per child which accounts for the students who have been able to pass the final exam in that academic year. It has been calculated by simply dividing the total funds received by the schools from various Sources by total number of students who have managed to pass the final exam. They concluded that the average per child cost in institutional schools was found to be NRs. 28,312.27, where the per child cost between grades 1-5 was NRs. 26,180.79 and that between grades 6-8 was NRs. 32,797.43.

Thapa (2015) examined the comparative performance of public and private schools in Nepal using the School Leaving Certificate (SLC) examination results. The study employed a quantitative analysis methodology, drawing on SLC examination data, which includes detailed performance records of students from both public and private schools across Nepal. The study revealed that private schools consistently outperform public schools on the SLC examinations. Students from private institutions achieve higher pass rates and score better on average compared to their public school counterparts. The study suggested several contributing factors to this performance gap, including differences in school resources, teacher quality, and student-teacher ratios. Private schools tend to have better facilities, more qualified teachers, and lower student-teacher ratios, which collectively contribute to their superior performance. However, the study had limitations, such as the potential for selection bias, as students from more affluent backgrounds are more likely to attend private schools.

Additionally, the study's reliance on SLC examination results as the sole measure of academic performance may not capture the full spectrum of educational quality.

Bhatta (2005) examined a large scale study to explore the determinates of SLC/SEE student performance using ordinary least square (OLS) and logistic regressions and explores that there is a minimal gap in students' performance between public and private schools and the performance of both schools is affected by students, teachers, and community factors. Using data from the survey of the Ministry of Education, Nepal-2005 for School Leaving Certificate Exam, this paper analyzes public and private school performance in Nepal. The ordinary least square estimates suggest that private school students perform better than public school students. However, the problem of self-selection bias arises, as private school students can fundamentally differ from public school students. This study adopts the propensity score matching technique to account for this problem. The results, even after using the propensity score matching technique, suggest a positive private school effect for the data used in this study.

Ministry of Education initiatives such as scholarships, stipends, and free education programs for disadvantaged groups aim to improve access and retention rates in schools. Government policies play a crucial role in mitigating the impact of education costs on academic performance in Nepal. The insufficient funding at school causes the low academic achievement on students' performance. But some of the public schools are doing best and being accountable to local people. Teachers were seen as responsive, friendly and dedicated to improving quality. No bad behavior towards students was reported. The school management believes child friendly environment rather than punishing students. The school is creating a friendlier environment for students to grow. The SMC has played a key role in maintaining accountability of the schools towards the people and overall results of the school seems best

2.3. Research Gap

In the context of Nepal, Mathema and Bista (2006) conducted a pioneering large-scale study examining the performance of SLC/SEE students to identify causes of poor academic outcomes. Their research highlighted prevalent underperformance across all subjects and overall grades in the SLC examinations. The study revealed significant disparities in student performance based on gender, school type, geographical location, language group, and socio-economic status of parents. However, this

evidence is limited in scope regarding study areas, population, and objectives. Specifically, it does not address the new letter grading system and the recently implemented governance structure that decentralizes the management of school education from central to local authorities.

This paper aims to address these gaps by investigating the unit cost of education at the secondary level (SEE graduates) and examining its impact on academic performance. Additionally, it will compare the differences in academic outcomes between public and private schools, potentially providing a foundation for future research. Furthermore, the findings of this study will offer valuable insights for policymakers, aiding in the reevaluation of educational investment policies, the implementation of revised school examination models, and the enhancement of secondary education teaching and learning practices.

CHAPTER III
RESEARCH METHODOLOGY

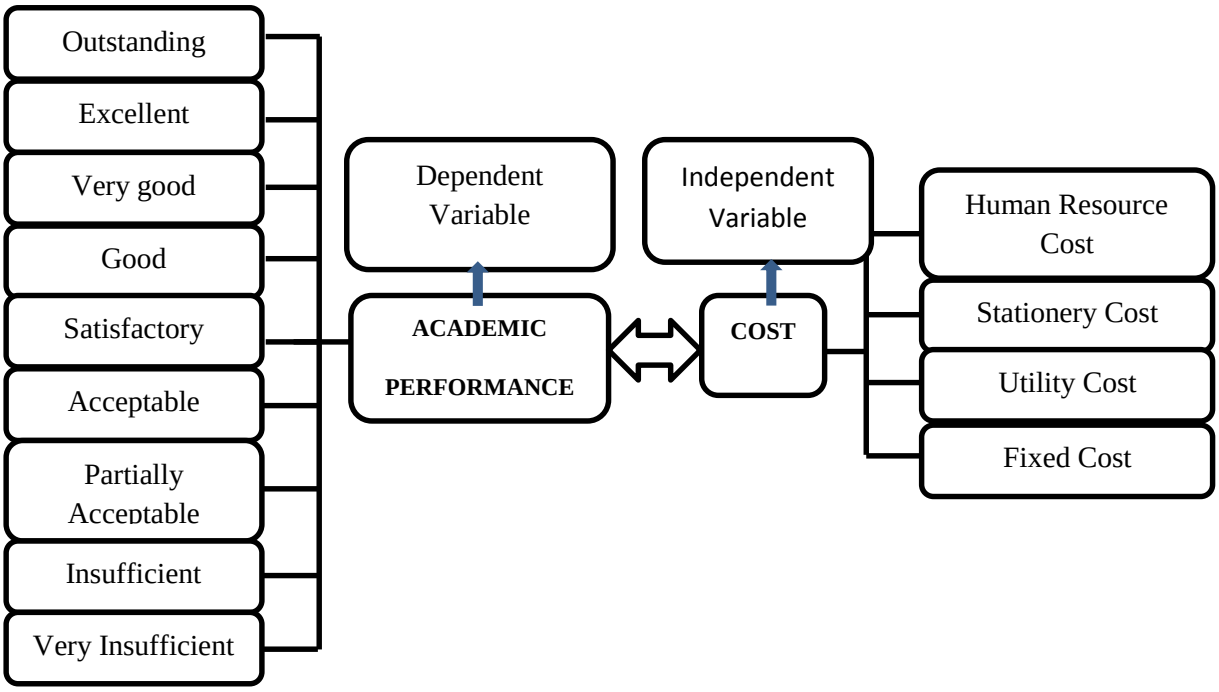
3.1. Introduction

This chapter deals with the procedures adopted for the study, It describes research design, selection of the study area and informants, population and sample size, Sources of data collection, data collection tools and techniques and analysis of data.

3.2. Theoretical / Conceptual Framework

Investment on education is the prime factor for transformation of a society. Educational cost is a measure of what a student, and institution of learning, or the public most give up educating an individual or a group of people. The educational system up other resources which have alternative uses, even though these are not reflected in normal expenditure on education (Pandey, 2022). The variable taken for the study is economic cost, unit cost, opportunity cost, guardians direct cost and drop out cost.

Figure 3.1.
Conceptual Framework on Cost and Academic Performance



Source: Pandey, (2022)

There are many variables in the reviewed literatures some of them are taken in this study. The additional variable included in this study is dependent variables as academic performance in outstanding, excellent, very good, good, satisfactory, acceptable, partially acceptable, insufficient and very insufficient and the independent variable is cost in human resource, stationery, utility and fixed cost.

3.3. Research Design

The study is focused on cost of education in secondary level and its impact on academic performance. The explanatory research design was carried out for this study. In this research, a household survey was conducted through structured questionnaire. Secondary data was also collected from respected schools audit report.. For the SEE result and government expenditures in 9^{th} and 10^{th} Grade have been collected through government data i.e. secondary data.

3.4. Nature and Sources of Data

All of the data for this study was collected from the secondary schools i.e. public and private schools of the Suryabinayak municipality of the Bhaktapur district. This study use the secondary sources and primary sources such as records of public schools, and information collected from key informants such as the headmaster, class teacher, administrative staff, etc. The mark sheet of SEE graduates was obtained from the record.

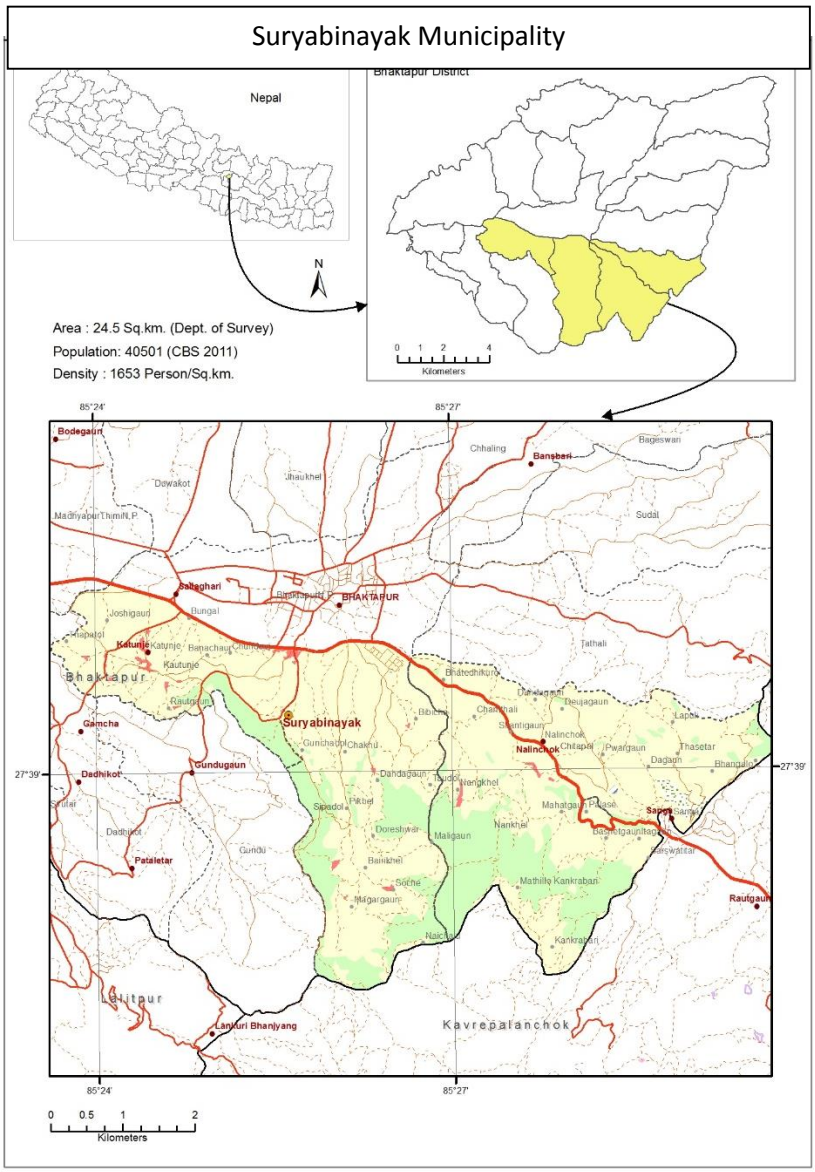
3.5. Data Collection Method

Primary data collection method i.e. survey was conducted to collect the payment bill of students as a fee if any charges have been taken. The primary data contained student expenses in the secondary level which was obtained from the private schools. Thus the expenses of students in private school were obtained. Similarly, the data for expenses of students in the public schools was collected from the record of DEO Bhaktapur or school administration

3.5.1 Study Area

Out of four municipalities in the Bhaktapur district, this study is conducted in the Suryabinayak municipality. The site is a suitable place for conducting research as

people, in this area are from different social, economic background and follow different culture and traditions. The population of this society consists of heterogeneous groups. Moreover, the study site is beneficial in the sense that very fewer studies have been conducted here.



Source: Local Governance and Community Development Programme (LGCDP) (2024)

3.5.2 Sampling Design

The study on the analysis of the cost of education and academic performance in public and private schools in Bhaktapur district has been conducted in Surya Binayak municipality of Bhaktapur district. Primary data has been collected from household

survey methods. Out of 30 public schools only 10 schools are secondary schools with grades 9 & 10 this study is done to calculate the cost of education at the secondary level so this was conducted in all 10 schools. But in the case of private schools there were total of 26 schools out of which 10 schools have only secondary level of education in the selected region. Daniel method (W. W. Daniel (1999)) for sample size calculation has been carried out as follow;

$$n = \frac{NZ^2P(1-P)}{d^2(N-1)+Z^2P(1-P)}$$

where,

n = Sample size for finite population
Z = Z statistic for level of confidence
P = Expected prevalence or proportion (P = 0.5 for unknown)
d = Precision (If precision is 5 percent then d = 0.05)
N = Size of population

The sample size for the selected schools of Suryabinayak Municipality with 20 numbers of secondary schools at 50 percent of expected prevalence and 5 percent precision at 95 percent of confidence level is given by:

$$n = \frac{20 \times 1.96^2 \times 0.5(1-0.5)}{0.05^2(20-1)+1.96^2 \times 0.5(1-0.5)}$$

$$= 19.05$$

Therefore 20 numbers of schools have to be surveyed. However, due to the non-respondent constraint in private schools, only 6 schools were taken as the respondent schools for the study. So, altogether out of 20 secondary schools, only 16 schools were surveyed for this study.

3.5.3 Data Collection Tool

The data collections tools are crucial for obtaining relevant and accurate data to answer research question. The choice of data collection tool depends on the nature of research, type of data required, the target schools and the research objective. In order to collect the required and relevant primary data the technique like surveys,

questionnaire method, observation and respondent of administration have been used in this study.

3.6. Tools of Analysis

The collected data was entered into the Microsoft Excel program and were processed and analyzed. Data was presented in tabular form and some in the pictorial form as well. Different variables and their relationship were presented analytically. The calculation is done as following:

Total Cost was calculated by the sum of all the costs (i.e. HRC, UC, FC,SC)

Total Cost (TC) = HRC + OC ……(1)

Unit Cost is the total Cost divided by the total number of students

Unit Cost (UC) of students of a given level = TC/Total number of enrollment at a given level. …….(2)

X^2 Test was carried out to find the significant differences in the academic performance in Public and Private schools.

After analysis, quantitative data obtained from the field survey was used for data interpretation General statistical tools such as ratios, mean and percentages were used in the analysis and for the significant difference X^2 test was carried out. Chi-square is a statistical test used to examine the differences between categorical variables from a random sample to judge the goodness of fit between expected and observed results. The formula used for the data analysis is as follows:-

$$X^2 = \sum \frac{(O-E)^2}{E} \quad \text{……..(3)}$$

Where,

X^2= Chi-Square test,

$\sum$ = the sum,

O = Observed values,

E = Expected values.

The degree of freedom is calculated by (number of rows-1)*(number of columns-1). The significance level, chi-square test is a threshold that isolates the alternative hypothesis (H1) from the null hypothesis (H0). The alternative hypothesis is accepted and the null hypothesis is rejected if the computed chi-square statistic is greater than the critical value that corresponds to the selected significance level. The significance levels of 0.05 and 0.01 are often used.

3.7. Operational Definition of the Variables

Human Resources Cost (HRC): Salaries of teachers and staffs were taken on the yearly basis. Level wise HRC were calculated but the number of periods allocated to teacher of different levels and their respective salaries. The time for administrative staff is distributed in proportion to the total time allocated by teachers at different levels.

Other Cost (OC): The costs except salary was calculated under other cost. It can be classified under following.

Stationery Cost (SC): The expenditure of one year of schools' record in stationery topic such as duster, ink, marker, teaching materials, exercise books, etc.are taken into account as stationary cost. Level wise stationary costs were calculated by the level wise students' proportion. Unit cost is measured by level wise first then estimation in total was calculated.

Utility Cost (UC): On the basis of yearly record of school maintenance charge, water cost, electricity cost, etc. were calculated as utility cost. It was calculated by level wise students' cost in proportion of level wise student then the unit cost of the students were be found out.

Fixed cost (FC): The rental value of building and furniture was the fixed cost of infrastructure. Rental value of building and furniture was calculated by the present value of the building allocated according to the local persons. The values of furniture were calculated on the basis of its life time and are converted into per year value of furniture. Cost of land was not included here.

The letter grading system of Nepal has nine grades. Among them A+ which is outstanding result has grade point between 3.6-4.0.Letter grades A which indicates outstanding result has grade point 3.2-3.6. Similarly letter grade B+ which refers very well has the grade 2.8-3.2. theletter grade B which refers good has grade point 2.4-2.8. But the letter grading C+ which indicates satisfactory has the grade point 2.0-2.4. Letter grade of C represents acceptable has grade point 1.6-2.0. Letter grade D+ which has grading between 1.2-1.6 is partially acceptable. Letter grade D which has grading 0.8-1.2 indicates insufficient. The letter grade E represents very insufficient has grade 0.0-0.8.

Table 3.1

Academic Performance

SN	Grade	Letter grade	Description
1	3.6-4.0	A^+	Outstanding
2	3.2-3.6	A	Excellent
3	2.8-3.2	B+	Very Good
4	2.4-2.8	B	Good
5	2.0-2.4	C+	Satisfactory
6	1.6-2.0	C	Acceptable
7	1.2-1.6	D+	Partially Acceptable
8	0.8-1.2	D	Insufficient
9	0.0-0.8	E	Very Insufficient

Source: MoEST, 2015

Each year government publishes the SEE results. The academic performance of the SEE graduates was collected from related schools which were published and recorded in the schools for further use.

CHAPTER IV
DATA PRESENTATION AND ANALYSIS

4.1. Introduction

This chapter analyzes and discusses the results of the study on the cost and academic performance of SEE results in public and private schools, divided into four subsections. Data were collected from ten public and seven private schools in Surya Binayak Municipality using questionnaires completed by head teachers. Information was gathered from the school EDIS for student numbers and the SEE results for academic performance. Descriptive statistics were calculated, and findings are presented using tools such as pie charts, bar diagram, figure and tables.

4.2. Overview of School Education

Nepal government has currently implemented the provision of two levels of school education in the formal education system: first, basic education that starts from the Early Child Development (ECD) program to grade 8, and second, secondary education that starts from grades 9 to 12 (MoEST, 2018). Excessive growth of private schools in Nepal started after the democratic change in the 1990s. People attribute this large-scale growth of private schools, especially in the urban centres of Nepal to the liberal policy adopted by the incoming Democratic government of the Nepali Congress in the 1990s.

In Nepal, the development of education is a recent experience. Until 1950, education was primarily considered a precondition of elite groups and the ruling class who blocked public access to education (Wood, 1965). As a result of this, just two percent of the population had attained literacy by 1951. Less than 500 students were admitted to higher education between 1918 and 1951. (UNESCO, 2008). A number of initiatives have been taken in Nepal to improve the educational system after the fall of the Rana authoritarian rule in 1951. Schooling investments were given significant emphasis as a tool of reforming society after the restoration of democracy in 1990, when the doors were opened for private education. The school-level education comprises the primary level (1–8) and secondary level (9–12). There are a total of 35,055 schools in Nepal, of which 27,728 are public schools (community schools), 6,206 private schools, and 1,121 religious schools (Muslim religious schools,

Gumbas/Vihar, and Hindu *Ashrams* schools) (DoE, 2018). Thus, there are 7,214,525 students enrolled in school level (grade 1–12) in the year 2018/19. Out of the total enrolment, 77% of students are at the primary level and 23% at the secondary level. Meanwhile, 4,124,478; 1,368,620; and 62,281 students were enrolled in public, private, and religious schools at the primary level, respectively. Similarly, 1,152,674; 294,732; and 610 students were enrolled in public, private, and religious schools at the secondary level, respectively (DoE, 2018).

Private school is defined as the school that does not receive any funds from any government after approval from the government. It denotes that public schools are running with the support of the governmental fund, services, and program but private schools are managing schools from their fee paid by students. Despite the difference in fund source and medium of language instruction, both schools are using the same curriculum throughout the school education (Mathema & Bista, 2007). Despite the lack of funds and technical support from the government, the number of private schools has drastically increased after 1990 and has attracted a significant number of students (Neupane et al., 2018). Altogether 34491 schools are being managed by 753 local governments in Nepal after devolving power and jurisdiction on the school education system by new constitution promulgated (Chapagain, 2015). This devolution took place in Nepal after six decades of a highly centralized education system. Based on the changes in managing school education, the Local Government Operating Act (2017) has provisioned 23 rights for managing school education in coordination with the province and state government.

Education receives nearly 11% of the total budget in fiscal year 2020/21, which is 1% higher than the previous year (MOF, 2020). According to MoEST (2019), there are 27,704 (80 percent) community schools and 6,787 (20 percent) private schools in Nepal. Despite substantial expansion in education, concerns about the quality of education in public schools have increased in recent years. As causes for alarm, the three-year interim plan from 2013-2015 by the government identified dropouts from school and class repetition in all grades and lack of quality professional development for instructors and decreasing pass rates as the primary problems for the near future (National Planning Commission, 2013). In 2015, the primary school dropout rate in Nepal was 23.1 percent. While the primary school dropout rate in Nepal has varied

substantially in recent years, it has remained stable around 23.1 percent between 1992 and 2015. (Koenma, 2015). The major problem is the high attrition rate in Nepal in which high repetition rates, dropouts, and failures are the fundamental problems.

In Nepal's light, study indicates that student learning success is declining yearly and is currently below 50% (ERO, 2019). The study also provides evidence that the academic performance of grades 3, 5, and 8 students is at an insufficient level. A significant number of students scored below 2.0 GPA out of 4 in the Grade 10 School Education Exam (SEE) test in the academic year 2018 (MoEST, 2019). Furthermore, there is a disparity in academic performance between public and private schools in Nepal. In addition, public and private schools in Nepal have different academic achievement levels. In the 2018 SEE test, 4 percent of public school students earned a GPA of 3.20 out of 4 and in the same grade, 40.84 percent of private school pupils had a GPA of 3.20 out of 4. (Dixit, 2019). She also suggests that students from private schools have performed outstanding performances than public schools. The SEE is often regarded as the "Iron Gate," as it is held at the conclusion of Grade 10 on a nationwide scale. The findings pique the public's interest and are widely utilized to evaluate school success in Nepal. A student's performance in the School Leaving Certificate (SLC) test can have a significant impact on their future life choices, either opening or closing doors to further education and the professions for them. Due to the low quality of public schools, people's confidence in public schools has seriously decreased, which has encouraged further growth in private education, According to the report, children from private schools often perform better academically than students from public schools. For instance, in the SLC exam, the overall passing rate was 46 percent in the data from 1994 to 2013 (Bhattarai, 2014) in which the passing rate of the private school was over 90 percent, whereas the passing rate of the public school was between 30 and 50 percent (Rai, 2014). In 2013, 3,95,013 students attended the SLC examination, which only 44.32 percent passed. Out of the students who passed, only 29.76 percent were from public schools, whereas 89.06 percent were almost three times the amount of public schools passed from the private schools (MOE, 2014). According to Mathema (2013), public school is just a place for low-income family’s students to take a shelter in a stack of disbandment from public to private schools. As a result, two distinct education systems have emerged within the same national education system, notably private for the rich and public for the poor,

posing a danger to societal cohesion (Mathema, 2013). Due to the lack of students, 33 public schools had been permanently closed in the Kathmandu valley alone in 2011 and 2013 in which the District Education Office in Kathmandu has further predicted that there will be a significant increase in the closure of public schools in the next five years (Ghimire, 2013). Moreover, this process often occurs in the city areas like Kathmandu, which causes much pressure for the public schools because of the high competition by the private schools. In Kathmandu valley, 78 percent of the schools are private schools in which 70 percent out of approximately 3.5 million students enroll in those schools even though the capital has a higher number of public schools with better resources than the public schools of the rural areas since they are located in the capital city which has better access to the resources (Bhatta and Bhudathoki, 2013). The students that enroll in these public schools are mainly from low-income families or the students are immigrants with little or no education (Bhatta & Budhathoki, 2013). The focus of discussion has been the student's academic achievement in school because of the developing process of the educational system of Nepal. The conclusions of this study are potentially very important to both public and private schools in governing academic performance to the highest level possible (Thapa, 2011). Thus, this study compares academic performance in schools in Bhaktapur District using SEE results to determine which schools perform better in academic performance.

The pass rates have generally improved, but there are still concerns about the quality of education and the disparity between urban and rural areas. The distribution of grades shows a concentration of students in the lower grade brackets, indicating challenges in achieving higher academic performance. There has been progress in reducing the gender gap, with more girls participating in secondary education and performing well in exams. There has been a significant increase in enrollment rates at the primary and secondary levels due to various government initiatives and policies aimed at promoting education for all. Despite increased enrollment, dropout rates remain a concern, particularly in rural areas and among marginalized communities. Efforts are being made to address these issues through scholarships, free textbooks, and midday meal programs. There have been improvements in school infrastructure, including the construction of new schools, classrooms, and provision of learning

materials. Efforts have been made to enhance the quality of teaching through professional development programs and training for teachers. (MoEST, 2023)

The Government of Nepal has implemented various policies to improve educational outcomes, such as the School Sector Development Plan (SSDP) which focuses on improving the quality of education, increasing access, and reducing disparities, National Education Policy 2020 which emphasizes inclusive and equitable quality education for all, aligned with the Sustainable Development Goals (SDGs). Focuses on lifelong learning opportunities, promoting vocational education, and integrating ICT in education. Emphasis on vocational and technical education to equip students with skills relevant to the job market.

There are various key components of Nepal's education policy. The policy aims to ensure that all children have access to free and compulsory primary education. Efforts to reduce gender disparities in education through scholarships, stipends, and awareness programs. Special provisions for Dalits, indigenous communities, and children with disabilities. Updating and revising the curriculum to make it more relevant and competency-based. Emphasis on the professional development of teachers through training programs and certifications. Focus on improving learning outcomes through standardized assessments and continuous evaluation. Construction and maintenance of school buildings, provision of water and sanitation facilities, and supply of learning materials. Integration of Information and Communication Technology (ICT) in education to enhance teaching and learning processes. Devolving authority to local governments and schools to manage and operate educational institutions. Encouraging community participation in school management through School Management Committees (SMCs).

4.3. Unit cost of students at different levels in public /private schools

To find out the total cost of students at different levels of schools two cost headings were taken from each school as human resource cost, Other costs (stationary cost, fixed cost and utilities cost) and these costs were calculated from annual audit and account records of schools. The different cost headings were calculated by different levels of schools such as primary level, lower secondary level and secondary level. Level-wise human resource cost was calculated by respective salary sheet.

4.3.1. General Information of the Costs in Public Schools

The following table provides us the whole picture of costs of human resource cost (salary) and the total cost invested in the public schools. It presents the distribution of cost in three different academic years. The distribution of costs in different academic year is illustrated with the name of the concerned schools.

Table 4.1

Distribution of cost in public schools

S. N.	Name of school	Human Resource Expenses (NRs)			Total Expenses (NRs)		
		2020	2021	2022	2020	2021	2022
1	Arniko Sec. School	15904723	17011055	14750271	28092994	33901931	28484715
2	Bhunaswori Sec. School	7320056	7032442	7423692	8384602	11470654	9708209
3	Ganesh Sec. School	6522014	10428866	11986088	16596547	13870260	16056871
4	Jorpati Sec. School	7764886	9786707	9891562	9057268	11868174	13197821
5	Mahendra Shanti Sec. School	8730876	9014215	9602451	11968220	12223571	13395279
6	Saraswoti Sec. School	6345194	7950859	10217215	8684296	9802180	13820277
7	Shanti NiketAn Sec. School	7502290	8089128	8970224	12969664	11157999	12466951
8	Shree Jyoti Sec. School	9453885	7475284	9028316	20688830	13970946	30306090
9	Sirutar Sec. School	6627942	7042245	7647466	14202833	15520800	14284558
10	KulmayaBhagawati Sec. School	6006853	7144709	9231189	10012357	10827928	11997268
	Total	**82178719**	**90975510**	**98748474**	**130645254**	**144614443**	**163718039**

Source: Field Survey, 2024

So for the public school, from the above table 4.1 it is found that the total human resource cost for year 2020 is Rs.8,21,78,719 for year 2021 is Rs.9,09,75,510 and for year2022 is Rs.9,87,48,474 and likewise the total cost for year2021 is

Rs.13,06,45,254, for year2021 is Rs. 14,46,14,443 and for year2022 is Rs.16,37,18,039**.**

4.3.2. General information of cost in private schools

In this section of study the clear picture of cost of human resource (salary) and the total cost invested in the private schools has been calculated. It presents the distribution of cost in three different academic years. The distribution of costs in different academic year is illustrated.

Table 4.2

Total cost of the private school

S. N.	Name of school	Human Resource cost (NRs)			Total Cost (NRs)		
		2020	2021	2022	2020	2021	2022
1	Candid Career E.S	7421250	5554039	6325800	10622705	13027336	18165036
2	Densh Secondary S	4500100	4660906	4700123	10000000	10025132	15006020
3	Model Janata E.S	3000000	3513800	4147200	3647150	4735625	5724146
4	Noble E.S	3401445	5232310	6137530	5215650	7726406	10221906
5	Rainbow E.S	7543702	8315164	10979553	11027580	12936787	16372534
6	Vedic S	5361990	3366295	5812627	13451917	8757991	9387445
Total		31228487	30642514	38102833	53965002	57209277	74877087

Source: Field survey, 2024

The expenditures in private schools has been calculated in table 4.2 as follows. As of human resource cost, in academic year 2020 is Rs. 3,12,28,487, in year 2021 is Rs. 3,06,42,514 andin year 2022 is Rs. 3,81,02,833. Similarly, for the total cost in year 2020 is Rs. 5,39,65,002, in year 2021 is 5,72,09,277 and in year 2022 is Rs 7,48,77,087.

The total cost of human resource (salary) and total cost for public and private schools can be summarized as follow.

4.3.3. Cost Status in Public and Private Schools

Government invests the capital for the cost of education in public schools whereas for the private schools, parents have to invest themselves. In this section of the study it provides us the comparison of costs in public and private schools in different academic years.

Table 4.3

Comparison of Costs in Public and Private Schools

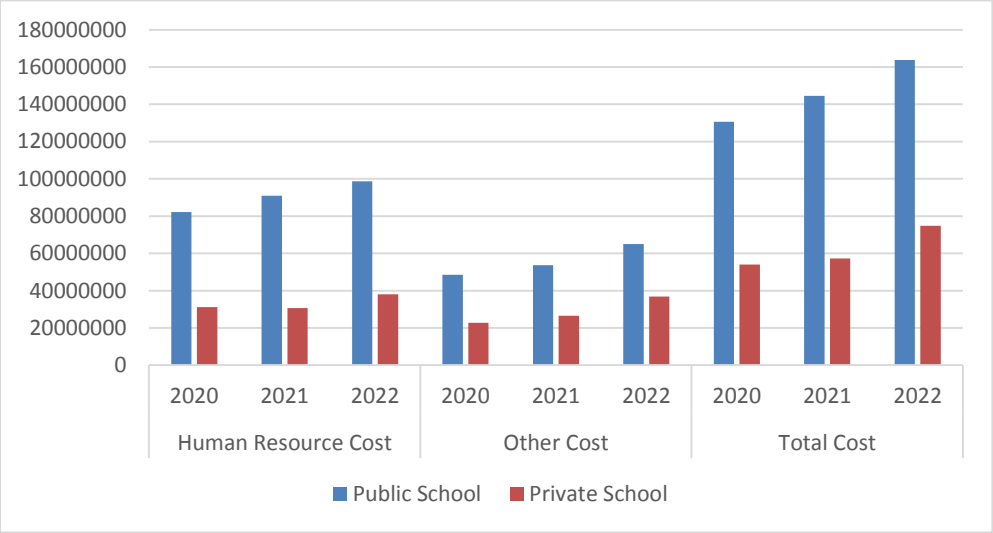
Year	Human Resource Cost (NRs)		Other Cost (NRs)		Total Costs (NRs)	
	Public School	Private School	Public School	Private School	Total HRC	Total OC
2020	82178719	31228487	48466535	22736515	130645254	53965002
2021	90975510	30642514	53638933	26566763	144614443	57209277
2022	98748474	38102833	64969565	36774254	163718039	74877087

Source: Field Survey, 2024

Table 4.3 provides insights into the cost in Public and Private schools. In term of cost in Public schools, government is investing more amount than the Private schools parent. The total cost for each year seems to be in increasing order in both public and private schools. From the above calculation it is clear that public school total cost is almost double than that of private schools.

Figure 4.1

Total cost in public and private school



Source: Field Survey, 2024

The diagram depicts that large amount of expense is used for the human resource cost (salary) rather than in the other cost. It is clear that the expenses on public schools is more than the private schools in both human resource and other cost.

4.3.4. Students' Enrollment in Public School in Different Level

This section of study provide us the information about the number of students who registered their name in different level, Primary (up to 5 class) , Lower secondary (6-8) and Secondary(9-10) in different academic years 2020, 2021 and 2022 respectively in both public schools.

Table 4.4

Student Enrollment in Public School (2020)

S.N.	Name of school	Primary (Nos.)	Lower secondary (Nos.)	Secondary (Nos.)	Total (Nos.)
1	Arniko Sec. School	315	210	334	859
2	Bhuwaneswori Sec. School	121	39	23	183
3	Ganesh Sec. School	245	82	57	384
4	Jorpati Sec. School	98	64	68	230
5	Mahendra Shanti Sec. School	232	173	189	594
6	Saraswoti Sec. School	123	60	32	215
7	Shanti Niketan Sec. School	85	55	106	246
8	Shree Jyoti Sec. School	230	132	60	422
9	Sirutar Sec. School	128	67	36	231
10	KulmayaBhagawati Sec. School	125	60	15	200
	Total	1702	942	920	3564

Source: Field Survey, 2024

The table 4.4 above shows the actual number of students' enrollment in public schools in academic year 2020 in primary, lower secondary and secondary level. The number of student in this year, in primary is more and it goes dominant than in secondary. The total number of student for this year is 3564.

This section of study provides the number of students enrollment in public school in year 2021. The number of students enrollment in different level is calculated.

Table 4.5

Students enrollment in Public School (2021)

S.N.	Name of school	Primary (Nos.)	Lower secondary (Nos.)	Secondary (Nos.)	Total (Nos.)
1	Arniko Sec. School	319	259	373	951
2	Bhuwaneswori Sec. School	120	43	29	192
3	Ganesh Sec. School	296	102	69	467
4	Jorpati Sec. School	118	59	69	246
5	Mahendra Shanti Sec. School	296	208	232	736
6	Saraswoti Sec. School	105	57	25	187
7	Shanti Niketan Sec. School	95	80	56	231
8	Shree Jyoti Sec. School	252	129	71	452
9	Sirutar Sec. School	212	65	42	319
10	KulmayaBhagawati Sec. School	130	80	14	224
	Total	1943	1082	980	4005

Source: Field Survey, 2024

Table 4.5 shows the number of enrollment of students in public schools in the academic year 2021 in in different level, i.e. primary, lower secondary and secondary. The total number of enrollment of students for this year is 4005.

In this section of study number of students enrollment in academic year 2022 is provided with their related level

Table 4.6

Student Enrollment in Public School (2022)

S.N.	Name of school	Primary (Nos.)	Lower Secondary (Nos.)	Secondary (Nos.)	Total (Nos.)
1	Arniko Sec. School	356	275	402	1033
2	Bhuwaneswori Sec. School	120	43	29	192
3	Ganesh Sec. School	413	121	67	601
4	Jorpati Sec. School	129	90	67	286
5	Mahendra Shanti Sec. School	141	158	303	602
6	Saraswoti Sec. School	106	64	20	190
7	Shanti Niketan Sec. School	184	89	96	369
8	Shree Jyoti Sec. School	250	150	88	488
9	Sirutar Sec. School	143	81	61	285
10	KulmayaBhagawati Sec. School	140	77	14	231
	Total	**1982**	**1148**	**1147**	**4277**

Source: Field Survey, 2024

Table 4.6 express the number of enrollment of students in public schools in academic year 2022 in primary, lower secondary and secondary level. The total number of students in this year is 4,277.

4.3.5. Enrollment of Students in Different Levels in Private Schools

This section of study provide the information of enrollment of students in Primary, Lower secondary and secondary classes for the academic year 2020, 2021 and 2022 in private schools.

Table 4.7

Student Enrollment in Private School (2020)

S.N.	Name of school	Primary (Nos.)	Lower Secondary (Nos.)	Secondary (Nos.)	Total (Nos.)
1	Candid Career E.S	240	110	130	480
2	Densh Secondary S	150	50	22	222
3	Model Janata E.S	238	22	26	286
4	Noble E.S	228	67	46	341
5	Rainbow E.S	380	142	51	573
6	Vedic S	189	88	40	317
	Total	**1425**	**479**	**315**	**2219**

Source: Field Survey, 2024

Table 4.7 indicates the total number of enrollment of students in the private school in the academic year 2020 in different level i.e. primary, lower secondary, secondary.

Table 4.8

Student Enrollment in Private School (2021)

S.N.	Name of school	Primary (Nos.)	Lower Secondary (Nos.)	Secondary (Nos.)	Total (Nos.)
1	Candid Career E.S	239	128	135	502
2	Densh Secondary S	170	55	28	253
3	Model Janata E.S	260	32	28	320
4	Noble E.S	261	91	39	391
5	Rainbow E.S	369	139	52	560
6	Vedic S	216	94	92	402
Total		**1515**	**539**	**374**	**2428**

Source: Field Survey, 2024

The table 4.8 gives the clear picture of number of students' enrollment in the academic year 2021 in private schools in different levels is primary, lower secondary and secondary. The ratio of student enrollment goes on decreasing from primary to lower secondary to secondary.

Table 4.9

Students Enrollment in Private School (2022)

S.N.	Name of school	Primary (Nos.)	Lower Secondary (Nos.)	Secondary (Nos.)	Total (Nos.)
1	Candid Career E.S	250	121	149	520
2	Densh Secondary S	200	60	29	289
3	Model Janata E.S	253	38	29	320
4	Noble E.S	299	94	49	442
5	Rainbow E.S	425	150	69	644
6	Vedic S	210	92	96	398
Total		**1637**	**555**	**421**	**2613**

Source: Field Survey, 2024

Table 4.9 indicates the number of students' enrollment in private school in academic year 2022 in different level i.e. primary, lower secondary and secondary. In this year the total number of students are 2,623.

4.3.6. Cost Distribution with Different Level in Public Schools

This section of study provides the distribution of cost i.e. human resource cost and total cost and the respective number of students in three different levels. It provides the information of cost for primary, lower secondary and secondary level.

Table 4.10

Cost and Number of Students in Public School

Cost and Number of students in different academic year						
Year	**Human Resource Cost (NRs)**	**Total Cost (NRs)**	**Primary Students (Nos.)**	**Lower Sec Students (Nos.)**	**Secondary Students (Nos.)**	**Total Enrollment (Nos.)**
2020	82178719	130645254	1702	942	920	3564
2021	90975510	144614443	1943	1082	980	4005
2022	98748474	163718039	1982	1148	1147	4277

Source: Field Survey, 2024

Above table 4.10 indicates the distribution of cost and level wise number of students in the public schools. From the table it is clear that the total both the total human resource cost and the cost for the public school is in increasing trend. Each year the cost is increasing in positive rate. It clearly shows that the total cost for primary level in year 2020 is Rs. 13,06,45,254, for lower secondary level is Rs 14,46,14,443 and for the secondary level is Rs. 16,37,18,039. Here it is clearly seen that both the human resource cost and the total cost are increasing in each year at the same time the number of students also increasing.

4.3.7. Distribution of Unit Cost in Public School

The study of this section depicts the distribution of unit cost mainly unit human resource cost and unit total cost in three different academic years 2020, 2021 and 2022 respectively.it provides the information of unit cost for public schools in respective academic years.

Table 4.11

Unit Cost in Public School

Year	Unit Cost	
	Unit Human Resource Cost (NRs)	Unit Total Cost (NRs)
2020	23058	36657
2021	22715	36108
2022	23088	38279

Source: Field Survey, 2024

From the table 4.11, it is clear that government expenditure for human resource cost for 2020 is Rs 23,058, for year 2021 is Rs 22,715 and for year2022 is Rs 23,088 and the unit total cost of education in year 2020 is Rs 36,657, in year2021 is Rs. 36,108 and for year2022 is Rs. 38,279. This unit total cost is the cost of education. Each year in average government is investing nearly Rs 37,000 for each student.

4.3.8. Distribution of Cost in Different Level in Private Schools

This section of study reflects the total number of students in different levels primary, lower secondary and secondary and the cost for human resource and total cost. Table 12 provides the information of different level, number of students and respected cost in human resource and total cost.

Table 4.12

Cost and Number of students in Private School

Year	Human Resource Cost (NRs)	Total Cost (NRs)	Primary Students (Nos.)	Lower Sec Students (Nos.)	Secondary Students (Nos.)	Total Enrollment (Nos.)
2020	31228487	53965002	1425	479	315	2219
2021	30642514	57209277	1515	539	374	2428
2022	38102833	74877087	1637	555	421	2613

Source: Field Survey, 2024

Table 4.12 explains the human resource cost in private school in different level in different academic year and the total number of students in respected years.It is seen that the Human resource cost is nearly same for all academic years it means the expense in salary has not increased dominantly, but on the other hand total cost for every academic year is in increasing trend.

4.3.9. Distribution of Unit Cost in Private Schools

This section of study provides us the distribution of cost in different three academic years 2020, 2021 and 2022 with the three level primary, lower secondary and secondary. It reflects the cost on salary of teachers (human resource cost) and total cost on school of different academic years.

Table 4.13

Cost Distribution in Private Schools

Year	Human Resource Cost (NRs)			Total Cost (NRs)		
	Primary	Lower Sec Students	Secondary Students	Primary	Lower Sec Students	Secondary Students
2020	20054346	6741075	4433066	34655308	7660647	7660647
2021	19120020	6802436	4720058	35696892	8812302	8812302
2022	23870776	8093024	6139033	46909220	12064008	12064008

Source: Field Survey, 2024

The cost distribution in private school according to different level i.e. primary lower secondary and secondary is presented in table 13 for three different academic years 2020, 2021 and 2022 respectively.

4.3.10. Distribution of Unit Cost in Different Academic Year

The table below provides us the unit cost for human resource and unit cost for total cost. The unit cost for human resource is the cost of school paying to the teachers as salary. Similarly, the unit total cost represents the per head cost of students. This unit total cost gives us the average cost of education for each student.

Table 4.14

Unit Cost in Private School

Year	Unit Cost for Human Resource Cost (NRs)	Unit Cost for Total Cost (NRs)
2020	14073	24320
2021	12620	23562
2022	14582	28656

Source: Field Survey, 2024

From the above chart, in case of the private schools the unit cost for human resource for year 2020 is Rs 14,073, for year 2021 is Rs 12,620 and for year 2022 is Rs 14,582. Similarly, unit total cost is found as follows, in year2020 is Rs. 24,320 in year2021 is Rs. 23,562 and for year 2022 is Rs. 28,656. This unit total cost represents the cost of education. It says that Nearly Rs 25,000 is invested fora student in private schools.

4.3.11. Cost of Education in Public and Private Schools

The table below provides the overview comparison of cost of education for public and private schools. It explores the capital investment by government and parents for each individual. It provides us the clear picture of cost of education in both public and private school in different academic years.

Table 4.15

Comparison of Total Unit Cost of education in Public and Private Schools

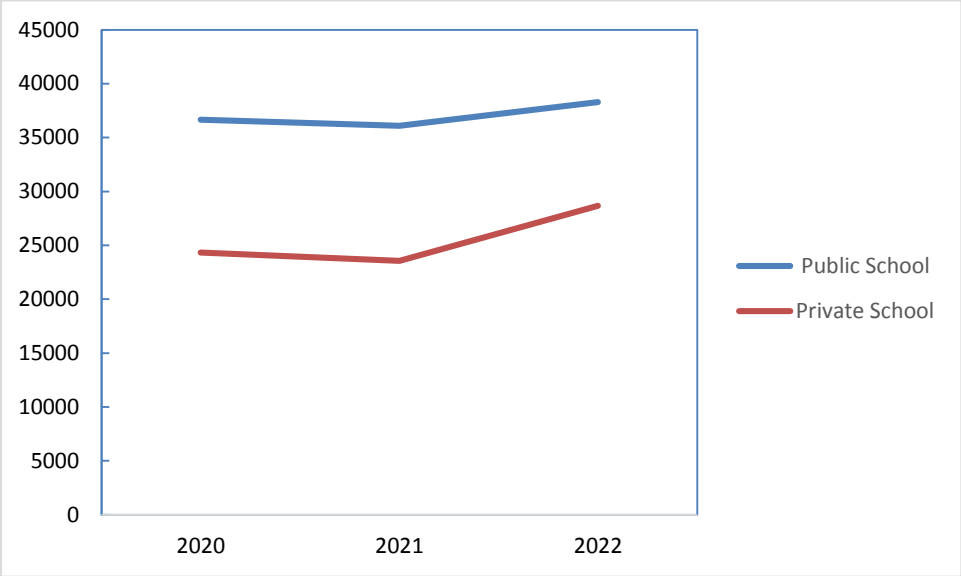
Year	Unit Cost of education in Public School (NRs)	Unit Cost of education in Private School (NRs)
2020	36657	24320
2021	36108	23562
2022	38279	28656

Source: Field Survey, 2024

The table 4.15 represents unit cost for each students in public and private school in different academic year was calculated. The finding of unit cost was more for public schools than for private schools. Around Rs. 37,000 was the per head cost for public school students whereas nearly Rs. 25,000 for each student in private schools.

Figure 4.2

Trend for Unit cost in Private and Public School



Source: Field Survey, 2024

The time line for both public and private school shows that the unit cost of education is positively inclined i.e. the cost is increasing each year. The amount of capital investment for Public school is much higher than the amount paid by parents in Private schools.

4.4. Academic Performance in Public Schools

This section of study explores the status of academic performance in public schools. The grade obtained by students are given the remarks which is provided by government. The letter grading system of Nepal has nine grades. Among them A^+ indicates outstanding result has grade point between 3.6 and 4.0. Letter grade A which indicates outstanding result has grade point 3.2-3.6. Similarly letter grade B+ which refers very well has the grade 2.8-3.2. The letter grade B which refers well has grade point 2.4-2.8. But the letter grading C+ which indicates satisfactory has the grade point 2.0-2.4. Letter grade of C represents acceptable has grade point 1.6-2.0. Letter grade D+ which has grading between 1.2-1.6 is partially acceptable. Letter grade D which has grading 0.8-1.2 indicates insufficient. The letter grade E represents very insufficient has grade 0.0-0.8.

Table 4.16

Academic Performance in Public Schools (2020)

S.N.	Name of school	A+	A	B+	B	C+	C	D+	D	E	Total
1	Arniko Sec. School	11	14	31	14	0	0	0	0	0	70
2	Bhuneswori Sec. School	0	1	3	2	2	0	0	0	0	8
3	Ganesh Sec. School	1	4	17	3	0	0	0	0	0	25
4	Jorpati Sec. School	0	5	2	14	1	0	0	0	0	22
5	Mahendra Shanti Sec. School	1	7	7	32	3	0	0	0	0	50
6	Saraswoti Sec. School	2	11	4	0	0	0	0	0	0	17
7	Shanti NiketAn Sec. School	1	6	1	6	8	0	0	0	0	22
8	Shree Jyoti Sec. School	3	3	16	6	0	0	0	0	0	28
9	Sirutar Sec. School	3	2	4	12	0	0	0	0	0	21
10	KulmayaBhagawati Sec. School	1	3	1	2	0	0	0	0	0	7
	Total	**23**	**56**	**86**	**91**	**14**	**0**	**0**	**0**	**0**	**270**

Source: Field Survey, 2024

Table 4.16 shows the academic performance of the public schools with their related grades. Among 270 numbers of students 23, 56, 86, 91 and 14 numbers of students got A+,A, B+, B and C+ respectively in academic year 2020.So we can say the out of 270 numbers of students, only 23 numbers of students have outstanding result, 56 has Excellent, 86 has Very Good, 91 has Good and 14 has Satisfactory result. In this table it explores that most of the students fall on B and C+ grade

This section of study provides the academic performance in public school in academic year 2021. Number of students and their grades have been calculated.

Table 4.17

Academic Performance in Public Schools (2021)

S.N.	Name of school	A+	A	B+	B	C+	C	D+	D	E	Total
1	Arniko Sec. School	3	17	17	25	10	3	0	0	0	75
2	Bhunaswori Sec. School	0	0	3	6	3	0	0	0	0	12
3	Ganesh Sec. School	0	0	4	8	6	9	3	0	0	30
4	Jorpqati Sec. School	0	0	2	7	8	9	3	0	0	29
5	Mahendra Shanti Sec. School	0	0	3	6	21	17	3	0	0	50
6	Saraswoti Sec. School	1	2	9	3	0	0	0	0	0	15
7	Shanti NiketAn Sec. School	0	1	0	3	7	7	9	0	0	27
8	Shree Jyoti Sec. School	0	1	2	2	16	13	1	0	0	35
9	Sirutar Sec. School	0	0	0	6	6	2	1	0	0	15
10	KulmayaBhagawati Sec. School	0	1	1	4	1	0	0	0	0	7
	Total	**4**	**22**	**41**	**70**	**78**	**60**	**20**	**0**	**0**	**295**

Source: Field Survey, 2024

Table 4.17 reflects the SEE performance for public schools in academic year 2021. Out of 295 students, 4 secure A+, 22 secure A, 41 secure B+, 70 secure B,78 secure C+, 60 secure C and 20 secure D+ in this academic. In this academic year out of 295 only 4 students got Outstanding result, 22 got Excellent, 41 got Very Good, 70 got Good, 78 got Satisfactory, 60 got Acceptable and 20 got Partially Accepted. From these two tables it is clear that the performance has decreased.

This section of study provides the academic performance in public school in academic year 2022. Number of students and their grades have been calculated.

Table 4.18

Academic Performance in Public Schools (2022)

S.N.	Name of school	A+	A	B+	B	C+	C	D+	D	E	Total
1	Arniko Sec. School	1	19	22	14	7	4	0	0	0	67
2	Bhuwaneswori Sec. School	1	2	4	6	0	0	0	0	0	13
3	Ganesh Sec. School	1	5	8	5	2	0	0	0	0	21
4	Jorpati Sec. School	1	3	4	8	12	5	2	0	0	35
5	Mahendra Shanti Sec. School	0	5	3	16	21	6	2	0	0	53
6	Saraswoti Sec. School	0	3	5	2		0	0	0	0	10
7	Shanti NiketAn Sec. School	0	0	2	4	9	4	1	0	0	20
8	Shree Jyoti Sec. School	1	0	8	16	12	5	0	0	0	42
9	Sirutar Sec. School	0	1	4	7	9	4	2	0	0	27
10	KulmayaBhagawati Sec. School	0	1	4	0	0	0	0	0	0	5
Total		**5**	**39**	**64**	**78**	**72**	**28**	**7**	**0**	**0**	**293**

Source: Field Survey, 2024

But in Table 4.18 it provides that out of 293 students who appeared in SEE, only 5 students got A+, 39 secure A with Excellent, 64 secure B+ with Very Good remark, 78 got B which indicates Good, 72 got C+ which indicates Satisfactory, 28 got C+ which is Acceptable and 7 got D+ with Partially Acceptable result.

In comparison to the other academic year most of the students have secured high grade in year 2020. It is not the case government has introduced any new methodology for teaching but due to Corona pandemic, the SEE exam was internally evaluated. Government had implemented internal marking system.

4.5. Academic Performance in Private Schools

Both the public and private schools follow the same curriculum provided by government of Nepal. The measurement criteria of academic performance of the student of private school is as same as of public schools. Private school also follow the same procedure. Among them A^+ = Outstanding (3.6-4.0.) Letter grade A = excellent (3.2-3.6). Similarly letter grade B+ = very good (2.8-3.2). the letter grade B =good (2.4-2.8). But the letter grading C+ =satisfactory (2.0-2.4). Letter grade of C =acceptable (1.6-2.0). Letter grade D+ = partially acceptable (1.2-1.6), D = insufficient (0.8-1.2). E = very insufficient (0.0-0.8).

Table 4.19

Academic Performance in Private Schools (2020)

S. N.	Name of school	A+	A	B	C+	C	D+	D	E	Total
1	Candid Career E.S	25	13	0	0	0	0	0	0	38
2	Densh Secondary S	18	0	0	0	0	0	0	0	18
3	Model Janata E.S	0	3	4	0	0	0	0	0	7
4	Noble E.S	0	23	0	0	0	0	0	0	23
5	Rainbow E.S	16	10	0	0	0	0	0	0	26
6	Vedic S	14	3	0	0	0	0	0	0	17
	Total	73	52	4	0	0	0	0	0	129

Source: Field Survey, 2024

Table 4.19 represents the academic performance in private school for academic year 2020. Out of 158 students, 73 secure A+, 52 secure A, 29 secure B+ and 4 secure B. In this academic year due to Covid pandemic and internal marking system most of the SEE graduates have secured A+. Nearly 57 percent students have secured A+, and 40 percent have secured A and rest 3percent have secured B. No one has secured less than B in this academic year from private schools.

This section of study provides the academic performance in private school in academic year 2021. Number of students and their grades have been calculated.

Table 4.20

Academic Performance in Private Schools (2021)

S.N.	Name of school	A+	A	B	C+	C	D+	D	E	Total
1	Candid Career E.S	8	15	1	1	0	0	0	0	25
2	Densh Secondary S	10	5	0	0	0	0	0	0	15
3	Model Janata E.S	0	4	2	0	0	0	0	0	6
4	Noble E.S	3	15	0	0	0	0	0	0	18
5	Rainbow E.S	3	5	5	0	0	0	0	0	13
6	Vedic S	6	14	5	0	0	0	0	0	25
Total		**30**	**58**	**13**	**1**	**0**	**0**	**0**	**0**	**102**

Source: Field Survey, 2024

Table 4.20 represents the academic performance of private schools in academic year 2021. Out of 133 students who appear in SEE only, 30 secure A+, 58 secure A, 31 secure B+, 13 secure B and 1 secure C+. In comparison to academic year 2020 the performance of student seems to be decreased.

This section of study provides the academic performance in private school in academic year 2022. Number of students and their grades have been calculated.

Table 4.21

Academic Performance in Private Schools (2022)

S.N.	Name of school	A+	A	B	C+	C	D+	D	E	Total
1	Candid Career E.S	14	11	0	0	0	0	0	0	25
2	Densh Secondary S	8	7	0	0	0	0	0	0	15
3	Model Janata E.S	1	3	1	0	0	0	0	0	5
4	Noble E.S	1	12		0	0	0	0	0	13
5	Rainbow E.S	12	10	3	0	0	0	0	0	25
6	Vedic S	3	9	3	2	0	0	0	0	17
Total		**39**	**52**	**7**	**2**	**0**	**0**	**0**	**0**	**100**

Source: Field Survey, 2024

Table 4.21 shows us the academic performance of SEE students in private school in academic year 2022. In this year out of 119 students 32 percent secure A+, 43 percent secure A, 16 percent secure B+, nearly 6 percent secure B, and 2 percent secure C+.

In private schools it is seen that many students secure A+ with outstanding result. Most of the students who appeared in SEE exam has secure higher grade within A+,

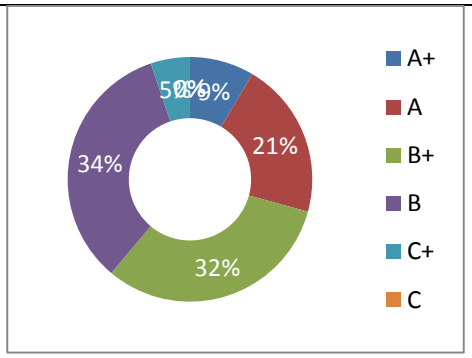
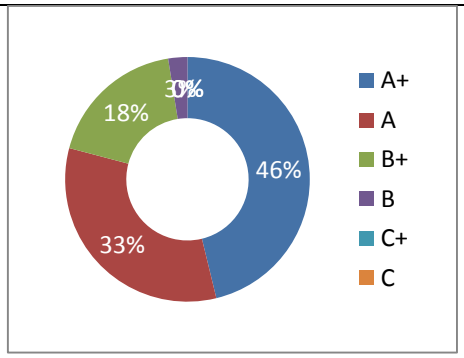
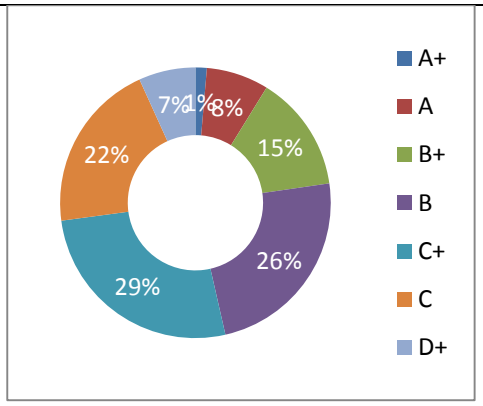
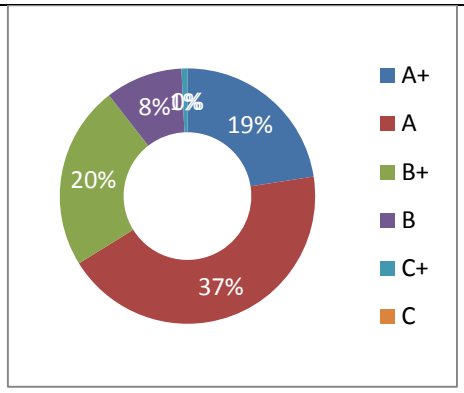
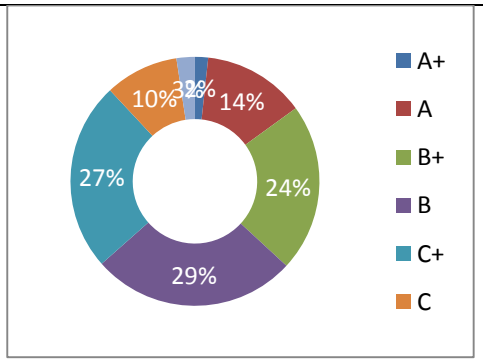
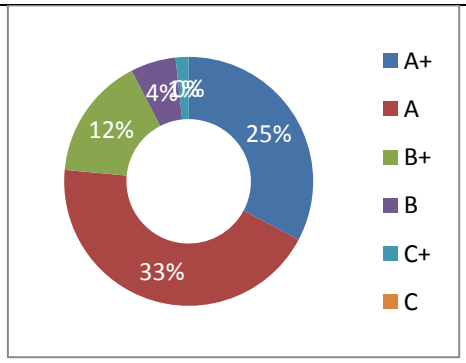
A and B+.It indicates the result is outstanding, Excellent and very good as of government remark.

4.5.1. Academic Performance in Public and Private Schools

In this study, the academic performances from both public and private schools was calculated. Following tables compare the academic performance of SEE graduates in different schools, in different academic years and its grades.

Figure 4.3

Comparison of SEE performance in Public and Private Schools

Year	Public	Private
2020		
2021		
2022		

Source: Field Survey, 2024

Figure 4.3 gives the clear vision of comparison between public and private schools, and their academic performance of SEE graduates for different academic years. The pie chart clearly shows that the number of students in private schools are able to secure more A+ than that of public school.

This section of the study provides us the SEE performance in Public and Private schools. Corresponding academic year with academic achievement are provided with the number of students.

Table 4.22

SEE Performances in Public and Private Schools

	Year	**A+**	**A**	**B+**	**B**	**C+**	**C**	**D+**	**D**	**E**	**Total**
Public School	2020	23	56	86	91	14	0	0	0	0	**270**
	2021	4	22	41	70	78	60	20	0	0	**295**
	2022	5	39	64	78	72	28	7	0	0	**293**
Private School	2020	32	117	191	239	164	88	27	0	0	**858**
	2021	64	234	382	478	328	176	54	0	0	**1716**
	2022	105	412	678	865	642	352	108	0	0	**3162**

Source: Field Survey, 2024

Table 4.22 clear us the academic performance of SEE graduates of public and private schools in different academic year. In academic year 2020, 8 percent students from public school has secured A+ but in the same academic year 3 percent from private school secure A+. When we compare the table for academic year 2022, it is clear that only 5 students from public schools have secured outstanding result (A+) but in the same academic year 2022, students from private schools, 105 secured A+. Most of the students from public schools secure B,B+ and C but the scenario for private schools are bit different. Most of the students are able to secure around A+, A and B.

This section of the study provides us the SEE performance in Public and Private schools. Corresponding academic year with academic achievement are provided with the number of student in percentage.

Table 4.23

SEE Pass-out from Public and Private Schools in Percentage

Public School									
	A+	**A**	**B+**	**B**	**C+**	**C**	**D+**	**D**	**E**
2020	9%	21%	32%	34%	5%	0%	0%	0%	0%
2021	1%	8%	15%	26%	29%	22%	7%	0%	0%
2022	2%	14%	24%	29%	27%	10%	3%	0%	0%

Source: Field Survey, 2024

Private School									
	A+	**A**	**B+**	**B**	**C+**	**C**	**D+**	**D**	**E**
2020	46%	33%	18%	3%	0%	0%	0%	0%	0%
2021	23%	44%	23%	10%	1%	0%	0%	0%	0%
2022	33%	44%	16%	6%	2%	0%	0%	0%	0%

Source: Field Survey, 2024

From the table 4.23 above, it is clearly seen that in academic year 2020 in both Public and Private schools, Percentage of students securing A+ is high. In the year 2020, 9 percent student from public schools were able to secure A+ but 46 percent of students were able to secure A+. But in the academic year2022, only 2percent were able to secure A+ but in the other hand from private schools 33 percent student were able to secure A+.

4.5.2. Weighted Value for Academic Performance

This section of study provides the range for the grades but not the exact value. For a student securing A+ means, the mark obtained by the student lies in between 3.6-4. So for the accurate central value we should have the weighted value. Weighted mean is used in quantitative research to make the analysis sample representative of the targeted population.

Table 4.24

Academic performance and its weight in Public School

Letter Grade	Grade	Weight (X)	No. of students (f)		
			2020	2021	2022
A+	3.6-4.0	3.8	23	4	5
A	3.2-3.6	3.4	56	22	39
B+	2.8-3.2	3	86	41	64
B	2.4-2.8	2.6	91	70	78
C+	2.0-2.4	2.2	14	78	72
C	1.6-2.0	1.8	0	60	28
D+	1.2-1.6	1.4	0	20	7
D	0.8-1.2	1	0	0	0
E	0.0-0.8	0.4	0	0	0

Source: Field Survey, 2024

Table 4.24 show the academic performance of public schools, in grades with their weighted value. The weighted value for the respected grade is calculated by taking a mean of a given range. From the above data, the weighted arithmetic mean is calculated and found to be as follows.

This section of study provides the range for the grades but not the exact value. The academic achievement of students in private school and their weighted value is provided.

Table 4.25

Academic performance and its weight in Private School

Letter Grade	Grade	Weight	2020	2021	2022
A+	3.6-4.0	3.8	32	64	105
A	3.2-3.6	3.4	117	234	412
B+	2.8-3.2	3	191	382	678
B	2.4-2.8	2.6	239	478	865
C+	2.0-2.4	2.2	164	328	642
C	1.6-2.0	1.8	88	176	352
D+	1.2-1.6	1.4	27	54	108
D	0.8-1.2	1	0	0	0
E	0.0-0.8	0.4	0	0	0

Source: Field Survey, 2024

Table 4.25 show the academic performance in grades with their weighted value. The weighted value for the respected grade is calculated by taking a mean of a given range. From the above data, the weighted arithmetic mean is calculated and found to be as follows.

4.5.3. Weighted Mean for Academic Performances

In this section of study the mean performance of students in both Public and Private schools are calculated in respective academic years. The weights of different grades are different as mentioned in following table. We find the weighted mean academic performance from the study.

Table 4.26

Mean performance obtained by students in different academic year

	2020	2021	2022
Public school	2.97(B+)	2.38(C+)	s2.6(B)
Private School	2.64(B)	2.64(B)	2.61(B)

Source: Field Survey, 2024

The average mark obtained by students from both public and private school are represented in table 4.26. It indicates that for both the schools the academic performance seems to be nearly same and it is B.

4.6. Relation between Cost of Education and Academic Performance

The study of this section presents the actual picture of the cost of education and its impact on academic performance.

Table 4.27

Cost of education and its outcome (academic performance)

Public School			**Private School**		
Cost of Education (NRs)	**Mean Mark**	**Grade**	**Cost of Education (NRs)**	**Mean Mark**	**Grade**
36657	2.97	B+	24320	2.64	B
36108	2.38	B	23562	2.64	B
38279	2.60	B	28656	2.61	B

Source: Field Survey, 2024

From the table 4.27 obtained by the survey it is found that, the academic performance and the cost of education is found to be linked as following. In the academic year 2020, almost Rs.36,657 was invested by government for a SEE student and was able to score 2.97 as a B+ grade.

Similarly, in the year 2021, almost Rs. 36,108 was invested and able to score 2.38 as B grade .Likewise, in year 2022, the expenditure was nearly Rs.38,279 which was able to score 2.6 with B grade.

But the scenario is different for the Private Schools. In academic year 2020, parents invested nearly Rs. 24,320, in 2021 it was Rs. 23,562 and in 2022 it was Rs. 28,526, which was enough to score nearly 2.6 as a B grade

4.7. Chi-Square Test

Table 4.28

Calculation of Chi-Square

	Public School 2022				
Grades	**Number of students (O)**	**Expected value €**	**d =O-E**	**d^2**	**d^2/E**
A+	5	42	-37	1369	-37
A	39	42	-3	9	-3
B+	64	42	22	484	22
B	78	42	36	1296	36
C+	72	42	30	900	30
C	28	42	-14	196	-14
D+	7	42	-35	1225	-35
	N=295				-1
	Private schools 2022				
Grades	**Number of students (O)**	**Expected value(E)**	**d =O-E**	**d^2**	**d^2/E**
A+	29	22	7	49	2.227273
A	52	22	30	900	40.90909
B+	7	22	-15	225	10.22727
B	2	22	-20	400	18.18182
	N =90				71.54545

Source: Calculation based on Annex

The calculated X^2 = -1 (public school) ,The calculated X^2 = 71.5 (private school)

Degree of Freedom = 6

Level of significance (α) = 5 %

Tabulated $X^2_{0.05}(6)$ = 11.07

Calculated value (private school)> Tabulated value, It is significant and $H_0$is rejected which means H_1 is accepted. That means there is significant difference in the grade in private schools

4.8. Discussion

The paper has concluded different facts that contribute to a lively discussion among all stakeholders regarding accountability towards investment in schools and students' academic performance for improving teaching and learning practices and examination system,

First the study has presented the fact that public schools are investing more money on education of students than the private schools, The cost of education in public school for secondary levels 48 percent higher than the cost for private secondary level, It highly support the finding of Thapa (2013) Second the study further found the academic performance level of public school students is very poor than the private schools. This finding is similar to the finding of Mathema & Bista (2006).

Thirdly most of the number of student's enrollment in each level from lower to higher, seems to be increasing in every year in private schools but the number of students enrollment in public schools are not increase significantly which is very close to report of WB (1994)

Government is investing more amount of capital for the SEE students than private but the academic performance is nearly same for both the schools. The finding from the X^2also suggest that there is significance difference in the SEE result in both schools. The academic performance in both school are extremely different. Most of the students from Private schools are able to secure A+, which indicates Outstanding, but in the public school most of the students are below excellent, i.e. scoring less than A.

CHAPTER V
SUMMARY AND CONCLUSIONS

5.1. Introduction

I have carried out this study with objective of exploring and finding out the impact of the cost of education on academic performance among SEE students of public and private schools of the Bhaktapur district. The study has also compared the academic achievement of public and private schools in performance grading system as standardized by MoEST. The findings and conclusions of the study have been presented in this chapter

5.2. Summary

Nepal's Government invests a considerable portion of its budget in education in every fiscal year and also many types of foreign aid have been received for educational development in Nepal. It is necessary to find out if the investment is totally utilized or not. So this study has tried to find out the cost of education in public and private schools and its impact on SEE academic performances.

- The study aims to analyze the impact of education costs on the academic performance of SEE students in public and private schools. It seeks to estimate the unit cost of student education and compare the academic performance between public and private institutions.
- Previous research has shown mixed results regarding the impact of education costs on academic performance, highlighting a gap in the research that this study aims to address.
- A small-scale survey was conducted in Surya Binayak Municipality, specifically focusing on schools offering secondary education. Data were collected from ten public schools and seven private schools.
- Data sources included the school EDIS for student numbers and SEE results for academic performance. Financial reports from each school provided information on human resource costs and other direct costs, while indirect costs such as opportunity and social costs were excluded.

- The research explanatory method was employed to analyze the collected data. The study first estimated the unit cost per student based on the schools' financial records.
- Costs were classified into two main categories: human resource costs and other costs (including utility, fixed, and stationary costs). These costs were calculated based on yearly data and the number of students at each school.
- The study assessed the impact of the unit cost on academic performance in the SEE exams.
- Findings for public schools showed the following:
    - In 2020, Rs.36657 per student was spent, resulting in an average B+ grade (2.97).
    - In 2021, Rs.36108 per student was spent, resulting in an average B grade (2.38).
    - In 2022, Rs.38279 per student was spent, resulting in an average B grade (2.6).
- Findings for private schools showed the following:
    - In 2020, Rs.24320 per student was spent, resulting in an average B grade (2.6).
    - In 2021, Rs.23562 per student was spent, resulting in an average B grade (2.6).
    - In 2022, Rs.28526 per student was spent, resulting in an average B grade (2.6).
- The Chi-square test suggested no significant difference in academic performance for public schools. However, it indicated a significant difference in academic performance for private schools.

5.3. Conclusion

The primary objective of this study was to estimate the cost of education and its impact on academic performance in both public and private schools in Nepal. This investigation covered the academic years 2020, 2021, and 2022, providing comprehensive insights into educational expenditures and outcomes.

Through various research articles, journals books are various materials, the study was able to identify and select major factors or independent variables that affects the

academic performance of students. Those independent variable or factors were grades. The study was entirely based on analysis the facts of this variable. The study identified the cost of education in different level, primary, lower secondary and secondary. The distribution of these cost was found to indicate the proportion of investment in primary to secondary level was in decreasing order. This study confirmed the level of academic achievement of schools in public & private schools. Most of the private school's academic performance is found to be far better than public schools.

The data indicates that private schools, despite lower per-student expenditures, tend to achieve similar or even better academic performance compared to public schools. This finding suggests that factors other than expenditure levels, such as resource allocation and management efficiency, significantly impact academic outcomes.

Further analysis revealed key areas affecting academic performance. Ineffective teaching methodologies, limited use of technology, and teacher-centered learning approaches were identified as major contributors to declining academic performance in public schools. These issues highlight the need for educational reforms focusing on improving teaching quality and integrating modern educational technologies.

The study underscores the necessity for policymakers to reassess educational investment strategies. By implementing strict regulations, enforcing codes of conduct, and providing regular professional development for teachers, the quality of education can be significantly enhanced. These measures will not only improve academic performance but also ensure equitable access to quality education across both public and private schools.

In conclusion, this research provides critical insights into the cost-efficiency and effectiveness of educational expenditures in Nepal. The findings emphasize the importance of strategic investment in education and the need for continuous evaluation and improvement of teaching practices to foster academic excellence.

5.4. Recommendation

This study has identified a decline in academic performance in both public and private schools. Given the importance of accurate information on the cost of education and its

impact on academic outcomes, further research is essential, particularly in a country like Nepal, where the decline in SEE academic performance is a significant barrier to children's educational and career prospects. The primary recommendations from this study are as follows:

Government

1. Proper Utilization of Educational Funds: It is highly recommended that the government ensures the proper utilization of allocated educational funds. These funds should be strategically directed to areas that can maximize academic outcomes, such as improving teacher quality, enhancing school infrastructure, and providing necessary learning materials.
2. Expand Research Scope: The government should support and fund research that encompasses a broader national sample beyond the initial focus on Surya Binayak Municipality. This would ensure that the findings are representative and applicable across Nepal, providing a comprehensive understanding of educational challenges nationwide.
3. Longitudinal Studies: The government should invest in longitudinal studies that track academic performance over an extended period. This approach will help in understanding long-term trends and patterns in educational outcomes, enabling more effective policy interventions.
4. Holistic Educational Policies: Recognize that educational cost is not the sole factor affecting academic performance. Policies should also consider other critical variables such as teaching quality, school infrastructure, parental involvement, and socio-economic conditions to provide a more comprehensive understanding of the factors influencing academic outcomes.

Local Government

1. Efficient Resource Allocation: Local governments should ensure that educational funds are used efficiently at the community level. They should monitor and evaluate how funds are spent and ensure that they directly contribute to improving academic performance.
2. Community Engagement: Engage with the community, including parents and local organizations, to identify and address specific educational challenges.

This collaborative approach can help in tailoring solutions that are effective and relevant to local needs.

3. Support for Schools: Provide additional support to schools in terms of infrastructure development, teacher training, and learning resources. Local governments can play a crucial role in ensuring that schools have the necessary resources to improve academic outcomes.

Schools

1. Financial Management: Schools should manage their financial resources effectively, ensuring that funds are allocated in a way that directly benefits student learning and academic performance. This includes investing in high-quality teaching staff, adequate learning materials, and maintaining school facilities.
2. Data-Driven Decisions: Schools should use data to inform their decisions on resource allocation and educational strategies. By understanding the specific needs and challenges of their students, schools can implement targeted interventions to improve academic outcomes.

Teachers

1. Professional Development: Teachers should engage in continuous professional development to enhance their teaching skills and stay updated with the latest educational practices. High-quality teaching is a critical factor in improving student performance.
2. Collaborative Teaching: Encourage collaboration among teachers to share best practices and innovative teaching methods. This can help in creating a more effective learning environment for students.

Parents

1. Parental Involvement: Parents should actively participate in their children's education by supporting their learning at home and engaging with teachers and school activities. Parental involvement is a key factor in student success.
2. Awareness of Educational Costs: Parents should be made aware of the importance of educational investments and how they can contribute to their

children's academic performance. This includes understanding the value of educational resources and supporting their proper utilization.

By addressing these recommendations, future research can provide deeper insights and more robust data, ultimately contributing to more effective educational policies and practices aimed at improving academic performance in Nepal. Through a collaborative effort among the government, local authorities, schools, teachers, and parents, we can work towards enhancing the quality of education and ensuring better academic outcomes for all students.

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ANNEX I: List of schools

Name of Public Schools	Name of Private Schools
Araniko Secondary School	Densh International
Ganesh Secondary School	Model Janata
BHuwaneshori Secondary School	Noble English Sec. School
Mahendra Shanti Secondary School	Candid Career Secondary School
Saraswoti Secondary School	Rainbow English Sec. School
Sirutar Secondary School	Vedic School
Shanti Niketan Secondary School	
Jyoti Secondary School	
Jorpati Secondary School	
KulmayaBhagawati Secondary School	

ANNEX II: Questionnaire (Survey Based)

Name of school: **Name of Principal:**

Contact Number: **Total staffs:**

Title	2020	2021	2022
Expense on Salary			
Total expenditure			
Number of students			
Primary			
Lower secondary			
Secondary			
Total			
SEE Performance			
A+			
A			
B+			
B			
C+			
C			
D+			
D			
E			
Total			

ANNEX III: Chi-Square Test

SEE Academic Performance in different institutions

School	A+	A	B+	B	C+	C	D+	RT
Public School(2022)	5	39	64	78	72	28	7	293
Private School(2022)	39	52	7	2	0	0	0	100

Source: Field Survey, 2024

Setting the Hypothesis:

Null Hypothesis H_0: The grades are not significantly different from those expected on the hypothesis of uniform distributions. In other words, the hypothesis of uniform distribution of grades holds good.

Alternative Hypothesis H_1: The grades are significantly different from those expected on the hypothesis of uniform distribution. In other words, the hypothesis of uniform distribution of grades does not hold good.

Test Statistics: Under H_0 the test statistics is

$$X^2 = \sum \frac{(O-E)2}{E}$$

Where E=Expected frequency

$$= \frac{\sum E}{N}$$

Degree of Freedom (df)= n-1

=7-1 (For public school) =4-1(For private school)

=6 =3

The expected frequency

E=295/7 (For public school) E=90/4 (For private school)

=42 = 22