LOCAL GOVERNMENT'S FINANCING FOR EDUCATION IN FEDERALISM: AN EMPIRICAL STUDY IN NEPAL

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AN ABSTRACT

of the dissertation of *Shital Bahadur Rawal* for the degree of *Master of Philosophy in* Development Studies presented on *14 May 2025*, entitled *Local Government's Financing for Education in Federalism: An Empirical Study in Nepal.*

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The financing of education by local government in a federal system is a crucial, emerging, and most discussed issue in Nepal's present context. In the restructured governance system after adopting federalism, the authority and responsibility of secondary-level education were assigned to the local-level government; however, the financing for secondary-level education has still relied on the federation. The local-level government units, such as the Rural Municipality and the Urban Municipalities, do not have adequate funds or revenue-raising resources to finance public education independently; besides that, there is a variance in government budgets and spending on school education at the local level. The variance and disparity in financing education at the local level and local education budgets heavily rely on the federal government's fiscal transfers, which are considered a central problem of this study. Despite the constitutional commitment to free and quality education for all, the local governments still face challenges in mobilizing sufficient financial resources for education.

Therefore, this study was carried out within the theoretical framework of fiscal federalism to examine: (a) the overall education financing trend and status in Nepal, (b) the relationship among the variables related to financing for education of local government in federalism, (c) the contribution of intergovernmental fiscal transfer to the

local government's education budget, (d) the variances and disparities within Nepal's public education financing of local government units based on the type of local government, geographical region, and provincial territories under the federal system.

This study was conducted by applying a quantitative research method from the perspective of the post-positivist paradigm. The fiscal data of 753 municipal units of Nepal were used in this study. The data related to descriptive analysis of education financing were collected from the Ministry of Finance and published reports of the Nepal government, and data for inferential analysis of this study were collected from the public finance management system (PFMS) of Nepal. The PFMS, particularly for local government, is also known as the Subnational Treasury Regulatory Application (SuTRA). The collected data were analyzed in two parts: descriptive analysis and inferential analysis. In the descriptive analysis, the tables, diagrams, and graphs (Figures) were used, and in the inferential analysis, the statistical tools such as Bivariate Correlation, Multiple Regression, and ANOVA were used.

The findings of this study reveal that the education budgets and expenditure increased, indicating the Nepalese government has a growing commitment to promoting the education sector to achieve its educational goals. The local government makes a higher contribution to education than the other tiers of government in terms of financing education spending; however, the source of the education budget heavily depends on the federal government. The study also identified a strong correlation between fiscal transfers, revenue sharing, internal revenue of the local level, and education financing among municipalities. This study also found that federal conditional grant transfers are the most influential factor for the education budget of local government compared to non-conditional grants. The findings reveal significant disparity in education financing across local governments of Nepal regarding variances in education budget, intergovernmental fiscal transfer, and revenue generation capacity.

The findings of this study can be helpful to policymakers and practitioners involved in the policy formulation of education financing at the local level and the other tiers of government. It contributes to the policy discussion and decision on intergovernmental fiscal transfer and revenue sharing. Similarly, this study also has

implications for future researchers who want to study the local government's financing for education using a quantitative research method.

…… 14 May 2025

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सोध सार

विकास शिक्षामा दिशनिास्त्रको स्नातकोत्तर डिग्रीको लाडि शितल बहादुर रा◌िलको ि◌ोध प्रबन्धको "संघीय ि◌ासनमा स्थानीय सरकारको शिक्षामा वित्तीय व्यिस्थाः नेपालमा एक व्यिहाररक अध्ययन" ३१ ि◌ै◌ि◌ाख २०८२ मा प्रस्तुत ि◌ररएको डथयो ।

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प्रा. प्रका◌ि चन्त्र भट्टराई, पीएची

ि◌ोध डनदे◌िक

नेपालको संघीय प्रणालीमा स्थानीय सरकारले शिक्षा क्षेत्रमा न्निपने वित्तीय लिनी एक महत्◌िपूणश बहसको डबषय बन्दै आएको छ । संघीय ि◌ासन व्यिस्थाको ि◌ुरु◌ि◌ात भैसकेपडछ, माध्यडमक तह सम्मको शिक्षाको अडधकार र शिम्मे◌ि◌ारी स्थानीय तहको सरकारमा हस्तान्तरण भएतापडन माध्यडमक तहको शिक्षाको लाडि वित्तीय व्यिस्था (Financing for Education) अझै पडन संघीय सरकारमा डनभशर रहदै आएको देशखन्छ । ि◌ाउँपाडलका तथा निरपाडलकाहरुसँ◌ि स्◌ितन्त्र रूपमा सा◌िशिडनक शिक्षामा ला◌ि◌ानी न्निशसक्ने पयाशप्त कोष ि◌ा रा◌िस्◌ि उठाउने स्रोतहरूको अभा◌ि हरेको छ ि◌सले ि◌दाश स्थानीय तहका सरकारहरु बीच शिक्षामा क्षेत्रमा हुने बिट विडनयो◌िन र खचशमा डनकै डभन्नता (Variation) र असमान्ता (Disparity) रहेको देशखन्छ । यसरी स्थानीय शिक्षामा हुने वित्तीय खक्शातथा लिनीको डभन्नता र असमानताका साथै स्थानीय सरकारले सधै संघीय सरकारको वित्तीय हस्तान्तरणमा डनभशर हुनु पने अिस्थालाई यस अध्ययनको मुख्य समस्याको रुपमा डलइएको छ । सबैका लाडि डनाः◌ि◌ुल्क र ि◌ुणस्तरीय शिक्षाको सं◌ि◌ै धाडनक प्रडतबद्धता भएतापडन स्थानीय सरकारहरूले अझै पडन ि◌ुणस्तरीय शिक्षाको लाडि पयाशप्त वित्तीय स्रोतहरू पररचालनका चुनौतीहरूको सामना

न्निुशपने देशखन्छ ।

तसथश, यो अध्ययन वित्तीय संघीयताको सैद्धाशन्तक ढाँचा डभत्र रवह डनम्न डबषयहरूको अन्ि्ेषण िनशकालाडि ि्ररएको हो : (क) नेपालमा शिक्षा क्षेत्रमा भएको वित्तीय व्यिस्था (Financing for Education) को प्रिृशत्त र शस्थडत , (ख) संघीयतामा स्थानीय सरकारको Education financing सं ि सम्बशन्धत विडभन्न चरहरु (Variables) बीचको अन्तर सम्बन्ध, (ि) स्थानीय सरकारको शिक्षा क्षेत्रको बिेटमा अन्तरसरकारी वित्तीय हस्तान्तरणको योि्दान, (घ) स्थानीय सरकारको प्रकार, स्थानीय सरकारको भौि्ोडलक क्षेत्र र स्थानीय सरकारको प्रादेशिक क्षेत्रहरूको आधारमा स्थानीय सकारका एकाइहरूले ि्रेको बिेट विडनयोि्नको डभन्नताहरू र असमानताहरू ।

यो अध्ययन Post-Positivist Paradigm मा आधाररत Quantitative अनुसन्धान विडध अिलम्बन ि्रेर ि्ररएको डथयो । यस अध्ययनमा नेपालका ७५३ ि्टा स्थानीय तहहरुको वित्तीय तथ्याङ्क प्रयोि् ि्ररएको डथयो । शिक्षा क्षेत्रमा भएको लिनीको Descriptive Analysis सँि् सम्बशन्धत तथ्याङ्क अथमन्त्रालय र नेपाल सरकारको प्रकाशित प्रडतिेदनहरूबाट सङ्कलन ि्ररएको डथयो भने यस अध्ययनको Inferential Analysis को लाडि नेपालको साि्शिडनक वित्त व्यिस्थापन प्रणाली (PFMS) बाट सङ्कलन ि्ररएको डथयो । वि्ेष ि्री स्थानीय सरकारको साि्शिडनक वित्त व्यिस्थापन प्रणाली, Subnational Treasury Regulatory Application (SuTRA) बाट तथ्यांक संकलन ि्ररएको डथयो । संकलन ि्ररएको तथ्याङ्कलाई मुख्य ि्री Descriptive Analysis र Inferential Analysis ि्री दुई भाि्मा विश्लेषण ि्ररएको डथयो । Descriptive Analysis मा ताडलकाहरू, रेखाशचत्रहरू, र ग्राफहरू (शचत्रहरू) प्रयोि् ि्ररएको डथयो भने Inferential Analysis मा Bivariate Correlation Coefficient, Multiple Regression Analysis, र ANOVA ि्स्ता Statistical Tool हरु प्रयोि् ि्ररएको डथयो ।

यस अध्ययनले नेपालमा शिक्षा क्षेत्रको बिेट र खस्रा बढ्दै ि्एको र ि्सले नेपाल सरकारको ि्ैशक्षक लक्ष्य हाँडसल ि्ना शिक्षा क्षेत्रलाई प्रिद्धशन ि्ने प्रडतबद्धता बढ्दै ि्एको देशखन्छ । शिक्षा क्षेत्रको खस्रा हेदाश, संघ र प्रदेि् सरकारहरूको तुलनामा स्थानीय सरकारको शिक्षामा उच्च योि्दान रहेको देशखन्छ; यद्यवप, स्थानीय सरकारको शिक्षा क्षेत्रको बिेटको अडधकतम स्रोत केन्त्रीय सरकारमा नै धेरै डनभशर रहेको छ । यस अध्ययनले वित्तीय हस्तान्तरण, रा्स्ि् बाँ्फाँ्, स्थानीय तहको आन्तररक रा्स्ि्, र सस्थानीय तहको ि्ैशक्षक बिेट र

खशबीचको सम्बन्ध बडलयो र सकारात्कम रहेको देखाउछ । साथै यस अध्ययनले स्थानीय सरकारको शिक्षा बिटको लाडि Non Conditional Grant Transfer को तुलनामा Conditional Grant Transfer सबैभन्दा प्रभाि◌कारी स्रोत रहेको देखाउछ । नेपालमा स्थानीय सरकारको शिक्षा क्षेत्रको बिट र खचश, अन्तर-सरकारी वित्तीय हस्तान्तरण, र रा◌िस्◌ि संकलन क्षमतामा उल्लेख्य डभन्नता र असमानता रहेको पडन यस अध्ययनले देखाउछ ।

यस अध्ययनका डनश्कषशहरु स्थानीय तथा संघीय सरकारका उच्च तथा नीडत डनमाशण तहमा संलग्न नीडत डनमाशताहरू र अभ्यासकताशहरूका लाडि उपयोि◌ी हुनेछन् । यसले अन्तरसरकारी वित्तीय हस्तान्तरण र रा◌िस्◌ि बाँ◌िफाँ◌िमा नीडतित छलफल र डनणशयमा यो◌िदान पुर्याउनका साथै यो अध्ययन भविष्यमा Quantitative Research Method प्रयो◌ि◌रेर शिक्षाको लाडि स्थानीय सरकारको वित्तीय व्यिस्थको अध्ययन ि◌शाचाहने अनुसन्धानकताशहरूका लाडि समेत उपयोि◌ी हुनेछ ।

..... ३१ ि◌ै◌ि◌ाख २०८२

शितल बहादुर रा◌िल
डिग्री उम्मेदिार

This dissertation, entitled *Local Government's Financing for Education in Federalism: An Empirical Study in Nepal,* presented by *Shital Bahadur Rawal* on *14 May 2025.*

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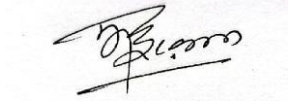
I understand and agree that my dissertation will become a part of the permanent collection of the Kathmandu University Library. My signature below approves the release of my dissertation to any reader upon request for scholarly purposes.



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DECLARATION

I hereby declare that this dissertation is my original work, and it has not been submitted for candidature for any other degree at any other university.

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DEDICATION

This dissertation is dedicated to my beloved daughter, whose unconditional love has been the greatest source of my strength, and to my wife, whose unwavering support and sacrifices have always inspired me to walk in the journey of academia, and to my son and brother-in-law, whose steadfast encouragement has been instrumental throughout this MPhil endeavor.

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In the beginning, I express my great pleasure to present this dissertation to fulfill my MPhil in Development Studies. I would like to express my gratitude to all those who helped me during this academic journey. Without them, it would not have been possible. I am grateful to my dissertation supervisor, Professor and Associate Dean Prakash C Bhattarai, PhD, who guided me through scholarly support, insightful comments, and feedback. He continuously motivated me to do my thesis. More importantly, he provided ample time to guide me academically and improve my dissertation. Similarly, I would like to thank all KUSOED professors and faculty, including the Department Head of Development Studies and the assistant. Prof. Suresh Gautam, PhD, and Asst. Prof. Lina Gurung, PhD, for their continuous support in this endeavor.

I would also like to thank the staff of the Financial Comptroller General's Office, who provided an electronic copy of the fiscal data of 753 municipalities from the system of Subnational Treasury Regulatory Application (SuTRA). Similarly, I would like to thank Mr. Prakash Poudel, PhD, and Mr. Sagar Mani Neupane for guiding me to use the quantitative tools in my thesis by sharing their experience in the quantitative methods.

My family deserves gratitude more than any others for making this journey possible. I am very grateful to my wife, Mrs. Tara Rawal, for supporting me during my MPhil journey. She completely understood me and the importance of my academic journey, although she had a bundle of family responsibilities. I would also like to thank my son, Mr. Yuvraj Rawal, my beloved daughter, Ms. Agrata Rawal, and my brother-in-law, Mr. Vinod Kunwar, who increased my determination to complete this endeavor.

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ABBREVIATIONS

ANOVA	Analysis of Variance
CBS	Central Bureau of Statistics
CEHRD	Center of Education and Human Resource Development
DDC	District Development Committees
ECED	Early Childhood and Development
ESA	Education Sector Analysis
FCGO	Financial Comptroller General's Office
GDP	Gross Domestic Product
GEMR	Global Education Monitoring Report
GoN	Government of Nepal
IGFTs	Intergovernmental Fiscal Transfers
MoEST	Ministry of Education, Science and Technology
MoF	Ministry of Finance
NNF	National Framework
RQ	Research Question
SDG	Sustainable Development Goal
SESP	School Education Sector Plan
SPSS	Statistical Package for Social Sciences
SSDP	School Sector Development Plan
SuTRA	Subnational Treasury Regulatory Application
UNESCO	United Nations Educational, Scientific, and Cultural Organization.
VDC	Village Development Committee

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CHAPTER I
INTRODUCTION

In a federal system, a country operates with multiple levels of government, such as central, provincial, and local, where power and authority are distributed and shared among them by the law. The constitution acknowledges local governments as the closest and autonomous entities of governance for the people within a federal structure (Nonso Alo, 2012). These local governments have the authority to allocate their funds to various public service sectors, forming an integral part of the broader public finance management system (Sharma, 2021). It consists of how the local government mobilizes its financial resources and allocates them for spending on public services, as well as other social and economic sectors at the local level. The resource generation and allocation by the local government depend on the system of governance adopted by the respective state of the Nation (Kharel & Kharel, 2020).

The central level government, called a federation, has the highest level of authority compared to other levels in terms of defense, peace, and security, as well as the national sovereignty of the country. The second level, called the provincial government, has subordinate levels of authority. In most federal countries, a third level of government (local government) also exists. The federation or federal government and sub-national unit of government are sovereign, and the central government cannot unilaterally change their legitimacy (Vasilakakos, 2024). The state's power and authority are allocated and shared among the tiers of government based on the country's Constitution and the principles of federalism.

In Nepal, Federalism was established as a new political system in 2015, which is considered a great political transformation and a big paradigm shift in terms of governance in the history of Nepal (Parajulee, 2021). After the constitution of Nepal was promulgated in 2015, the government adopted a federal democratic republic as a political system. The Constitution of 2015 envisioned that the federal governance system of Nepal would be enacted based on the constitutional principles of mutual coordination, cooperation, and coexistence among all tiers of governance units (Constitution of Nepal,

2015). The Constitution ensures that the powers and authorities distributed under the Constitution are used independently by different levels of government. Although the power and authority were also delegated to local government units in the previously practiced unitary system, it was based on the principles of decentralization. The system of fiscal transfer and revenue sharing was known as grants transfer to the local level governments. The local government was known as village development committees (VDCs), municipalities, and District Development Committees (DDCs), which existed in the unitary system (Lamichhane, 2012). The constitution of Nepal (2015) has ensured three levels of government, such as the federal government, provincial and local government, and the political, administrative, and fiscal power and authority have also been distributed among these three tiers of government accordingly.

In this context, education financing by local government units in the federal system is considered a crucial task in public finance management that ensures the enhancement of human capital formation by providing equitable and quality education (Kharel & Kharel, 2020). The Incheon Declaration of the World Education Forum held in 2015 has defined that education is a merit good and a fundamental right of an individual (Government of Nepal [GoN], 2019). Thus, local governments often subsidize and provide for free education and are also more responsible for spending on education to ensure the quality of education and equitable access to education at the local level. Local governments play a vital role in financing school education by preparing annual education budgets, prioritizing education in local development plans, and mobilizing internal revenues such as local taxes, fees, and service charges. They manage and utilize intergovernmental fiscal transfers from federal and provincial governments, including equalization, conditional, and special grants, ensuring efficient and transparent use of funds.

Education is a paramount sector of any country and a prerequisite for human capital formation, which ultimately contributes to the country's production and productivity growth (Saputra, 2018). However, the government has been facing challenges in connection with economic growth and educational achievement in Nepal. The substantial increase in GDP and educational achievement leads the country towards prosperity. As education is a multidimensional and cross-cutting sector, it has multiple

effects on the economy. So, a significant amount of money is invested in the public education sector to fulfill the socioeconomic goal set by the government (Pal, 2023).

Therefore, financing education is the primary responsibility of the government to ensure the educational rights of people. So, the government spends public funds on education because it is the fundamental right of a citizen and also the duty of the state to ensure inclusive, equitable, and quality education for its citizens (Dangal & Gajurel, 2019). Education is considered a merit good, so the government provides subsidies and grants to it so that backward and marginalized groups of society can consume it (United Nations Educational, Scientific, and Cultural Organization [UNESCO] et al., 2015).

The adoption of a federal governance system in Nepal has far-reaching effects in the field of education (Gyawali et al., 2021). This shift has not only completely altered the management and financing of basic and secondary education, but it has also affected the overall planning process of the education sector development in Nepal. As a result, the government of Nepal introduced a seven-year School Sector Development Plan (SSDP) in 2016 to transform the overall management and financing system of education into a federal structure, and it is considered a foundation of the School Education Sector Plan 2022 (SESP). Now, the School Education Sector Plan is being implemented. The SSDP has been made to reform the existing education system of Nepal and aligned with the commitment of Sustainable Development Goal 4 (SDG4), which sets out to "ensure inclusive and equitable quality education and lifelong learning opportunities for all" by 2030 (Ministry of Education, Science and Technology [MoEST], 2022). As the SSDP was formulated before the operationalization of the federal system, the public schools at basic and secondary levels were funded and overseen by the Ministry of Education; the Education Ministry used to allocate budgetary funds across the nation through district education offices, which then distributed the funds to schools based on thresholds set by the central government. These funds covered the recurring and capital expenditures of schools. While most of the grant components used to be determined based on the number of teachers and students of the school, some schools received a lump sum to cover operating costs, regardless of their size (Gyawali et al., 2021). In the current federal system, the jurisdiction of basic and secondary level education has now been transferred from a federally regulated system to local government in the form of a decentralized

system, and the education governance of basic and secondary level schools has been overseen and funded by local governments. Constitutionally, the authority and responsibility of basic and secondary-level education have been assigned and delegated to the local government units in Nepal (Ministry of Education, Science and Technology, 2021).

Since, this study focuses on to what extent the fund transfer system affects the education financing of local government and the theory of fiscal federalism linking the local government's financing for education in federalism would be a promising framework to explain the contribution of intergovernmental fiscal transfers on local government financing for education in federal Nepal.

Problem Statement

Under the Constitution of Nepal 2015, the authorities and responsibility of basic and secondary level education (school-level) have been assigned to the local government in Nepal (Constitution of Nepal, 2015). This includes planning, budgeting, managing schools, hiring teachers, monitoring performance, and ensuring service delivery at the local level. So, local governments are fully responsible for promoting and enhancing the quality of school-level education. However, there are some obstacles and root causes of insufficient funds for education financing at the local level. Local-level governments often lack adequate funds to fully support school-level education and depend upon central government grants and fiscal transfers in developing countries (Uzun, 2022). The revenue mobilization authority is highly centralized to the federal government, except for local-level property tax and administrative fees; for this reason, they have not been able to generate sufficient funds for equitable investment in education and rely on the intergovernmental fiscal transfer and revenue sharing from the central government (Al-Samarrai & Lewis, 2021). Most local government units are highly reliant on federal conditional grants, especially for teacher salaries and infrastructure. Their own-source revenue is often inadequate to cover core education expenses due to weak administrative capacity to collect taxes and manage finances. Although constitutionally empowered, in practice, many local governments have limited control over education budgets due to rigid conditions attached to federal transfers, which means the financial capacity and autonomy of local governments remain major challenges.

Coordination among various government units is essential to ensure the smooth functioning of the fund flow mechanism (Bhattarai et al., 2021). Moreover, due to the lack of a scientific funding mechanism for school education at the local level, there is a variance in the financing for education among the local governments, which leads to disparities in intra-government financing for school education and impacts educational achievement and the quality of school-level education (Webb et al., 2017). It creates serious obstacles to ensuring equitable access to quality education in Nepal, and a high reliance on the federal government's fiscal transfer for education financing by local government raises a question of concern about the principle of fiscal federalism in the federal structure. Students from economically disadvantaged, geographically remote, and ethnic groups are disproportionately affected by variations in local government financing for education. On the one side, the local government financing trend shows that development sectors like agriculture, Health, education, and infrastructure have been given more priority, and on the other side, there is a significant variation in education budget and spending among all types of local governments in Nepal. These variations lead to uneven educational resources and opportunities. This injustice challenges the fundamental human right enshrined by the constitution that everyone should have equal access to education, which has long-term socioeconomic repercussions and feeds the cycle of poverty and inequality (Lamsal, 2014). A thorough examination of local governments' education budgets and spending patterns supports the fairness of budget allocation and the formulation of laws to address these discrepancies in equal access and opportunity in education.

However, the education system of Nepal has changed significantly in terms of educational reforms after the country adopted the federal system of governance. Education governance has been decentralized to provincial and local governments (Kushiyait, 2022). This transformation has exposed challenges to ensuring equitable and adequate funds for school-level education. Lamsal (2014) argued that Local governments, especially in rural and remote areas, face difficulties in effectively mobilizing resources and managing education budgets. This has resulted in disparities in educational quality and access, impacting the overall development prospects of students across the country.

Purpose of Study

The main purpose of this study is to examine the overall trend of education financing, focusing on the local government units under federalism in Nepal. It explores the source of education financing of local government and the role of intergovernmental fiscal transfer in the local government education budget. This study also investigates the variances and disparities in public education financing among the local government units in Nepal.

Research Questions

The research questions investigate the issues raised in the problem statement section. So, I have determined the following research questions to be investigated through an empirical analysis.

1. What is the overall trend and status of education financing in federalism in Nepal?
2. What is the relationship between the sources of education financing (fiscal transfers, revenue sharing, and internal revenue) and the total education budget of local government?
3. To what extent do inter-governmental fiscal transfers (Grants) contribute to the local government's education Budget in Nepal?
4. To what extent does the education budget differ across the type of local level (government), geographical Region, and the Provincial Territory of local government?

Setting Hypothesis

The following hypotheses have been tested in this study.

Hypothesis 1 (H1)

This hypothesis assumes that the total Grant Transfers, Revenue Sharing, Internal Revenue, and Total Education Budget of local governments are positively associated.

Hypothesis 2 (H2)

This hypothesis assumes that the Inter-Governmental Fiscal Transfers positively contribute to the Local Government’s Education Budget.

Hypothesis 3 (H3)

This hypothesis assumes that the Education Budget differs among the local government units based on the types of local government units, geographical regions, and provincial territories in Nepal.

Significance of the Study

Local government financing for education plays a pivotal role in ensuring quality education, as it directly impacts the resources available for educational institutions and the equitable distribution of educational opportunity (Frroku, 2023; Saputra, 2018). The analysis of local-level government financing for education in Nepal is a crucial part of overall public finance management in Local government (Dangal & Gajurel, 2019). It investigates the potential impact of the intergovernmental fiscal transfer on local government financing for education at the local level. The findings of this research recommend that policymakers and practitioners develop a critical understanding of the financing policies and practices regarding local-level education financing in Nepal. This type of discourse also helps to prepare a critical mass of people to actively advocate for equitable and quality education during the formulation of financing policies in education. Therefore, all people should get their rightful share of the public subsidies on an as-needed basis to make them equitable (Lamsal, 2014). To allocate public subsidies unbalanced towards needy targeted people, a thorough analysis of the existing situation is required, and this study is believed to contribute to this aspect to a certain extent.

The analysis of the education financing system requires an assessment of inputs, processes, outputs, and outcomes, which is quite comprehensive in articulating policy implications at different levels. Such analysis provides policymakers with rich information on financing in basic and secondary level education, which can be used to improve the overall system (Lamsal, 2014). Analysis of the financing policies will also provide useful insights to policymakers by highlighting the policy gaps and challenges. This will ultimately help them design more equitable education financing policies and plans and explore their relations with quality education, leading to social change in Nepal.

Delimitation of the Study

This study particularly focuses on financing for education at the local level government units in the context of federalism in Nepal, which includes only sources of

education financing such as fiscal transfers from the federal and provincial government to the local level, revenue sharing, and internal resources, and budget allocation and spending for education in the local government and it does not include the financing from private sources. . The data regarding the overall education financing trend of five fiscal years (2018/19 to 2022/23) for descriptive analysis and data of a single fiscal year (2022/23) for inferential statistical analysis were used. The Inferential statistical analysis is limited to the education budget of municipal government units only and does not include the education budget of federal and provincial governments. Furthermore, while examining the budget allocation and spending for education at the local level, it does not assess the impact of the education budget on educational achievement and student learning outcomes.

Organization of the Study

I have structured this study into six chapters. The first chapter, Introduction, consists of a statement of the problem, the purpose of the study, the research question, the setting of the hypothesis, the significance of the study, and the delimitation of the study. This describes the overview of the local government financing process and mechanism for education in the context of federalism.

The second chapter, Literature Review, consists of a policy review, thematic review, and theoretical review of literature related to financing for education in the federal system. This includes the global context and national context of education financing, the theory of fiscal federalism, the research gap, and the theoretical framework of the study.

The third chapter, Research Methodology, consists of the philosophy of research, research design, research method, data collection and presentation procedures, regression model specification, reliability and validity of the data, and ethical considerations of the study.

The fourth chapter, Empirical Analysis of Local Government's Financing for Education in Nepal, consists of bivariate correlation coefficient analysis, multiple regression analysis, and analysis of variance. This includes the interpretation of the results obtained from the above statistical tools.

The fifth chapter, Findings and Discussion, consists of major findings and their discussion. This includes the summary of key findings and discussion, as well as the interpretation of the key findings connecting to the related literature.

The sixth chapter, Recapitulation, Conclusion and Implication, includes a summary, conclusions, and implications of the whole study and provides the appropriate recommendations to the policymaker and concerned authority of financing for education based on the research findings.

CHAPTER II
LITERATURE REVIEW

The review of related literature is a crucial task for any researcher. All kinds of literature reviewed in this study are the major sources of my knowledge for this research. So, this section is the most essential part of my study. This is a process of exploring what previous researchers have discovered and leaving it to find out in the area of the study. It is also a way of avoiding investigation problems that have already been researched, and a way forward to new findings. This section comprises the literature review of public financing for education in a global and a national context, a review of policy prospects of local government financing of education in Nepal, a theoretical review of education financing, and a theoretical framework of the study.

Government Financing for Education

The government's financing for education refers to how the government generates and allocates financial resources. This section consists of a literature review of the overall trend of government financing for education in a global and national context; several empirical studies on the impact of government financing (Budget and Spending) for education conducted by various scholars have been reviewed in this study.

Global Context

The global community has collectively established a new educational vision to be achieved by 2030, as agreed upon in Incheon. Consequently, the Education 2030 Framework for Action was developed to implement SDG 4 (Ghanem, 2020). The Framework is a global roadmap to guide countries in achieving the educational goal by 2030 and aims to ensure high-quality education with inclusive and equitable access to education, while promoting lifelong learning for everyone. Through the Incheon Declaration, international communities committed to increasing educational spending to realize the goals of Education 2030 and SDG4 (UNESCO, 2023a).

Regarding education financing, the international community agreed upon expenditure benchmarks for education and set out two international benchmarks of education financing. The first benchmark is GDP, and the second benchmark is total

public expenditure. As per the first benchmark, the country should spend 4 to 6 percent of its GDP on education, and as per the second benchmark, the country should spend 15 to 20 percent of its total government expenditure on education (UNESCO, 2023a). By considering the countries' economic status, meeting any of these benchmarks is considered a minimum requirement for all countries for education spending.

The global landscape of education spending shows that the average education expenditure is 14.10 percent of the total government budget in 2021. However, the educational data for six years (2017 to 2022) of 178 countries shows that more than one-third of the countries could not meet either of the internationally recommended benchmarks for education spending of at least 4% of GDP and 15 % of total public expenditure (UNESCO, 2023a).

The estimated global budget, expenditure, and financing gap for education by 2030 have been presented in Table 1.

Table 1

Average Global Financing Gap in Education (Annual), 2023-2030 (in billion)

Country with Economic Status	Levels of Education				Total
	Pre-Primary Education	Primary Education	Lower Secondary Education	Upper Secondary Education	
Low-income Country:					
Estimated Budget	2	14	5	4	25
Estimated Cost	5	25	13	9	52
Gap	3	10	7	5	25
Lower Middle-Income country:					
Estimated Budget	21	169	88	59	337
Estimated Cost	39	188	104	78	409
Gap	17	19	16	19	71
Total:					
Estimated Budget	23	183	93	63	362
Estimated Cost	44	213	117	87	461
Gap	20	29	23	24	96

(UNESCO, 2023)

The global financing trends (Budget and Spending) presented in Table 1 above show a great challenge in meeting the target of SDG4 by 2030. It is estimated that there will be a vast gap between the world education budget and the expenditure needed for education. The Global Education Monitoring Report (2023) reports that there will be a USD 96 billion average annual financing gap for education in the upcoming 7 years by 2030. This financing gap will hinder the low and lower-middle-income countries from achieving their national target of SDG4. The report shows that, when measured over a longer time interval, the average public spending on education as a share of GDP has increased by a disappointing 0.3% (from 3.9% of GDP in 2005 to 4.2% in 2021).

In addition, the Education Finance Watch shows that government financing for education has not kept pace with the need to recover from the learning crisis, which has resulted from the school closures and disruptions due to the COVID pandemic in 2019 (UNESCO, 2023b). The EFW Report indicates that most countries have reduced or cut their education budgets since the COVID-19 pandemic. Overall, the average decline observed in public spending on education amounted to 13.5% compared to 2020 (UNESCO, 2023b). The sizeable contractions witnessed in public education spending are contributing to a further exacerbation of the learning crisis.

The GEM Report UNESCO (2023b) reports that international assistance for education financing has declined by seven percent globally, and as a result, most low-income countries have been facing the problem of a financial resources gap for education spending since 2020. Due to the lack of substantial financial resources for financing education, many countries are encountering the challenges of attaining the minimum international benchmark of public education spending recommended by the Incheon Declaration (UNESCO, 2023a). The Incheon Declaration has been an international effort to ensure the substantial financial resources to meet the global agenda for Education 2030, which established an international benchmark for Education Spending to provide education for all (UNESCO et al., 2015). As per the UNESCO Report (2023b), some countries could not have met the international benchmark of education expenditure, and they need to expand the portion of public spending in the economy by increasing the share of education spending in the total public expenditure to meet that benchmark of more than 4% of GDP.

Prioritizing education as a long-term investment not only accelerates progress towards achieving the SDG 2030 targets for education, but it is also a foundation in driving progress towards all other Sustainable Development Goals (Abera, 2023). Kulkarni et al. (2022) claim that investing in education is indispensable in securing progress in critical areas like employment and decent work, peace and security, climate action, and healthcare, and significant resources are therefore needed to achieve Sustainable Development Goals for ensuring continuous and quality education for all. Mobilizing sufficient resources and prioritizing investment in education systems is pivotal in advancing progress in global development.

An Empirical study conducted by Musah et al. (2024) in sub-Saharan Africa shows that education is the foundation of a well-civilized society. It not only plays a crucial role in social welfare but also supports the building of competent human resources and the economic development of the country. The government, therefore, invests in education. They concluded that education spending has short-term and long-term impacts on educational quality in sub-Saharan Africa. The analysis shows that education spending by the government influences the overall educational performance and educational achievement of all levels of education, such as basic, secondary, and higher education, in both the short and long run, which indicates that the government financing for public education effectively and positively contributes to the education quality. Therefore, sub-Saharan Africa should allocate a substantial budget to public education.

According to the study of Nguyen-Hoang (2024), Vietnam's government has recognized the importance of education with its commitment to spending at least 20% of its budget, central and local, on education. In this investigation, the authors examine provinces' legal documents specifying how general-purpose funds are allocated to schools within their jurisdiction and found substantial variation in the provincial allocation of resources between salary and non-salary purposes, among schools of different grade levels, for socioeconomically disadvantaged students, and for students with disabilities. Given that nearly 90% of the resources for education in Vietnam are put to use by local authorities.

The fiscal expenditure of the Chinese government on education shows that public expenditure on basic-level education in China positively influences household education

spending, meaning that the relationship between public financing for education and household spending for education in China is positively associated (Feng et al., 2023). Similarly, a study conducted by Nuta et al. (2023) showed that the funding of central and eastern European countries in education significantly contributes to their GDP. It also reveals that a long-term interdependent relationship exists between education spending and GDP in Europe. In many of these former communist nations of Central and Eastern Europe, public expenditure on education has significantly influenced GDP, indicating that education spending has a substantial impact on the economic performance of these countries. Annabi et al. (2011) also established a clear-cut relationship between public spending on education, human capital, and economic growth in Canada.

However, Sikayena et al. (2022) argued that public spending on education influences not only economic growth but also heavily impacts the human capital of the world. Public investment in education and health plays an important role in human capital development in developing countries, which is ultimately a paramount foundation for gross domestic product. The public investment in human capital through education and health substantially contributed to economic growth and had a significant impact on social change in Africa. Thus, the government spending of African countries on human capital formation has increased over the years. However, there is still insufficient government financing for the health and education sectors compared to other development sectors, and it is also found that there is much more public investment in health than in the education sector in Africa (Sikayena et al., 2022).

However, a study conducted by Farayibi and Folarin (2021) shows that there was a human capital crisis in sub-Saharan Africa that influenced the country's economic growth. This indicates that there is a weakness in the African education system in terms of global competitiveness. They also claimed that effective government financing for the education sector would increase learning outcomes as a whole in African countries, leading to human capital formation on the continent (Farayibi & Folarin, 2021).

An empirical study conducted by Rambeli et al. (2021) explored the validity of the education-based economic growth in Malaysia during the global economic crisis of 2008. Following the 2008 economic crisis, the Malaysian government sustained a long-term and stable economic growth. The study showed that the relationship between

education spending and economic growth is positively associated, particularly during the post-crisis recovery period. The study also showed that the increment in education spending by the Malaysian government has increased the post-crisis economic growth in Malaysia, which means the investment in human capital at different levels of government is important to the economic growth of a nation.

Recuero and Olaberria (2018) claimed that government investment in per-student and better teacher qualifications is positively associated with educational outcomes and achievement. For the betterment of the education quality of the country, the government should spend a substantial amount of financial resources on the education sector and human capital. He also claimed that the government invests more in education and teachers' capacity building, and higher qualifications will contribute to an increase in the overall educational performance of students and achievements. It also shows that the highest public investment per student made by the government can increase scores by 8 percent.

Furthermore, Jasmina and Oda (2017) pointed out that there is a disparity in education among districts in Indonesia due to unequal education spending. Similarly, Nepal has not yet overcome the budgetary disparities among provinces and local levels (Bhattarai et al., 2023). If the government spends the public funds as recommended by government expenditure benchmarks on education, it will indeed increase the quality of education and reduce the disparity in education. However, there is a limit to education spending in Indonesia. The government of Indonesia implemented a basic education plan that mandates the central government and local government to allocate and spend public funds for education as per the global benchmark for education spending. The education plan recommends that all levels of government in Indonesia allocate a minimum of 20% of their total budget for education (Saputra, 2018).

National Context

Gyawali et al. (2021) assess the school education financing of Nepal in an ADB Brief in 2021 and found that the public expenditure seems to have increased more rapidly than Nepal's gross domestic product (GDP). Out of total public expenditure, there has been an increase in education expenditure by 11.4% per year on average during the last eight years (2011-2018). However, the budget trend shows that there is an increment in

the education budget as a share of GDP by 1.4% in 2018, whereas education expenditure as a share of total government expenditure has declined during the same period by 4% in 2018 (declined from 18% in 2011 to 14% in 2018. Similarly, the government has increased education expenditure per student enrolled in community schools. This also showed that there was a 66% increase in spending per student on basic education from 2011 to 2018 (Gyawali et al., 2021).

Ministry of Education, Science and Technology [MoEST] (2021) shows in the Nepal Education Sector Analysis Report that the trend of internal resource mobilization for education in Nepal is gradually increasing, whereas external funding has declined (Ministry of Education, Science and Technology, 2021). The government's financial mechanism for public education financing and its role in school funding need to be reformed and revisited, and the allocation formula should be revised in terms of federalism. The report outlines that there is a strong demand for education, but great dissatisfaction among parents with public schools. They perceive that public schools are not good enough, and that public schools cannot provide better education than private schools. So, the private schools are the first choice for their children's education. Consequently, they are ready to choose private schools and pay large amounts of money for their children. This may raise the question of equitable access to quality education in public schools.

A study conducted by Dangal and Gajurel (2019) claimed that education is the key component of building effective and efficient human capital in the country that enhances and enforces national production and productivity, which eventually contributes to economic growth and prosperity. So, government investment in education is essential for achieving the development goal set out by the government. However, the investigation shows that education spending and economic growth of Nepal are not positively associated, which means education spending negatively impacts the long-term economic development of Nepal. This may be because of inefficiency and mismanagement of public funds, lack of investment quality, and unequal distribution of public funds for education in Nepal. It is suggested that the government of Nepal and policymakers should emphasize and focus on technical and vocational education to

generate domestic employment opportunities to foster sustainable economic development (Paudel et al., 2025).

In the constitution, the basic and secondary level education in Nepal falls under the jurisdiction of the local government (Table 2), which includes the overall governance of pre-primary (ECD), primary, and secondary school management at the municipal level (Neupane, 2019). As Nepal is a highly diverse country in terms of caste, ethnicity, and language, with low development indicators, the equitable distribution of public funds to provide inclusive and quality education is a challenging issue. Neupane (2019) suggested that the challenges and barriers to education-related socioeconomic issues should be addressed by formulating and implementing a proper education policy so that local governments can deliver effective and efficient public services. However, Sharma (2021) argues that the primary challenge facing many local governments, particularly in developing nations, is the growing disparity in financial resources available and the expenditure demands of municipalities. This fiscal gap is largely driven by the rapid urban population growth, which escalates the need for public services, new infrastructure, and ongoing maintenance. Therefore, the local governments in Nepal often rely on fiscal transfers from the central government. The property taxes and service charges of local government units contribute a smaller share of revenue at the local level. There is a significant fiscal gap between public service assignments and revenue authority in local government, which creates challenges in managing fiscal imbalances.

Policies Review

There are many policy provisions for education in Nepal. In this section, I have studied and reviewed the most relevant policy arrangements regarding public financing for education in Nepal, which consist of the constitutional provision for education and its financing, the Local Government Operation Act 2074, the National Education Policy 2019, the National Framework for SDG4, and the School Education Sector Plan 2022.

Constitution of Nepal 2015

Nepal's constitution serves as the supreme law governing the nation's socioeconomic and political systems. Referred to as the mega policy and politico-economic document of the country, it was enacted in 2015 by the Sovereign Constitution Assembly of Nepal. The constitution enshrines education as a fundamental right,

guaranteeing every citizen access to compulsory and free education up to the secondary level (Constitution of Nepal, 2015). The Constitution of Nepal has delegated the responsibilities, personnel, and financial resources for education to lower levels of government. Local governments are responsible for basic and secondary education, while provincial governments oversee universities, libraries, and higher education. Likewise, Central universities, central-level academies, university standards and regulations, and the central library fall under the jurisdiction of the central government. This type of political transition to a new form of governance system may require increased institutional capacity to govern the public education service, particularly at the local government (Ministry of Education, Science and Technology[MoEST], 2021).

By the constitution of Nepal, the functional authority and responsibilities regarding education have been distributed and assigned under the jurisdiction of different tiers of government. Table 2 shows the jurisdiction of education under the different levels of government.

Table 2

Distribution of Educational Jurisdictions under the Federal System in Nepal

Level of Government	Jurisdictions		
	Sole Authority	Concurrent Authority of Federal and Provincial Govt.	Concurrent Authority of Federal, Provincial, and Local Govt.
Federal Government	Central University, central level academies, university standards and regulations, central library (Schedule 5).	Scientific research, science and technology, and human resource development (Schedule 7)	Education, Health, and Newspapers/Magazines (Schedule 9)
Provincial Government	Provincial-level universities, higher education, libraries, and museums (Schedule 6).		

Local Government	Basic and Secondary Education. (Schedule 8).

(Constitution of Nepal, 2015)

Table 2 above reveals that the authority and responsibility of education have been shared among the different tiers of government by the constitution in Nepal. As per Schedule 8, the education up to secondary level (ECD to class 12) falls under the jurisdiction of the local level.

Local Government Operation Act 2017

The Local Government Operation Act 2074 is the main guiding document of the overall governance of local government units in Nepal. Under this guideline, all the municipal governments deliver public services directly related to local people's livelihoods at the local level and operate development activities at the local level. The governance of basic and secondary level education has been assigned to the local government under this act. This includes the operation and regulation of Early Childhood Development (ECD), as well as approval of establishing community and institutional schools at the local level (Government of Nepal, 2017). Similarly, this act constitutes the authority for the formulation of a plan, policy, and laws, as well as the implementation, monitoring, and evaluation of educational plans and programs regarding informal education. This act also mandates local governments to regulate alternative learning, community learning, and special education at the local level in Nepal.

This operating Act allows the local governments (municipalities) to operate and provide permission to establish community, institutional, Trust-run (Guthi), and cooperative schools within their territory, and they are entitled to operate, manage, and regulate them. Under this Act, the local government units are also autonomous in planning, authorization, restructuring, and regulation of schools; development, implementation, and regulation of technical and vocational training programs at the local level; and oversight of schools offering instruction in native languages (Government of Nepal, 2017). They are also responsible for the establishment and management of the village education committee at the rural municipality level, the municipal education committee at the urban municipality level, and the school management committee at the school level. Their authority extends to the designation of school names, coordination and

alignment of teaching and non-teaching staff positions in community schools, and enhancement of educational quality through the provision of learning materials. Additionally, local governments manage the ownership, documentation, preservation, and administration of community school properties, as well as oversee the assets of schools that have been merged or closed.

National Education Policy 2019

The government of Nepal introduced a new education policy in 2019 after the transformation of the previously practiced governance system into a federal system. The policy was formulated to align the existing education system with this new governance structure and safeguard the constitutional right to basic education. This policy proposes to ensure free and compulsory education up to the basic level (grade 8), provide free education up to the secondary level, and guarantee free access to higher education for individuals with disabilities and those from economically disadvantaged backgrounds (Constitution of Nepal, 2015).

The main slogan of the National Education Policy 2019 is 'Educated, civilized, healthy and competent human resources, social justice, transformation, and prosperity'. The slogan has been aligned with the long-term goal of Prosperous Nepal and Happy Nepali of the Nepal government. The National Education Policy aims to develop the country as a center of excellence with world-class education quality and produce competent and productive skilled human capital, so that the country can attain its long-term goal (Ministry of Education, Science and Technology [MoEST], 2019). The policy mainly focused on the development of human capital by ensuring quality education with an advanced technology-based education system. So, technical education for all has been set out as a prominent strategy of this policy. It intends to provide technical and vocational education to all interested people (Bhattarai, 2020). Based on the principle of positive discrimination, the National Education Policy 2019 ensures that the government provides inclusive and special education for disabled children to meet their learning needs (Shahi, 2022)

The National Education Policy 2019 also emphasizes building up highly skilled, qualified, and self-motivated teachers in all schools by providing capacity-building opportunities and monetary and non-monetary incentives. According to this policy, the

performance evaluation of the teachers is measured based on the learning achievement of students. This provision will make teachers responsible for the educational performance and outcomes of the students (Neupane, 2019)

Ultimately, the Nepal National Education Policy 2019 has been brought to bring reforms in the education sector to materialize the slogan of Education for All and to eliminate illiteracy through formal and nonformal education in Nepal.

National Framework for Sustainable Development Goal 4: Education 2030

The government of Nepal, the Ministry of Education, formulated this framework in 2019 after the commitments expressed in the international declaration of Sustainable Development Goal 4 (SDG4), Inchon Declaration 2015. The Inchon Declaration's aim is to ensure inclusive and equitable education and promote lifelong learning opportunities for all (Sunthonkanokpong & Murphy, 2019).

Subsequently, Nepal has demonstrated its commitment to global and regional educational goals by endorsing key international frameworks. Following its adoption of the 2030 Agenda for Sustainable Development, the country also signed the "Education 2030: SAARC Framework for Action" to support the achievement of SDG 4 (GoN, 2019). In response to these commitments, Nepal has formulated the Nepal National Framework (NNF) for SDG 4: Education 2030, which serves as a national strategy to align with and contribute to both regional and global education agendas (Adhikari & Shah, 2021).

This Framework is a guiding document for providing quality education to all in Nepal. It was designed with the social justice and equity principle to guarantee inclusive and equitable access to quality education for all individuals, regardless of their background or circumstances. It emphasizes the importance of lifelong learning opportunities that empower individuals throughout their lives (Albert et al., 2023). In addition to fostering academic achievement, the Framework seeks to cultivate a culture of peace, civic responsibility, environmental consciousness, social cohesion, and shared national values. It also prioritizes the development of practical skills and the promotion of entrepreneurship, aiming to enhance individuals' employability, support sustainable livelihoods, and drive economic growth. Ultimately, the Framework aspires to build a more educated, harmonious, and economically resilient society.

This Framework highlights the importance of advancing the use of Information, Communication, and Technology (ICT), promoting scientific thinking, encouraging innovation, and supporting knowledge generation to build a knowledge-driven economy. It also focuses on strengthening institutional capacities to improve the effectiveness and efficiency of the education sector delivery (GoN, 2019).

School Education Sector Plan 2022

The government of Nepal formulated the School Education Sector Plan(SESP) in 2022, with a comprehensive discussion with stakeholders on the foundation of the five-year School Sector Development Plan 2016 (Ministry of Education, Science and Technology, 2022).

It was developed to enhance equity, quality, and efficiency within the education system, ensuring that educational programs and reforms remain relevant and responsive to the evolving national context. It incorporates innovative strategies and initiatives aimed at addressing emerging challenges and priorities in the education sector. The main objective of this plan was to develop a capable, well-governed, accountable, and competitive public school education system by strengthening and enhancing the overall education mechanism in Nepal that supports inclusive learning opportunities and meets the diverse needs of all students. This ensures high-quality education with international standards (Ministry of Education, Science and Technology, 2022). The School Education Sector Plan (SESP) 2022 is a comprehensive policy framework developed by the Government of Nepal to enhance the quality, equity, and inclusiveness of the school education system. One of its central goals is to fulfill the constitutional mandate outlined in the Constitution of Nepal, which guarantees the right to free and compulsory education up to the basic level (grades 1-8) and free education at the secondary level (grades 9-12) for all children. This commitment reflects the state’s obligation to ensure that no child is denied access to education due to financial constraints or socio-economic barriers (Ministry of Education, Science and Technology, 2022). In the context of education financing in federal Nepal, the SESP 2022 analyzed the current trend and status of financing for education in Nepal, presented potential resource availabilities for education, and estimated resources for proposed programs. The SESP expected that all units of the

government of Nepal should be able to finance public education through improved financial management mechanisms.

Fifteenth Plan (2019/20-2023/24)

The fifteenth periodic development plan pointed out that Nepal's education sector faces structural challenges, including limited access for marginalized groups, high dropout rates, and low learning outcomes. Teacher distribution is uneven, and technical education remains poorly integrated. Financial constraints hinder the right to education. Misalignment between education and the labor market leads to unemployment. Additionally, poor governance, underdeveloped reading culture, weak institutional management, and brain drain further undermine the sector's effectiveness (National Planning Commission, 2019). However, the education sector's vision focuses on developing human resources for socio-economic transformation. The overarching goal is to produce creative, skilled, competitive, productive, and innovative individuals through quality education. Key objectives include universal access to free and compulsory basic education, provision of early childhood education, and equitable access to high-quality, practical, and technology-friendly secondary education (National Planning Commission, 2019).

In the federal context, public financing for education has become a shared responsibility across federal, provincial, and local levels (Parajuli et al., 2024). Strengthening financial control mechanisms has therefore become a priority. The Fifteenth Plan of Nepal emphasizes the need to regularly assess financial risks across all levels of government and to build institutional capacity in public financial management (National Planning Commission, 2019). It highlights the importance of enhancing the capacities of the National Natural Resources and Fiscal Commission and other stakeholders involved in fiscal federalism. The plan also proposes that internal debt mobilization be guided by scientific methods, macroeconomic indicators, and subnational borrowing capacities. To reduce financial risks and ensure fiscal discipline, risk assessment frameworks are to be introduced, particularly at provincial and local levels. Furthermore, the adoption of an electronic system is planned to improve the transparency, equity, and predictability of intergovernmental fiscal transfers. Within this evolving federal structure, local governments are increasingly tasked with ensuring the delivery of

basic education, managing resources effectively, and aligning local priorities with national educational goals. However, challenges remain in terms of resource adequacy, financial autonomy, institutional capacity, and coordination across levels of government.

Theoretical Review

This section reviews the key theoretical framework relevant to government financing for education in the federal system. The theoretical reviews set the stage for understanding the key concepts, relationships, and perspectives underlying the research. This provides a conceptual lens to understand the relationship between fiscal policies, budgetary decisions, and their impact on education financing at the local level, and the theoretical framework integrates theories from public finance, decentralization, education economics, and development studies to explain how the overall financing policies and practices impact local government financing for public services delivery.

Several theories are relevant to local government financing for education, such as fiscal decentralization, public goods, fiscal federalism, human capital, resource dependency, and social capital theories. The relevance of these theories can be different based on the specific context. The fiscal decentralization theory and the theory of fiscal federalism are interrelated and considered more relevant to the financing of education in the federal context.

Theory of Fiscal Federalism

Richard Musgrave (1910-2007), a German-American economist, propounded the theory of fiscal federalism. He is popularly known as a prominent contributor to the theory of public finance (Jha, 2015). Musgrave's major contributions to the theory of public finance and the theory of fiscal federalism are the Three-Function Framework of the economic function of government, i.e., allocation, distribution, and stabilization (Musgrave, 1959).

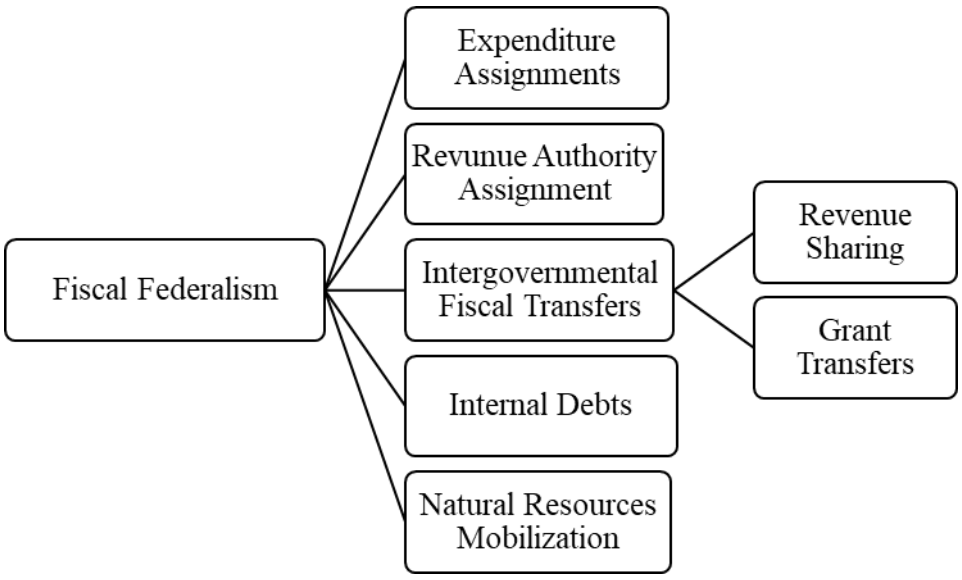
The theory assumes that local governments are better positioned to identify and address local needs, thereby improving the allocation of resources and service quality. However, critics argue that the effectiveness of decentralization depends heavily on local capacity, institutional arrangements, and intergovernmental coordination (Rao, Bird, & Litvack, 1998). This theory examines the distribution of functional authority and intergovernmental fiscal relationships among the different tiers of government. It

provides insights into how the decentralization of financial resources to local governments can impact the efficiency and effectiveness of public service delivery (Lamichhane, 2012).

The revenue collection and expenditure authority are decentralized at sub-national levels of government, and local governments are entitled to set tax rates and tax base (Akai & Watanabe, 2020). It assumes that the responsibilities of public service delivery are assigned to the sub-national government by the national government, with public spending authority (Nonso Alo, 2012). There are four conceptual aspects of fiscal federalism: Expenditure assignment, Revenue Assignment, intergovernmental fiscal transfer, and internal borrowings (Devkota, 2020). The revenue collected by the sub-national government contributes to the total national revenue, which reflects revenue decentralization in the federal system (Akai & Watanabe, 2020). The theory of fiscal federalism emphasizes the three core functions of public finance in the federal system, such as the expenditure for public goods, revenue collection, and intergovernmental fiscal transfer among subnational governments (Musgrave,1959; Oates, 1972). The components of fiscal federalism are presented in Figure 1.

Figure 1

Components of Fiscal Federalism



(Intergovernmental Fiscal Arrangement Act, 2074, Nepal)

The Expenditure Assignment

The assignment of expenditure authority and power to the subnational government is a primary conceptual aspect and principle of Fiscal federalism theory (Lamichhane, 2012). In the federal governance system, the authorities and responsibilities are assigned to the subnational units of government to provide public service delivery at the subnational level. It is a decentralization of public function. To perform the delegated function, there is an authority to expend the public fund for public services such as education and health, which is called an expenditure assignment. The public service functions, along with expenditure authority of the national government, are assigned to subnational units of government based on the principle of efficiency in spending public funds (Shah, 1994). Expenditure assignment is considered foundational because it determines the scope and nature of responsibilities delegated to subnational governments, such as education, health, infrastructure, or local governance. Without clearly defined expenditure responsibilities, revenue assignment lacks purpose and direction. Subnational governments must first know what services they are expected to

provide to assess how much revenue is needed and which sources of revenue are appropriate and sufficient (Bird, 1990).

The expenditure authority and revenue collection authority assignments are both the most essential components of federalism, and without expenditure assignment, the revenue collection assignment would not be effective in the decentralization process. Moreover, the principle of public finance is to address the fiscal deficit through internal revenue and should match expenditure needs (Bahl, 2008).

Revenue Assignment

The revenue collection authorities are delegated to the sub-national governments to finance the local-level service delivery in the federal governance system. The major objectives of revenue assignment are to allocate resources efficiently among various levels of government, match revenue sources with the expenditure responsibilities of each level, and contribute to the overall economic stability of the country by ensuring all levels of government have access to stable and predictable revenue sources. The local governments are entitled and autonomous to raise their internal revenue through tax assignments such as local sales tax, land tax, hourly rent tax, property tax, and other administrative fees. However, the efficiency of resource mobilization and the capabilities of local governments in underdeveloped countries must be strengthened (Bird, 1990).

Sub-national governments can also secure loans or debt from higher levels of government and financial institutions for development activities within their jurisdictions. This principle of subnational governments' borrowing is to support the local government spending, which depends on the state legislation of the respective country (Lamichhane, 2012). Generally, the subnational governments have the right to take internal borrowings from the national government and other local financial institutions in a federal system. When the subnational governments cannot cover public expenditures, they should have the right to borrow to fulfill their expenditure obligations (Giugale et al. 2001). Internal borrowing is a crucial and often favored method for addressing these financial needs and fulfilling revenue gaps. Therefore, in a federal system, local and provincial governments should be granted the authority to finance development expenditures through internal borrowing. However, this provision has not yet been implemented in Nepal, and

subnational governments are unable to secure borrowing due to a lack of an appropriate law and an Act.

Intergovernmental Fiscal Transfers and Revenue Sharing

Fiscal transfers between various levels of government are crucial for subnational financing, as they help balance local revenue with expenditure responsibilities while advancing both national and local policy objectives like equity and economic cohesion. The structure and implementation of these transfers significantly affect fiscal responsibility, macroeconomic stability, fairness, efficiency, and the quality of public service delivery (Shah, 2007).

There are three main reasons for intergovernmental fiscal transfers. Firstly, these transfers allow the central government to generate more revenue while fostering positive relationships with sub-national governments. The sub-national governments can deliver quality services transparently and efficiently to meet public needs. Secondly, significant disparities often exist in the revenue-generating capacities of sub-national governments. To address this, the central government provides fiscal transfers to lower-income regions, helping to bridge resource gaps and support local economic development (Shah, 1994). Thirdly, transferring resources from the central to sub-national levels enables the units of government to address national priority areas of public services. This approach promotes equity, enhances the efficiency of sub-national governments, and supports poverty reduction initiatives at the grassroots level (Shrivastava, 2002).

Acharya and Bhusal (2024) claimed that intergovernmental fiscal transfers and revenue sharing serve as vital mechanisms for local governments to address fiscal gaps and reduce inequalities by supplying the financial resources needed to carry out their assigned functions. It is an important public sector finance tool. This is used to fill the gap between revenue-raising capacity and expenditure needs of subnational governments.

Although the subnational governments handle the management and decision-making of public education financing, they typically depend on central government transfers. In countries with decentralized systems, these fiscal transfers make up a significant portion of subnational government revenues, including financing for education at the subnational level (Al-Samarrai & Lewis, 2021).

The constitution of Nepal mandates that the federal government transfer funds to the sub-national units of government to bridge such a fiscal gap. Devkota (2020) explained that fiscal transfers are generally divided into four types: fiscal equalization, conditional, special, and matching grants. Among these, fiscal equalization grants are the most significant in scale and, as required by the constitution, must be distributed considering the spending requirements and revenue capacity of sub-national governments.

Research Gap

The research gap is a problem and question that has not been explored and studied previously. It identifies what is missing or unstudied in the existing literature. The research gap highlights the areas where current research is lacking and previous studies have not addressed the research problem.

While studying literature related to my study, I explored many research articles, case studies, seminar papers, dissertations, etc., regarding public financing for education. Kharel and Kharel (2020) indicate that the success of budget execution is assessed through how effectively local resources are utilized to deliver public services and promote development. Lamichhane (2012) conducted a study on fiscal federalism and local government finance in Nepal and suggested that the four major components of fiscal decentralization need to be clearly defined by the government so that the local governance system would ensure financing of public services. Similarly, Lamsal (2014) researched Financing Primary Education in Nepal to assess the impact of financing policies in primary education from an equity perspective and explore the relationship between equity in financing policies and education in terms of progress.

Nguyen-Hoang (2024) claimed that significant variation in the provincial allocation of resources in education in Vietnam. A study conducted by Uzun (2022) concludes that the system of governance can also affect the education of a country. He also claimed that the centralized unitary system of public administration in Turkey affects the overall education system and education outcomes; however, the local units receive a significant share from the central budget for financing education. So much research and studies were conducted on public finance focusing on education and found to be relevant to my research; however, the impact of fiscal transfer on the education budget and

variance in the education budget of local government has not been studied. So, this study has been conducted to fill the research gap in the literature.

Local governments are still dependent on intergovernmental fiscal transfers from higher levels of government, even in a federal system, especially on federal equalization and conditional grants transfers for public financing in Nepal (Devkota, 2020), which is a question of concern about federalism. There is a significant variance in the financing for education among the local governments, which indicates disparities in financing for education at the school level. This financing variance and disparities significantly influence the educational outcome, leading to disparities in educational quality in connection with access and equality in education across municipal governments and geographic regions of local government.

The education sector analysis report 2021 suggested that governments need to prioritize ensuring inclusive and equitable education in terms of access, participation, and learning attainment (Ministry of Education, Science and Technology, 2021). The current budget allocation mechanism in public education sectors, which is heavily based on the traditional system of governance, needs to be revised and revisited. The analysis of the resources gap between local government expenditure needs and available resources for education indicates that the government should evaluate and review the current financing mechanisms to reduce disparities. The variance in government budget and spending on school education and the heavy reliance of education financing on the federal government's fiscal transfers are considered a main research gap yet to be addressed. As I explored and studied several related literatures, I found that the research specifically on the role of intergovernmental fiscal transfer to local government financing for education in Nepal has not been undertaken.

There is a lack of comprehensive quantitative research on how local government financing for education is influenced by the fiscal transfer from higher levels, which can measure the influence of public education financing on overall school education in Nepal. Many studies focus on qualitative assessments without providing robust numerical data, while there is considerable literature on the impact and role of national public finance on the national education system. There is less focus on how local government public finance specifically affects school-level education in Nepal. So, I would recommend that

scholars, educators, and practitioners research the answer to these unanswered questions through empirical investigation.

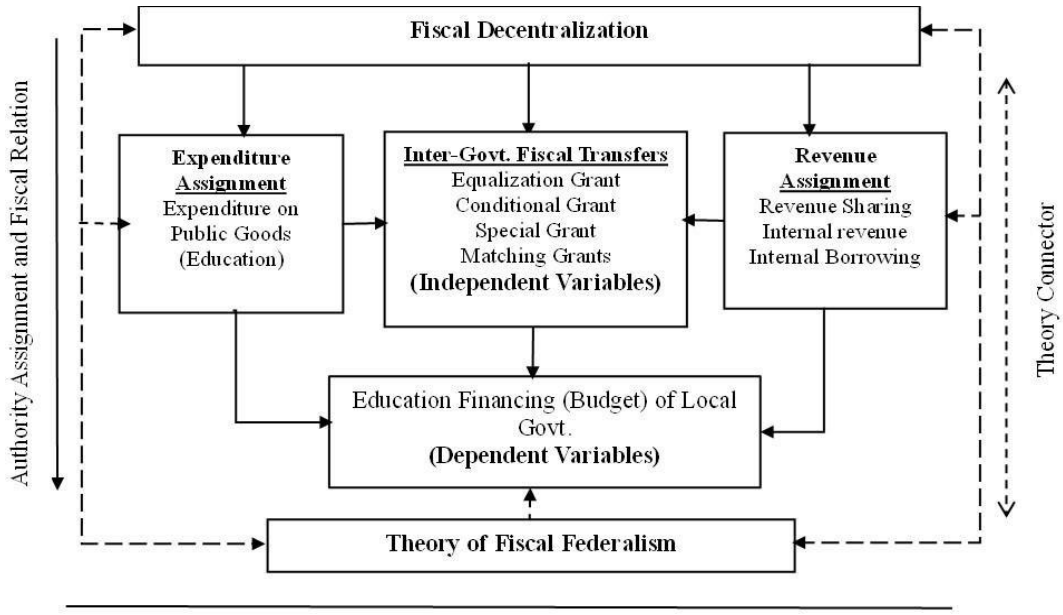
Conceptual Framework of the Study

As my study on local government financing for education in federalism is deeply rooted in the theoretical principle of fiscal federalism and fiscal decentralization theory, I have adopted the theory of fiscal federalism as a theoretical framework for my research. It focuses on the importance of aligning fiscal responsibilities with revenue-raising capacity and making expenditure decisions, fiscal transfers, and revenue sharing among the different levels of government.

Based on the above theoretical background, the following conceptual framework (Figure 2) has been developed to empirically test the impact of intergovernmental fiscal transfer on financing for education in Local governments. The framework includes variables and measures of public finance and basic components of fiscal federalism, such as expenditure assignment, revenue assignments, intergovernmental fiscal transfer (IGFS), revenue sharing, internal revenue, and internal borrowings of subnational governments.

Figure 2

Conceptual Framework of the Study



Concluding the Chapter

This chapter has reviewed the literature on education financing in a federal context, focusing on the major debates on disparity in the government's financing for education among the subnational units of government in federalism. There is a disparity and fiscal gap in education financing, which impacts the equity, access, and quality of education. It also explored how the education sector is financed by the government in the global scenario as well as the national context, highlighting the policy provisions and practice of government financing for education. As this study is found to be more relevant to the theory of fiscal federalism, it was conducted based on the framework of fiscal federalism theory, focusing on the intergovernmental fiscal transfer dimension of fiscal federalism. This chapter also draws on the importance of local-level government investment in education by analyzing previous findings and their critical analysis. Furthermore, this chapter provided a conceptual framework of current studies based on the concepts, ideas, and linkages of theories.

CHAPTER III
RESEARCH METHODOLOGY

This chapter is a crucial part of any research report, as it includes the overall plan and methodology to be adopted for the research work. The research methodology chapter comprised the philosophy of research, research design, source of data, sample size, data collection, presentation and interpretation, data analysis tools and techniques, Data analysis strategy, reliability and validity, and ethical considerations.

Philosophy of the Study

The research philosophy encompasses the fundamental beliefs and assumptions that guide how a researcher perceives the nature of reality (ontology), understands knowledge (epistemology), and defines the relationship between the researcher and the subject being studied (Wright et al., 2016). In this study, the philosophical orientation has been clearly articulated to reflect the worldview that informs the research design and methodological decisions, ensuring coherence and alignment throughout the inquiry process.

Ontology

I have adopted a post-positivist ontology to study the local government's financing for education in federalism in Nepal. Post-positivism accepts that reality exists but recognizes that we can never fully observe or measure it with complete certainty. It acknowledges that all observations are fallible and theory-laden. It values empirical research but also recognizes the role of values, context, and interpretation. So, as a post-positivist, I believe that the reality of the impact of intergovernmental fiscal transfer on education budget can affect the education spending of subnational government, and variances in the education budget and spending by local government result in disparity in educational participation, poor education performance, and weak quality education can be understood imperfectly. Social phenomena on equity exist in an objective world, but there are some lawful, reasonably stable relationships among them (Teddlie & Tashakkori, 2009). This ontological stance, often called critical realism, claims that reality is socially

constructed and influenced by social interaction and interpretation. Knowledge about reality or truth depends on how different stakeholders construct and perceive this objective reality (Creswell, 2012). For example, in studying why girls drop out of school in rural Nepal, a critical realist approach would go beyond survey data to explore underlying causes like cultural norms, poverty, or weak institutional support that may not be directly visible but still affect behavior.

Epistemology

Based on the above post-positivist ontology, the epistemological stance of my research is that knowledge is derived from rigorous methods and empirical evidence, and it is understood that knowledge is fixed. The theoretical perspective of post-positivism is a flexible research perspective (Panhwar et al., 2017). This epistemological stance emphasizes the objective measurement and verification of phenomena through empirical investigation. However, it does not support the assumption of a single reality and objectivity in the knowledge of classical positivism. The knowledge about how intergovernmental fiscal transfers impact the education financing of local government and disparities in education financing by the government impact educational achievement and quality of education, and the theory of fiscal federalism and practice through perception and experience, is dealt with under the epistemological stance of this study. This philosophical paradigm emphasizes that knowledge about reality is perceived through the quantitative research methodology. Based on the above philosophical perspective, I plan to conduct an empirical study on local government financing of education in the federal context in Nepal through a post-positivist paradigm.

Axiology

Axiology concerns the value and ethics of study and how value judgment influences various aspects of human life. I believe that the local government's financing for education is the public accountability and resource distribution for the public good, which ensures equitable resource distribution based on the principle of social justice, public accountability, and transparency in local government.

Research Design

The research design serves as a comprehensive framework for conducting a study, outlining the chosen research method, procedures for data collection, and strategies for

data analysis and interpretation. In this study, a quantitative research approach has been adopted to address the research questions. The collected data have been analyzed and interpreted using SPSS software.

This analysis has focused on the total government budget, fiscal transfers to local government, revenue sharing among local governments, and education spending of local-level government in Nepal. My investigation was based on an empirical analysis of local government financing for education in Nepal, which mainly examined the relationship and association between local governments' education budget and expenditure, and sources of education financing at local governments in Nepal.

Source of Data and Sample Size

This study has employed secondary data. The fiscal data regarding the government's financing for education has been collected from the central accounting system of the Financial Comptroller General Office (FCGO), particularly from the Sub-national Treasury Regulatory Application (SuTRA) and the official publication of the Ministry of Finance of Nepal. The fiscal data from the SuTRa were collected with a request letter (Annex-1 Recommendation Letter) of Kathamdu University, School of Education. Besides this, the consolidated report of FCGO has also been used. The educational data related to this study have been collected from the Flash Report of the Ministry of Education, Nepal. The necessary data and information relevant to this study have been collected from the National Statistics Office (NSO), Nepal.

The total number (N=753) of local government units has been taken as a sample for this study. The fiscal data of 753 municipalities regarding education financing have been analyzed in this study. The sample size of this study has been categorized based on three dimensions: the types of local government, the geographical location, the Provincial Territory, and the geographical situation.

Dimension 1: Municipal Division of Local Government

The data relating to the local governments' financing for the education of all 753 local governments have been classified based on the types of local government. The sample size categorized based on the Types of Local Government has been presented in Table 3 below.

Table 3

Types of Local Government

Type of Government	Number of Local Governments	Percentage (%)
Rural Municipalities	460	61.1
Urban Municipalities	276	36.7
Sub-Metropolitan cities	11	1.5
Metropolitan cities	6	0.8
Total	753	100

Table 3 shows that there are 460 Rural Municipalities in Nepal, which is 61.10% of the total units of local government, 276 Urban Municipalities, which is 36.70%, 11 Sub-Metropolitan Cities, which is 1.50%, and 6 Metropolitan cities, which is 0.80% of the total 753 units of local government. This indicates that the majority of the sample of my study is from rural municipalities (RM = 460, 61.10%). The second largest sample is Urban Municipalities (UM= 276, 36.1%), similarly, the third largest sample is Sub-Metropolitan Cities (SMC= 11, 1.5%), and the last and smallest sample is Metropolitan Cities (MPC= 6, 0.80%) of 753 units of local government.

Dimension 2: Geographical Region of Local Government

According to the Local Government Operation Act 2074, the geographical regions of Nepal have been classified into five regions: the Terai Region, Hilly Region, the Mountain Region, the Inner-Madhesh Region, and Kathmandu Valley. Based on these geographical regions, all the above samples of 753 local government units have been further categorized for this study in Table 4 below.

Table 4

Geographical Regions of Local Governments

Geographical Situation	Number of Local Governments	Percentage (%)
Terai Region	252	33.5
Hilly Region	260	34.5
Mountain Region	160	21.2

Inner-Madhesh Region	60	8.0
Kathmandu Valley	21	2.8
Total	753	100

(Local Government Operation Act, 2074 (Appendix 1))

The above table 4 shows that the 252 (N=252) local governments fell under the Terai Region, which is 33.5% of the total sample size. Similarly, 260 (N=260) local government units fell under the Hilly Region which is 34.5% of the total sample size, 160 (N=160) fell under the Mountain Region which is 21.2% of the total sample size, 60 (N=60) fell under the Inner-Madhesh Region which is 8% of the total sample size and 21 (N=21) local government units fell under the Kathmandu Valley which is 2.8% of the total sample size.

Dimension 3: Provincial Territory of Local Government

There are seven provinces in Nepal. The data regarding the local government's financing for the education of 753 local-level units have been classified based on the provincial territory. The sample size categorized based on Provincial Territories has been presented in Table 5 below.

Table 5

Provincial Territory of Local Governments

Provincial Territory	Number of Local Governments	Percentage (%)
Koshi Province	137	18.2
Madhesh Province	136	18.1
Bagmati Province	119	15.8
Gandaki Province	85	11.3
Lumbini Province	109	14.5
Karnali Province	79	10.5
Sudur Paschim Province	88	11.7
Total	753	100

The Table 5 shows that the 137 (N=137) local government units fell under the Koshi Province, which is 18.20% of the total sample size, the 136 (N=136) units fell under the Madhesh Province, which is 18.10% of the total sample size, the 119 (N=119) units fell under the Bagmati Province, which is 15.80%, the 85(N=85) local government units fell under the Gandaki Province, which is 11.30%, the 109 (N=109) units fell under the Lumbini Province, which is 14.50%, the 79 (N=79) units of local government fell under the Karnali Province, which is 10.5% and 88 (N=88) units which is 11.70% of total sample size fell under the Sudur Paschim.

Data Analysis Tools and Techniques

The data regarding the government's financing for education, collected from different secondary resources for this research, were gathered into a Microsoft Excel Sheet first in a tabular form, and particularly, the data to be statistically analyzed were modified and updated in the form of a dataset for SPSS. After making it compatible by modifying the Excel file for the SPSS Dataset by adding and naming the necessary Variables, it was imported into the SPSS file.

SPSS was used to analyze the statistical data. The following statistical tools were used in this study to analyze and interpret the data.

Bivariate Correlation

The bi-variate correlation coefficient analysis of some major variables has been used to explore the relationship between intergovernmental fiscal transfers from the higher level of government and the education budget and expenditure.

Initially, I used a bivariate correlation analysis tool to investigate the degree of relationship among different variables regarding education financing at the local level. It helped me to explore the nature of relationships between variables.

Multiple Regression Analysis

A multiple regression analysis was also performed to understand the impact of intergovernmental fiscal transfers (independent variables) on the education budget (dependent variable) of local government. This analysis helped me to explore the impact of fiscal transfer on the education budget at the local level. Before conducting the multiple regression, the underlying assumptions of multiple regression (parametric test) have been checked.

Analysis of Variance (ANOVA)

The tool ANOVA is more relevant to assessing whether disparities in education financing exist or not, as well as indicating the degree of dispersion (Sherman & Poirier, 2007). Thus, ANOVA has been performed to confirm the statistical significance of the prevailing inequalities in education financing at the municipality level in Nepal. It helped me to judge whether the disparities and unequal distribution of education budgets among local governments in different geographical locations are statistically significant or not.

Model Specifications

The following equation for the multiple regression model has been developed to estimate the overall impact of intergovernmental fiscal transfer on the municipal (Local government) education budget. In this model, the Education Budget of local government has been taken as a dependent variable, and fiscal grants transferred from the federal and provincial governments to local governments for education financing have been taken as the independent variables.

$$Y=a+B_1X_1+B_2X_2+B_3X_3+B_4X_4+B_5X_5+B_6X_6+B_7X_7+B_8X_8+E\ldots\ldots\ldots\ldots\ldots\ldots (i)$$

Where;

Y = Local government Education Budget

a = Intercept

B = Coefficient of Each Grant Transfer

X1 = Federal Equalization Grant Transfer

X2 = Federal Conditional Grants Transfer

X3 = Federal Special Grant Transfer

X4 = Federal Matching Grant Transfer

X5 = Provincial Equalization Grant Transfer

X6 = Provincial Conditional Grants Transfer

X7 = Provincial Special Grant Transfer

X8 = Provincial Matching Grant Transfer

E = Error Term (Residuals)

Data Analysis Strategy

The data analysis strategy adopted for this research is presented in Table 6 below.

Table 6

Data Analysis Strategy

RQN	Research Question	Analysis Strategies	Hypothesis
RQ1	What is the overall trend and status of the government's financing for Education in Nepal?	Descriptive analysis of education financing in Nepal	Descriptive Table and Diagrams
RQ2	What is the relationship between the sources of education financing (fiscal transfers, revenue sharing, and internal revenue) and the total education budget of local government?	Bivariate Correlation Coefficient Technique.	H1
RQ3	To what extent do intergovernmental fiscal transfers (Grants) contribute to the local government's education Budget in Nepal?	Multiple Regression	H2
RQ4	To what extent does the Education Budget differ among the types of local governments, Geographical Regions, and Provincial Territories	(One-Way ANOVA)	H3

Description of Variables and Data Source

The descriptions of variables and the data used in this study are presented in Table 7.

Table 7

Description of Variables and Data Source

RQ	Variables	Description	Types of Measure	Sample Size	Data Source	Year (BS)
RQ1	National Budget	National Budget	Continuous	753	MoF, MoEST	2018/19-022/23
	Edu. Budget	Total Education Budget	Continuous	753	MoF, MoEST	2018/19-022/23
	Edu. Expenditure	Total Edu. Expenditure	Continuous	753	MoF, MoEST	2018/19-022/23
	Foreign Assistance	Foreign Grants and Loans	Continuous	753	MoF, MoEST	2018/19-022/23
RQ2	TFED_GT	Total Federal Grant Transfer	Continuous	753	FCGO, MoF	2022/023
	TPRO_GT	Total Provincial Grant	Continuous	753	FCGO, MoF	2022/023
	TREV_SHARE	Transfer	Continuous	753	FCGO, MoF	2022/023
	TINT_REV	Toral Revenue Sharing	Continuous	753	FCGO, MoF	2022/023
	EDU_BUGDT	Total Internal Revenue	Continuous	753	FCGO, MoF	2022/023
	EDU_EXPEND	Edu. Budget of Local govt Edu. Exp of Local govt	Continuous	753	FCGO, MoF	2022/023
RQ3	FED_EG	Federal Equalization Grant	Continuous	753	FCGO, MoF	2022/023
	FED_CG	Federal Conditional Grant	Continuous	753	FCGO, MoF	2022/023
	FED_SPG	Federal Special Grant	Continuous	753	FCGO, MoF	2022/023
	FED_MG	Federal Matching Grant	Continuous	753	FCGO, MoF	2022/023
	PRO_EG	Provincial Equalization Grant	Continuous	753	FCGO, MoF	2022/023
	PRO_CG	Provincial Conditional Grant	Continuous	753	FCGO, MoF	2022/023
	PRO_SPG	Provincial Special Grant	Continuous	753	FCGO, MoF	2022/023

	PRO_MG	Provincial Matching Grant	Continuous	753	FCGO, MoF	2022/023
RQ4	TYP_LGOV	Types of Local Government	Categorical	753	FCGO, MoF	2022/023
	GEO-REG	Geographical Region	Categorical	753	FCGO, MoF	2022/023
	PRO_TERR	Provincial Territory	Categorical	753	FCGO, MoF	2022/023

Reliability and Validity

The principles of reliability and validity are the basic concerns of the quantitative research method, which measures the consistency of the data in the same group or different groups and at the same point of time or in different periods (Cohen et al., 2007); whereas credibility, transferability, conformability, and dependability are used in the qualitative approach.

I have used secondary sources of data and a quantitative research approach for my study. The reports and other source documents that I have used for my study are nationally representative longitudinal studies that applied rigorous methods and tools to maximize validity and reliability. Since the sources that I have used in this study are the government's published report and the public finance management database system, the data and results of the study are reliable.

The data and information used in this study were collected by a request letter from Kathmandu University, School of Education. The secondary data from the system of the Financial Comptroller General's office of the Nepal government was downloaded into an Excel sheet. All the data gathered in the Excel sheet was rearranged and exported to SPSS to make it compatible for analysis. So, during the arrangement of data, no data or cases were lost or manipulated. I am confident that all the data were originally analyzed and the results of this study are reliable and valid.

Ethical Consideration

In any research, the researchers are required to consider the ethical considerations of the study while conducting research. According to Alcser et al. (2011), ethical considerations are necessary from the initial stage to the end of research. This study was conducted based on ethical norms and research values. I have followed the research guidelines and ethical principles pointed out by Halai (2006) for this study. Data and information used in the study were kept confidential (Halai, 2006). All the research work has been undertaken based on the ethical norms and values of social and academic research. No data, information, or text from other research has been plagiarized. Any sources of data and information presented in the research report have been referenced as per the guidelines of Kathmandu University.

Concluding Chapter

This chapter presented a detailed and structured account of the overall research process adopted in this study. It began by introducing the underlying research philosophy, which shaped the study's approach to understanding the nature of reality and knowledge. The methodology section elaborated on the quantitative research method selected to address the research questions effectively. Furthermore, the chapter thoroughly discussed the research design, including the rationale behind selecting the specific study area, defining the target population, and employing appropriate sampling techniques to determine a representative sample size. In addition to outlining the research design, this chapter meticulously describes the entire process of data collection. It also presented the analytical procedures used to process the data, including both descriptive and inferential statistical methods. The selection of these techniques was justified by the nature and scale of the data collected.

CHAPTER IV
AN EMPIRICAL ANALYSIS OF LOCAL GOVERNMENT'S FINANCING FOR EDUCATION IN NEPAL

This chapter presents a detailed analysis of local governments' financing of education in the context of federalism in Nepal. It is comprised of two major sections: Descriptive Analysis and Inferential Analysis. The descriptive analysis includes the trend and status of education financing in Nepal, focusing on local government financing for education. In this section, tables, graphs, and other descriptive statistics on education financing have been presented. All the tables and graphs presented in this section have been thoroughly described and analyzed to reveal the trend and status of education financing, such as the education budget and expenditure trend. It also presents the portion of the education budget in the National budget, the source of the education budget, and the distribution of the education budget and expenditure within the federal system. The inferential analysis includes testing different aspects of local government financing for education using various statistical tools and techniques. Parametric tests such as the bivariate correlation coefficient, multiple regression analysis, and variance analysis (One-Way ANOVA) have been used in this section to test the hypothesis of the respective research questions.

Descriptive Analysis of Education Financing in Nepal

The secondary data regarding education financing published in the Redbook of the Ministry of Finance (MoF) and the Annual Policy, Program, and Budget of the Ministry of Education, Science, and Technology (MoEST) have been used for the descriptive analysis. The trends of the education budget and its share in the National Budget, the composition of the federal education budget, the distribution of the education budget in different tiers of government, foreign grants and foreign loans (Foreign Assistance) for the education budget, and the source of municipality-wise local government education budget have been analyzed in this section as follows.

The Trend of the Total Education Budget.

Table 8 below presents the trend of the national budget, total education budget, and share of the education budget in the national budget for five consecutive fiscal years (2018/2019 to 2022/2023). The total education budget included the education budgets of all three tiers (Federal, Provincial, and Local) of governments.

Table 8

The Trend of the Total Education Budget in Nepal (Rs. In Lakh)

Fiscal Year	Total National Budget	Total Education Budget of Nepal	
		Amount	Percentage (%)
2018/2019	13151617	1345087	10.23
2019/2020	15329671	1637559	10.68
2020/2021	14746454	1717122	11.64
2021/2022	16475767	1800411	10.92
2022/2023	17938373	1963931	10.95

(Combined from the Redbook of MoF and the Budget Sheet of MoEST)

Table 8 reveals that the national budget has been fluctuating, whereas the total education budget of Nepal has been increasing since 2018, spanning the five fiscal years. This means the trend lines of both the National and education budgets show an increasing trend. This also showed that the share of the total education budget in the national budget is almost 11% in Nepal.

Education Expenditure Compared to GDP and GoN Expenditure

Table 9 below presents the public education expenditure trend incurred by the Nepal government in comparison with the country's Gross Domestic Product and total Expenditure.

Table 9

The Education Expenditure Compared to the GDP and GoN Expenditure (NPR Billion)

Year	GDP	Total GoN Expenditure	GoN Expenditure for Education		
			Amount	% of GDP	% of Total GoN Exp.
2015/16	2253.20	671.70	92.40	4.10	13.76
2016/17	2675.50	717.30	112.30	4.20	15.66
2018/19	3458.80	1031.60	141.30	4.09	13.70
2019/20	3767.00	1062.30	164.30	4.36	15.47
2020/21	4312.90	1392.20	190.30	4.41	13.67

(Nepal Education Sector Analysis, 2021, page no 160, MoEST)

The above Table 9 reveals that GoN expenditures for education have been increasing since 2015 during the following five consecutive fiscal years in Nepal. This also shows that the Nepal government has been spending about 4.5% of the National GDP and 14.5% of total government expenditures on education.

Distribution of Education Budget in Federal Structures

The status of the total education budget allocated by the three levels of government within five fiscal years has been presented in Table 10 below.

Table 10

Distribution of the Education Budget in Federal Structures (NRs in Lakh)

Fiscal Year	Total Education. Budget	Federal Govt.		Province Govt.		Local Govt.	
		Budget	%	Budget	%	Budget	%
2018/2019	1345087	465364	34.60	28573	2.12	851150	63.28
2019/2020	1637559	652817	39.87	42532	2.60	942210	57.54
2020/2021	1717122	558689	32.54	50989	2.97	1107444	64.49
2021/2022	1800411	601067	33.38	50234	2.79	1149110	63.82
2022/2023	1963931	700532	35.67	53236	2.71	1210162	61.62
Average Contribution (%)			35.21		2.64		62.15

(Budget Sheet of the MoEST)

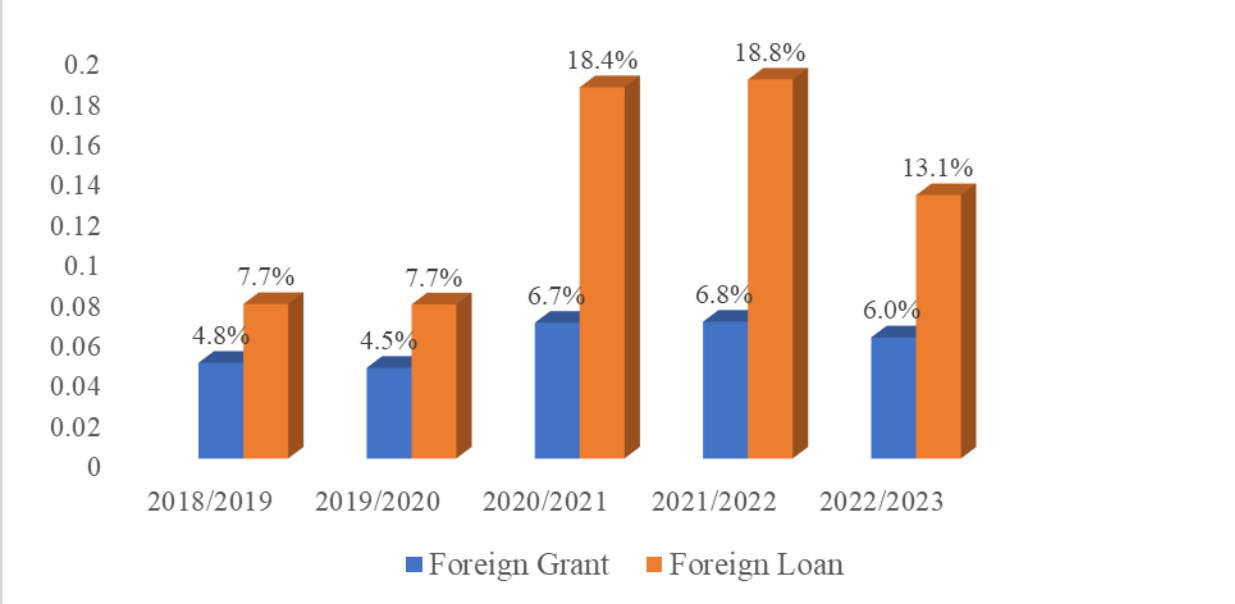
Table 10 reveals that the federal government contributes almost 35.21%, the provincial government contributes almost 2.64%, and the local government contributes 62.15% to the total education budget. This indicates that the local government allocates higher amounts of budget to education among all three levels of government in Nepal. It also shows that the provincial government is the least contributor to the total education budget. It indicates that most educational resources are allocated by the local level government; however, all three tiers of government finance education in Nepal.

Foreign Assistance in the Federal Education Budget

Nepal has been receiving international cooperation from different bilateral and multinational agencies for development activities. There is also a significant portion of international cooperation (Foreign Assistance) in the education sector. The foreign assistance received by the Nepal government for the education budget of the federal government during the five fiscal years has been presented in Figure 3 below.

Figure 3

Foreign Assistance in Federal Education Budget in Nepal (%)



(Redbook, Ministry of Finance, Nepal)

The above figure shows that during the five fiscal years, the foreign assistance in the federal education budget has increased by almost two times in fiscal year 2020/2021 and 2021/2022. However, there has been a sudden decline in foreign assistance in the fiscal year 2022/2023. This indicates that there is a substantial contribution of foreign

assistance to the federal education budget, and this also indicates that there is a higher portion of foreign loans in the federal education budget as compared to foreign grants. However, there has been a sudden decline in foreign assistance in the fiscal year 2022/2023. It also shows that the total foreign assistance (foreign grants and foreign loans) has been increasing during the five fiscal years. It indicates that the federal education budget has been financed by foreign assistance (foreign grants and loans).

Source of Education Budget in Federal Structure in 2022/023 (2079/080)

The following Table 11 presents the total education budget allocated by all three levels of government in f/y 2022/023 with its budgetary sources. The sources of the education budget of f/y 2022/023 are the Nepal government, foreign grants, and foreign loans, and their contribution to the education budget has been presented in Table 11 below.

Table 11

Sources of Education Budget in Federal Structure in 2022/023 (2079/080)

Level of Governments	Source of Education Budget (in Million)			Total Education Budget
	Nepal Government	Foreign Grants	Foreign Loans	
Federal Level	56669.60	4216.30	9167.30	70053.20
Provincial Level	4939.10	236.90	147.60	5323.60
Local Level	107218.80	4664.10	9133.30	121016.20
Total	168827.50	9117.30	18448.20	196393.00
% of Contribution	85.96	4.64	9.39	100

(MoEST, 2079/80)

Table 11 shows that the main source of education budget for all tiers of government is the Nepal Government; however, there is a significant amount of foreign assistance (Foreign grants and foreign loans) in the education budget. To observe the total sources and total education budget in the fiscal year 2022/023, the Nepal government contributes 85.96%, foreign grants contribute 4.64%, and foreign loans contribute 9.39% to the education budget, respectively. This indicates that foreign loans contribute more than foreign grants to Nepal's education budget.

Sources of Education Budget at the Municipal Level in F/y 2022/023

The education budget of 753 municipal units of local government has been categorized into four municipal levels: Rural Municipality (640), Urban Municipality (276), Sub-Metropolitan City (11), and Metropolitan City (6). The sources of the education budget of all municipal units have been presented in Table 12 below.

Table 12

Source of Education Budget at Municipal level in 2022/023 (2079/080)

Local Government Units	Sources of Education Budget *(Rs. in Thousand)*			
	Federal Transfer (Average)	Provincial Transfer (Average)	Internal Revenue (Average)	Revenue Sharing (Average)
Rural Municipality (640)	150650.90	2730.27	5308	5319
Urban Municipality (276)	232178.01	2572.88	7618	9770
Sub-Metropolitan City (11)	499643.48	7086.64	27066	21965
Metropolitan City (6)	941007.33	6471.67	153038	29774
Total	1823479.73	18861.45	193029.85	66827.77
% of Contribution	86.74	0.90	9.18	3.18

(Financial Comptroller General's Office, MoF)

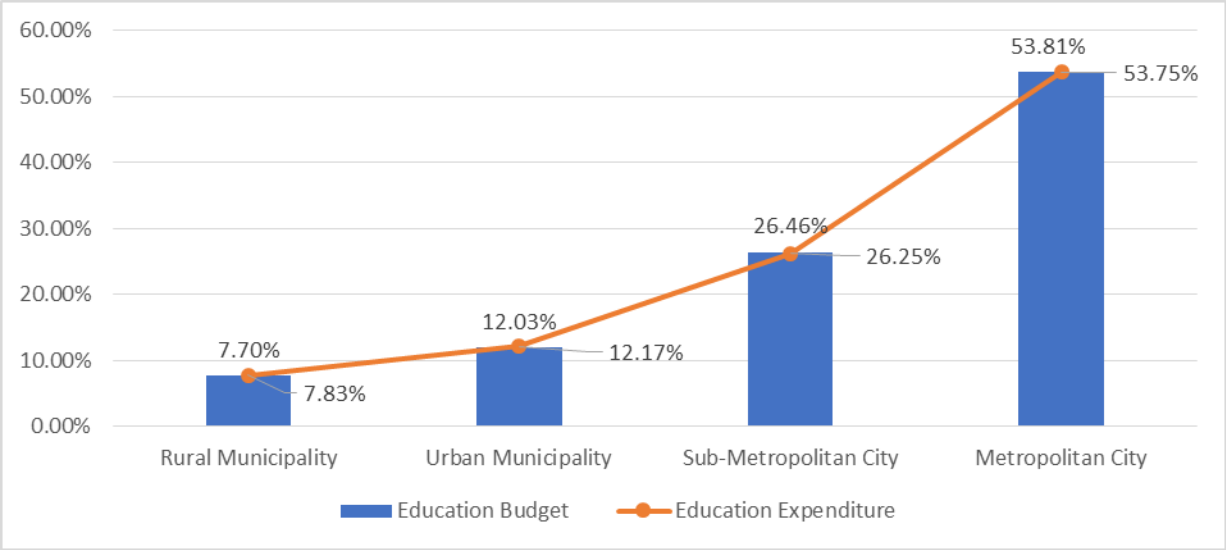
There are four sources of the education budget at the municipal level. Table 12 reveals that the fiscal transfer from the federal government is the main source of financing for education at the municipal level, which contributes 86.74% of the total municipal education budget among all four sources of the education budget in fiscal year 2022/023. It is also seen that the budgetary transfer from the provincial government is the second source of financing for education; however, it is the least contributor to the municipal education budget, which contributes 0.90% of the total municipal education budget. Similarly, the Internal Revenue of municipalities and Revenue Sharing contribute 9.18% and 3.18% to the total municipal education budget, respectively.

Status of Education Budget and Expenditure at the Municipal Level

The status of the total mean education budget and mean education expenditure in the fiscal year 2022/023 has been presented in Figure 3 below.

Figure 4

Education Budget and Expenditure of Local Government in f/y in 2022/023



Source: SPSS Data Set

Figure 3 presents the average education budget allocation and education expenditure at all four municipal levels in fiscal year 2022/023. The above figure shows that Rural municipalities allocated 7.70%, Urban Municipalities allocated 12.03%, Sub-Metropolitan cities allocated 26.46%, and Metropolitan cities allocated 53.81% for education financing at the local level in the fiscal year 2022/023. It indicates that the Metropolitan cities have allocated the highest amount of budget in education as compared to other municipal levels, and Rural Municipalities have allocated a lower amount of budget in education in 2022/023.

Similarly, education expenditure is also simultaneously increased with education budget allocation. The above figure shows that the Rural Municipalities spent 7.83%, Urban Municipalities spent 12.17%, Sub-Metropolitan cities spent 26.25%, and Metropolitan cities spent 53.75% of the total education expenditure in fiscal year 2022/023. It also indicates that metropolitan cities have higher education expenditure than other municipal levels, and rural municipalities have lower education expenditure than other municipal levels.

Inferential Statistical Analysis of Education Financing

In this section, the inferential analysis of education financing in Nepal has been undertaken by the use of inferential statistical tools such as the bivariate correlation,

multiple regression analysis, and analysis of variance (ANOVA) have been used to conduct the statistical analysis of local government financing for education in this section.

Association of Education Financing Variables

I have performed the bi-variate correlation to measure the level of association between inter-governmental fiscal transfers, revenue sharing, internal revenue, education budget, and expenditure of Local governments. The bi-variate correlation coefficient analysis effectively identifies the degree of relationship between an input and output variable, so the input (independent) variables of this analysis are intergovernmental fiscal transfers, such as total federal fiscal transfer and provincial fiscal transfer from the federal government and the provincial government, respectively, and revenue sharing and internal revenue of local governments. Likewise, the output (dependent) variable is the local government's education budget. The relationships between these variables are explained in Table 13 below.

Table 13

Descriptive Statistics of Variables Used in Correlation Analysis in 2022/023

Variables	Mean	Std. Deviation	N
Total Federal Grant Transfer	389478.19	189369.83	753
Total Provincial Grant Transfer	34070.99	26243.24	753
Total Revenue Sharing	110152.07	109101.88	753
Total Internal Revenue of Local Govt	171047.64	759848.90	753
Total Education Budget of Local Govt	208566.12	139596.23	753
Total Education Expenditure of Local Govt	189988.57	126795.97	753

(Calculation from the dataset in correlation analysis, SPSS)

The total number of observations for Pearson's correlation analysis is 753, which is the total number of local governments all over Nepal. Table 13 above shows that the average grant transfer from the central government to the local government is calculated as Rs. 389,478.19, and the standard deviation is Rs. 189,369.83, while the mean and standard deviation of fiscal grant transfers from the provincial government to the local

government are calculated as Rs. 34,070.99 and Rs. 26,243.24, respectively. This indicates that the federal government transfers more fiscal resources to the local level than to the provincial government.

Likewise, the mean and standard deviation of total revenue sharing of local government are calculated as Rs. 110,152.07 and Rs. 109,101.88, respectively. Similarly, the mean and standard deviation values of the internal revenue (Internal resources) of the local government are calculated as Rs 171,047.64 and 759,848.90, respectively, and the mean and standard deviation of the education budget of 753 local government are Rs 208,566.12 and Rs.139,596.23 respectively whereas the mean and standard deviation of education expenditure is calculated as Rs 189988.57 and Rs.126,795.97 respectively.

In this bivariate correlation analysis, I have used Pearson's correlation coefficient tools to explore the level of relationship among the variables regarding financing for education at the local level. Data analyzed for Pearson's correlation has been presented in Table 14 below.

Table 14

Pearson's Correlations between Variables.

Variables	Federal Grant Transfer	Provincial Grant Transfer	Revenue Sharing	Internal Revenue	Education Budget
Federal Grant Transfer	1				
Provincial Grant Transfer	.481**	1			
Revenue Sharing	.783**	.403**	1		
Internal Revenue	.567**	.265**	.805**	1	
Education Budget	.936**	.432**	.795**	.645**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Pearson's correlation coefficient analysis, as shown in Table 14, indicates that all variables included in the study are significantly and positively correlated. This suggests a

positive association between the education budget and expenditure of local governments and the selected independent variables.

The analysis reveals a moderate positive correlation between Federal Grant Transfer and Provincial Grant Transfer (r = 0.481), indicating that an increase in federal grants is moderately linked with an increase in provincial grants. A strong positive correlation exists between Federal Grant Transfer and Revenue Sharing (r = 0.783), suggesting that these two variables are closely related. Similarly, Federal Grant Transfer shows a moderate positive correlation with Internal Revenue (r = 0.567), implying a moderate association between these two variables.

Furthermore, the Federal Grant Transfer exhibits a very strong positive correlation with the Education Budget (r = 0.936), signifying a strong link between federal transfer and educational financial allocations at the local level.

Regarding the Provincial Grant Transfer, it has a weak positive correlation with Revenue Sharing (r = 0.403), indicating a relatively low but positive relationship. The correlation between Provincial Grant Transfer and Internal Revenue is very weak (r = 0.265), showing a minimal association. Similarly, Provincial Grant Transfer has weak positive correlations with the Education Budget (r = 0.432), suggesting a modest link.

In addition, Revenue Sharing demonstrates a strong positive correlation with Internal Revenue (r = 0.805) and Education Budget (r = 0.795), indicating that higher revenue sharing is strongly related to increased internal revenue and education-related funding.

Lastly, Internal Revenue shows a moderate positive correlation with the Education Budget (r = 0.645), suggesting that greater internal revenue is moderately associated with higher educational budget allocation.

All the variables, such as federal grant transfer, provincial grant transfer, revenue sharing, internal revenues, and education budget of the local governments, were found to be positively associated and statistically significant at a 0.01 (1%) alpha level. This means the assumption of the null hypothesis has not been satisfied. Therefore, the Null Hypothesis (H0) is rejected. Alternative hypothesis (H1) is retained, meaning that H1 cannot be rejected because there is a significant positive association among the total grant

transfers, revenue sharing, internal revenue, and total education budget of local governments. This means all the variables are positively associated with each other.

All these relations discussed above are statistically significant. This means these variables are valuable resources for the education financing of local government in Nepal, which should be considered while designing and formulating the education financing policy.

Contribution of Fiscal Transfers to the Education Budget of Local Government

From the bi-variate analysis, significant correlations are found between sources of education financing (input variables) and education budget and expenditures (output variables). However, the bi-variate analysis does not predict the effect size and contribution of the predictor variable(s). Multiple regression is closer to reality and is generally used in practice rather than simple regression. Therefore, I have conducted a multiple linear regression analysis to determine the predictability of fiscal transfers on the education budget of local-level government. The main purpose of the multiple regression analysis in this study is to determine whether the fiscal transfer from the higher level of government influences the education budget of the local government in the federal context in Nepal.

Assumptions Testing

The basic assumptions of multiple regression have been tested to determine whether they are within the threshold or not to ensure the validity of the result. These assumptions are also called the rule of thumb for parametric tests. These assumptions are: 1) No issue of multicollinearity, 2) No issue of autocorrelation among residuals, 3) No issue of non-normality of residual distribution, and 4) No issue of Heteroscedasticity in residual distribution.

Multicollinearity Test

To test whether multicollinearity exists among predictors, the variation inflation factor (VIF) is tested, which is presented in Table 15 below for this study.

Table 15

Collinearity Statistics

Independent Variables	Tolerance	VIF
Federal Equalization Grant	.191	5.243
Federal Conditional Grant	.279	3.588
Federal Special Grant	.899	1.112
Federal Matching Grant	.835	1.198
Provincial Equalization Grant	.254	3.943
Provincial Conditional Grant	.855	1.170
Provincial Special Grant	.903	1.107
Provincial Matching Grant	.871	1.149

Table 15 shows that the majority of independent variables have a tolerance value closer to 1, and Variance Inflation Factors (VIF) are less than 5. However, the Variance Inflation Factor (VIF) of the Federal Equalization Grant is slightly higher than 5 (VIF=5.24). The Variance Inflation Factor (VIF) value below 10 is often considered acceptable, particularly in large sample sizes. This threshold helps ensure that there is no problematic multicollinearity among the predictors. Chatterjee and Hadi (2015) and Gujarati and Porter (2009) suggested that a VIF value below 10 is generally considered acceptable, indicating that multicollinearity is not severe enough to unduly affect the stability and interpretation of the regression coefficient. A VIF of 10 or more typically indicates severe multicollinearity, while some researchers flag values as low as 4 (tolerance of 0.25) as potentially problematic. A tolerance below 0.10 (VIF $\geq$ 10) is often considered a critical threshold (O'Brien, 2007). This threshold helps ensure that the regression model is reliable and that the coefficient estimates are not inflated due to the high correlation among the independent variables. Daoud (2017) suggested that tolerance is the amount of variability in one independent variable that is not explained by the other independent variables, and it is 1- $R^{2.}$; tolerance values greater than 0.10 indicate no collinearity at all.

This means the VIF value of the Federal Equalization Grant, which is 5.243, is considered acceptable. So, the first assumption, 'No issue of multicollinearity' of multiple regression, has been satisfied. This indicates there is no multicollinearity problem in fitting the multiple regression model. After testing multi-collinearity, the multiple regression model can be developed to test the impact of fiscal transfers on the education budget of local government (Dependent variable).

Durbin-Watson Test

No issue of autocorrelation in the residuals is another assumption of multiple regression, which means the residuals must be independent, or the independent variable should not be autocorrelated. The Durbin-Watson (DW) test is one of the reliable statistical tools for detecting the independence of errors in the residuals. This means the DW-test checks whether the autocorrelation in residuals exists or not in a regression model, which is presented in Table 16 below.

Table 16

Auto-correlation Statistics (Test of Independence of Error)

Test	Statistics (DW-test)
Durbin-Watson	1.640[a]

b. Dependent Variable: 38. Total Education Budget of Local Government

The DW-test statistic measures the degree of autocorrelation in the residuals. It assumes that if the DW value is less than 1.5 (DW<1.5), there is a positive autocorrelation, which is considered problematic, and if it is greater than 2.5 (DW>2.5), there is a negative autocorrelation among residuals. The DW statistic closer to 0 or 4 is considered a serious issue in autocorrelation in residuals. The acceptable DW value for multiple regression is 1.5 to 2.5, which indicates there is no autocorrelation.

The Durbin-Watson test value calculated in Table 16 above reveals that the DW statistic is 1.640 (DW=1.640), which falls into the acceptable range of the assumption of multiple regression. This indicates that the assumption of autocorrelation has been perfectly satisfied for this study.

Normality of Residuals

Another assumption of the multiple regression is the normality of residuals. This rule of thumb assumes that the distribution of residuals should be normally distributed. To visualize the distribution of residuals, the following histogram has been presented in Figure 5 below.

Figure 5

Normality of Residuals

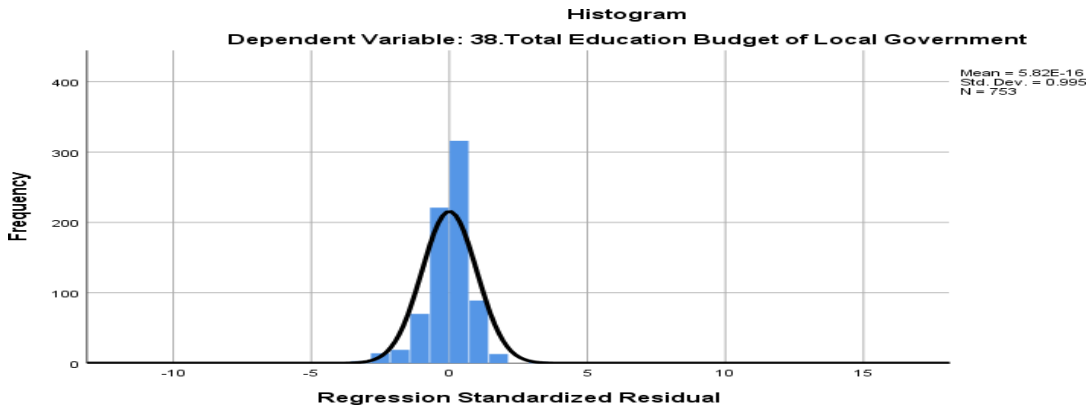


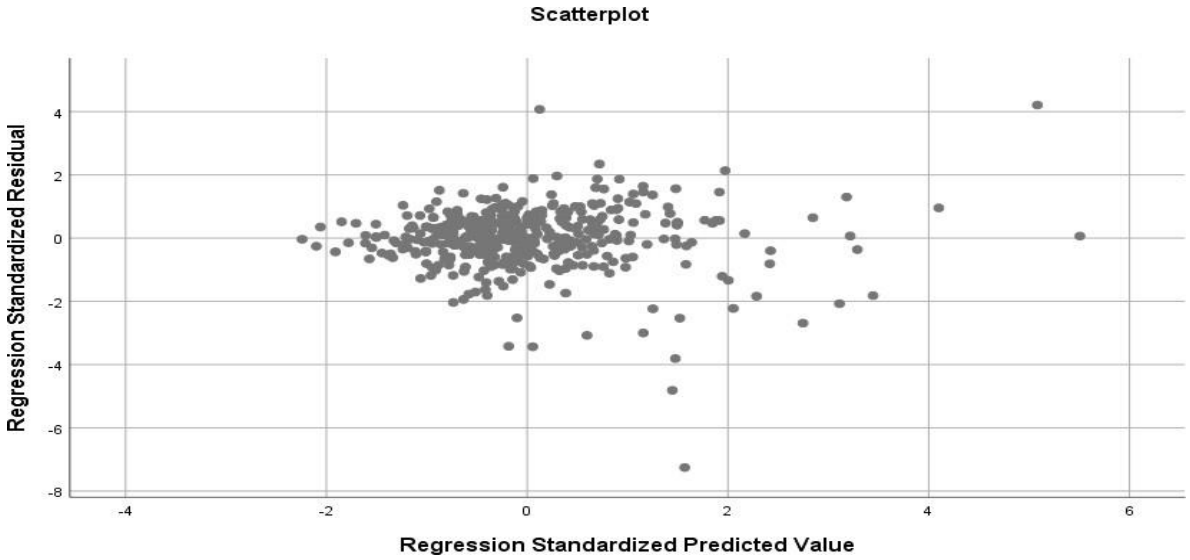
Figure 4 above shows that the distribution appears to be approximately normal, though minor deviations exist. The histogram shows that the regression standardized residuals for the total education budget of local governments are almost normally distributed. The black normal curve fits the histogram well, suggesting approximate normality. The histogram follows a roughly symmetric, bell-shaped pattern, indicating a normal distribution. There seem to be a few outliers on both tails, but the distribution mostly centers around zero.

Homoscedasticity of Residuals

To assess and visualize the position of homoscedasticity of the residual distribution of variables, the following scatterplot is presented in Figure 6.

Figure 6

Homoscedasticity of Residuals



The scatterplot displays regression standardized residuals against standardized predicted values. The scatterplot presented in Figure 6 above suggests that the variance of residuals is approximately homoscedastic, meaning that the variance of residuals remains relatively constant across predicted values. However, some minor deviations are visible in the above scatterplot.

As all the assumptions of multiple regressions are satisfied based on the above statistical tests, I have conducted the multiple regression analysis to assess the impact of intergovernmental fiscal transfers on the education budget of local governments as follows.

Table 17

F-Statistics

	Model	df	F	Sig.
1	Regression	8	864.157	.000[b]
	Residual	744		
	Total	752		

a. Dependent Variable: Total Education Budget of Local Government

The F-statistics (F=864.157) and associated p-value ($p<0.01$) presented in Table 17 indicate that the overall test of the model is statistically significant at the 0.001 alpha

level, which means that there is a substantial impact of intergovernmental fiscal transfers on the education budget of local government in Nepal. The F-statistic measures only the overall significance of the model, but it does not explain the overall level of correlation and prediction of intergovernmental fiscal transfer on the education budget.

To identify the overall correlation and level of prediction, we need to check the R and R-squared of a regression model. The overall correlation (R) of the model and the percentage of prediction (R-Square) of independent variables on dependent variables have been presented in Table 18 below.

Table 18

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.950[a]	.903	.902	43746.777	1.640

a. Predictors: (Constant), Provincial Matching Grant, Federal Special Grant, Federal Conditional Grant, Provincial Special Grant, Provincial Matching Grant, Provincial Equalization Grant, Federal Equalization Grant.

b. Dependent Variable: Total Education Budget of Local Government

The multiple regression model summary shown in Table 18 indicates a strong positive correlation (R = .950) between fiscal transfers and the education budget. This suggests a significant positive association between intergovernmental fiscal transfers and the local governments' education budget. The predictors—fiscal transfers—demonstrate a strong linear relationship with the dependent variable, the education budget. The R-squared value of 0.903 indicates that the model accounts for 90.3% of the variance in the education budget ($R^2 = 0.903$; Adjusted $R^2 = 0.902$). In other words, 90.3% of the variation in local government financing for education can be explained by intergovernmental fiscal transfers at the local level in Nepal.

Since Adjusted R-Square is closer to R-Square, it indicates that the predictors significantly contribute to explaining the variance, and the model does not suffer from overfitting. This means that the estimate of the model is accurate and realistic. From the

above interpretation, it is seen that the regression model is a good fit because a high proportion of the variance of the education budget is explained by the intergovernmental fiscal transfer. When R^2 is closer to 1, the model fit is said to be "better" or a good fit.

The SEE (Standard Error of the Estimate) of the model measures the average deviation of the observed value from the predicted value. In the model summary presented in Table 18, the value of SEE is 43746.777. This shows that there is an average deviation of the actual value from the estimated or predicted value by 43746.77, which means the actual education budget deviated from the predicted education budget of the local government by Rs. 43,746.77. The Durbin-Watson value is 1.640, which has been discussed earlier in the above section. The model of regression coefficients has been presented in Table 19 below.

Table 19

Model -1, Contribution of Fiscal Transfers to the Education Budget of Local Government

Model 1	Coefficients			t	Sig. (*p-value*)
	Unstandardized B	Std. Error	Standardized Beta(β)		
(Constant)	-45789.17	4316.105		-10.609	.000
Federal Equalization Grant	.153	.064	.062	2.370	.018
Federal Conditional Grant	.831	.022	.809	37.371	.000
Federal Special Grant	-.374	.161	-.028	-2.326	.020
Federal Matching Grant	-.132	.220	-.007	-.598	.550
Provincial Equalization Grant	2.955	.520	.129	5.685	.000
Provincial Conditional Grant	-.362	.083	-.054	-4.341	.000
Provincial Special Grant	.830	.431	.023	1.925	.055
Provincial Matching Grant	.684	.227	.037	3.013	.003

N = 753

a. Dependent Variable: Education Budget

The Model 1 presented in Table 19 shows that the two independent variables, Federal Matching Grants Transfer(P>0.05) and Provincial Special Grant Transfer (P>0.05), are not statistically significant among the eight. Five grant transfers have a positive impact on the education budget, and the other three have a negative impact on all eight independent variables in the model.

Since the federal equalization grant has a positive beta coefficient, both unstandardized and standardized (B=.153, β=.062), and t-value (t=2.370), which indicates a positive effect of the federal equalization grant on the education budget at the local level. The unstandardized beta coefficient of the federal equalization grant shows that a one rupee increase in federal equalization grants leads to a Rs. 0.153 (B=.153) increase in the education budget. This means the federal equalization grant transfer is an influential factor for the education budget, and the corresponding p-value (p<0.01) also indicates it is significant at the 0.01(1%) alpha level.

Similarly, the federal conditional grant also has a positive coefficient (B=.8031, β=*.809*), *and* a t-value (t=37.371), which indicates that there is a strongly positive effect of the federal conditional grant on the education budget. The unstandardized beta coefficient shows that a one-rupee increase in federal conditional grants leads to a Rs. 0.8031(B=.8031) increase in the education budget. The standardized beta coefficient and t-value indicate that the federal conditional grant transfer is the most influential factor and largest contributor compared to other predictors for the education budget, and the corresponding p-value (p<0.01) also indicates the federal conditional grant has a significant effect on the education budget at the 0.01(1%) alpha level.

The federal special grant has a negative beta coefficient (B=-.374, β=-.028) and a t-value (t= -2.326), which indicates that there is a negative effect of the federal special grant on the education budget. The unstandardized beta coefficient shows that a one-rupee increase in federal special grants leads to a Rs 0.374 (B = -0.374) decrease in the education budget. However, the associated p-value (p<0.05) indicates it is also significant at a 0.05(5%) alpha level.

Both the unstandardized and standardized beta coefficient (B= -.132, β=-.007) of the federal matching grant, and a t-value (t= -.598) also have a negative value, which indicates there is an inverse or negative effect of the federal Matching grant on the education budget. The unstandardized beta coefficient shows that a one-rupee increase in federal Matching grants leads to a Rs 0.132 (B = -0.132) decrease in the education budget, and the associated p-value (p>0.05) indicates it is not significant. This means there is no meaningful impact of the federal matching grant on the local education budget.

Similarly, the Provincial Equalization Grant has a positive coefficient (B=2.955, β=.129*)*, and t-value (t=5.685), which indicates that there is a positive effect of provincial equalization grants on the education budget. The unstandardized beta coefficient shows that a one rupee increase in Provincial Equalization grants leads to a Rs. 2.955 (B = 2.955) increase in the education budget. The standardized beta coefficient and t-value indicate that the Provincial Equalization Grant transfer is the second most influential factor and contributor to the education budget, and the corresponding p-value (p<0.01) also indicates it is significant at the 0.01(1%) alpha level.

The provincial conditional grant also has a negative value of coefficient (B=-.362, β=-.054*)*, and a t-value (t= -4.341), which indicates that the provincial conditional grant negatively influenced the education budget. The unstandardized beta coefficient shows that a one-rupee increase in provincial conditional grants leads to a Rs 0.362 (B = -0.362) decrease in the education budget. However, the associated p-value (p<0.01) indicates there is also a significant effect of provincial conditional grant on education budget at 0.001(01%) alpha level. The negative relationship between the education budget and provincial conditional grants indicates that there has been an unexpected reduction or decline in the amount of Provincial Conditional Grant Transfers to local government.

Likewise, the provincial special grants have positive values of beta coefficient (B=0.830, β=.023*)*, and t-value (t=1.925), which indicate that there is a positive contribution of provincial special grants to the education budget. This means the provincial special grant transfer is also an influential factor in the education budget. The unstandardized beta coefficient shows that a one rupee increase in federal conditional

grants leads to a Rs. 0.830 (B = 0.830) increase in the education budget, and the corresponding p-value (p>0.05) also indicates it is not significant at the 0.05 (5%) level.

The provincial matching grant has positive values of the beta coefficient (B=0.684, β=.037*)*, and the t-value (t=3.013), which indicate that there is a positive contribution of provincial Matching grants to the education budget of local government. This means the Provincial Matching Grant transfer is also an influential factor in the education budget. The unstandardized beta coefficient indicates that a one-rupee increase in the provincial Matching grant leads to a Rs. 0.684 increase in the education budget. The corresponding p-value (p<0.05) also indicates that the contribution of provincial Matching grants is statistically significant at the 0.05 level.

From the overall analysis of the regression coefficient, the federal special grant, the federal Matching grant, and the provincial conditional grant have negatively influenced the education budget of the local government. However, federal Matching grants and provincial conditional grants are among the negative influencing factors that are statistically significant ($p<0.05, p<0.01$) at 0.05 (5%) and 0.01 (1%) levels, respectively, but only the provincial grant transfer is not statistically significant.

The above Model 1 shows that the federal matching grant transfer and provincial special grant transfer (predictors) do not have a significant impact on the local government education budget. Therefore, I have developed a significant Model 2 by excluding these insignificant predictors from Model 1 in Table 20 below.

Table 20

Model-2, Contribution of Fiscal Transfers to the Education Budget of Local Government.

Model 2	Coefficients			t	Sig. (*p-value*)
	Unstandardized B	Std. Error	Standardized Beta(β)		
(Constant)	-43615.647	4155.461		-10.496	0.000
Federal Equalization Grant	0.144	0.064	0.058	2.244	0.025
Federal Conditional Grant	0.829	0.022	0.807	37.358	0.000
Federal Special Grant	-0.393	0.155	-0.030	-2.537	0.011
Provincial Equalization Grant	3.000	0.516	0.131	5.810	0.000
Provincial Conditional Grant	-0.359	0.083	-0.053	-4.327	0.000

Provincial Matching Grant	0.793	0.215	0.043	3.692	0.000
N = 753					

a. Dependent Variable: Education Budget

Table 20 presents the significant model of the multiple regression equation. This reveals that the federal equalization grant has a positive impact on the education budget. Since the value of both the unstandardized coefficient (B=.144) and standardized coefficient (*β*=.058*),* and t-value (t=2.244) are positive, which indicates that there is a positive effect of the federal equalization grant on the education budget of the local level. The unstandardized beta coefficient indicates that a one-rupee increase in federal equalization grants leads to a Rs. 0.144 increase in the education budget. This means the federal equalization grant transfer is an influential factor for the education budget, and the corresponding p-value (p<0.01) also indicates it is significant at a 0.05(5%) alpha level.

Similarly, both the unstandardized and standardized beta coefficient (B=.829, *β=.807*) of the federal conditional grant and a t-value (t=37.358) have a positive value, which indicates that there is a strongly positive effect of the federal conditional grant on the education budget. The unstandardized beta coefficient indicates that a one-rupee increase in federal conditional grants leads to a Rs. 0.829 increase in the education budget. The standardized beta coefficient and t-value indicate that the federal conditional grant transfer is the most influential factor and largest contributor compared to other predictors for the education budget, and the corresponding p-value (p<0.01) also indicates it is statistically significant at the 0.01(1%) alpha level.

The federal special grant has a negative coefficient (B= -0.393, *β*=-.030*),* and a t-value (t= -2.537), which indicates that there is a negative effect of the federal special grant on the education budget. The unstandardized beta coefficient indicates that a one-rupee increase in federal special grants leads to a Rs -0.393 decrease in the education budget. However, the associated p-value (p<0.05) indicates it is significant at a 0.05(5%) alpha level.

Similarly, the Provincial Equalization Grant has a positive beta coefficient (B=3.00, *β*=.131*),* and t-value (t=5.810), which indicates that there is a positive effect of provincial equalization grants on the education budget. The unstandardized beta

coefficient indicates that a one-rupee increase in Provincial Equalization grants leads to a Rs. 3.00 increase in the education budget. The standardized beta coefficient and t-value indicate that the Provincial Equalization Grant transfer is the second most influential factor and contributor to the education budget, and the corresponding p-value (p<0.01) also indicates it is statistically significant at the 0.01(1%) alpha level.

The provincial conditional grant also has a negative value of unstandardized beta coefficient (B=-.359), a standardized beta coefficient (β=-.053*),* and a t-value (t= -4.327), which indicates that the provincial conditional grant negatively influenced the education budget. The unstandardized beta coefficient indicates that a rupee increase in provincial conditional grants leads to a Rs 0.359 decrease in the education budget. However, the associated p-value (p<0.01) indicates it is also significant at 0.001 (01%) alpha level.

The provincial matching grant has positive values of the beta coefficient (B=0.793, β=.043*),* and the t-value (t=3.692), which indicate that there is a positive contribution of provincial Matching grants to the education budget of local government. This means the Provincial Matching Grant transfer is also an influential factor in the education budget. The unstandardized beta coefficient indicates that a one-rupee increase in the provincial Matching grant leads to a Rs. 0.793 increase in the education budget. The corresponding p-value (p<0.05) also indicates that the contribution of provincial Matching grants is statistically significant at the 0.01 level.

The above analysis shows that Model 2 is statistically very significant in explaining the local government financing for education, and the education budget heavily depends on intergovernmental fiscal transfer. This means that the assumption of the null hypothesis is not satisfied and, therefore, it is rejected. The alternative hypothesis that the inter-governmental fiscal transfers positively contribute to the education budget of local government in the federal context of Nepal is satisfied; therefore, it cannot be rejected and is retained.

Therefore, it can be concluded that the fiscal transfer from the higher level of government, such as federal equalization grants, federal conditional grants, provincial equalization grants, provincial special grants, and provincial Matching grants, does have a strong effect on the local government education budget whereas the federal matching

grant transfer and provincial special grant transfer does not affect education budget of local government.

The Regression Equation of the Significant Model (Model-2)

The multiple Regression Equation Model is an appropriate tool for assessing the effects of multiple predictors on output variables. In this study, the following regression equation model has been estimated to analyze the factors influencing the Local government's education budget. This model assumes that the education budget of the local government depends on the fiscal transfer of the federal and provincial governments. In the following regression equation, there are eight independent variables and one dependent variable.

$$Y = \alpha+\beta1_{X1}+ \beta2_{X2}+ \beta3_{X3}+\beta5_{X5}+ \beta6_{X6}+ \beta8_{X8}+ \varepsilon \quad \text{..... (i)}$$

Y denotes the predicted value of the education budget of the local government, which is considered a dependent variable or output variable and α represents the intercept where as β1, β2, β3, β4, β5, β6, β7, and β8 denote the unstandardized coefficient of respective predictors and X1, X2, X3, X5, X6, and X8 are respective predictors. Where X1 = federal equalization grant (FEG), X2 = federal conditional grant (FCG), X3 = federal special grant (FSPG), X5 = provincial equalization grant (PEG), X6 = provincial conditional grant (PCG), X7 = provincial special grant (PSPG), X8 = provincial Matching grant (PMG), and ε represent the error terms (residuals).

Based on the unstandardized coefficient calculated in Table 20 above, I have obtained the following regression equations by substituting the value of the independent variables.

$$Y=-43615.64+0.144_{FEG}+ 0.829_{FCG} - 0.393_{FSPG} +3.00_{PEG}-0.359_{PCG}+ 0.793_{PMG}$$

Variances of Education Budget in the Local Government

To explore the variances of the education budget in local government, the analysis of variance (ANOVA) technique has been used in this study. The analysis of variance is a statistical method for measuring significant mean differences between three or more independent groups. This means that it determines whether there is a significant variation between the mean value of categorical independent variables. In this study, I have used the analysis of variance (ANOVA) tools to examine the disparities in local government financing for education. The education financing indicators, such as budget allocation for

education, have been used to identify the variation of education budget across local government units. All 753 local government units have been categorized into three major dimensions for analysis of variance of the education budget in this study, such as 1) Type of Local Level, 2) Geographical Region, and 3) Provincial Territory of Local Government. From these three dimensions, the disparity and inequality of the education budget have been analyzed using the One-Way ANOVA technique in this study.

All parametric tests have some underlying assumptions for the reliability and validity of the test results. So, before conducting the ANOVA, these underlying assumptions should be tested. These assumptions of ANOVA are: a) Independence of Observation, b) Normality of Distribution, and c) Homogeneity of variance (Wilcox, 1995; Khan, 2003; Hecke, 2010). The following statistical tools have been used in this study to test the above underlying assumptions of ANOVA.

Assumption of ANOVA

The first assumption of the parametric test, like one-way ANOVA, is the independence of observations. It assumes that the observations within the group and between the groups should not be autocorrelated with each other. The Durbin-Watson test is used to examine whether there is an autocorrelation among the independent variables. As the DW-test has already been tested in the previous section, this assumption has been satisfied for this study.

The descriptive statistics of a dependent variable based on three dimensions of categorical variables, showing the normality statistics (Skewness, Kurtosis), have been presented in Table 20 below. These variables are the major dimensions of variance analysis of education financing at the local level in this study.

Table 21

Descriptive Statistics of Normality Test for ANOVA

Items/Variables		Mean	Std-Deviation	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
Types of Local Level	Rural Municipalit	162854.40	62668.73	1.06	0.12	6.48	0.23

(Government)	y						
	Urban Municipality	251174.28	89654.78	0.57	0.15	0.60	0.31
	Sub-Metropolitan City	555760.00	132345.04	1.24	0.66	0.26	1.28
	Metropolitan City	1130290.00	710973.19	0.10	0.85	-1.50	1.74
Geographical Regions	Terai Region	199098.65	110387.33	1.627	0.153	3.88	0.31
	Hilly Region	222146.87	121379.38	8.304	0.151	102.25	0.30
	Mountain Region	158094.40	77161.08	0.923	0.192	1.91	0.38
	Inner-Madhesh Region	283326.03	196232.01	3.265	0.309	13.70	0.61
	Kathmandu Valley	324979.67	416131.66	3.983	0.501	17.00	0.97
Provincial Territory	Koshi	208672.87	92355.78	2.00	0.21	7.30	0.41
	Madhesh	156177.74	93695.68	2.60	0.21	9.67	0.41
	Bagmati	243364.34	223032.90	5.78	0.22	41.58	0.44
	Gandaki	236526.19	196702.57	5.78	0.26	44.45	0.52
	Lumbini	242865.06	101504.63	2.38	0.23	10.14	0.46
	Karnali	176772.27	85589.08	1.13	0.27	2.79	0.53
	Sudur Paschim	201358.50	90252.49	1.72	0.26	5.76	0.51

Table 21 above reveals that the data distributions of all groups are almost normal; however, some groups, such as Hilly Region (Skewness=8.304), Inner-Madhesh

(Skewness=3.265), and Kathmandu Valley (Skewness=3.983) under the Geographical Region, and Gandaki (Skewness=5.78) and Bagmati (Skewness=5.78) Province under the provincial territory, have higher Skewness statistics. It indicates that the data distributions of these five groups seem non-normal, which violates the assumption of parametric tests like One-Way ANOVA. Among the three categorical variables, the skewness values of all groups of types of local level units fell into the acceptable range, which indicates there is a normal distribution of observations.

To ensure and confirm the normal distribution of the data shown in the table above, the Shapiro-Wilk and Kolmogorov-Smirnov tests were applied for additional verification. These tests are considered more reliable alternatives to Skewness and Kurtosis when assessing normality. The Kolmogorov-Smirnov test is generally suitable for smaller sample sizes, while the Shapiro-Wilk test is recommended for larger samples, typically up to 2000 cases. Since the sample size in this study is relatively large (N = 753), the Shapiro-Wilk test was employed to assess the normality of the data.

Table 22

Shapiro-Wilk Test

Items and Types of Local Government		Shapiro-Wilk test		
		Statistic	df	Sig.
Types of Local Level (Governments)	Rural Municipality	0.949	433	0.000
	Urban Municipality	0.979	250	0.001
	Sub-Metropolitan City	0.796	11	0.008
	Metropolitan City	0.951	6	0.749
Geographical Regions	Terai Region	.875	252	.000
	Hilly Region	.517	260	.000
	Mountain Region	.955	160	.000
	Inner-Madhesh	.665	60	.000
	Kathmandu Valley	.474	21	.000
Provincial Territory	Koshi	.860	137	.000
	Madhesh	.761	136	.000
	Bagmati	.477	119	.000
	Gandaki	.536	85	.000

Lumbini	.827	109	.000
Karnali	.938	79	.001
Sudur Paschim	.886	88	.000

The Shapiro-Wilk significance level ($p<0.05$) calculated in Table 22 above indicates a substantial deviation in the normality of the data. This means the data is not normally distributed among all groups; however, it is assumed that the closer the Shapiro-Wilk statistic is to 1, the more it is considered a normal distribution. So, the above result showed that almost all the Shapiro-Wilk values of all groups are approximately closer to 1, which indicates the data is normally distributed. As I calculated Skewness and Kurtosis in Table 21, the same result was seen in the Shapiro-Wilk test in Table 22. This result showed that the Hilly Region, Inner-Madhesh, and Kathmandu Valley under the geographical region and Bagmati and Gandaki provinces under the provincial territory have non-normal data distribution, which violates the assumption of parametric tests such as One-Way ANOVA. The rest of the other groups have a normal distribution of data.

Based on the result of the Shapiro-Wilk test for distribution normality calculated in Table 21 above, the null hypothesis regarding the five (Hilly Region, Inner-Madhesh, Kathmandu Valley, Bagmati province, and Gandaki province) groups is rejected, and regarding the rest of the groups, the null hypothesis is not rejected.

Regarding the normality assumption, the Central limit theorem allows us to assume the criterion of normality, which is approximated even for the skewed distribution if the sample sizes are large enough (Ehiwario et al, 2013, p.12864). In this study, 753 local government units have been used as samples representing the whole population of the local government of Nepal. This sample size of 753 units of local government can be considered a large sample size.

Table 23

Test of Homogeneity of Variance

Dimensions/Variables		Levene's Statistic	df1	df2	Sig.
	Based on Mean	215.385	3	749	.000
	Based on Median	196.555	3	749	.000
Type of Local Government	Based on the Median and with adjusted df	196.555	3	86.564	.000
	Based on the trimmed mean	213.389	3	749	.000
Geographical Region	Based on Mean	12.072	4	748	.000
	Based on Median	6.277	4	748	.000
	Based on the Median and with adjusted df	6.277	4	166.698	.000
	Based on the trimmed mean	7.057	4	748	.000
Provincial Territories	Based on Mean	2.848	6	746	.010
	Based on Median	2.041	6	746	.058
	Based on the Median and with adjusted df	2.041	6	351.003	.060
	Based on the trimmed mean	2.085	6	746	.053

The homogeneity of variance calculated in Table 23 above showed a substantial variance difference between all the groups because the p-value of Levene's statistics ($p<0.05$) is less than 0.05. It indicates that the equal variance assumption has not been satisfied, and the variance of all groups is heteroscedastic. This means there is a violation of the assumption of homogeneity of variance in all the groups of all three dimensions. In this case, the null hypothesis regarding the homogeneity of variance and equal variances is rejected.

Based on the results of the normality of data distribution and the homogeneity of variance test, it is seen that both assumptions of ANOVA have been moderately violated in this study. In this situation, I have decided to review the literature regarding the assumption of ANOVA further and found that there are many journal articles and research papers that have considerable discussion on the violation of the assumption of ANOVA. Regarding the normality, Wilcox (1995) conducted a study on the effect of the violation of the normality assumption in the case of ANOVA (Analysis of Variance) and claimed that non-normality and heteroscedasticity of variances may have some effects on the Type I error, but there is a minimal effect on the F-test.

Similarly, Ehiwario et al. (2013) claimed in a study that when the assumption of homogeneity of variance is moderately violated, the F-test (ANOVA) is not seriously affected. This means that the heteroscedastic data distribution does not seriously affect the Analysis of Variance test. Hence, it is robust to this criterion. Therefore, I have decided to test the hypothesis with One-Way ANOVA and more robust tests, such as the Welch and Brown-Forsythe test, simultaneously to adjust for the violation of assumptions.

The Welch and Brown-Forsythe is a statistical technique used to assess the equality of variance between two or more groups. These tests are especially used when the assumption of homogeneity of variance is violated (Bhattarai, 2015). The Welch test ensures a more reliable comparison of the mean when variances are unequal.

Dimension 1: Types of Local Level (Municipal Division)

The type of local government is the first dimension of my variance analysis of education financing at the local level. It is assumed that the education budget may differ according to the types of local governments. All the local governments that existed in Nepal have been categorized into Rural Municipality 1 (N=460), Urban Municipality 2 (N=276), Sub-Metropolitan City 3 (N=11), and Metropolitan City 4 (N=6). For the types of local government, all the assumptions of ANOVA have been met. Thus, the null hypothesis has been tested using the ANOVA test.

Table 24

One-way ANOVA Among the Types of Local Governments

Type of Local Government	N	Mean	Std. Deviation	F	Sig.
Rural Municipality	460	161811.97	62097.39	297.23	.000
Urban Municipality	276	252614.79	89793.91		
Sub-Metropolitan City	11	555760.00	132345.04		
Metropolitan City	6	1130290.00	710973.19		

The result of the One-Way ANOVA calculated in Table 24 above indicates that there is a significant difference ($F=297.23$, $p<0.05$) in the education budget of local governments between and within the group of local governments in Nepal. To confirm this result, which was analyzed by One-Way ANOVA, I have conducted the more robust test of the Welch and Brown-Forsythe below.

Table 25

Welch and Brown-Forsythe Test

Robust Test of Equality of Means	Statistic[a]	df1	df2	Sig.
Welch	97.895	3	16.585	.000
Brown-Forsythe	15.161	3	5.484	.004

a. Asymptotically F distributed.

The P-value calculated by the Welch ($P<0.05$) and Brown-Forsythe ($P<0.05$) test in Table 25 shows that there is no difference between the results in the ANOVA and the Welch and Bron-Forsythe test. It ensures that the F-test (ANOVA) is not seriously affected by the violation of normality and homogeneity of variance. This also means that there is a significant difference in the education budget of local governments across the types of local governments in Nepal. Hence, the null hypothesis, assuming the means of the two groups being compared are not equal, has been rejected, and the alternative hypothesis (H3), assuming the means of the two groups are significantly different, has

been accepted. It concludes that there is a significant difference between the mean education budget of local government units and suggests rejecting the null hypothesis.

Table 26

The Post Hoc Test for Multiple Comparisons by Type of Local G overnment

(I) Types of Local Level	(J) Types of Local Government	Mean Difference (I-J)	Sig.
Rural Municipality	Urban Municipality	-90802.825*	.000
	Sub-Metropolitan City	-393948.035*	.000
	Metropolitan City	-968478.035*	.000
Urban Municipality	Rural Municipality	90802.825*	.000
	Sub-Metropolitan City	-303145.210*	.000
	Metropolitan City	-877675.210*	.000
Sub-Metropolitan City	Rural Municipality	393948.035*	.000
	Urban Municipality	303145.210*	.000
	Metropolitan City	-574530.000*	.000
Metropolitan City	Rural Municipality	968478.035*	.000
	Urban Municipality	877675.210*	.000
	Sub-Metropolitan City	574530.000*	.000

*. The mean difference is significant at the 0.05 level.

a. Dependent Variable: Total Education Budget of Local Government

The Post Hoc test for multiple comparisons by Local Level reveals that the p-values of all groups of the local level government are less than 0.05 (p<0.05). This also indicates a significant mean difference in education budget among the local government units. Table 26 above shows that rural municipalities allocate a smaller portion of their budget for education compared to urban municipalities. Similarly, urban municipalities allocate a smaller budget compared to Suburban cities and metropolitan cities, and sub-metropolitan cities allocate a smaller budget compared to metropolitan cities.

Dimensions 2: Geographical Region

The geographical region of local government has been set as the second dimension of my variance analysis of education financing at the local level. It also

assumed that the education budget may differ according to the geographical location of the local government in Nepal. All the local governments in Nepal have been categorized based on their geographical location into Terai Region 1 (N=252), Hilly Region 2 (N=260), Mountain Region City 3 (N=160), Inner-Madhesh Region 4 (N=60), and Kathmandu Valley 5(N=21). All the assumptions of ANOVA have been met. Thus, the null hypothesis has been tested using the ANOVA test.

Table 27

One-way ANOVA Among Geographical Regions

Geographical Region of Local Government	N	Mean	Std. Deviation	F	Sig.
Terai Region	252	199098.65	110387.326		
Hilly Region	260	222146.87	121379.375		
Mountain Region	160	158094.40	77161.078	15.147	.000
Inner-Madhesh	60	283326.03	196232.010		
Kathmandu Valley	21	324979.67	416131.660		

The findings from the One-Way ANOVA presented in Table 27 reveal a statistically significant difference ($F = 15.147$, $p < 0.05$) in the education budgets among and within different groups of local governments in Nepal. To further validate this result, I conducted additional, more robust analyses using the Welch and Brown-Forsythe tests, as shown below.

Table 28

Welch and Brown-Forsythe Test

Robust Tests of Equality of Means	Statistic[a]	df1	df2	Sig.
Welch	15.479	4	110.755	.000
Brown-Forsythe	4.854	4	35.565	.003

a. Asymptotically F distributed.

The P-value calculated by the Welch (P<0.05) and Brown-Forsythe (P<0.05) tests in Table 28 shows that there is no difference between the results in the ANOVA, Welch, and Bron-Forsythe tests. It ensures that the F-test (ANOVA) is not seriously affected by the violation of normality and homogeneity of variance. This also means that there is a significant difference in the education budget of local governments across the types of local governments in Nepal. Hence, the null hypothesis, assuming the means of the two groups being compared are not equal, has been rejected, and the alternative hypothesis (H3), assuming the means of the two groups are significantly different, has been accepted. This means that the null hypothesis has been rejected, and it can be concluded that there is a significant difference between the mean education budgets of local government units in Nepal.

Table 29

Post Hoc Test for Multiple Comparisons by Geographical Region

(I) Geographical Region	(J) Geographical Region	Mean Difference (I-J)	Sig.
Terai Region	Hilly Region	-23048.222	.299
	Mountain Region	41004.251*	.022
	Inner-Madhesh	-84227.383*	.000
	Kathmandu Valley	-125881.016*	.000
Hilly Region	Terai Region	23048.222	.299
	Mountain Region	64052.473*	.000
	Inner-Madhesh	-61179.160*	.014
	Kathmandu Valley	-102832.794*	.007
Mountain Region	Terai Region	-41004.251*	.022
	Hilly Region	-64052.473*	.000
	Inner-Madhesh	-125231.633*	.000
	Kathmandu Valley	-166885.267*	.000
Inner-Madhesh	Terai Region	84227.383*	.000
	Hilly Region	61179.160*	.014
	Mountain Region	125231.633*	.000
	Kathmandu Valley	-41653.633	.740

Kathmandu Valley	Terai Region	125881.016*	.000
	Hilly Region	102832.794*	.007
	Mountain Region	166885.267*	.000
	Inner-Madhesh	41653.633	.740

*. The mean difference is significant at the 0.05 level.

a. Dependent Variable: Total Education Budget of Local Government

The Post Hoc test for multiple comparisons by Geographical Region reveals that the p-values of all groups of the local level government are less than 0.05 (p<0.05) except for Hilly Region, Terai Region, Inner Madhesh and Kathmandu Valley. The p-values of Hilly-Terai Region and Inner-Madhesh-Kathmandu Valley are 0.299 and 0.740, respectively, more than 0.05. This means that the mean difference between those two groups is not significant. This indicates that there is a significant mean difference in education budget among the other regions of local-level governments.

The Post Hoc Test presented in Table 29 above shows that the local governments in the Kathmandu Valley have a higher budget allocation for education compared to other regions. Similarly, the local government located in the Terai Region allocates a higher amount of budget compared to the local government located in the Mountain Region and a lower budget compared to the Hilly Region, and the local government located in the Inner-Madhesh Region allocates a higher amount of budget compared to local government located in Hilly, Mountain, and Terai Region but lower than Kathmandu Valley.

Dimension 3: Provincial Territories

The provincial territories of local government have been set as the third dimension of my variance analysis of education financing at the local level. It also assumed that the education budget may differ according to the provincial territories of the local government in Nepal. All the local governments that existed in Nepal have been categorized based on their provincial territories into Koshi Province 1 (N=173), Madesh Province 2 (N=136), Bagmati Province 3 (N=119), Gandaki Province 4 (N=85), Lumbini Province 5 (N=109), Karnali Province 6 (N=79) and Sudur Paschim Province 7 (N=88). All the assumptions of ANOVA have been met. Thus, the null hypothesis has been tested using the ANOVA test.

Table 30

One-way ANOVA Among Geographical Regions

Provincial Territory	N	Mean	Std. Deviation	F	Sig.
Koshi	137	208672.87	92355.778		
Madhesh	136	156177.74	93695.679		
Bagmati	119	243364.34	223032.902		
Gandaki	85	236526.19	196702.569	7.146	.000
Lumbini	109	242865.06	101504.632		
Karnali	79	176772.27	85589.078		
Sudur Paschim	88	201358.50	90252.495		

The result of the One-Way ANOVA calculated in Table 30 above indicates that there is a significant difference ($F=7.146$, $p<0.05$) in the education budget of local governments between and within the group of local governments in Nepal. To confirm this result, which was analyzed by One-Way ANOVA, I have conducted the more robust test of the Welch and Brown-Forsythe below.

Table 31

Welch and Brown-Forsythe Test

Robust Tests of Equality of Means	Statistic[a]	df1	df2	Sig.
Welch	10.452	6	309.931	.000
Brown-Forsythe	7.052	6	404.967	.000

a. Asymptotically F distributed.

The P-value calculated by the Welch ($P<0.05$) and Brown-Forsythe ($P<0.05$) tests in Table 31 shows that there is no difference between the results in the ANOVA, Welch, and Bron-Forsythe tests. It ensures that the F-test (ANOVA) is not seriously affected by the violation of normality and homogeneity of variance. This also means that there is a significant difference in the education budget of local governments across the types of local governments in Nepal. Hence, the null hypothesis, assuming the means of the two groups being compared are not equal, has been rejected, and the alternative hypothesis

(H3), assuming the means of the two groups are significantly different, has been accepted. It suggests that the null hypothesis is rejected because there is a significant difference between the mean education budget of local government in Nepal.

Table 32

Post Hoc Test for Multiple Comparisons by Provincial Territory

(I) Provincial Territories	(J) Provincial Territories	Mean Difference (I-J)	Sig.
Koshi	Madhesh	52495.133*	.025
	Bagmati	-34691.476	.396
	Gandaki	-27853.320	.757
	Lumbini	-34192.186	.445
	Karnali	31900.603	.645
	Sudur Paschim	7314.369	1.000
Madhesh	Koshi	-52495.133*	.025
	Bagmati	-87186.609*	.000
	Gandaki	-80348.453*	.000
	Lumbini	-86687.320*	.000
	Karnali	-20594.531	.937
	Sudur Paschim	-45180.765	.190
Bagmati	Koshi	34691.476	.396
	Madhesh	87186.609*	.000
	Gandaki	6838.156	1.000
	Lumbini	499.289	1.000
	Karnali	66592.079*	.014
	Sudur Paschim	42005.845	.301
Gandaki	Koshi	27853.320	.757
	Madhesh	80348.453*	.000
	Bagmati	-6838.156	1.000
	Lumbini	-6338.867	1.000
	Karnali	59753.922	.076
	Sudur Paschim	35167.688	.619

Lumbini	Koshi	34192.186	.445
	Madhesh	86687.320*	.000
	Bagmati	-499.289	1.000
	Gandaki	6338.867	1.000
	Karnali	66092.789*	.019
	Sudur Paschim	41506.555	.339
Karnali	Koshi	-31900.603	.645
	Madhesh	20594.531	.937
	Bagmati	-66592.079*	.014
	Gandaki	-59753.922	.076
	Lumbini	-66092.789*	.019
	Sudur Paschim	-24586.234	.907
Sudur Paschim	Koshi	-7314.369	1.000
	Madhesh	45180.765	.190
	Bagmati	-42005.845	.301
	Gandaki	-35167.688	.619
	Lumbini	-41506.555	.339
	Karnali	24586.234	.907

*. The mean difference is significant at the 0.05 level.

a. Dependent Variable: Total Education Budget of Local Government

The Post Hoc test for multiple comparisons presented in Table 32 by Provincial Territories reveals that most of the groups of provincial territory have insignificant P-values, which means that there is no significant mean difference between the provincial territories of local level governments. However, p-values of the Koshi-Madhesh (p=0.025), Madhesh-Gandaki (p=0.00), Madhesh-Bagmati (p=0.00, Madhesh-Lumbini (p=0.00), Bagmati-Karnali(p=0.014), and Lumbini-Karnali (p=0.019) are less than 0.05 (p<0.05). This means that there is a significant mean difference between those provinces that have a p-value less than 0.05.

Concluding Chapter

This chapter is an important section of the entire dissertation, where the findings of the study have been drawn from the statistical analysis. This chapter consists of

descriptive statistical analysis and inferential analysis of the government's financing for education in Nepal. Initially, this chapter began with descriptive statistics on education financing in Nepal, which includes the trends and status of education finance. The trend and status of education financing indicate that the education sector has been prioritized by the Nepal government from a policy perspective; however, the education budget allocation has not been prioritized, and the education budget is somehow influenced by foreign loans and grants. As far as the local government's financing for education is concerned, the study revealed that the local government units allocated more budget to the education sector than the federal and provincial governments; however, the local government education budget mostly relied on the federal fiscal transfer and local government education budget and spending are positively associated with the dimension of fiscal federalism such as fiscal transfer (federal transfer and provincial transfer), revenue sharing and internal revenue of local government. It also identified that the education budget allocation in local government units varied among them, which indicates that there is a variance and disparity in education financing among the local government units.

CHAPTER V
FINDINGS AND DISCUSSION

The major findings and discussion of the research findings regarding the research questions raised in Chapter I have been included in this chapter. Major findings associated with Local Government's Financing for Education, revealed in Chapter IV, have been discussed thoroughly based on the research questions and the hypothesis of the study. Each research question has been set out as a topic for discussing major findings. The topics of the discussion are: Trends and Status of Education Financing (Descriptive Analysis), Association of Variables associated with education financing, Contribution of Fiscal Transfer to the Education Budget of local government, and Variances of Education Budget at the Local Level (Inferential Analysis).

Major Findings of the Study

The first research question was to identify the overall trend and status of the government's financing for education in Nepal. To respond to this question, I have reviewed the relevant literature in connection with the trend and status of the government's financing for education in Nepal and found that the total National education budgets and expenditure have increased since 2018 during the five fiscal years (2018/019 to 2022/23) in Nepal. The result shows that the education budget shared 11% of the National Budget of Nepal. Similarly, the total education expenditures in Nepal have increased since 2015. This also shows that the Nepal government has been spending about 4.5% of the National GDP and 14.5% of total government expenditures on education. It was also found that the local government allocated more of its education budget than the federal and provincial governments. The contribution of international cooperation to education in Nepal is considered substantial. A significant portion of foreign assistance in the federal education budget consists of foreign grants and loans. The study also indicates a higher portion of foreign loans in the federal education budget than foreign grants.

The sources of the education budget of all three tiers of government in the federal structure were composed of the Nepal government grants and loans. It seems that the

Nepal government's budget is the dominant source of financing for education at all levels of government in the fiscal year 2022/023; however, there is a significant amount of foreign assistance (foreign grants and loans) in the education budget.

The allocation of the average education budget of the municipal level in the fiscal year 2022/023 shows that the federal government grant transfer is a big contributor to education financing at the local level as compared to other financing sources, such as provincial transfer, revenue sharing, and internal revenue of the local government. Similarly, the Metropolitan City has allocated the highest amount of budget in education as well as the highest amount of expenditure in education as compared to other municipalities.

The second question explored the association and relationship between variables regarding education financing (federal grant transfer, provincial grant transfer, revenue sharing, and internal revenue), education budget, and expenditure. The research investigated the fact that all those variables related to education financing are positively associated and found to be statistically significant. The finding also reveals that the Federal Grant Transfer has a strong positive association with Revenue Sharing and a very strong positive association with the Education Budget and Education Expenditure of local government.

The third research question aimed to examine the extent to which intergovernmental fiscal transfers contribute to the education budgets of local governments. The findings indicate that these transfers play a significant role in shaping local education budgets in Nepal. The overall regression model is statistically significant, suggesting a positive relationship between fiscal transfers from higher tiers of government and the education budgets of local governments. The model accounts for 90.30% of the variance in the local education budget, indicating that intergovernmental fiscal transfers are strong predictors of local education financing.

The study found that federal conditional grant transfer is the most influential factor and largest contributor compared to other predictors for the education budget, and it is statistically significant. However, other predictors also have a significant contribution to the Education Budget of local government, and because of the unexpected reduction of fiscal transfer, some variables, such as federal special grants, federal

Matching grants, and provincial conditional grants, have a negative unstandardized beta coefficient, which indicates that there is a negative effect on the education budget.

The fourth question was to explore the variance of the education budget in local government units. To identify the variance of the education budget, the three dimensions were formulated to assess the variances in the education budget, such as the types of local level, geographical region, and provincial territories of local governments.

The study found that rural municipalities allocate a smaller budget for education compared to other municipal units of local government, such as urban municipalities and metropolitan cities. Similarly, urban municipalities allocate a smaller budget compared to Suburban cities and metropolitan cities, and sub-metropolitan cities allocate a smaller budget compared to metropolitan cities.

Similarly, the analysis of variance in education budget by geographical region suggests that the local governments located in the Kathmandu Valley have a higher budget allocation for education compared to other regions. Similarly, the local government located in the Terai Region allocates a higher amount of budget compared to the local government located in the Mountain Region and a lower budget compared to the Hilly Region, and the local government located in the Inner-Madhesh Region allocates a higher amount of budget compared to local government located in Hilly, Mountain, and Terai Region but lower than Kathmandu Valley. The study found that there are significant variances in the distribution of the education budget across all three dimensions of local government.

Discussion of the Findings

This section contains a comprehensive discussion and interpretation of the major findings of the study. The discussion includes the meaning and interpretation of findings within the framework of fiscal federalism theory that I adopted in the research, alignment of findings with the theoretical framework of my research, and comparing and contrasting the findings with existing literature. The discussion on finding, followed by the research question of the study, is as follows.

Trend and Status of Education Financing in Nepal

The research findings highlight the overall trend and status of government financing for education in Nepal's federal structure. The increase in education budgets

and expenditure indicates that the government of Nepal is committed to promoting the education sector to achieve its educational goals. This trend of education financing aligns with the global effort to prioritize education as a critical component of sustainable development (UNESCO, 2021). However, the proportion of the education budget of the total national budget, while education is a priority, may still be insufficient to address the diverse needs of Nepal's education system (World Bank, 2022).

The findings also reveal that the local government contributed more to the budget for education financing than the federal and provincial governments, whereas the provincial government contributed a very small portion of the budget, which is considered the least contributor to education financing in Nepal. This means that the local government has a crucial role in promoting education and ensuring the financing for education within its jurisdiction, which is consistent with the principles of fiscal decentralization (Oates, 1999), while the constitution of Nepal has delegated the power and authority of basic and secondary-level education to the local government under the principle of fiscal federalism.

Much of the literature related to financing for education has been reviewed in this study to understand the trend and status of governments' financing for education. Most of the studies suggest that the government should increase the financing for education to fulfill the global commitment to educational achievement. Dangal and Gajurel (2019) found that the Government of Nepal has substantially increased its investment in education, intending to improve access, quality, and equity at all levels of the education system. Nevertheless, it is argued that this increased spending has not translated into measurable economic growth, and the effectiveness of such investment continues to be a subject of ongoing debate and investigation.

Similarly, Jasmina and Oda (2017) studied 'Empirical analysis of the government spending and disparities of education outcomes at the district level in Indonesia' and claimed that the Indonesian government has also been increasing the education budget at the local level since 2009. In Indonesia, 60% of the central government's education budget is allocated to local district-level governments through a school operational assistance program targeting primary and junior secondary education. These transferred funds are utilized to support the special allocation fund for education and to provide

additional allowances for teachers at the basic and secondary levels. The findings also indicate a rise in education spending by local governments at the district level.

Similarly, a study conducted by Lu (2024) reveals that the government of China has been spending more than 4% of its gross domestic product on education since 2012. China's national fiscal spending pattern on education indicates that, for nine consecutive years, education expenditure has consistently made up at least 4% of the country's gross domestic product (GDP), thereby meeting the internationally recognized benchmark for education investment. Moreover, over 80% of the total education funding in China is financed by the government, underscoring the state's central role in supporting its vast education system, which is the largest in the world. Around half of this public spending is allocated to compulsory education, while higher education receives the highest per-student funding. In addition, China has been progressively expanding its fiscal investment in preschool education, reflecting a growing focus on early childhood development.

However, Malik and Naveed (2012), in their study on the financing of education in Pakistan and the influence of public expenditure and foreign aid on educational outcomes, highlighted that Pakistan's public spending on education has consistently been below 2% of its GDP over the last two decades. Compared to other countries in the region, this is a notably low figure and significantly lags behind the targets required to guarantee universal access and a satisfactory quality of education. Moreover, this level of spending is far below the internationally recommended minimum benchmark of 4% of GDP, which is considered essential for achieving a standard level of education quality.

The findings of this study also revealed that a significant portion of foreign assistance is allocated to the education budget in Nepal. The foreign assistance is embedded in the federal education budget, which consists of foreign grants and loans. The finding reveals that foreign assistance has significantly influenced Nepal's federal education budget, which consists of a higher portion of foreign loans. This indicates that the federal government relies more on foreign loans than foreign grants to finance education expenditures. Apart from this, there is a sudden increase in foreign assistance in 2020/2021 and 2021/2022. This sudden increase in foreign assistance may be a result of the government's raising additional funding for the recovery of education after the

COVID-19 pandemic. This finding is consistent with previous studies indicating that developing countries rely heavily on international aid to finance education (Organization for Economic Co-operation and Development [OECD], 2018). The study suggests that external borrowing for financing education sectors in Nepal raises concerns about the sustainability of debt financing for long-term educational development.

Likewise, this research also found that the government of Nepal is the main source of education financing for all branches of government in the federal structure; however, foreign grants and foreign loans have contributed significantly to financing education. While foreign assistance provides necessary resources, it also raises concerns about financial sustainability and dependency (Altbach & de Wit, 2018). Effective utilization of these funds and a transition towards increased domestic revenue generation for education financing should be a long-term policy objective.

Findings indicate that the federal government grant transfer is a big contributor to education financing at the local level in fiscal year 2022/023 as compared to other sources of financing, such as provincial transfer, revenue sharing, and internal revenue of the local government. The heavy dependency on intergovernmental transfers, particularly at the municipal level, indicates the central government's continued role in ensuring education financing for local government despite the federal structure. This reliance is evident in the mean education budget at the municipal level, where federal grants constitute the largest portion compared to other sources such as provincial transfers, revenue sharing, and internal revenues (Shah, 2007). However, this raises questions regarding the autonomy and financial capacity of local-level governments to independently fund education initiatives (Bahl & Bird, 2018).

This study also found that metropolitan cities have allocated the highest budget and expenditure on education compared to other municipalities. This could be attributed to the higher population density, greater educational infrastructure, and increased fiscal capacity of metropolitan areas. Similar trends have been observed in other federal contexts where urban municipalities allocate more resources to education due to higher service demands (Rodríguez-Pose & Gill, 2004).

Association of Variables of Education Financing of Local-Level Government

This section presents the discussion of the research findings of the association of sources of education financing, such as Federal Fiscal Transfer, Provincial Fiscal Transfer, Revenue Sharing, and Internal Revenue of local government units, considered independent variables and the education budget of local government units, considered the dependent variable in the federal context of Nepal. The correlation analysis suggests that an increase in the Source of education financing (fiscal transfer, revenue sharing, and internal revenue) of the local government increases the education budget and expenditure of the local government. The overall analysis shows that there are positive correlations between the input and output variables of local-level government's financing for education in the federal context. This means that intergovernmental fiscal transfers and revenue generation play an important role in shaping the education financing of local government.

The findings reveal that the federal fiscal transfer to local government is very strongly and positively associated with the education budget and local government expenditure, whereas provincial fiscal transfer is weakly and positively associated.

This indicates that an increase in federal grant transfer is very strongly associated with an increase in the Education Budget of local government. This shows that the Federal Grant Transfer is the most influential variable for education financing for the local-level government in Nepal. However, the internal revenue of local-level government is moderately associated with the education budget. The overall finding of the research question reveals that all sources (independent variables) of financing for education in local government are also positively associated with the education budget of the local government in Nepal.

The findings support the theoretical framework of fiscal federalism, highlighting that the vertical fiscal imbalance and the intergovernmental fiscal transfer ensure the fiscal resources for the educational expenditure needs of local government (Shah, 2006).

The research finding aligns with the existing literature emphasizing the importance of intergovernmental fiscal transfer for education financing.

A study conducted by Acharya and Bhusal (2024) on 'Intergovernmental Fiscal Transfer in Nepal. Does It Lead to Greater Accountability at the Local Level? They

claimed that the Intergovernmental Fiscal Transfer (IGFT) is a crucial tool for local governments to bridge fiscal disparities by providing the necessary funds to fulfil their functional responsibilities. However, the current trend of centralization within federal government agencies, limited bureaucratic capabilities at both federal and local levels, and inadequate political commitment to IGFT have hindered accountability at the local level. Devkota (2020) also claimed that intergovernmental transfers involve the flow of financial resources from national to subnational levels, either through grants and revenue sharing, or both, to fill fiscal gaps and carry out development activities in the Nepalese context.

The intergovernmental fiscal transfer is a key principle of fiscal federalism in the federal structure. The subnational units of government are often dependent on the fiscal support of higher levels of government to finance their public expenditure (Musgrave, 1959; Oates, 1972). Most of the local governments of developing countries fill their fiscal gap between available financial resources and expenditure responsibility through the intergovernmental fiscal transfer from a higher authority (Bahl & Bird, 2018).

The findings suggest that the federal government plays a crucial role in ensuring the financial resources for educational needs at the local level (Bird & Smart, 2002; Shah, 2006). This means the local government is still relying on federal fiscal transfer, and the central government is playing a pivotal role in education financing for local governments in Nepal. This finding is consistent with a previous study highlighting the centralization of education financing in Nepal, where the federal government transfers the financial resources to support the local government's education budget and spending (Bird & Smart, 2002; Shah, 2006). The very strong association between Federal Fiscal Transfer and Education Budget and Spending further supports the argument that education financing of local government is largely dependent on federal fiscal support, even in fiscal federalism (Martinez-Vazquez & Smoke, 2010).

Similarly, Oates (1999) argued that the principle of fiscal federalism enhances the efficiency of subnational governments in generating adequate fiscal resources to finance their expenditure by delegating fiscal autonomy; however, the heavy dependence on federal fiscal transfer indicated a constrained fiscal autonomy and limited independent internal revenue sources of Local government in Nepal. The reliance on the federal

government raises concerns about the sustainability and predictability of education financing at the local level.

Contribution of Fiscal Transfer to Education Budget of Local-Level Government

As discussed in the above section, Federal Fiscal Transfer, Provincial Fiscal Transfer, Revenue Sharing, Internal Revenue, Education Budget, and Expenditure are positively associated, and Federal Transfer is strongly correlated with Education Budget and expenditure as compared to Provincial Fiscal Transfer, Revenue Sharing, and Internal Revenue. In this section, I have discussed the multiple regression model, which investigates the effect size and contribution of each Intergovernmental Fiscal Transfer in the Education Budget of Local Government in a Federal Context.

The findings of this study reveal that the Education Budget (output variables) and Intergovernmental Fiscal Transfers (Predictors) are strongly and positively correlated. This means the education budget of local government and Intergovernmental Fiscal Transfers from higher levels of government are significantly associated. This indicates that intergovernmental fiscal transfers substantially contribute to the education budget of the local government in Nepal.

The overall test of the regression model is found to be statistically significant, which further supports that the fiscal transfers of higher levels of government and the education budget of local government are positively associated. The research investigated that the regression model explained the variance in the dependent variable, meaning that the local government education budget (dependent variable) is mostly determined and predicted by intergovernmental fiscal transfers (independent variables). This means the tested model is very significant in explaining the local government financing for education and the education budget, and the education budget of the local government heavily depends on intergovernmental fiscal transfer from the higher level of government in Nepal.

The intergovernmental fiscal transfers to the local government, such as equalization grants, conditional grants, special grants, and Matching grant transfers from the federal government, and equalization, conditional, special, and Matching grant transfers from the provincial governments, are also sources of education financing of local government.

The finding shows that the Federal Conditional Grant Transfer demonstrates a substantial positive impact on the local government education Budget. The standardized beta coefficient and t-value indicate that the federal conditional grant transfer is the most influential factor and largest contributor compared to other predictors for the education budget; however, some fiscal transfers have negative or non-significant effects. The unstandardized beta coefficient suggests that the federal conditional grant transfer is a vital contributor to the education budget, which plays a crucial role in financing local education in Nepal.

Similarly, the finding shows that the provincial equalization grant is also a significant contributor to the education budget of the local government. The unstandardized beta coefficient indicates that the provincial equalization grant has a positive and statistically significant effect on the education budget. This means that the provincial governments play an essential role in supplementing local education financing. This supports theories of fiscal decentralization, which argue that equalization grants transfers are essential for reducing regional disparities in public service delivery (Bird & Smart, 2002).

The federal equalization grant also has a significantly positive impact on the Education budget of local government. The unstandardized beta coefficient shows that the federal equalization grant transfer is also an influential factor in the education budget of local governments. This suggests that while equalization grants contribute to local education financing, they are not as influential as targeted conditional grants. Furthermore, the provincial special grant and the provincial Matching grant showed positive but relatively smaller effects.

The local government education budgets heavily rely on equalization and conditional grants from the central government. This finding aligns with the broader understanding that subnational governments often lack sufficient sources of revenue to finance public expenditure and depend on transfers (Bird & Smart, 2002). This indicates that the findings of this study support the theories of fiscal federalism and intergovernmental fiscal transfers.

Devkota (2020) agreed that the functional responsibility devolved to the sub-federal units, while revenue-raising rights remain highly centralized in the central

government of Nepal. To bridge the gap between revenue rights and expenditure needs, the constitution mandates fiscal transfers to sub-federal units of government.

Similarly, Acharya & Bhusal (2024) also support the idea that the federal government allocates resources to the subnational government through intergovernmental fiscal transfers to fill budgetary gaps at the subnational level in Nepal. In the context of federal Nepal, IGFTs have been classified into four types: fiscal equalization, conditional, special, and matching grants.

Gyawali et al. (2021) have conducted a study on 'An Assessment of Nepal's School Education Financing in a Federal System'. They also found that the federal conditional grant for education is the major source of local government expenditures in Nepal.

Similarly, Dhungana and Acharya's (2021) study on Nepal's federalism suggests that local governments struggle with revenue generation, making them reliant on federal transfers. Similarly, Khadka (2021) argues that the education sector is particularly dependent on federal conditional grants, limiting local discretion.

Nonso Alo (2012) concluded that the Fiscal transfers to local governments are direct financial allocations from the central government or state government to the local government in Indonesia. In some countries, these financial transfers are referred to as intergovernmental transfers, and in Nigeria, they are called grants or statutory allocations. The transfer of funds from the central government to the local administrations is premised on certain considerations. The federal government is so reluctant, even when revenue fields are within the jurisdiction of a local government.

Stotsky et al. (2019) claimed that intergovernmental transfers with a mandate for equalization have a crucial role in supporting states to ensure these essential public goods in India. To address the inadequacies in public spending in education, intergovernmental transfers (IGTs) are considered crucial. IGT is a mechanism to level the horizontal and vertical imbalances in resources. In the federal structure of India, the intergovernmental fiscal transfer for school and higher education played a vital role in bridging the gaps in expenditures across the Indian states. The main channel for central transfers on education is via grants-in-aid. The other channel of intergovernmental fiscal transfers on education

is through the specific-purpose grants on education, recommended by the fiscal commission (Stotsky et al., 2019).

All these findings of this study align with previous research indicating that intergovernmental fiscal transfers are crucial in shaping local government expenditures, especially in education (Martinez-Vazquez & Smoke, 2021; Boadway & Shah, 2009). The findings are consistent with decentralization experiences in countries like India and Indonesia, where conditional transfers dominate local education financing (Rao & Singh, 2007).

Variances of Education Budget in Local-Level Government

In this section, I have discussed the various aspects of variances in the education budget in the Local government units of Nepal. The discussion of findings of variance in the education budget has been presented by analyzing the three key dimensions of local government: the types of local levels, geographical regions, and provincial territories. Under those three dimensions, the variance of the education budget has been discussed in detail, as well as why there are significant disparities in education budget allocation across all three dimensions from the perspective of fiscal federalism in Nepal's local governance framework.

Dimension 1: Variance by Municipal Division of Local Level

The finding of this study reveals that the education budget significantly differed among the types of local government. This variance in education budget among the Rural Municipality, Urban Municipality, Sub Metropolitan City, and Metropolitan City was measured by the use of One-Way ANOVA. To ensure the result of ANOVA, I further performed the Welch and Brown-Forsythe test, and both tests support the result of One-Way ANOVA because there were some violations of ANOVA assumptions. The Welch and Brown-Forsythe test ensures that the F-test (ANOVA) is not seriously affected by the violation of normality and homogeneity of variance. This also means that there is a significant difference and variance in the education budget of local governments across the types of local governments in Nepal. Since the average education budget of the two groups of local government being compared is unequal, the null hypothesis has been rejected. The alternative hypothesis (H3), assuming the means of the education budget of the two groups of local government are significantly different, has been accepted. It

suggests that there is strong evidence to reject the null hypothesis and conclude that there is a significant difference between the mean budget of local government in Nepal.

The Post Hoc test for multiple comparisons by type of local government also indicates that the education budget of all groups of the local level government is significantly different from each other. This also indicates that there is a significant mean difference in education budget among the Rural Municipality, Urban Municipality, Sub-metropolitan city, and Metropolitan City. The size of municipalities, such as Rural and Urban municipalities, may influence the variance in education financing of local government units. There might be other factors, such as the number of schools and students within the municipality, that influence the education budget.

The local government units of Nepal, such as Rural Municipality, Urban Municipality, Sub-Metropolitan City, and Metropolitan City, are the third tier of government in the federal structure of Nepal. They are fully autonomous government units that raise revenue from internal resources and allocate it to development activities at the local level. Depending on their revenue mobilization capacity, local governments allocate their budget to public services such as education and health care (Kharel & Kharel, 2020). The findings show that the budget allocation for education by the rural municipality is less than that of the urban municipality. So, revenue mobilization and budget allocation of local government depend on the fiscal efficiency of local government units and the fiscal transfer from the higher level of governments (central and provincial). Thus, the findings of this study align with the theory of fiscal federalism and fiscal decentralization.

Shrestha and Adhikari (2020) also conducted a study on Municipal Financing and service delivery in Nepal and concluded that Local governments in Nepal are classified into municipalities and rural municipalities in the federal system, each with distinct fiscal capacities and expenditure priorities. They claimed that urban municipalities tend to allocate a higher proportion of their budgets to education compared to rural municipalities. This discrepancy can be attributed to differences in revenue generation capacities, population densities, and infrastructure availability. Urban municipalities benefit from a broader tax base and higher revenue streams, allowing for greater

investment in education, while rural municipalities often face budgetary constraints due to lower revenue collection and competing demands for essential services (Paudel, 2019).

Similarly, a Study Conducted by Jasmina and Oda (2017) in Indonesia reveals that expenditure on education, along with various socio-economic factors, influences educational disparities across districts in Indonesia. While increased government spending supports the education sector, its impact has limitations, necessitating consideration of other key factors to translate spending into better education outcomes effectively (Jasmina & Oda, 2017).

However, Shah (2006) claimed that the subnational governments of developed countries like Canada and the United States often have more autonomy in revenue generation, and local taxes are significant for financing education. In contrast, Faguet (2014) argues that local governments often lack fiscal capacity in developing countries, which leads to dependency on central budgetary transfers.

Dimension 2: Variance by Geographical Region

The findings of this study also demonstrated that there is a significant variance in education financing among the local municipal units according to their geographical situation. The Analysis of Variance (ANOVA) test and Welch and Brown-Forsythe tests for identifying variances in education financing reveal that there is a significant difference in the education budget of local governments across the geographical location of local governments in Nepal. Hence, the null hypothesis, assuming the means of the two groups being compared are not equal, has been rejected, and the alternative hypothesis (H3), assuming the means of the two groups are significantly different, has been accepted. It suggests that there is strong evidence to reject the null hypothesis and conclude that there is a significant difference in the average education budget of local government in Nepal.

The Post Hoc test for multiple comparisons by Geographical Region also reveals that there is a significant variance in education finance in almost all groups of the local level government based on their geographical situation. However, the education budget of municipalities situated in the Hilly Region and Terai Region, Inner Madhesh, and Kathmandu Valley does not show a significant difference. This indicated that there is a

significant average variance in education budget among all the other regions of local-level governments.

The geographical diversity of Nepal also plays a crucial role in shaping education budget allocations. The study observed significant differences in education spending among the Mountain, Hill, and Terai regions. The Terai region, being more accessible and densely populated, has relatively higher budget allocations for education, while the Mountain region, characterized by rugged terrain and lower population density, receives comparatively lower allocations (Ghimire & Dhungana, 2021). The cost of delivering education services in remote areas is higher due to infrastructural challenges, transportation difficulties, and teacher shortages, leading to disparities in educational investments (Khanal & Thapa, 2022).

Qin (2011) found that in rural China, educational disparities are strongly influenced by government funding policies. The study showed that extra-budgetary income, instead of reducing funding inequalities, often worsens them. Richer provinces rely more on this income, which tends to amplify disparities in education spending across regions, contrary to the central government's goal of equalizing resources.

Dimension 3: Variance by Provincial Territory

The finding of this study also reveals that there is significant variance in the education budget of municipalities based on the location of their provincial territory. As per the result of the ANOVA test and the Welch and Brown-Forsythe tests, the education budget is significantly different among the provincial territories of local government. However, there is a violation of normality and homogeneity for ANOVA. The Welch and Bron-Forsythe tests further ensure that the F-test (ANOVA) is not seriously affected by the violation of normality and homogeneity of variance.

This also means that there is a significant difference in the education budget of local governments across the provincial territory of local governments in Nepal. Hence, the null hypothesis, assuming the means of the two groups being compared are not equal, has been rejected, and the alternative hypothesis (H3), assuming the means of the two groups are significantly different, has been accepted. It suggests that there is strong evidence to reject the null hypothesis and conclude that there is a significant difference between the mean budget of local government in Nepal.

The Post Hoc test for multiple comparisons by Provincial Territories showed that most of the groups of provincial territories have insignificant P-values. This means that there is no significant mean difference between the provincial territories of local level governments. However, the group of Koshi Province and Madhesh Province, Madhesh Province and Gandaki Province, Madhesh Province and Bagmati Province, Madhesh Province and Lumbini, Bagmati Province and Karnali, and Lumbini Province and Karnali Province have a significant mean difference in education budget.

Nepal's federal structure comprises seven provinces, each exhibiting distinct economic and governance patterns. The study found significant inter-provincial variations in education budget allocations. Provinces with stronger economic bases and higher internal revenue mobilization, such as Bagmati and Lumbini, demonstrated greater education investments compared to less developed provinces like Karnali and Sudur Pashchim (Bhusal, 2021).

The disparities in education financing may also be influenced by provincial policy priorities, political leadership, and administrative capacities. Some provinces have adopted progressive education policies and innovative financing mechanisms, while others struggle with budget constraints and inefficient fiscal management (Sharma & Poudel, 2020).

Anbalagan (2011) explored the shifts in public education spending trends in India following economic liberalization and examined its statewide macroeconomic effects. Using data from the RBI, Economic Survey, MHRD, and five-year plans, the study found that post-liberalization investment in education has had a stronger positive impact on GDP than it did before liberalization. States lagging in educational performance also tend to be more socially and economically disadvantaged, and significant disparities across states are largely due to differences in education investment.

However, Yan and Reschovsky (2023) argued that while most local governments in China struggle with fiscal challenges, the intensity of these pressures varies. They analyzed fiscal conditions within a single province, focusing on the disparities between local governments' spending needs and their ability to generate revenue. Revenue-raising capacity was linked to local GDP and actual revenues. Although significant fiscal gaps exist, equalizing intergovernmental transfers helps narrow these disparities. Notably, rural

local governments receive larger per capita transfers, which results in weaker fiscal health for the province's larger cities after these transfers are distributed.

Xiao and Liu (2014) explored the evolving inequalities in education financing across Chinese provinces and identified key factors driving them. After China decided to achieve 9-year compulsory education by 2000, questions emerged about the fairness and adequacy of funding, especially as fiscal and market reforms widened regional gaps. The study focused on Gansu (a poor province) and Jiangsu (the richest), finding that inequalities grew mainly because: (1) disparities widened between the top 25% and bottom 75% of counties, and (2) the spatial distribution of funding and economic growth showed little change over eight years. The study also discussed how centralized administration and localized financing have contributed to these persistent disparities.

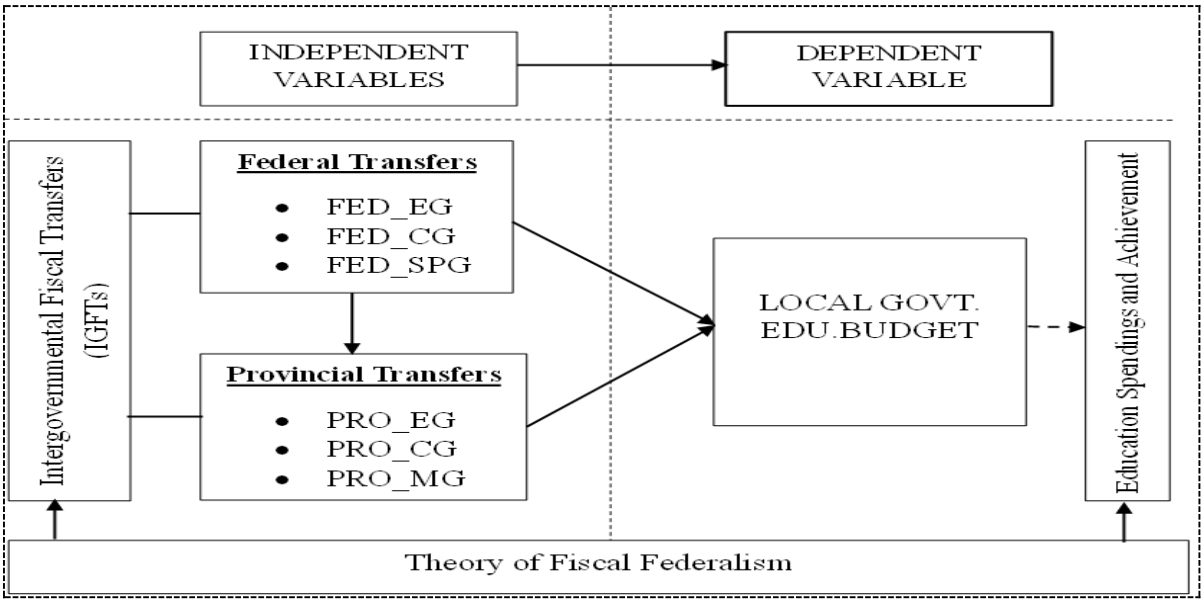
Model of Local Government's Financing for Education in Federalism

The model of local government's financing for education in federalism was developed based on the findings and hypotheses of this study. The theory of fiscal federalism, along with intergovernmental grant transfers from the higher level of government and the education budget of local government, has been taken as a key theoretical framework in designing and developing this model. This model of local government financing for education focuses on the impact of fiscal transfer on education budget in federalism, and presents the theoretical and practical philosophical construct to establish knowledge in the area of public finance management.

The model describes the meaningful relationship between intergovernmental fiscal transfer from higher levels of government and education financing (education budget) from local level governments. The model of local government's financing for education in federalism is presented in Figure 7 below.

Figure 7

The Model of Local Government's Financing for Education in Federalism



This model, presented in Figure 6 above, displays the relationship between the multiple grant transfers and the local government's education financing (budget).

This multiple regression model of intergovernmental fiscal transfer and local government education budget has been developed based on the multiple predictors that have a significant effect on the local government education budget (output variable).

The model reveals that grant transfer from federal government such as the Federal Equalization Grant (FED_EG), Federal Conditional Grants (FED_CG) and Federal Special Grants (FED_SPG) and grant transfer from provincial government such as Provincial Equalization Grants (PRO_EG), Provincial Conditional Grants (PRO_CG) and Provincial Matching Grant (PRO_MG) significantly contribute to the Education Budget of Local Government. This model also presents how fiscal transfers from the federal and provincial governments influence the financing of education for local government in Nepal.

Concluding Chapter

This chapter presented major findings and a comprehensive discussion of the results obtained in Chapter IV in connection with the research questions raised in Chapter I. The findings of the study have been discussed thoroughly within the framework of the

theory adopted in this study. The results and findings of this study have been compared and contrasted with existing and previous literature regarding the government's financing for education, highlighting the intergovernmental fiscal transfer and the education budget, as well as the spending of local government in Nepal. This also described how the local government financing for education could be contextualized. Based on the results found and hypothesis testing, a new multiple regression model has been developed in this chapter, which demonstrates the meaningful relationship and effect between the intergovernmental grants transfers and the education budget of local governments.

CHAPTER VI
RECAPITULATION, CONCLUSION, AND IMPLICATIONS

I have presented the final output of my entire research work in this chapter, which was conducted in Chapters I to V. This chapter comprises a recapitulation of the research work, the conclusion of findings, and the implications of my research work. I have begun this chapter with a recapitulation of my research, followed by the conclusion and implications of the study. The recapitulation of the research summarized the key points of my research work by relating the research questions to the overall findings. I have also presented the conclusion and implications of my research work. The implications of my research comprised the implications for the policymaker, theoretical implications, and implications for future researchers, along with the final remark.

Recapitulation of the Study

The financing for education is the paramount responsibility of the government to ensure the educational rights of people in Nepal. As education is enshrined as the fundamental right of people in Nepal, the government invests its funds in the education sector to ensure inclusive, equitable, and quality education for its citizens. However, no studies have been conducted in Nepal's area of research. As I found this area to be a potential topic of my research to fulfill the research gap, I have carried out this research work by choosing the title 'Local Governments' Financing for Education in Federalism in Nepal'. This research highlighted the local governments' financing for education in the context of the federal structure of Nepal. Particularly, this research has explored the answer to the four major questions: (a) What is the overall trend and status of education financing in federalism in Nepal? (b) What is the relationship between the sources of education? (c) To what extent do inter-governmental fiscal transfers contribute to the local government's education Budget? (d) To what extent does the education budget differ across the type of local level (government), geographical Region, and the Provincial Territory of local government?

To seek the answers to the above research questions, I have explored several dimensions of education financing in public education sectors in the federal context of

Nepal, particularly focusing on the education budget and expenditure and sources of local government units (Municipalities). Therefore, this study was delimited to financing for education at the local level (local government).

Primarily, the review of related literature was carried out to examine the theoretical perspectives of my research, the association of variables, policy, and practice of public financing for education, and the trend and status of education budget and expenditure in global as well as national contexts.

The philosophical foundation of my research is post-positivism. The theoretical perspective of post-positivism is a flexible research perspective(Panhwar et al., 2017), and the epistemological stance emphasizes the objective measurement and verification of phenomena through empirical investigation. However, it does not support the assumption of a single reality and objectivity in the knowledge of classical positivism. Based on this philosophical foundation, I have used the quantitative research method to seek the answer to the research question.

This study employs both descriptive statistics and inferential statistics for empirical analysis. The data related to local government financing for education of 753 local government units (municipalities) were collected from the Subnational Treasury Regulatory Application (SuTRa) of the Financial Comptroller General Office, Kathmandu.

Descriptive analysis was performed based on the research question 1. The data related to the trend and status of the education budget, Expenditure, foreign assistance to the education budget, and the trend of education budget by the level of government have been analyzed using appropriate tables and figures. Similarly, the inferential analysis was performed using statistical tools and techniques such as correlation coefficient, multiple regression, and analysis of variance.

The correlation coefficient was used to measure the association of variables related to education financing, such as federal grant transfer, provincial grant transfer, internal revenue, revenue sharing, and education budget and expenditure of local government. Multiple regression was used to measure the size of the effect of intergovernmental fiscal transfer on the education budget of local government. Similarly, the Analysis of Variance was used to measure the variance in the education budget across

the local government. The variance of the local government education budget was analyzed using three different dimensions: Types of municipalities, geographical region of municipalities, and provincial territories of municipalities.

Conclusions

Local government's financing for education is an emerging issue in Nepal in the context of federalism. Before federalism was introduced in Nepal, the central government used to finance the education expenditure at the school level through the district education office. Now, the right and authority of school-level education governance have been delegated under the jurisdiction of the local government by the constitution of Nepal, and local governments are responsible for providing an equitable and quality education for the school-level students at the local level. However, the local governments are facing the challenges of disparity and insufficient funding for education. They often lack adequate funds to support school-level education and depend upon central government grants and fiscal transfers.

After investigating the global scenario of public spending for education, it was found that most countries could not have met the internationally recommended standard for education spending. However, the average amount of education expenditure is 14.10 percent of the total government budget in the world. This global financing trend for education shows that there is a great challenge in meeting the target of SDG4 by 2030, and the GEM Report, 2023, reveals that there will be a vast gap between the world education budget and the expenditure needed for education by 2030.

In the national context, the total education budget of Nepal has been increasing over the five fiscal years, indicating that the government has expressed its growing commitment to equitable and quality education by ensuring financing for education. The study reveals that the government allocated an average of 11% of the total education budget to the national budget. However, despite this progress, further efforts are required to bridge the financing gap and align with global education financing benchmarks.

A significant portion of foreign assistance consists of foreign grants and loans in Nepal's federal education budget. The finding shows that foreign assistance contributes 18.9% of the total federal government education budget, which includes 5.8% foreign grants and 13.10% foreign loans. However, the major source of the federal government's

education budget is internal, which is 81.10%. It also shows that the local government invested more in education financing than the upper-level governments in Nepal. To compare the education budget and expenditure at the municipal level, the urban municipality allocates a higher amount of budget and expenditure in the education sector than the rural municipality.

Findings show that the sources of education financing and the education budget of local governments are positively associated. As the relationship between federal fiscal transfer and the education budget is very strong and positive, it indicates that the local government relies on the federal government's fiscal transfer for financing school education. However, other sources of education financing, such as provincial fiscal transfer, revenue sharing, and internal revenue of local governments, are also positively associated with education budget and education expenditure.

The analysis reveals that Intergovernmental fiscal transfers play an important role in shaping the financing of local government education in Nepal. The variables related to intergovernmental fiscal transfers are valuable resources for the education financing of local government in Nepal, where the federal conditional grant transfer is found to be the most influential factor in the education budget. The education budget of the local government heavily relied on fiscal transfer from the federal government, which should be considered while designing and formulating the education financing policy in Nepal.

Likewise, the education budget is significantly different across the local government units. To compare the mean education budget variance of local government based on the types, geographical regions, and provincial territories of local government, it is found that there is a significant variation in the allocation of education budget in Nepal.

Finally, the government of Nepal prioritized education financing to achieve the target of SDG4 by 2030.

Implications of the Study

The major findings have been drawn from a comprehensive study on the local government’s financing for education in federalism in Nepal. All the major findings were discussed and interpreted thoroughly. From the thorough discussion of the major findings of this study, I have drawn some meaningful conclusions. These conclusions can be helpful to learners, policymakers, academic institutions, and local government units of

Nepal. These conclusions can also be useful to future researchers who want to explore more about local government's education financing in the federal structure. The implications of the findings are presented in the section below.

Implications for Policy Makers

This study is useful to policymakers of both the subnational governments and the national government, who are involved in formulating the policies regarding education financing under the jurisdiction of the level of government. Since the local government heavily relied on federal fiscal transfers, there is a gap in the fiscal autonomy of local government. So, policymakers should consider enhancing revenue generation capacity to promote fiscal autonomy for local government in Nepal.

Since there is a significant variance in education budget allocation across the different local government units, this highlights that there are disparities in education financing of local governments. Policymakers should develop a scientific financing mechanism to bridge the disparities in education financing and ensure equitable distribution of education funds among all local governments in Nepal.

The findings show the federal education budget is on an increasing trend; however, this is not sufficient to meet the global commitment of education financing in Nepal. All tiers of government should increase the education budget to align with the international benchmark of education financing and meet the Sustainable Development Goal (SDG4) for education by 2030.

Implications for Future Researchers

This study is also useful to future researchers who want to explore more about the financing for education and the financing system in fiscal federalism in the federal context. In this context, the future researchers and scholars should study how the different types of intergovernmental fiscal transfers influence the education financing of local government and their impact on educational outcomes at the school level. Investigating the efficiency of federal conditional grants versus unconditional grants can provide insights for optimizing education financing policies. Since the study focuses on budget allocation and expenditure, further research is needed to evaluate how these financial investments translate into improved learning outcomes, student retention rates, and overall educational quality.

Future researchers can conduct comparative studies between Nepal and other federal countries to identify best practices in education financing under federalism. Understanding how other nations manage decentralization and local education budgets can inform policy improvements in Nepal, and future studies should examine the broader socio-economic effects of increased education financing, including its impact on employment, poverty reduction, and economic growth in Nepal. More research is needed to understand the factors contributing to regional disparities in education financing and how policy interventions can bridge the gaps.

Implications for Practitioners

This study is more useful to practitioners who are engaged in particular as local government officers, education administrators, and development partners. This study mainly highlighted the need to revisit the overall public finance management system to ensure education financing at the local level. To revisit and reform the existing fiscal mechanism, practitioners need to prioritize changing the fiscal transfer system in the federal context. The practitioners who are engaged in local government need to enhance the capacity of resource mobilization at local government units in connection with local revenue generation and natural resources mobilization, so that the high dependence on the federal government can be minimized. The finding of this study also suggests that the education administrators and practitioners of local government develop a robust budgetary planning and allocation framework that aligns with the school-level education needs. As the disparity and variances in the education budget exist across the local level government, practitioners use this finding to design the inclusive and equitable financing policies to ensure equitable access to quality education for all and foster collaboration and harmonize funding mechanisms across all tiers of governments.

Concluding the Chapter and Final Remarks

This chapter is the conclusion of the entire study of local government financing for education in a federal system. This began with a recapitulation of this study, followed by a conclusion and implications sections, where I have concluded my entire research work. At the end of this chapter, I pointed out several conclusions and implications of the study. I started this dissertation by studying the literature on government financing for education in federalism, and most of the literature regarding public finance management,

focusing on the budget and spending for education in the federal system. Now, at the end of this journey, I would say that conducting research and preparing this dissertation report was a great challenge, and alongside a huge learning opportunity and experience for me, which strengthened me to walk on the path of quantitative research and academia in the future.

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ANNEXES

Annex 1: Recommendation Letter for Data Collection

Kathmandu University
School of Education

21 June 2024

To Whom It May Concern

Mr. Shital Bahadur Rawat (KU Reg. No. 033663-23) has been studying MPhil in Development Studies at the School of Education of this University since February 2022. For the completion of his MPhil Dissertation, he is conducting research on ***"Local Government* Finance in Education in Federal System of Nepal".**

In course of his research, he is currently visiting different places where he needs to consult libraries, research centers, educational consultancies, related government, and non-government organizations, Colleges & schools. He is collecting data for his research from educationists, policy makers, development activist and educational administrators.

Therefore, I would like to request the concerned organizations and personalities to co-operate him on his research activities.

Prof. Bal Chandra Luitel, PhD
Dean

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Annex 2: List of Constitutional Powers/Jurisdictions Regarding Education in Federal Nepal

SCHEDULE 5

(RELATED TO ARTICLE 57(1) AND 109)

List of Federal Powers/Jurisdiction

Serial Number	Subjects
1.	Related to defense and army
	a) Protection of national unity and territorial integrity
	b) Related to national security
2.	Central police, armed police force, national intelligence and investigation, peace and security
3.	Central planning, central bank, financial policy, currency and banking, monetary policy, foreign grants, aids and loan.
4.	Monitoring and regulation of telecommunication, central telecom, radio frequency distribution, television and postal service
5	Customs, excise-duty, value added tax (VAT), corporate income tax, individual income tax, tax on remuneration, passport fee, visa fee, tourism fee, service charge, penalties and fines
6.	Federal civil service, judicial service and other government services
7.	Policies and criteria related protection and multi-dimensional use of water resources
8.	International and inter-provincial electricity transmission lines
9.	Central statistics (national and international standards and qualities)
10.	Central level mega projects for electricity, irrigation and other projects
11.	Central university, central level academies, university standard and regulation, central library
12.	Central health policy (setting standard, quality and monitoring of the health services, national/special service provider hospitals, traditional treatment services, control of communicable diseases
13.	Federal legislature, federal executive, local level affairs, special structures
14.	International trades, exchange, ports and quarantines
15.	Civil aviation, international airports
16.	Foreign and diplomatic affairs, international relations and related to United Nations
17.	International treaties and agreements, extradition, mutual legal assistance and international border, international border river
18.	National transport policy, train and national highways management
19.	Laws related to Supreme Court, High Courts, District Courts and Judicial Administration
20.	Citizenship, passport, visa, and immigration
21.	Nuclear energy, atmosphere and space related
22.	Intellectual property (including patent, design, copy right)
23.	War and defense
24.	Factory and production of arms and ammunitions
25.	Standards and metrology

SCHEDULE 6

(RELATED WITH ARTICLE 57 (2), 162 (4), 197, 231 (3), 232 (7), 274 (4) AND 296 (4))

List of Provincial Powers/Jurisdiction

Serial Number	Subjects
1.	Provincial police administration as well as law and order
2.	Banks and operation of financial institutions according to the policy of Nepal Rastra Bank, cooperatives, and foreign grants and aids with consent from the center
3.	Radio, FM, television operation
4.	Land and house registration fee, vehicle tax, entertainment tax, advertisement tax, tax on tourism and agricultural income, service charge and penalties and fines
5.	Provincial civil service, and other government services
6.	Provincial statistics
7.	Provincial level electricity, irrigation projects, drinking water, transport
8.	Provincial level university, higher education, libraries and museums
9.	Health service
10.	Related to Provincial Assembly, provincial cabinet
11.	Trade/Business within the province
12.	Provincial highways
13.	Provincial investigation bureau
14.	Infrastructure management and other necessary matters of province government offices
15.	Provincial public service commission
16.	Land management, record-keeping of the land
17.	Exploration and management of mines
18.	Protection and use of language, culture, script, fine arts and religion
19.	Management of national forest, water resources and ecology within the province
20.	Agriculture and livestock development, factories, industrialization, business, transportation
21.	Guthi (community trust/endowment) management

SCHEDULE 8

(RELATED TO 57 (4), 214 (2), 221 (2) AND 226 (1))

List of Powers/Jurisdiction for Local Level

Serial number	Subjects
1.	Municipal police
2.	Cooperatives
3	FM operation
4	Local tax (property tax, house rent tax, fee on registration of houses and land, vehicle tax), service fee, tourism fee, advertisement tax, business tax, land tax (land revenue), fines, entertainment tax
5.	Management of local services
6.	Local statistics and record keeping
7.	Local development projects and programs
8.	Basic and secondary education
9.	Basic health and sanitation
10.	Management of local markets, environment conservation and biological diversity
11.	Local roads, rural roads, agriculture roads, irrigation
12.	Village assembly, Municipal assembly, district assembly, local courts, dispute settlement and mediation
13.	Management of local records
14.	Distribution of land, building ownership certificates
15.	Farming and livestock, agriculture production management, livestock health, cooperative
16.	Management of senior citizens, people with physical disability and disabled
17.	Collection of statistics of unemployed people
18.	Management, operation and control of agriculture extension
19.	Drinking water, small electricity projects, alternative energy
20	Disaster management
21.	Conservation of Watershed, wetland, wildlife, mines and minerals
22.	Preservation and development of language, culture and fine arts