

RELATIONSHIP BETWEEN HEAD TEACHERS' DISTRIBUTED LEADERSHIP
AND STUDENTS' LEARNING ACHIEVEMENT

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DECLARATION

I announce this sort of dissertation has not been done in any other universities, I have submitted this thesis work in head teachers' distributed leadership in Education under Kathmandu University.

.....

20 October, 2022

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DEDICATION

This dissertation is dedicated to my beloved father Dal Bahadur Khatri.

This dissertation entitled *Relationship Between Head Teachers' Distributed Leadership and Students' Learning Achievement* was presented by *Rajan Kumar K.C.* for the Degree of Master of Philosophy in Education (Educational Leadership) on 20 October, 2022.

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ABSTRACT

of the dissertation of *Rajan Kumar K.C.* for the degree of Master of Philosophy in Education Leadership presented on 20 October, 2022. Title: *Relationship Between Head Teachers' Distributed Leadership and Students' Learning Achievement.*

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This study aimed to find out the relationship between head teachers' distributed leadership and students' learning achievement in Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur districts. For fulfilling the objective of study, three research questions were designed and related to the relationship between distributed leadership and demographical variables of head teachers, demonstration of head teachers' distributed leadership, the relationship between head teachers' distributed leadership and students' learning achievement. The methodology was adopted with survey approach within a quantitative research design based on the post-positivism philosophical paradigm. The significant differences were found between head teachers' distributed leadership practice and demographic variables in qualification and training status. Collective and distributed leadership were found significant difference across qualification as demographic variables of head teachers. In addition, the training status was found significant difference in collaborative, coleader, collective and distributed leadership where p- value was found < 0.05 . The level of HTs' found moderate in gender, experience in position, districts wise leadership, teaching experience, training days and attributes wise

leadership. The low positive correlation between HTs' distributed leadership and students' learning achievement was found. The contribution of head teachers' distributed leadership was found 0.064 in obtaining students' GPA. As the SEE result is not good as expectation of the government, parents and students which were found from the result of SEE (2022). The Head Teachers' distributed leadership supports the holistic schools' productivity and progress in terms of quality education. Head Teachers can no longer do their jobs alone. The Head Teachers' distributed leadership can enhance the better result of Schools. Further, this study is helpful to the new researchers, Head teachers and educational policymakers.

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ABBREVIATIONS

DL:	Distributed Leadership
DECU:	District Education Co-ordination Unit
PBS:	Public Basic Schools
NJSLA:	New Jersey Students Learning Assessment
DLRS:	Distributed Leadership Readiness Scales
GON:	Government of Nepal
SSDP:	School Sector Development Plan
SIP:	School Improvement Plan
UNESCO:	United Nations Education Scientific and Cultural Organizations
ANOVA:	Analysis of Variance
I Sc.:	Intermediate of Science
SEE:	Secondary Education Examination
SLC:	School Leaving Certificate
FSU:	Free Students' Union
TPD:	Teachers Professional Development
SLA:	Students Learning Achievement
SD:	Sustainable Development
MOE:	Ministry of Education
EMIS:	Education Management Information System
SMC:	School Management Committee
PTA:	Parents Teachers Association
SSRP:	School Sector Reform Plan
SD:	Standard Deviation
HT:	Head Teacher
GPA:	Grade Point Score

CHAPTER I

INTRODUCTION

This dissertation is based on ‘The Relationship between Head Teachers’ Distributed Leadership and Students’ Learning Achievement’. Head teachers’ distributed leadership of Public Secondary Schools play the vital role for obtaining expected good results in students’ learning achievement. Public Secondary schools have got approval, permission and received the regular grant from the government of Nepal. The head teachers as the leader head, administrator perform the duties by applying existing rules and regulations under education act where all the teachers of schools are working and teaching by receiving government approval and appointment. The teachers have to work under head teachers’ instructions.

The head teachers are the official authority persons who are accountable and responsible to their right and duties. Head teachers’ distributed leadership plays major role to enhance the holistic performance. Students’ learning achievement is measured either in internal assessment or external evaluation. The Secondary Education Examination (SEE) result of the secondary level is one measurement which represents the Grade Point Average (GPA) in academic year in the context of Nepal. The attributes of head teachers directly associate to the students’ learning achievement. The head teachers’ demographic variables have impacted and enhanced their holistic performance of schools.

This introductory chapter addressing the statement of problems in students’ learning achievement of Public Secondary School of Kathmandu, Lalitpur and Bhaktapur, presents the research purpose and research questions. This section also argues on the rationale and significance of the study, along with the delimitation described and concludes with chapter summary.

Setting Scene

I remember the days of formal study at school where we used to do various learning and extra –curricular activities under the guidance and co-ordination of teachers. In the first session of a new academic year we used to select a captain and a vice captain who had to lead students' groups according to their house divisions. A code of conduct used to be applied by discussing with an agreement of students and teachers where the head teacher supervised. Even the School Leaving Certificate (SLC) was known as the Iron Gate for students. The day I passed my School Leaving Certificate (SLC) examination in first division, my parents, head teacher and teachers gave positive response for me to join Science stream as my higher education.

I decided to study science. For this purpose, I went Kathmandu. As the days passed by, I came to understand the admission environment of Public Campus. I got admitted in Tri- Chandra Multiple Campus as a science student who took Intermediate of Science (I. SC.) as base for his carrier. After spending a year in my campus, I participated in Free Students' Union (FSU) election in which a panel of students' union won the election where the president and member were elected for two years. I heard the leadership under president could work for students' welfare and professional rights. After completing my course study of Intermediate of Science (I. SC.), I joined Bachelors' Degree in Science (B.Sc.) and finished my three years studying as a science student. During my studying period as a Bachelor's student, I also got an opportunity to be one of the leaders leading Department of Science where we representatives had to be a bridge for our mates to get their professional rights and students' welfare along with the efficiency of knowledge and skill provided by the campus.

My status of being a student continued for two more years after completing my Bachelor of Science (B.SC.) Program as I enrolled for Master's Degree at Tribhuvan University (T.U.) during People's Movement II (2062/063) conducted by the Seven Political

Parties of Nepal and Nepal Communist Party (Maoists). As a student of Tribhuvan University (T.U.), I was involved in some programs and participated in the very movement. Leadership at that time was much discussed, highly valued as well as commented. Political, social and professional leaders of different institutions, journalists, lawyers, general public rebelled against autocratic rule by monarch. As a former student's union leader, I wanted to participate in one of those historic movements led by the former prime minister, a towering personality Mr. Girija Prasad Koirala who was a great influencer not only for me but also thousands of Nepalese people. However, on the completion of Master's Degree in order to stabilize myself economically I had to have a decent job.

The first thing that came to my mind on thinking about a job was teaching profession. So, I applied my application in a school and was selected as a science teacher. Since that day, I have been gaining experience as teacher for fifteen long years. I was and still am a department head of subject committee. The head teacher gave me opportunities for leading and organizing some programs for betterment of students. Students learning achievement is growing and is seen as satisfactory in science subject. I developed progressive time schedule for completing course within allocated time table. As a teacher of college and department head of science subject, I have gained a lot of experience of students learning achievements. As a student of Master in Philosophy (M.Phil.) in Education at Kathmandu University, I prepared the term papers associated to education leadership, different forms of leaders, theory of leadership, and leadership in education in the context of Nepal. I was highly motivated to carry this research on Relationship between Head Teachers' Distributed leadership and Students learning Achievement to fulfill purpose of this research. My central argument on this regard is that, there is significant Relationship between Head Teachers' Distributed leadership and Students' Learning Achievement. I am eager to conduct the research on these associated teaching experiences in present scenario of students' learning achievement.

Background of the Study

Head teachers' distributed leadership possess a better students' learning achievement by implementing their efforts as their input that appears as an output of students' schools result (Hardman, 2011). Similarly, students' skills are essential to get appropriate knowledge and understanding in real life situation in terms of practical notion. I think, head of school as a leader has such authority that he can distribute, delegate empower, share, democratic collaborate and disperse his authority in an easy way of distribution culture for meeting the goal associated to students' learning achievement. If the students are delivered much on contents of theoretical as well as practical knowledge, progressive change can be seen due to which they can display their skills practically in their classwork and periodical exams. Moreover, it has become possible when school teachers are distributed responsibility in a visible and applicable opinion. Likewise, all the teachers can empower students to specify the course study. If the teachers facilitate the students in accordance to specific and general objectives of the subjects through distributed leadership, the students' achievement becomes acceptable and satisfactory. However, all students and teachers should be responsible in regards to teaching learning activities in regular schedule allocated by schools.

Distributed leadership is associated to the distribution of teacher's tasks, daily activities of teaching learning activities for meeting the purposes designated by the curriculum development center. Being a science teacher of secondary level, I used to participate in various meetings, trainings, seminars, workshops and interactions where there were representatives of teachers, head teachers, educationists, resource person, subject specialists, roster teachers and information and communication technology coordinators. During formal meetings as well as informal communications, we used to discuss about the educational quality achievements of students, head teacher roles, problems of students and teachers' performance. Most of the voices like leadership of head teachers, teachers are the

key components of the schools. Head teachers and teachers work together side by side to implement the school conducting plans for fruitful results. At a point, teachers might not be satisfied with the head teachers' decisions. Dynamic school leader has to be accountable leader for leading the associated organization (Harris, 2014).

Distributed leadership is a remarkable solution rather than a single leadership in an institution (Gronn, 2000 as cited in Shava & Tlou, 2018). Our school is significant regarding such practice of leadership, as it assists to improve students' learning achievement. In this regard, Spillane and Coldren (2011) as cited in Shava and Tlou (2018) Distributed Leadership (DL) can uplift students' learning achievement if the working team of school adopt measure key roles while performing their duties in accurate situation. According to Harris (2008) Distributed Leadership (DL) in terms of shared can be practiced within schools; those leaders of education can reform the existing situation. Even concerning to Nepal, policy makers of the Government of Nepal (GON) has favored in accordance with worldwide conventions. Similarly, Heck and Hellinger (2009), mention that every aspect take part while giving emphasis to the educational leaders for cooperating and participating ones. DL as a practical tool in which school leaders have to share their workloads with one another (Tian et al., 2016). Distributed Leadership (DL) has become popular in education and school fields due to its sharing nature, and incomparable freedom (Bolden, 2011). In this study, I tried to identify the extent to which the leadership is distributed in the context of Public Secondary Schools of Lalitpur, Kathmandu and Bhaktapur district.

The provision of The Constitution of Nepal (2015) has guaranteed fundamental right relating to education in article (31) in which free basic education is delivered. The government of Nepal has guaranteed to take full responsibility regarding the higher education program for especially abled, under privileged and economically backward people along with minority groups. In this study, the relation is seemed to the provision of constitution that the free education related to free, special and backward people is possible

through Public Secondary Schools as private schools cannot provide free education to those special people. Head teachers of Public Secondary Schools have to follow the rule and regulation of constitution. As they distribute and demonstrate their academic and demographic attributes which brings students' learning achievement. The government of Nepal has been implementing such provision in Public Secondary School throughout the country. Furthermore, Head teachers as leadership role have to play vital role to implement the provision made by constitution. As a teacher of Lalitpur district, I have been interested to research on Relationship between Head Teachers' Distributed leadership and students' learning achievement in terms of Public Secondary Schools' of Lalitpur, Kathmandu and Bhaktapur districts.

National Education aims of Nepal has formulated act and regulation in overall development of the country for implementing strategies, policies, and program. To implement a new shift in education field, National Education Policy (2076) under the government of Nepal enlightened supporting principle that contribute in federal system: local province and central. Head Teacher and teachers' role is the significance to enhance students' learning achievement. Similarly, National Education Policy (2076) mentions that investment for research and development, basic and scientific studies are applied for enhancing public, private sectors, industries and educational expertise zones along with appropriate help of research institution, productive organizations which enhances effective coordination. The head teacher is the academic as well as administrative leader of the school. The management of head teacher keeps importance in the spare of teacher management.

The Education Regulation of Nepal (2059) mentions that the teachers have been supervised by the headmaster and chairperson of the management committee. Likewise, to take out essential tasks for maintaining discipline good characters, respect in the school to operate administrative functions of the school to hold teachers meeting to have discussion

on the school related subjects and maintain record of such meeting and discussion from the studies and provisions in different Acts, policies, strategies the head teacher can uplift the existing situation (distributed responsibility) in collaboration.

As a teacher of Secondary School and coordinator of subject committee, I have been much enthusiastic to lead my efforts to become a successful school of organizational profession. The more we teachers warm up the student involvement for learning, the better performance they show through appropriate activities related to subject contents. Through my experiences, I can say that leadership is an essence and need of the day. Documents of Secondary Education Examination (SEE) of external and internal evaluations prove that the curious teacher leaders have achieved satisfactory results. So far the student outcomes are seen very good in aggregate Grade Point Average(GPA). It's the leader who conducts various programs at schools submitting team cooperation with healthy, competitive and child friendly environment. In this regard, notion of democratic leadership assists to transform to other teachers being extended and share significant responsibilities for enhancing school children learning achievement. To be specific, I was really motivated to find out the present title of this research. Thus, this experience hit me to raise this agenda. In this line, I realized the students' learning achievement through distributed leadership can be uplifted.

Statement of the Problem

The Head teacher is the leader of Public Secondary Schools, an accountable and responsible person of the School. A head teacher has many characteristics for handling the overall plans of schools.

Lumby (2013) discusses on the distributed leadership ignores the political phenomenon of schooling where misuse of power related matters limited. To consult the data of Public Secondary Schools, the students' learning achievement is not satisfactory and similar to every districts' schools. In this context, the Secondary Education Examination of

Nepal depicts poor learning achievement of Public Secondary Schools (SEE Report, 2022).

Due to various constraints, students of this level might have appeared for grade improvement, poor linguistic background, irregularities of school days including their absenteeism at regular classes. Students may not have provided sufficient daily used teaching aids as per, the need of the day whatever they require.

According to Examination Report (2022) the total students appearing in SEE was 5,14,967, among them 11454 students were for grade improvement. Similarly, 107425 students were from Bagmati where I have been conducting research (SEE result, 2022). Many students from Public Secondary School were seen for grade improvement. Due to various reasons Public Secondary Schools result is decreasing. Among them Head teachers' leadership, political hindrance, absence of professional support, inadequate school management and educational facilities, the absence of power and authority of the Head teachers can be the reason for poor learning achievement (Mathema and Bista, 2006). In their study concerning the secondary schools' result, they found that the teacher's irregularity in their workplaces, involvement in promotion and reward of teachers, and shortage of trained teachers, low level of professional learning and teacher motivation are the causes behind low result. Mathema and Bista (2006) in their study claim the learning and motivation as the major issue in the community schools, where observation of teaching, teachers' performance and monitoring of students' growth in their learning and achievement are the most ignored features in the process of Public Secondary Schools. Leadership under head teacher of Public School was selected by fulfilling necessary criteria where his/her experiences in teaching as well as the contribution for holistic achievement regarding students is primary concern which can cause influence in students' learning GPA where the score GPA is depend upon leaderships and participatory teachers performing distribution sharing with an agreement and disagreement.

The teachers and head teachers are aware of and are enthusiastic to progress the school climate. Leadership attributes of the head teachers was just in acceptable level i.e. there was positive association between leadership attributes and school climate (Subedi, 2017). Many aspects which affects students' achievement, conscious head teachers, selection of good teachers and the building team for good learning environment are listed out (Pollard, 2006). Behind this output, head teachers' Distributed Leadership may be responsible. It is burning problem in Public Secondary Schools as well as huge challenges to the Leadership. A head teacher can play an important role to enhance schools existing situation by sharing and distributing his or her experience to be a leader, monitor, guider, supervisor and facilitator. After reviewing the result of SEE (AY-2022), students' learning achievement is not constant in Public Secondary Schools. The distributed leadership in Public Secondary Schools teacher can perform their skills having different capabilities into practices: by collaborating collegial, participatory, sharing and an individual teacher expertise within schools (Spillane, 2006 as cited in KC, 2020). Raising the problems in regard to government authorities, who are involved in policy formation and execution, are liable for the faulty leadership and education practices in some cases against the government policy. These authorities might also be responsible for the students' low educational achievement in terms of generating and mobilizing the sources in the part of leadership management, (MOE, 2022). Hulpia and Vlerick (2012) says the only efforts by leaving teachers' groups lacking the principal's regular observation could lead to low effectiveness.

Bolden (2011) concluded that the idea of Distributed Leadership (DL) really needs to link in a meaningful way through the experience, aspiration of leadership practitioners, power and influence that imbalances school organizations and inherent political nature. There is similarity and dissimilarity between distributed leadership and relative concept including shared, collective, collaborative, emergent and democratic leadership. School is not easy institution in the conclusion of Pierro (2020), where distributed leadership can have

minimized HTs' overload with collective work among teachers. Distributed Leadership offers a vehicle for HTs' to address the responsibilities.

UNESCO (2015) presented the education framework, in which it was much focused quality and equity for improving teaching methodology where the head teachers, teachers and educators are supposed to coordinate in terms of implementation and monitoring the students' learning problems for promoting inclusion. Education Policy of Nepal (2076) has indicated many challenges and problems in school sector in regards all round development of learning achievement. It has focused on leadership too.

Most of the problems are associated with teachers' duties, responsibilities, daily activities and functions of head teacher's skills of leading, head teachers' attributes and challenges to meet and address the problems within public secondary schools and students' learning achievement. The problems pointed out by Nepal High Level Commission (2018) simulated students' learning achievement, school management, policy level problems, human resource management, school leadership, head teachers' selection, authority and accountability. This report did not suggest the head teachers' distributed leadership which fits the public secondary school. Reviewing the available literature in the context, there was not focused on the relationship between head teachers' distributed leadership and students' learning achievement in public secondary school. In the education system of Nepal, the government has the major role to execute national level curriculum throughout the country but, what about the ground reality for implementing expected education goals cannot be synthesized. The primary factors to use and utilize government plan and strategy by schools where students, teachers and the head teachers are mutually correlated. School Management Committee, Teachers, Parents Associations (PTA) observe and support to the public schools conducting different programs for the betterment as well as welfare. UNESCO (2015) emphasized the pedagogy in which teachers and head teachers can improve students' achievements. As a researcher raising problems concerning with subject matters associated

to head teachers distributed leadership and students' learning achievement is simulated as a burning challenges in the local context of public secondary schools of Nepal. However, I have delimited my study only in the Public Schools of Kathmandu, Lalitpur and Bhaktapur that's why relation between them is connected thoroughly.

To review the previous related literature, researchers like Subedi (2017); Rai (2019); Kandel (2020) and Dulal (2020) conducted researches out in Nepali context. But their dissertation did not address the problems and issues of the relationship between head teachers' distributed leadership and students' learning achievement in public secondary school. These literatures are explained in literature review section. This present study relates to find out answers to what extend head teachers demonstrated distributed leadership and demographic variables? and Is there association between head teachers' distributed leadership and students' learning achievements.

Purpose of the Study

Formulated study aimed to find out relationship between head teachers' distributed leadership and students' learning achievement in public secondary schools.

Research Questions:

The following specific research questions were answered through this research.

- i) What is the relationship between distributed leadership and demographic variables of head teachers?
- ii) To what extent school head teachers demonstrate distributed leadership in schools?
- iii) What is the relationship between head teachers' distributed leadership and students' learning achievement?

Research Hypothesis:

The following were the hypothesis constructed to find the above research questions lied the association with independent variables (Distributed Leadership) and dependent variables.

H1: There is a different between head teacher distributed leadership and demographic variable of head teachers.

H2: Head teachers' distributed leadership and students' learning achievement appears association.

Rationale of the Study

The distributed leadership viewed by (Davis, 2013 et al.), head teachers vision affect teachers, consequently provided autonomous opportunities to the teachers change Schools situation. The distributed model promotes Head teachers' distributed leadership, teachers' individual expertise, skills, collaboration tasks, effective learning, and students' learning achievement are many educational challenges and burning issues in Public Schools' of Nepal (Department of education, 2022). Present study was attempted to fulfill the purpose of the relationship between head teachers' distributed leadership and students' learning achievement. This study also tried to find association relating to head teachers' distributed leadership with demographic variables like age, gender, teaching experiences, training, subject specialization, location of teaching job, teachers' professional developments expertise skills, collaborated extended tasks and students' learning achievement.

The degree to which the head teachers' distributed leadership predicts and improves each co-leader, teachers. The relationship of head teachers and teachers improves and provides good situation for implementing education plans and strategy. This study on head teachers distributed leadership will definitely clear figure, tables, graphs and box plots displaying the exact data and discussion of existing situation of the study norm. Even this study has outlined and drawn problems and executing solutions in the designated Schools.

Contribution of principals found significant in the conclusion of Grootemboer (2018), with distributed practice sketched from by Groon (2002). In this way, the above information of the head teachers' distributed leadership in relation to co-leaders teachers informed the grasping and accepting the fact and truth to the head teachers' leadership at the subject and the activity theory in general and their performances in specific in schools as a leader.

The present study has drawn and enabled the head teachers' distributed leadership impacted the students' learning achievement. Extracting from finding of this research study, Public Secondary School head teachers of Kathmandu, Lalitpur and Bhaktapur have to grow and improve their present distributed leadership for obtaining better result and improving the students' Learning achievement. Considering the finding with positive notion, head teachers may adopt for changing and improving approach methods and technique to gate very good remarkable result as the students' achievement. Likewise, this study has distinguished and differentiated the head teachers' distributed leadership effect on students' learning achievement Grade Point Average (GPA). Collection of information exhibiting Public Secondary Schools' GPA as result, Evaluation indicated most important suitable data (Statistics, 2022) in regard distributed leadership of head teachers in the vital issues raised while conducting the research.

This studious inquiry in the current issues may help head teachers for using and increasing their best practices of school head teachers. It also may helpful in many circle of the school stake holder comprising school head teachers (as administrator authority), parents, students and concerned people. Specifically, this study can implement and provide educational planner of national level by organizations to find the head teachers' distributed leadership level and the holistic students' learning achievement, GPA of the country regarding Public Secondary School. Finally, I have brought the conclusion of this research study that may be re-condition and carried out by the researcher and further researcher

educational scholars and established the fact. Thus, this research study specifically scaffolds and provide adequate support to visible improving and changing the head teachers' distributed leadership with students' learning achievement in Public Secondary Schools. Moreover, this empirical study in the present scenario can help at national education system which was provisioned by the National Education Policy (2076).

Public Schools' head teachers got feedback from this study for improving students' learning achievement. A research for head teachers' educational leaders, teacher leaders, distributed leadership; a supportive research to the administrative supervisors, policy makers, curriculum designers', resource persons, education centers and school management committee, District Education Co-ordination Unit. It is good to be helpful for improving students' learning achievement and the research document has used in future educational leadership, head teachers and distributed leadership in schools.

Delimitation of the Study

This study was delimited with the head teachers' distributed leadership attributes sharing, collective, collaborative, co-leader and democratic which were measured in terms of distributed practices relating to demographical variables: age, gender, qualification, experience, training status and days for training. It was also delimited to the students' learning achievement of Public Secondary Schools District Education Coordination Unit (DECU, 2022) of Lalitpur, Kathmandu and Bhaktapur districts.

Only the head teachers of public secondary schools represented as population sample of this study. This dissertation is based upon head teachers' characteristics but the teachers were not participated due to different limitations according to the purpose of the study. It's a quantitative study that I adopted the nature and essence associated to related methods by following maintaining the criteria. The present study was delimited on the basis of Organizational Leadership Theory mentioned by Bolden (2011) that pointed out five distributed leadership attributes: sharing, collective, collaborative, co-leader and democratic.

There were 165 schools out of 281 Public Secondary Schools were visited in the process of gathering information which were primary as well as secondary sources of data and the head teachers of those Schools of Kathmandu, Lalitpur and Bhaktapur districts were selected through the simple random sampling procedures for collecting students obtaining grades within an academic year 2022. The selected head teachers as respondents answered on closed ended research questionnaires. The result of 2022 of SEE was based for collecting secondary sources of this research. Five-point ordinal Likert Scales was used to measure head teachers Distributed leadership attributes. I used the correlational survey design to find out the relationship between head teachers' distributed leadership and students' learning achievement. I used survey technique to collect data which was paper based survey. Main reason behind this survey technique was the preference of head teachers. It gave quantitative data from head teachers. I used this technique because it is time preferable and easy to conduct.

Organization of the Study

The present research work incorporates seven chapters. Introduction chapter includes setting scene, background, raising issues, research questions, research objectives, hypothesis, rationale, delimitation. Second unit consists of related literature review, research studies thesis, dissertations, research journals, articles and book reviews. This chapter was reviewed to the related literature by examining relationship between head teachers' distributed leadership and students' learning achievement in public secondary schools. It was reviewed the thematic relation to distributed leadership of head teachers' attributes and the students' learning achievement. Further, the historical overview of the organizational theory and activity oriented distributed theory were studied. Similarly, constitution of Nepal, School Improvement Plan (SIP), School Sector Development Plan(SSDP), School Sector Reformation Plan(SSRP), United Nation Education Scientific and Cultural Organization (UNESCO), Incheon declaration (2015-2030), Education Act Plan, Sustainable

Development Plan(SDG4), National Education Policy (2076) were studied. Even some empirical studies related to leadership in the context of Nepal National and International carried out by different researchers. On the basis of previous theory and studies, a conceptual framework was formulated.

Chapter III consists the methodology for carrying the present work. It was collected essential data as primary sources from participants through surveying the selected schools. Similarly, the type of data was collected from participants from whom information were identified. Likewise, instrument tools were used to collect data from head teachers of delimited area, and secondary sources of data were collected through Secondary Education Examination (SEE)conducting pilot study thatensured instruments after testing. In this process, I discussed the philosophy of the research: Ontology, Epistemology, and Axiology. Further, design of research, techniques to measure the dependent and independent variables, identification HTs' and sampling procedures, data collection tools and techniques, analysis of the data and interpretation of the results were adopted.

Chapter IV incorporated the association to HTs' distributed leadership and students' learning outcomes, with developing major themes. After the collection of data through survey questionnaire and secondary source, the researcher managed and edited the data. In this chapter database is prepared, relationship between distributed leadership and head teachers' demographic variables were analyzed through T- test and normality test using statistical procedures with SPSS tools to find out the normality of distribution of data which ensured further parametric test. After conforming the data normality, I found out answers to three-research questions and two hypothesis question.

Chapter V consisted of the computation by SPSS data using correlation test. The district wise distributed leadership, district wise students' GPA, correlation coefficient and regression were calculated by using Karl Pearson model having its mean adjusted

regression, model summary and constant in terms of dependent and independent variables that were computed and found out their relation.

Chapter VI Findings linked the previous chapter IV and V were collected and highlighted in different perspectives by comparing contrasting and reviewing with previous researchers' findings.

Chapter VII Includes analysis findings underlying chapter IV, V and VI. This unit also emphasizes further research, in the policy, practice for forwarding and carrying the new database dissertation in the context of head teachers distributed leadership and students' learning achievement throughout Public Secondary Schools in developing countries like Nepal, specifically, government aided Public Schools.

Chapter summary

This chapter has been organized by consisting of setting the scene in which I organized the experience, ideas, perspectives towards teaching work mission in the real life. The first chapter even connects the holistic background of this work. I have submitted the ground and bases for the background information in terms of theoretical as well as practical aspects.

In continuation of raising the problems statement of research is the key issue related to this study. To address and find the problems issue, I constructed 3 research questions that were related to HT's distributed leadership and Students' Learning Achievement. Likewise, to prove the rationale behind the study, a significant rationale was made. I formulated two research hypothesis which were tested after collecting primary as well as secondary sources of data. It was listed in the study area of the three districts of Kathmandu valley. I delimited the area due to time constraint that had to be visited by adapting survey method.

CHAPTER II

REVIEW OF RELATED LITERATURE

I reviewed beginning of the history with distributed leadership and its' established principles, perspectives, perceptions and findings of empirical theories. Moreover, I reviewed the previous works conducted by different researchers, scholars and explorers. Continuing this process, national policies, international declarations related to education were studied and taken ideas from these works. Similarly, a conceptual framework was designed and formulated by observing previous researchers' findings.

Thematic Review

I studied different theories associated to leadership of various time. HTs' practices are deliberated as a collective system that emphasized the communications of school teachers and head teachers, as they work collectively to develop their knowledge and increase their human abilities leading to instructional innovations in Schools distribution (Harris & Spillane, 2008; Mayrowetz, 2008; Spillane, Halverson, & Diamond, 2004). Conclusion by Danielson (2007) emphasized that many possible expanded activities grow teacher ability by utilizing HTs' sources.

Lead by an individual under the head of an institution has been removing and such trends can increase inclusive democracy at school (Pierro, et al., 2020). The present dissertation synthesized the related literature on DL and it's a bases of foundation of initial theories. I have made my clear roadmap and conceptualized this thematic review.

Distributed Leadership (DL) is means of solution in education sector, as it has made the school leaders to be responsible for reforming schools (Ravitch et al., 2013). Teachers' and HTs' can enhance and have significant crucial role for uplifting schools (Sebastian, Huang, & Allensworth, 2017). Likewise, head teachers' have to be free rather than each and

every duties performance by them (Grogan, 2013; Spillane et al., 2008). Group work is needed for making head teachers' strong (Making group work is head teacher's strength) (Marzano et al. 2005). Byfield (2007), recommended new structure by distributing and shifting old ways to lead schools bringing change in collaboration, sharing and decision taking.

According to Maltempi et al. (2019) school teachers, and staff members have to trust culture that bring consequences by taking risk and sharing accountability in terms of Distributed Leadership climate. Teachers perform significant role when they are in distributed forms of works in school; they impact students due to their rigorous contract (Hattie, 2009). In this way, Teachers' efforts of mobilization can foster positive environment among students and staff members. They have to grasp huge chances of being leader of school, as the way of collaboration and influencing teachers having their democratic conducts. Teacher leaders are transformed strength if they communicate, collaborate to their new creativity an exclusive climate of inclusive democracy (Luff, 2011).

Definition developed by Harris (2008) focused on similarity with many leadership ideas like participation, democratic, sharing, collaboration with each other. To compare suggestion of Elmore (2000) more than one person in school should be grown up by distributing the attributes.

Shared leadership are divided into many activities: head teachers and teachers work collaboratively, they involve formal and informal decisions being a teachers and HT (Goksoy, 2016). Spillane (2008) has categories DL into four components. The first components emphasis communication for tackling many task in schools' development. Likewise, second component is directly associates one of action what teachers say they do, what HTs' really do theory in practice. Similarly, third components of DL with appropriate of HTs' and Teachers' responsibilities' and the fourth components emphasis many aspects in regard leadership distributing situations either coordinated, collective or collaborative

way. From the above thematic review, I felt a head teacher is a teacher, who is administrator of a school as a principal, he/she should lead, organize and manage the school by maintaining proper order and discipline in schools. Furthermore, he should supervise in the field of Educational Institution as a leader by showing leadership skills and by demonstrating his/her personal attributes within collective, collaborative and group leadership.

Spillane (2008) argued different factors for teachers and head teachers like skills, knowledge, competencies, and efforts should be provided by the states in collaboration to increase learning outcome. There are different sources of individual and group intelligences as many persons' knowledge and intelligence is far better than an individual person in leading the institution (Hoerr, 2005).

The report conducted by Education International (2017) focuses on qualities of leaders in education institutions and their competencies like workshop, training for both teachers and educational professionals with leadership skills and knowledge. Similarly, it focuses on the leadership training which enhances educational management as well as pedagogical leadership capacity. It mentions multidimensional, components of the leader like the management, administrative, pedagogical and other related activities of the institution. An institution needs to have such leadership who has skills, knowledge experience and its implication in real context.

The leadership in the 21st century at schools should be innovative as multiple collective influences as better results (Shava & Tlou, 2018). In this regard, Eckert (2018) further finds that collective leadership consists of the practices with which the teachers and administrators motivate their helpers and policymakers for improving teaching learning process that can enhance learning achievement in a collective way. Furthermore, Eckert (2019) focuses that DL being a key component in learning central leadership is a shared responsibility and interrelates with students' learning results.

There is distinction as well as similarity between styles and ways of leading. Leadership is divided into different bases, some of the leaders of school share and collaborate to their co-leaders, as many of them follow democratic behaviors and others can interest in group leadership (Shava & Tlou, 2018). Based on these different researches, their conclusion and suggestions we can say that distributed leadership concept is ancient through the DL and is established old notion that has become popular current days. In this regard, DL is significant component for improving students' result (Day et al., 2007). According to Northouse (2007), leader need to perform multiple roles as they can perform better. It is a process of communications among the Public Secondary Schools' head teachers of Nepal. In the explanation of DeFlaminis (2013), it is much focused of leadership functions when they grasp chances and they have to cooperate, participate in teamwork's as well as the leadership of teachers' commitment as it is the need of the day who can work in school culture.

In this study, I reviewed the theories associated to Distributed Leadership, from which I found the similarities and differences among various theorists. Especially School head teachers are such persons who can utilize their attributes for distributing and sharing their experiences. Moreover, Public Schools of Nepal may have got HTs who perform their responsibilities in order to complete the functions and duties in collaboration and collectivity by conducting activities with the help of co-leaders in more democratic ways. Nepal Education Sector Analysis (2017) has highlighted essential skills of HTs and teachers' general, managerial and specific roles by distributing various duties in local province and federal leading system relating with distributive nurture. Some Literature related to Distributed leadership principles, as well as studies and dissertations carried out by previous researchers and scholars were reviewed. It seems like the subject teachers' role is to be linked in particular through distributive opinion within levels to address present and future challenge fulfilling provided duties as well as responsibilities. In this regard, head

teachers have to coordinate with the teachers of the schools of different subject committee as well as coordinator of extra-curricular activities. Those efforts of teacher leaders must be targeted for interesting learning situation in classroom which might bring consequent and acceptable outcomes according to instructed goals of national educations.

Policy Review

Fundamental right regarding Nepalese constitution provision of article 31 has guaranteed to provide free and basic education where head teachers are leading specially government aided schools.

Objectives declared by United Nations Education Scientific and Cultural Organization (2015) mentions strengthen international cooperation across the world of educations in order to complete designated aspect collectively. According to this declaration, leaders of schools need to be accountable for carrying out historical progress in education, head teachers commit new dimensions of long lasting function and change the existing situation of schools with help of supporting teachers, parents and students. It also discusses on indicative strategies to develop qualifications of teachers by training inclusive and equitable managements for quality teaching. It further emphasizes providing soft and hard abilities to address Informational Communication Technology (ICT) and providing internet capacities to meet current challenges and improving present condition.

SSRP (2009-2015) was considered as one of the most important policy guidelines for the solution of contemporary 17 challenges, demands and expectations within the allocated financial resources. The main purpose of School Sector Reform Plan (SSRP) was to enhance the valuable and applicable school level learning. Including quality, the other essential purposes like efficiency and effectiveness were also given sharpening emphasis which needs proper leadership and teacher commitment as well as it further helps in developing teachers' competencies by strengthening leadership capacities. School Sector Reform Plan (SSRP) focuses on strengthen teacher licensing practices. It also made criteria

and qualification of HTs' with minimum standard bachelors and master's degree. Ministry of Education (2009) had focused on short term and long term career development program on it as teachers' training. According to Ministry of Education (MOE, 2016) a new system was launched which consisted different factors relating education like equity, efficiency, equality, management, governance through (EMIS) provides facts data of education sector.

SSDP (2016-2023), mentioned some challenges on teachers' management and professional development, about seventy percent of education budget is being spent for teachers' salary and there is unbalanced teachers distribution, teacher's absence, inadequate monitoring system of teachers and school management, insufficient transfer and implementation of knowledge/skills learned from training in classroom, lack of teachers career path and incentives, insufficient reward for teachers work, insufficient public support and motivation towards the job. National Education Policy (2019) presented leadership solidification and parents' ownership by creating and transforming public education system as well as active participation with concerned individuals for long term and short term goals designated to move up education system establishing reinforcement project and program.

SSRP (2009-2015) had already phased over and now our country is working under the plan of SSDP (2016-2023) to promote learning activities. The above-mentioned policy is helpful administratively as well as in academic leadership in our school to enhance the quality of education. Despite the achievements, there are many more challenges in regulations and policies to uplift the quality of Public Schools. SSRP and SSDP both are supportive strategic plan to enhance Public Schools academically, financially and administratively. Policies were not functioned as their objectives due to problems in operation. As a result, there is the gap between objectives of plans and execution. Similarly, UNESCO (2015), Education -2030 mentions that students' learning is mainly improved by teachers' contribution as they need to the role of school leaders according to time and demand of the day.

If the leadership is distributed in schools by handing shares of authorities in mutual understanding, SMC and PTA can support as a role of teacher leaders for enhancing students' learning achievement. National Education Policy (2019) states that school leadership role strengthening by head teacher educational qualifications, competency and work operation performances, enhance comfortable facilities together selection process ought to be transparent and system based. In this study, I reviewed to the extent that the head teacher's leadership was distributed in the Public Schools of Lalitpur, Kathmandu and Bhaktapur districts. In my research many previous studies and recent reviews have been seen research gap while carrying out this functional form of research.

Students' Learning Achievement

Students' Learning Achievement is understood in different level and situation when they study and have to take part in an examination held by the board of Education Examination. In such condition the students are evaluated on completion of academic year which is expected from objective of curriculum. Defining the word achieves means "to complete, carry out successfully" Merriam-Webster (n.d.). Achievement, crediting to the root word achieve, means the act of succeeding in getting and attaining as the result of exertion for achieving high degree of skills which is desired to meet the aims.

Students acquire skills and abilities while learning and studying in schools with the support of HTs and teachers within allotted schedules of academic year and they become able to deal with different situations as well as level wise learning performance. It is not always certain that students perfectly meet the set level of expectations, which are normally known as the objectives. Various scholars and psychologists have suggested the relationship of students learning achievement into critical comments. Mentioning educationists' views in relation with the student learning achievement simulates the basic skills as well as abilities through learning processes that the students are supposed to demonstrate after a study period (Naomee & Tithi, 2013). Similarly, Kuh et al. (1997) state learning achievement with

students obtain that are related with good practices while learning. The learning achievement of students is measured in different ways and standards adapting different assessments which have been used by the teachers either an internal examiner or an external evaluator. Kuh et al. (1997) enlightened SLA is explained as examination scores, grades within credit hour earned during the academic year, progress from one grade to another or upgrading the students from existing level to upper level like grades, scores and credit hours have been computed academically for each level of the students. Kreng (2014) viewed most of the trend in secondary level, the final examination results have been held as the best standard for measuring the students' learning achievement, appearing in numbers and grades which are more universalized standard evaluation throughout the world. Final results of students are prepared by calculating the sum of internal examinations that have been conducted in allocated scheduled intervals of school calendar terminal examinations half annual examination as well as annual too. Expanding level there remains a different scheme of terminal and annual schedule of examination are taken.

Different perspective towards students learning achievement have been acknowledged. In the opinion of Sengal (2000), the four types of measurement tools are used for evaluating the student's learning achievement: school level assessment, public review, regional assessment and international evaluation. Teachers evaluate SLA in School levels. Individual students take a public examination at the end of the particular level. Regional assessment is measured by standardizing which requires the students' pools or connection bridge to national standard. Furthermore, maintaining measurement in specific level of international assessments which are applied and analyzed in terms of higher studies that select students from many countries and compare the results adopting assessment matrix. These studies are coordinated and held by international committees in each country which coordinate the work of research teams. In the context of Nepal, students' learning achievement is measured in different ways despite private schools and community schools

administer exams in regular intervals terminal, half annual and final examination. Every public and private Schools adopt regular interval based internal examinations and finally administer board examinations under supervision of Ministry of Education.

Marking and measuring the SLA in which average scores, awarding the students through internal assessment. In my own experience public schools have practice of terminal examination and annual examinations. Terminal for formation and annual for final result which is expected to maintain standard according to specification chart of different levels as well as curriculum. Considering such practices with holding examinations indicated SLA for more validity and reliability, this research uses the SEE examination results for analysis as students' learning achievement. The record of achievements of the student is used for the sum of the scores in GPA received in SEE examination by the students of the Public Schools. The SLA deals with students' abilities, skills gaining from certain levels, learning in classroom in specific subjects.

Empirical Review

I reviewed some empirical literature of different Universities by researchers, investigators in the field of education and leadership. So far as the research studies of National as well as international levels were carried out on various topics. In this study, I have presented some of the empirical reviews in both contexts to meet the objectives of this study.

Subedi (2017) conducted research study on relationship between head teachers' leadership attributes and school climate in Public school of Nepal. It was conducted by purposing to examine existing situation of school climate and head teachers' leadership attributes to find the association between with two variables. The findings indicate teachers and head teachers are aware of and enthusiastic to improve the school climate. There was gap between the desired and the actual situation of climate. Leadership attributes of the head teachers was just in acceptable level i.e. there was positive association between leadership

attributes and school climate. The overall collective leadership behavior of head teachers can contribute to creating conducive climate of Public schools in Nepal. This study helped to design the research tools for survey study.

Velasquez (2021) identified significances and not significances in relation to demographic attributes and teachers' perceptions, status and level of DL which were predicted by statistics procedures.

Finding of Rai (2019) mentioned that head teachers' leadership can play vital role for school improvement. The study attempted to provide guidance and direction to head teachers who wished to exercise their leadership in a more appropriate and relevant way for school's improvement. To add more, this study had suggested reviewing existing education rules, regulations and policies focusing on head teachers' role in school improvement. This study gave an ample illustration of Public Schools circumstances and their learning output.

Aboudahr (2019) found that there are similarities among staffs' members while working in school. Similarly, it was found that there is strength association between school DL and teachers works. From this study I took help for selecting the sample Public Head teachers of Lalitpur, Kathmandu and Bhaktapur districts.

Dulal (2020) conducted study on Head Teachers' Leadership Behavior and Students Learning achievement. The findings show HTs have been practicing transformational leadership at a higher level in the community schools. It is identified there is no significant difference on the HT's TFL across their age, training status and experience. HTs are significantly difference by gender, male HTs practice TFL at higher level in the community schools of Kathmandu district. The sample schools are found to be performing below significantly than the average as compared to national standard. To observe the finding, the correlation between them was found low as the coefficients (r) range from 0.091 to 0.164 in positive direction. The HTs of community schools of Kathmandu district are practicing TFL at higher level.

Goksoy, S. (2016), Educational Research shows the findings of the study was associated to attributes of leaderships and finding depicted in all the medium level.

Finding by Kandel (2020) simulated the crucial role of head teachers played by them in effective performance of a school. The finding indicated community schools' teachers as high level of organization commitment along with personal attributes. The two dimensions of affective commitment and normative commitment were observed high, whereas continuance comment was observed moderate and overall organizational commitment was observed high. The ethnic group and service periods influence affective components of organizational commitment. The all dimensions of transformational leadership were observed high and overall transformational leadership was observed high. Head teacher's transformational leadership was significantly predicted by the age group, education level.

Citing Pierro (2020), work, students' outputs were positively impacted by applying with distributing practice. This study was tested among the principals of New Jersey in order to understand their perception towards Distributed Leadership. The two tools: DLRS scores and NJSLA were used to get information whether principals responsibility was shared or believe as a dimension practice. The data were analyzed and answered the research questions, it is seen that the linear regression and DLRS have significant variables those impact English and Math models. According to the scores New Jersey principals have high perceptions with a mean DLRS scores whereas this represents DL doesn't significantly impact on NJSLA scores. This study appropriately helps to designing instrument for carrying research.

Research Gap

As a research candidate I reviewed the studies related to head teachers' distributed leadership and students' learning achievement what I found in national and international publications as well as those from unpublished resources. While reviewing these, it was

found literature related to the specific leadership namely sharing, collective, collaborative, co-leaders and inclusive democratic leadership. Association of head teachers' distributed leadership and students' learning achievement has been made different context in the above literature review either in the form of theoretical or in the form of empirical review of related literature. Since the establishment of organizational theory of leadership, many assumption of the approaches have born and institutionalized one after another. Here, I have included the related theory specifically. Since 20th century DL has been existed in school sector leadership. Here, I have submitted some of the previous reviews which I found as the bases of leadership in different time and context. The above empirical studies show that there is gap between national and international research, case studies, co-relational dissertation research journals and theses of different levels. There was a vast difference between head teachers' leadership attributes for school improvement. Leadership role of head teachers may create a substantial gap within their staff, co-leaders even if teacher leaders' commitment at working education profiles. The above study emphasized on vital role of head teachers for enhancing visible results for students' learning achievement

I reviewed the research studies and the dissertation thesis which were associated to my present study. After reviewing these related dissertations in the context of local and national circle, I found these reviews publications of national education, journals. Some of those were found from unpublished resource. While reviewing the related thesis, I identified various literatures in different categories, specifically I reviewed four empirical dissertations under the supervision of Kathmandu University in different allocated time. From these literatures I found some similarities in these works. I found four specific categories from five empirical review in national context. They are: (a) head teachers' leadership, (b) attributes and styles of the head teachers, (c) transformational leadership of teacher and head teachers to organizational commitment and (d) components affecting students' learning achievement.

The first categories head teachers' leadership is assessed the vital role for school improvements and there is relationship between head teachers' attributes and school climate. As the head teachers were found aware of enthusiastic for improving the existing situation of schools. Secondly, attributes and styles of the head teachers were found democratic style where teachers wanted to participate in the discussion and obtained delegated authority. Thirdly, transformational leadership of teacher and head teachers to organizational commitment, there was an evident that transformational leadership and teachers' commitment to their organization was seen to change the students' learning achievement. The community schools' teachers were found as high level organization commitment along with their personal attributes. And finally the fourth category, components affecting students' learning achievement, the head teachers' transformational leadership does not make a significant effect on the students' learning. The sample schools were found to be performing below significantly than the average as compared to national standard. Different factors affected students' achievement (physical, teaching learning atmosphere and management system of community schools).

The above empirical studies associated to international context have been seen different lenses that the research gap occupy in the situation contexts, styles of leadership phenomena, leadership theory and distributed leadership for improving school leaders and students' learning achievement. They used quantitative as well as qualitative study by designing questionnaires, observations, interviews which show the gap among dissertations. My study is a survey study design where I collected the information throughout selected head teachers and survey report of District Education Coordination Unit (2022) Lalitpur. Kathmandu and Bhaktapur.

Conceptual Framework

Conceptual framework under this study was designed by completing and reviewing the previous researchers of National and International contexts. Every research study either quantitative or others has the conceptual and theoretical framework. In this regard of quantitative conceptual framework of the present study, theoretical frameworks have analytically significant. According to Lederman & Lederman (2015), Theoretical framework are analytically important to quantitative research and further analysis of the available facts. In the same way, Bryman (2012) suggested the conceptual framework has to purposes the angle for conducting research and provide the avenue to interpret a way of approaching the research problems and possible solutions. In such an avenue, this conceptual framework has been made the validity map of research supported for stablishing the importance of present work concerning with Public Secondary Schools and head teachers' leadership in relation to the outcomes.

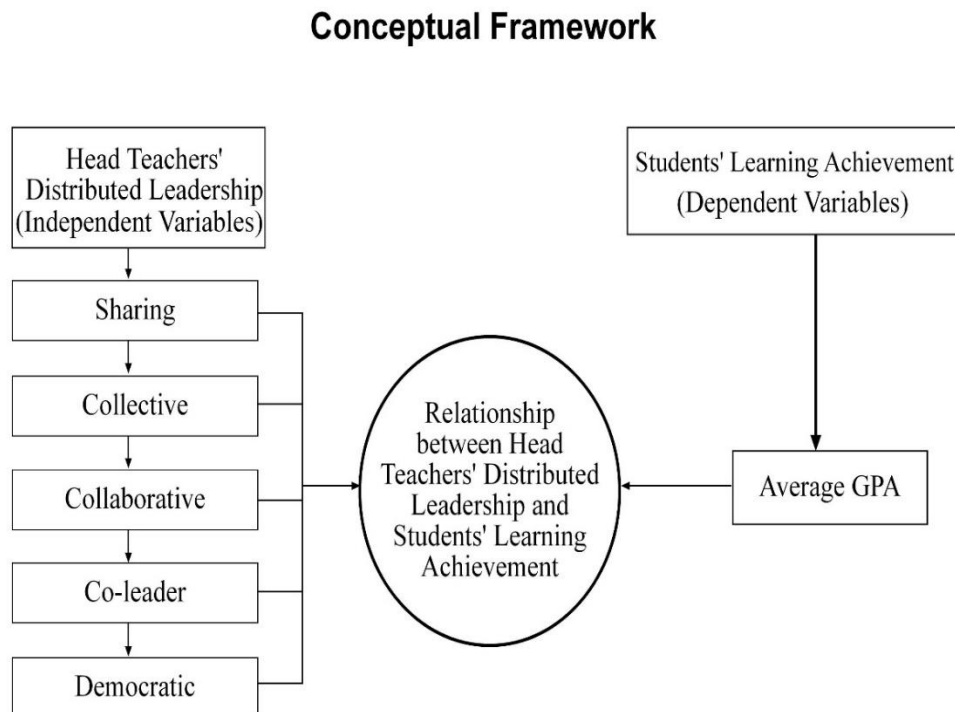
It has emphasized head teachers' leadership in schools. In the word of Badaracco, (2001), a popular model concerning DL which represented distributing through attributes. Similarly, Northouse (2007), focused the leadership on collective social process, further, it was reviewed from Gibb (1954).

Distributed leadership is conceived as a group quality, a set of functions carried out by the group. Spillane (2006), suggested on characteristics of individual leader to located leadership practice in regard distributed leadership. Similarly, Peace & Conger (2003) claimed distributed leadership as the shared leadership, collective leadership (Danis, et.al 2001), collaborative leadership (Rosenthal, 1998), coleader (Heenana & Bennis, 1999), emergent leadership (Beck, 1981). According to Barker (2001): Hosking (1998), multi accountability is better than on persons' monopoly. Reviewing explanation of Leith-wood et. al (2006) a crystal opinion and relation with one another consisting of sharing, democratic, participation and collaboration features of leaders having individual differences.

In the study of Harris (2009) it was concluded distributed leadership as executive authority having empirical duties according to their levels and abilities.

Public Secondary School of Nepal are such complex organization where the concerned people access the essential matters and expectation of parents, stakeholders and students. In this regard, Danielson (2006), Elmore (2000), Spillane (2006) focused the distributed leadership that gives the principal for including all concerning persons while leading and distributing power. The principals (Head teachers) have to organized the schools' resources, infrastructure, time space and personnel to enhance the students' learning achievement. Heat teachers' leadership has been assessed by the outcomes appearing in the appropriate time frame.

This dissertation on relationship between head teachers' distributed leadership and students' learning achievement was ascertained the Public Secondary School of Kathmandu, Lalitpur and Bhaktapur districts. The following figure of conceptual framework was formulated underlying the theoretical and empirical studies what I reviewed in the process of conducting this research study.

Figure 1***Conceptual Framework***

The above figure 1 sketched how the head teachers' distributed leadership served as a bridge that links distributed leadership of head teachers with relation to students' learning achievement, Grade Point Average(GPA). The head teachers must recognize a model to overcome developing certain distributed leadership framework. As administrator and supervisor of the Public Secondary Schools, head teachers have to ensure the situation and circumstances for continuous improvement of schools. The head teachers need to uplift school as academic organization to increase the capability of school teacher and create a mission and vision (Murphy, 2015; Senge, 2006). Present framework is so significant while considering the research process and its implementation into schools, that can impact possible results. To apply present framework, the head teachers, have to coordinate with

each other between and among the teacher leaders staff to perform the leadership roles in accordance their duties and responsibilities.

The literatures concerning relationship between head teachers distributed leadership and students' learning achievement has judiciously used this theory in different context provided me the logical ground and bases for using theory. The above figure 1, I designed under which there are five attributes of head teachers' distributed leadership as those attributes represented dependent variables that influences students' learning achievement. The head teachers' demographic controlled attributes: age, qualification, experience, training, post, subject specification, gender were also used to identify the association between head teachers' distributed leadership and students' learning achievement.

This research was observed for possible impacts on the dependent variables that was caused by a change in independent variables (McLeod, 2019). The independent variables simulated students' learning achievement (GPA) of 165 schools and dependent variables represented head teachers' distributed attributes: sharing, collective, collaborative, coleader and democratic. Likewise, extraneous variables were controlled and used: age, gender, qualification, experiences, training, position, subject specification which were controlled possible important enough to my study provided alternative explanation as head teachers general information with research questions 1 for effect (McLeod, 2019).

Chapter Summary

This chapter includes the literatures related to distributed leadership and students' learning achievement through the literature head teachers' distributed leadership can impact schools Grade Point Average(GPA) and outcomes of schools. There were various theories relevant in this section. I reviewed such literatures which were carried and connected to the links between head teachers' distributed leadership and students' learning achievement with the theoretical lens of (Harris & Spillane, 2008; Mayrowetz, 2008; Spillane, Halverson, & Diamond, 2004), (Danielson, 2007), (Pierro, et al., 2020), (Ravitch et al., 2013), (Sebastian,

Huang, & Allensworth, 2017). (Grogan, 2013; Spillane et al., 2008 (Byfield, 2007), Maltempo et al. (2019; as cited in Pierro, 2020), (Hattie, 2009). (Luff, 2011), (Harris, 2008). (Elmore, 2000), (Goksoy, 2016). Spillane (2008), Lederman & Lederman (2015), Bryman (2012), Badaracco, (2001), Gronn (2000).

I reviewed the literature related to conceptual framework while formatting the executive form and these previous researchers helped me to design in this study such as: Spillane (2006), Peace & Conger (2003), (Danis, et al 2001), (Rosenthal, 1998), (Heenana & Bennis 1999), (Beck, 1981). Barker (2001), Hosking (1998), (Leithwood et. al 2006), Harris (2009), Danielson (2006), Elmore (2000) and Spillane (2006).

The review section was also related to the Nepalese context: Education Act of Nepal, constitutional provision, SIP (2009-2014), SSRP (2009-2015), SSDP (2016-2023), UNESCO (2015-2030), National Education Policy (2019), reports of Secondary Education Examination (2022) and some educational background. National and International journals, the books of research methodology, books of leadership theories were reviewed, on these literature basis of different grounds related to distributed leadership. Finally, this chapter II has the conceptual framework consisting both the independent and dependent variables underlying theoretical and practical status. This research study was conducted to address the related issues.

CHAPTER III

RESEARCH METHODOLOGY

Present Unit reflects the research methodology. It was carried out to find the relationship between head teachers' distributed leadership and students' learning achievement in public secondary schools of Kathmandu, Lalitpur and Bhaktapur districts. This chapter, began with survey approach within a quantitative research design based on the post-positivism philosophical paradigm was applied. The sample was taken from Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur districts. Data were collected through a single survey questionnaire. Distributed leadership and students' learning achievement questionnaire and a list for head teachers' demographic features were used. Reliability of the questionnaires was ensured by Cronbach's alpha administering a pilot test in ten percent of the total sample size from three districts (17 out of 165). After satisfying assumptions, descriptive, mean, correlation coefficient, and regression as inferential statistical techniques were used for analyzing the data. Finally, this chapter was displayed the ethical consideration of this study.

This is a quantitative research study which is predicted and explained the probable relationship between the dependent and independent variables. In this research I took and sampled the head teachers' distributed leadership attributes of Secondary Schools as the independent variables and Students' learning achievement of these schools of an academic year underlying Secondary Education Examination (SEE, 2022) as dependent variable.

As a researcher I tested the relationship between two variables dependent and independent whose positive effect hold in distributed leadership theory. Moreover, it's a quantitative research I investigated and located theories in the literatures examined the participants' responses. The next step to this quantitative theorization was to test the theories

and linked with the statement of the problems. Likewise, the three research questions and two hypothesis tested and predicted relationship between HTs DL and SLA. Particularly, I used this theoretical base by building upon head teachers own opinions with value free. Even some, leadership theory, styles, practices and their attributes were linked up with the present scenario of Public Secondary Schools.

The term SLA is known as different terminologies and definitions. However, in this study SLA is students' learning achievement of the public secondary schools of Kathmandu, Lalitpur and Bhaktapur districts from which I selected primary as well as secondary sources of data to fulfill the purpose of my study as it is a quantitative study by following and adopting survey large scale of data from selected schools. This is a research process in which I engaged developing a set of logical steps. Firstly, it was identified how could I conduct a research ethically implementing and employing skills. I conducted this study depending upon the types of the statement of the problems which were needed to research by shaping the procedures in this chapter or section.

I found that the SLA is not satisfactory through result of (2022) SEE and identified 11454 students' GPA simulated for grade improvement. It means they were non-graded according to the letter grading system of Nepal which is recently provisioned as an external examination system. HTs, teachers and the students are the key factors who are mutually connected in the schools for teaching learning activities within an academic year. Hence, in this study, 10th grade students result was analyzed by using mean of every 165 schools wise individually.

Observing some of the schools obtained acceptable GPA and others not, so far as the students' learning achievement is not uniformity within three districts evaluation. According to the objectives, I collected information and manipulated the data differing variables and measurements. A systematic inquiry, in this research methodology I established rapport and gained the confidence of research area. Furthermore, it's a survey study which included the

identification of the population and sampling which I contained an adequate size of samples 165 head teachers systematically by using simple random sampling.

This methodology underlying, correlational study was employed the specific instruments questionnaires which were determined from reliable and valid by using appropriate data procedures which were answered by the respondents to the designed questions and hypothesis. It was collected data on an instrument which I needed some system for scoring and assigning a numeric value or score to each responses categories for each questions and used to collect data (Creswell, 2020). Five point Likert Scales was used having ordinal number i.e. 4= Strongly Agree, 3 = Agree, 2 = Undecided, 1 = Disagree and 0 = Strongly Disagree respectively. Survey method was used for collecting primary resources of data where I visited selected Public Secondary Schools. Only the questionnaires tools were used for collecting primary data and grade sheet of board exam SEE (2022) was used for secondary resources of data. Collected information implemented and were analyzed by interpreting descriptive and inferential statistics by using SPSS version 25. In the analysis section it was found only the significant predictions but insignificant were not predicted however those data even also included by displaying tabular form and their descriptions.

This study is based on the quantitative calculation. So there are only two types of scales of measurement i.e., interval and ratio for quantitative measurement. Different scales are used to measure scale, here it was used Likert scale in this study for calculating weight and attitude value for every questionnaire statements (Kumar, 2011) which help me to interpret HTs respondent scores. But there comes the term quality of questionnaires for the better result of this study. So, I used the best scaling technique due to these both reason is Likert scaling technique which gives better quantitative calculation. I identified the Likert scale surveys more feasible because it made interpretation of data extremely easy. Head teachers were given more options to choose from extremely positive to extremely negative.

It also provided the options no response to the Head Teachers. Likert scale survey was also very easy to conduct with simple result calculation. However, this scaling technique also have limitation. Validation of this scale might be compromised because of social desirability i.e., individual may lie in the survey to make their positive image.

Philosophy of the Study

I was concentrated by the philosophy of post positivism paradigm. The post positivism paradigm accepts there is only a single reality. There is contemporary truth and it can be well-known specifically and quantitatively as approved by Creswell (2020). The post positivism view in my study was controlled, stabled, and standardized in appropriate order which can predict view towards the worlds. It was seen that there were four research paradigms which were used to carry out and conduct research studies, they were Epistemology, Ontology, Axiology and Methodology (Kivunja and Kuyini, 2017). The four components of paradigm have different meanings. In this regard, (Mertens, 2010) as cited in Khatri (2020) viewed that the nature of truth is Ontology, nature of knowledge is Epistemology, systematic inquiry is Methodology and nature of ethics is Axiology.

Ontology

The perception of Ontology is an assumption of a part of philosophy that is a real sense of the external world where a single and real objective can be vision. Mentioning perspective of Scotland (2012), ontology is part of philosophy, which is thought sensible reality including real events and facts regarding society and investing to establish truthful belief. Initially, the ontological assumptions concern the nature of existence (Cohen et al., 2018).

The ontological ground of my study was to search the nature of the present reality associated with head teachers' distributed leadership and students' learning achievement. This ground of ontological perspective of the researcher in my study was concentrated on

the single truth of the Head Teachers distributed leadership, which was assessed against the statements of hypothesis that were established using previous literature. The data were attained by means of preset procedures, and the answers were interpreted and discussed jointly. The current reality was established on the statistical results from the data.

Epistemology

This component is related to the knowledge which is gained from different sources while conducting research. The epistemological understanding was considered the bases or sources of knowledge (Cohen et al., 2018) in relation to the HTs' perspective to head teachers' distributed leadership and students' learning achievement acquired through empirical inquiry. Thus, it was the objective way of data collection and communication of the knowledge to others. It was gathered primary and secondary data for testing the reality. Through epistemological view, the post positivism view was explored the single reality that was before unidentified (Creswell, 2020). So, this study consists the holistic process for establishing through participants' answers, in relation to head teachers distributed leadership in Kathmandu, Lalitpur and Bhaktapur districts of Public Secondary Schools. Retrieving Cooksey & McDonald (2011), epistemology pertains numerous comprehension consisting natural knowledge of human surrounding the world which is obtained by investigators and knowledge is expanded through new findings. The researchers believe that this study focuses on absolute truth pertaining to practice of DL on students' learning outcome.

Methodology

Methodology deals with how aspects of inquiry process which is well planned to find out something. I used quantitative approach that is specific, well-structured and have been tested for validity and reliability as well as explicitly define and recognized. This method guides to collect the data with the help of questionnaires on the foundation of purpose statements, research questions and research hypothesis which are to be specific and measurable (Creswell, 2015). A researcher has to survey to a sample in delimited area to

whole population of head teachers to get essential information as well as to explain their perceptions (Creswell, 2020). In this study, the researcher surveyed in the Public Secondary Schools of Lalitpur, Kathmandu and Bhaktapur and Head teachers' demographic characteristics and (attributes) of HT's were described in quantitative form. The questionnaires were used to collect primary data and these data were analyzed. In this research, the researcher studied the relationship between head teachers' distributed leadership and students' learning achievement. So, survey was suitable design to fulfill the requirements of research hypothesis. Methodological questions guided me to the research process of knowing through which design questionnaires were answered. The survey was carried out taking representative sample from population of the Public Secondary Schools head teachers. This study carried out the association between head teachers' distributed leadership and students' learning achievement in the condition of Public Secondary Schools of Lalitpur, Kathmandu and Bhaktapur districts.

Axiology

Axiology is the philosophical approach to making decision of value or the right decision, it is called theory of value. Axiology address question what is the nature of ethics or ethical behavior? that I considered while conducting my research as moral issues and characteristics were also considered. Kivunja and Kuyini (2015) discussed in regard secure the good a participant is to be secure, the research is socially just, respectful, peaceful manner, minimize risk that it is to be psychological, physical, social, legal, and economic aspect. In my research study, I used the right decision to qualify the standards and value of study to the different aspects. The Participants perspectives towards school leadership and students' learning achievement were understood and evaluated either it was wrong or right. In my study, I gathered information through a single survey questionnaire by conducting pilot test and the real survey visit. I obtained valid knowledge through objective constructions and analyzed the statistical data. So, it is constructed on the post-positivism

paradigm which publically supports the single reality of truth and it exposes the effects of head teachers' distributed leadership and knowledge of Public Schools of three districts.

Research Design

For carrying out holistic specific aim of study, research design is conducted measurable issues and included into concrete setting (Cohen, 2018). The design of the study consists of the different components which can be adopted aggregate strategy by following an appropriate way for finding clear facts and information. The research design was adopted from the survey, it was cross-sectional in nature to find out the head teachers' distributed leadership and students' learning achievement. This is an element of survey research design that survey consists suggested a large scale data which conceptualized similarities (Cohen, 2018). Those large scale data were collected from selected Public Secondary Schools. Available information and data were statistically generated and manipulated by gathering context-free data. According to the characteristics of research design, I described and explained those data which represented wide population of gathering statistical data specifically more use of questionnaires and valuation the testing data. From this design it was obtained the opinions, scales, outcomes, conditions and ratings.

Design of the study was overall plan and strategy of research which is used to get answers from structure questionnaire that address statement of the problems (Kumar, 2011). I designed the research questions related to the problems of my study from primary as well as secondary sources. Definition by Kumar (2011), concerning post positivism which possesses unique data consisting quantitative methodology used in terms of features of many variables. In this research, I carried my research using post positivism paradigm. For this research purpose, survey method was suitable to collect and analyzed data to establish the association between independent and dependent variables.

Population and Sampling of the Study

Public Secondary Schools head teachers was a study group that they have a common feature while leading schools and distinction from other teachers group (Creswell, 2020). Population in study was all the head teachers of Public Secondary Schools of Lalitpur, Kathmandu and Bhaktapur districts. The Sample were selected from study area of the research design i.e. real number of sampling where I selected actual list of participants from Public Secondary Schools. Population was selected by using simple random sampling. Head teachers were target population in this study. In this process, random sampling was used by employing a procedure such as a random number and was selected sample representative that claimed to the population.

The probability random sampling was used to ensure the sample which represents broader characteristics of head teachers (Cohen, 2018). The sample was collected from the sampling frame by using simple random sampling. The number of sample size was determined by the following sampling formula.

$$\begin{aligned}
 n &= \frac{N}{1+Ne^2} \\
 &= \frac{281}{1+281*(0.05)^2} \\
 &= \frac{281}{1+0.7025} \\
 &= 165
 \end{aligned}$$

Where, n= total population (281)

e = margin of error (5%)

Thus, the required sample size of the head teachers was 165 for the sample size of this study. I used probability random sampling in which simple random sampling procedure was followed. The above sample of proportionate population showed the number of head

teachers of Public Secondary Schools were 281 in total under which 165 respondents samples were selected by minimizing (5%) margin of error (95%) significance level.

As it was a sampling which I had to select the simple random under probability, so I used the above formula of sample size. In this way, the next step was followed by population sampling of delimited study area. The table below shows the number of head teachers of selected area associated to schools that I selected through simple random sampling.

Table 1

Population Sampling

District	No. of Head Teachers	Proportion	Sample size
Kathmandu	165	0.59	97
Lalitpur	70	0.24	41
Bhaktapur	46	0.17	27
Total	281		165

Source: District Education Coordination Unit (2022)

The above table was depicted for sampling the population of head teachers who were working in the Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur. In this regard, Yamane (1976) sampling equation formula where, n = number of sample size, N = number of population = 281, e = Level of significance (5% = 0.05), 95% confidence level. All together 165 samples were required for the study. The above size of the sampling population was known. Public Secondary Schools Head Teachers of three districts were participants and sample size of this study.

It was survey method to collect data from Public Secondary Schools which was paper based survey. Main reason behind this survey technique was the preference of Head Teachers. Head Teachers themselves wants that technique because of their time scheduling. This study was also the field of school education sector. Creswell (2020, p. 377) states

“Cross-sectional survey research is a popular design in education”. It gives quantitative data from Head teachers. I used this technique because it was cost effective, time preferable and easy to conduct. Also it is traditional technique, so that every individual were comfortable with this technique and understand it easily. I selected the sample from targeted population and simplify outcome from the sample. I randomly selected sample from Public Secondary Schools of three districts by operating the lottery process. The Head teachers were the group of participants as populations of this study from which I simplified to the selected population.

Instrument Construction (Tools)

An instrument measures the variables in the study. Head teachers’ distributed leadership was evaluated by a survey questionnaire that was prepared in five point Likert Scale. The survey questionnaires included two Annexes I & II namely head teachers’ general descriptions in the first part (A-I) and questionnaires for head teachers in the second part (A-II). The first Annex consisted of head teachers’ demographic variables which assess the age, gender, experience, qualifications, position, training and specification. The second part Annex included the questionnaires for head teachers related to perspective of head teachers regarding their distributed leadership and students’ learning achievement. I requested the head teachers of Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur districts to have permission in order to conduct study.

In process of preparing distributed leadership survey questionnaires, I identified a source of questionnaires used in the research dissertations, those would measure the head teaches’ distributed leadership that was published in the Journals of International Education. The dissertations carried out by National and International researchers associated to distributed leadership head teachers’ attributes, students’ learning achievement under the supervision of the research committee of universities throughout the global context. For developing survey questionnaires in the process of designing, some research questionnaires

designed by Pierro (2020), Velasquez (2021), Subedi (2017) were observed but questionnaire design by them were not enough for the study and some items of questionnaires were irrelevant to this study. I constructed some questionnaire items in the approval of the research guide of this dissertation under Kathmandu University. However, I developed some items of questionnaires for the use in this study. In the process of developing phase of questionnaire, some items were found be relevant for this study, some items were related head teachers' demographic variables and general information and even some items were relevant to the Likert scales which I developed in this study. Head teachers sharing attributes had some items, similarly of collective, collaborative, coleader and democratic were relevant. Likewise, the review of Velasquez (2021), I found some items relevant to this study. Some items had matched with head teachers gender description were relevant to the questionnaires for head teachers Likert Scales. While developing questionnaires I identified similar constructions in terms of leadership attributes of this study. Thus, the Likert scale was used for collecting information in the survey and it was constructed in the form of scales (Sullivan & Artino, 2013). So, I used the Likert scale as the major tools for the data collection through survey visit. Likert scale was constructed in the five point: Strongly Agree (4), Agree (3), Undecided (2), Disagree (1), Strongly Disagree (0). These Likert focused on examining the respondents' attitudes (DeCoster, 2000). The scale was constructed to maintain the quality of the surveys to endow a quantitative measurement with concerning head teachers distributed leadership and students' learning achievement. Thus, a set of questionnaires, 8 items of Annex-I and 43 items of annex-II was prepared to measure the head teachers distributed leadership. The set of questionnaires was further refined with the help of subject and language experts in five point Likert scale.

On developing the questionnaires, I entered into the translation phase. In this process the translators, reviewers and adjudicators engaged to translate the questionnaires. I got support from expert (English to Nepali) for translating the language. After translation,

the issues of items in Annex-I & II were assessed and checked by expert of Nepali Language. I completed this translation work for Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur considering the head teachers from these schools were supposed to be bilingual. The suggestions provided by the experts were included in the developed questionnaires. The researcher ensured their suggestions and questions. So far as reliability and validity after the questionnaires were checked, which was discussed in the pilot study. The Likert scale contains multiple items and they are likely to be more reliable than single items. The reliability of design Likert scale has to be checked using Cronbach's Alpha. After constructing the scales, I reviewed dissertations which were carried out by Pierro (2020) using distributed leadership and students' achievement and Velasquez (2021). Moreover, I studied the literature associated to different researchers to get perspectives towards DL.

I made the potential respondents Public Secondary Schools head teachers of Kathmandu, Lalitpur and Bhaktapur even discussed with them for contextualizing the constructs which were developed. The number (17) of head teachers involved in the developing process in the first and second phase then some items were removed, merged and some items were added while constructing these items. Thus, scales were contextualized in the research site available. The following table 2 displays the attributes and questionnaire items related to head teachers distributed leadership.

Table 2*Attributes and Questionnaires Items*

S.N.	Attributes	Number of items
1	Sharing	9
2	Collective	9
3	Collaborative	8
4	Co-leaders	7
5	Democratic	10
	Total	43

Analyzing and Interpreting data

Creswell (2020, p.385) defined “Designing good survey instrument is a challenging and complex process”. As a researcher, I considered a survey instrument which was available to measure conceptualized variables. For this process, it was essential to design different types of questions which consisted individual, behavioral, attitudinal, sensitive and close ended questions. Similarly, a strategy of constructing good questions including clear language which was sure to the answer options. Those questions were not overlapped and were applicable to all participants (HT). These questions as an instrument were used as pilot test by administering where the research was going to be held. Lastly, the questions were changed on the basis of head teachers’ feedback. I analyzed and interpreted descriptive and inferential statistics. In descriptive statistics, Mean and Correlation Coefficient models were used to draw the idea about the relationship between or among the dependent and independent variables. For testing hypothesis, inferential statistics was used which tells us statistically significant difference and non-significant the attributes and their belonging variables. It further tells us three degrees of freedom within group mean square (variance).

After rigorous process of study related literature review and expert advice from the field independent and dependent variables have been taken in completion. I used the following tools for collecting primary data through field visit by using survey:

Table 3

Research Tools

S.N.	Research questions	Dependent variables	Independent variables	Statistical tools
1	What is the relationship between distributed leadership and demographic variables of head teachers?	Distributed leadership	Demographic variables	Mean Percent Normality Test
2	To what extend school head teachers demonstrate distributed leadership in schools?	Distributed leadership		T test and ANOVA
3	What is the relationship between head teachers' distributed leadership and students' learning achievement?	Students' learning achievement	Distributed leadership	Correlation and Regression

As a quantitative researcher, I had to follow standard criteria for assessing a good instrument to use and contain recording procedures that fit the data that I need to answer the question and research hypothesis. In this process, different questions were discussed and collected from different source. By observing different standard criteria and discussing with supervisor I decided to use Ordinal Scale of measurement technique out of four different scaling technique to answer my survey questions (Creswell, 2020).

This study is based on the quantitative calculation. I used the Likert Scale as my measurement scale in this study because it suits and answer all my survey questionnaires. I found the Likert scale surveys more feasible because it makes interpretation of data extremely easy. It gives the Head teachers more option to choose from extremely positive to

extremely negative. It also provided undecided option to the Head Teachers. And also Likert scale survey are very easy to conduct with simple result calculation. However, this scaling technique also have limitation. Validation of this scale might be compromised because of social desirability i.e., individual may lie in the survey to make their positive image.

Pilot Test of the Study

Pilot study in this research was done in order to find out the perspective of head teachers towards the research questionnaires what I designed and hypothesized. Two sorts of research questionnaires were designed into two different sets i.e. Annex-I and Annex-II where personal descriptions were asked in the Annex-I and the holistic questionnaires associated to leadership, learning achievements and education issues in the Annex-II. Moreover, there were 11 questions in the former sections and 43 questions were made in the latter Annex-II. According to Lackey and Wingate (1998) the sample size for pilot test must be 10 percent of the total sample to estimate the reliability of the scale (as cited in Hertzog, 2008). To establish the internal reliability of the scale of this research study, I took total 10 percent sample size and I used Cronbach's Alpha for calculating the present research. The following table shows what I adopted and conducted pilot test as field study or survey design: -

Table 4

Pilot Test Respondents

District	Total HT's	Selected HT's	Total participants HT's
Kathmandu	165	97	10
Lalitpur	70	41	4
Bhaktapur	46	27	3
Total	281	165	17

The above table shows that the number of head teachers of Kathmandu, Lalitpur and Bhaktapur. There were all total 281 HTs from where 165 HTs were selected populations in this study. Out of 165 only 17 participants were selected for piloting the test. However, I adopted equal proportion while designated the populations of Head teachers i.e. 10 out of 97 from Kathmandu, 4 out of 41 from Lalitpur and 3 out of 27 from Bhaktapur were the respondents.

I reached to the selected schools having a set of questionnaires. I requested and informed Schools Head teachers about my visit. Some schools administered the letters and set of questionnaires easily but others didn't and told me to visit again. I knew that it was going to be costly and would take a lot of time. Head Teachers were selected by lottery method. The population of head teachers were selected through random selection. The questionnaires were distributed and HT's responded too. In individual distribution of questions most of the HT's looked hesitant towards the questions related to Academic publication associated to 9, 10 and 11. According to their suggestions, I improvised the questions in Annex-I. Remaining 8 questionnaires were appropriate and consistency after piloting.

In the context of second set of Annex (questionnaires) 43 questions were designed and most of them were given approval. So, I decided to go with the second phase. To analyze the responses in regard to the questionnaires, leadership attributes could be touched within the international standards. Most of the HT's responded on Strongly Agree and some of them picked Agree whereas least of them chose the option Undecided.

Reliability

Reliability is measured when using samples and instruments in research study are either stable or consistence though these samples and instruments are used in many times (Cohen, 2018). Creswell (2020, p. 159) states "To determine this form of reliability, the researcher administers the test at two different times to the same participants at a sufficient

time interval”. Reliability of the instrument was obtained through Cronbach’s Alpha.

George & Mallery (2003; as cited in Koonce & Kelly, 2014) provide the following rules of thumb: “ ≥ 0.9 - Excellent, ≥ 0.8 - Good, ≥ 0.7 - Acceptable, ≥ 0.6 -Questionable, ≥ 0.5 - Poor and ≤ 0.5 - Unacceptable”. So, Alpha instrument was appropriate as per stated the rule of thumb. Alpha was used to perform pilot test before conducting research study. I selected 10% of schools’ head teachers of total sampling population out of 165. In my study, the validity of questionnaires was measured as epitomized as what I scored from sample by stable reliability.

The following statics of reliability test depicts that the Cronbach’s Alpha was tested by giving the citations whereas 43 questionnaire items were checked and then the consequence of the total value was denoted 0.94 i. e. highly consistency and reliable.

Table 5

Reliability Test of Pilot Study

Reliability Statistics	
Cronbach's Alpha	No of Items
.94	43

Above table was calculated by using SPSS version where as it shows that there is high reliable consistency of the test i.e. 94 Cronbach’s Alpha according to statistics.

Reliability is an attentive part for internal consistency. The reliability is ensured by various methods while piloting the test. There are many methods used to ensure reliability. Among these various methods split half, inter-rater, Cronbach’s alpha and coefficient, Alpha are widely used methods. Internal consistency was measured by Cronbach’s Alfa score because it considers the variance of each designed items. Even though variance of each item is seen it is not seen uniformity in the acceptable level of alpha. According to Cohen et. al (2018) the acceptable level of alpha is not to be less than 0.7. In this condition, according to

Mir and Abbasi (2012), minimum acceptable level of Alpha is 0.5 (approval) in sort of piloting. In this present study the Cronbach's Alpha in both Annex I and Annex II sets of questionnaires were seen acceptable to a high degree of internal consistency. The values of Alpha in the survey study of delimited field are presented below:

Table 6

Pilot Test of Attributes

Attributes	Indicators (Items)	Cronbach's Alpha
Sharing	9	0.72
collective	9	0.63
collaborative	8	0.62
Coleader	7	0.65
Democratic	10	0.64

In this study Alpha value is measured using SPSS version. In these sorts of studies and measures many researchers have found out that the values of Alpha and its acceptable level. The above table of Cronbach's Alpha is above 0.6 in every items, so it is acceptable. George and Mallery (2010) recommended is to be in regard Cronbach's Alfa whereas,

Alpha value is ≥ 0.9 is excellent

≥ 0.8 is good

≥ 0.6 is acceptable

≥ 0.5 is questionable

≥ 0.4 is unacceptable

In this study, I calculated the two sets of questionnaires Annex I and Annex II whether these construction instruments were appropriate for the research. On completion of pilot test 0.7 i.e. acceptable level for further real study.

The above table depicts that value of Cronbach's Alpha coefficient is to be above 0.7 to ensure the internal reliability of the scale. In this piloting the Cronbach's Alfa was found (derived 0.7 in all the attributed). Likewise, these coefficients of Cronbach's Alfa showed the high internal consistency among HT's Distributed Leadership and students' learning achievement. So this research instrument was highly reliable and consistent too.

I used the research tools which remained consistent and stable that they were predictable, accurate and reliable. According to Moser and Kelton (1989) as cited in Kumar (2011, p. 181) "the greater the degree of consistency and stability in an instrument, the greater its' reliability. A scale or test is reliable to the extent that repeat measurements made by it under constant conditions give the same results".

Having pilot test of questionnaires through survey were measured and Likert scale used by head teachers were the same results. Same type of test and information were collected from the survey, the respondents gave same type of answers in Likert what they agreed and viewed in the pilot test. The less the difference between the two sets of results the higher the reliability of an instrument is.

I used methods of defining the reliability of tool in this quantitative research maintaining external or internal consistency in which test, retest procedures are used. The score showed the sign of reliability of the instrument with the larger value of score. So my instrument remained consistent. Internal consistency procedure of this study seemed in items and questions reliable. Cronbach's Alpha was tested which showed above 0.6 was the acceptance level of reliability.

Validity

This study is quantitative, so validity is must establish criteria to be established. Kerlinger (2011) suggested that validity in the study is the extent to which it was assessed what it pre-determined. It contributes to the study by reducing the errors which arise from the measurement. Concerning validity of any designed test relating research is defined in

terms of different meanings, levels, nature and associated concepts expecting accepted findings including reflections to address accurate prediction and measures (Cohen, 2018). The three forms of validity were measured that is content validity, construct validity and criteria validity.

The valuation of the items of a tool in this detail is content validity. Especially, for content I covered issue and approach by balancing and having acceptable representation in the questionnaire items. Content validity of this survey was confirmed by incorporating the attitudes from the subject's experts and HTs of public secondary schools. Content validity is accomplished by incorporating experts' opinions about the significance and sampling of the test content for a specific context. It includes coverage and representativeness rather than designs of answer or grades. It is a matter of judgment rather than of measurement. Kumar (2011, p. 180) states "construct validity is a more sophisticated technique for establishing the validity of an instrument, as it is based upon statistical procedures". I conducted pilot test and collected data from field survey. The collected data were analyzed by using statistical procedures to establish the contribution of each construct (items) to the total variance. The contribution of these issues to the total variance is an indication of the degree of validity of the instrument. Kumar (2011) says that the greater the variance attributable to the constructs the higher the validity of instrument. To address the construct validity in this study, I designed different items of questionnaires for getting information of demographic variation and attributes of head teachers statements were given in the Annex II and Likert Scales were provided in every items. The dependent variable (Students' learning achievement) and independent variable (DL) are compared with suitable statistical tests and distributed leadership theory was used to evaluate the construct validity in this research.

Criteria validity in this study is compared the scores of Likert Scale with one or more external criteria. Measures of the distributed leadership attributes were compared to the previous researchers. In my study, the findings and results were compared and

contrasted with other similar types of this study by Pierro (2020) and Avalsque (2021). The description was already explained in questionnaire of instrument of data collection phase.

Ethical Consideration

Ethical consideration might arise in the research during the data collection, getting information, interpretation of collected data and reporting these data in thesis dissertation. The ethical consideration plays an important role as an essential part of study. Concerning this indomitable section, Cohen et al (2018) stated from the beginning of the data collection procedure to the preparation of final report. I considered all the ethical factors while collecting the primary as well as secondary data. The head teachers of Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur were informed about nature of this research study even it was told impact before collecting the data (Creswell, 2020). So, I adopted and followed the research guidelines designed by Creswell (2020). In the process of conducting research, I gained permission before entering the schools and minimum disturbance to during the study. To approve my research, I considered instructional time of the head teachers and they required the considerable amount of time. The head teachers were not interfered; it was gained access minimum disruption. I sought permission by including the schools responsible for ensuring rights of participants were protected who participated in my study and I did not pressurize into the signing consent of set of questionnaires as well as the cover letter of schools. On completion of the data collection I had to respect audiences who read and use information from this study. I reported the data honestly without changing and altering the findings to satisfy certain prediction (Creswell, 2020).

As the researcher of Kathmandu University, I should follow the ethical guidelines for conducting and collecting research. I clarified the benefits to the populations by identifying the level of head teachers DL practices in schools. The purpose and process of study was conveyed to participants. The cover letter with questionnaires was designed to all the respondents. In continuation, I took verbal permission from the head teachers in order to

collect the data from the school head teachers. Further, collected data were only used to meet the purpose of study, the data were not used for other purposes. In process of data analysis and interpretation privacy of respondents was duly respected and revealed only positive or negative results of the study. It was revealed, falsified, fabricated and plagiarized data while writing and sharing my reports.

I duly maintained confidentiality of the collected data, anonymity of the respondents. These all ethical provision ensured the strong ethical expect of this study. Furthermore, the questionnaires which were responded by the participants were coded by a numerical value adopting statistical results. The statistical results were described from the total samples in the process of data analysis using accessible statistical technique (SPSS), which were designed and used by the previous researchers in their thesis dissertations. Finally, the validity by statisticians were considered for research findings.

Chapter Summary

Above study was laid by the post positivism research paradigm. The survey was adopted as it methodological consideration. I adopted the quantitative method and selected the Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur districts. Furthermore, population study, probability sampling (simple random), sampling design and Likert Scale were employed in this study. Conducting pilot testing high internal reliability and consistency were ensured in this study. Moreover, I ensured content, construct and criterion validity of the instruments (tools). All the norms, values and guidelines of the survey quantitative research method was followed. I maintained the survey research ethics developed by the previous researchers and the statisticians while conducting this research study.

CHAPTER IV

RELATIONSHIP OF DEMOGRAPHIC ATTRIBUTES AND DISTRIBUTED LEADERSHIP

Head teachers' distributed leadership and students' learning achievement were the main major variables. Concerning to fulfill purposes and find out the relationship between head teachers' distributed leadership and students' learning achievement, I collected the primary and secondary sources of data. After the collection of data through survey questionnaires data were managed and edited the description about head teachers' distributed leadership and students' learning achievement. For coding and decoding the data I used the SPSS codes and Excel system to prepare the database. In the first step, the profiles of head teacher were examined by using frequency, percentage. The mean analysis was used to examine the demographic variables and level of head teachers. Pearson's correlation was used to find out relationship between head teachers' distributed leadership and students' learning achievement (GPA).

Preparing Database

The data was collected through survey questionnaires. There were 165 head teachers of Public Secondary Schools Kathmandu, Lalitpur and Bhaktapur as participants. They were distributed a set of questionnaires having Annex-I and annex-II. Head teachers' general information was inquired in the Annex-I and Likert Scale questionnaires were designed and asked in the annex-II in the form of constructed statements. The all Head Teachers responded on questionnaires. On the basis of collected data, I edited and processed the data set, and the data were cleaned and updated. Then, they were entered in computer software. The result of data analysis was computed using the SPSS software and the Microsoft excel program. Likewise, the Secondary Education Examination(SEE) results (2022) for

evaluating students' learning achievement was collected from District Education Coordination Unit Kathmandu. Similarly, the Secondary Education Examination (SEE) result of Lalitpur and Bhaktapur were collected from individual selected schools. The data were entered into Excel, and later on SPSS software was used for further analysis. In this part, data was analyzed using descriptive statistics like frequency, percentage, mean, standard deviation to measure head teachers' demographic attributes and distributed leadership.

Head Teachers' General Information

The present study was conducted to find out answer of questions relating to purpose, I designed three questionnaires by formatting hypothesis to measure the significant differences between the independent and dependent variables. In continuation of study, I visited the Schools and met the head teachers for collecting the primary sources of data from their responses to given questions. So far as, a set of questionnaires having two annexes were distributed to the head teachers and collected the data. In the first annex, the questions were designed for achieving the head teachers' personal academic and experiences of general information. Similarly, the second annex consisted closed ended types of statements in which participants filled up their responses in the given Likert Scales. This section of head teachers' general information had eight constructed questions namely personal information, qualification, age, gender, teaching experience, subject specialization, head teachers post in years and training skills days of the head teachers. To overview the general information of head teachers through questionnaire tools from the participated respondents the following answers were observed in their demographic variables. The number of head teachers who responded their personal information was 165 and they filled up the questions as their answers. They mentioned the name, their mailing address, telephone numbers and schools' name where they have been working as a head teacher of school. Similarly, the head teachers categorized their qualification, ticked out the age group, male and female,

teaching experience, subject specification, head teachers position, and training skills in days in the first part of the questionnaires which were obtained through out their general personal description, academic teaching experiences being a Head teachers of public secondary schools of Kathmandu, Lalitpur and Bhaktapur.

Head Teachers' Qualifications

On the basis of primary sources of collected data through questionnaires of Annex 1 Head teachers' qualification was asked and head teachers responded about their qualification. According to their responses, there were 11 categories of qualification filled by Head teachers. The education qualification represents the minimum to the highest degree which is shown in the following table:

Table 7

Qualification Wise Descriptive Distributed Leadership

Qualification	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
SLC	2	3.1967	.08607	.06086	2.4233	3.9700
B.Ed	6	3.4360	.11684	.04770	3.3134	3.5586
BBA	1	3.3119	.	.	.	.
B.SC	2	3.2792	.23020	.16278	1.2109	5.3475
B.A	11	3.4110	.16357	.04932	3.3011	3.5209
M.Ed	78	3.5174	.18558	.02101	3.4755	3.5592
M.A	29	3.5057	.18766	.03485	3.4343	3.5771

MBA	6	3.4577	.16369	.06682	3.2859	3.6295
M.Sc	17	3.4159	.14340	.03478	3.3422	3.4897
M.Phil	12	3.5537	.15016	.04335	3.4583	3.6491
PhD	1	3.4665	.	.	.	.
Total	165	3.4870	.18039	.01404	3.4592	3.5147

The above table depicts that there is the highest number of subject specializations i.e. 78 in mathematics and mean is 3.51 having master's degree of education. The head teachers with the qualifications of M.Ed., MPhil and M.A. have the higher level of distributed leadership practice as compare to others.

Teaching Experience of Head Teachers

This section was related to teaching experience of head teachers' experience in years. The collected data represented the different types of teaching experiences. Especially, I had categorized four classification having their experience of 1-10, 11-20, 21-30 and 31-40 years which is shown in table below:

Table 8

Teaching Experience Wise Descriptive Distributed Leadership Attributes

		95% Confidence Interval for Mean					
			Std.	Std.	Lower	Upper	
Teaching Experience	N	Mean	Deviation	Error	Bound	Bound	
11 to 20	2	3.5527	.08569	.06060	2.7827	4.3226	
21 to 30	21	3.5296	.21346	.04658	3.4324	3.6267	
31 to 40	76	3.4666	.18134	.02080	3.4252	3.5080	

41 to above	66	3.4949	.16960	.02088	3.4532	3.5366
Total	165	3.4870	.18039	.01404	3.4592	3.5147

The above table shows the work experience of distributed attributes in the fourth categories which indicates third category (31-40) year group has the highest number of work experience where mean is found 3.46. In the group (11-20) has the lowest number of work experience whose mean is 3.55. Among the different groups of teaching experience of head teachers, having the experiences of 11 to 30 years has higher mean of distributed leadership practice as compared to other head teachers experience.

Gender Wise Description

The following table shows the gender wise description of head teacher's demographic variables belonging to either male or female of Public Secondary Schools.

Table 9

Gender Wise Descriptive Distributed Leadership

Gender	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Male	138	3.47	0.18007	0.01533	3.4456	3.5062
Female	27	3.54	0.17444	0.03357	3.4746	3.6126
Total	165	3.48	0.18039	0.01404	3.4592	3.5147

The above table shows that there are 138 participants belonging to Male head teachers and 27 of female. The total mean of distributed leadership of male was 3.47 and that of female was 3.54. The total gender wise mean was 3.48 in which female head teacher practice distributed leadership at higher level as compare to male Head teachers and there

seems similarity in the responses of head teachers towards their distributed leadership due to the closeness of standard deviation (SD=0.18 and SD=0.17).

Age of Head Teachers

This section was related to the information of head teachers' age. On the basis of collected primary sources of data, I have described the age as general information in this part.

Table 10

Age Wise Descriptive Distributed Leadership Attribute

Age	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
30-40	6	3.5234	.20512	.08374	3.3081	3.7387
40-50	34	3.5114	.19947	.03421	3.4418	3.5810
50-60	125	3.4786	.17451	.01561	3.4477	3.5095
Total	165	3.4870	.18039	.01404	3.4592	3.5147

From the above table the maximum number of head teachers in the categories of 50-60 years is found to be 125 and mean is 3.47 whereas, there are 6 head teachers in the category of 30-40 years' age and mean is found 3.52. The total mean is 3.48. Age wise description shows the age group 30-40 has the slightly higher as Hairon and Goh (2015) used the mean score which fits to depict calculation of statistics recommended by Brown (2014) which was similarly computed in above table.

Experience in Head Teachers' Position

This study represents the experience of head teacher in position which is sketched:

Table 11*Experience (Position) Wise Descriptive Distributed Leadership*

Experience (Position)	N	Mean	SD	Sd Error	Lower Bound	Upper Bound
1 to 10	2	3.4451	.10837	.07663	2.4715	4.4188
11 to 20	115	3.4912	.17999	.01678	3.4580	3.5245
21 to 30	34	3.4995	.18268	.03133	3.4358	3.5633
30 to 40	12	3.4332	.19783	.05711	3.3075	3.5589
41 above	2	3.3938	.19279	.13632	1.6617	5.1260
Total	165	3.4870	.18039	.01404	3.4592	3.5147

The above table shows that experience of head teacher position underlies 11-20 years' experience which has 3.49 mean and SD is 0.17. The categories 1 to 10 and above 41 years are same number 2 and mean 3.44 and 3.39 respectively. The experience of head teachers with the years of 11 to 30 or aggregate sum has slightly higher level of Distributed leadership practice as compared to others.

Head Teachers' Training (in days)

The following table shows head teachers training in days which participants responses of head teachers, I categories the training days into four scales.

Table 12*Training (In days) Wise Descriptive Distributed Leadership*

						95% Confidence	
						Interval for	
						Mean	
		Std.	Std.	Lower	Upper		
Training skill Days	N	Mean	Deviation	Error	Bound	Bound	
1 to 90	30	3.3828	.14826	.02707	3.3274	3.4382	
91 to 180	129	3.5059	.17535	.01544	3.4754	3.5365	
181 to 270	3	3.6064	.23848	.13768	3.0140	4.1988	
270 to 365	3	3.5935	.31723	.18315	2.8054	4.3815	
Total	165	3.4870	.18039	.01404	3.4592	3.5147	

From the above table it is found that the training days' group 91 to 180 has the highest number 129 and mean score is 3.50 and the categories group 181 to 270 and 270 to 365 has the similar number appear having mean score 3.60 and 3.59 respectively. The training status of head teachers with the 181 to 270 and 270 to 365 days have slightly higher level of distributed leadership practice as compared to others (i.e. 6 months 0 to 1 years).

Subject Specification

This information reflects the subject wise description which was related to specialization of subject what the head teachers achieved their degree as a teacher leadership. This question more specifically emphasis the degree which the head master got in their academic carriers. According to collected primary data, there were 28 subject specialization filled up by the respondents (HTs'). There were 17 head teachers found

having their major mathematics subject of Kathmandu whereas 5 head teacher were having their 1 subject such as Science, Health, Finance, Psychology and History. Likewise, to observ the data of Lalitpur, maximum 14 head teachers were having their EPM subjects, 12 of them were having English and 10 of them were having Nepali subject. Similarly, 10 head teacher were found having their major Nepali, 7 mathematics and 6 English. There were 10 head teachers found having their minimum 1 subject such as EPM, Leadership, Geography, Planning and management, Planning and Education, Development studies, Curriculum, Account and Science in Lalitpur district. To observ the data of Bhaktapur, there were maximum 4 English and 4 Mathematics head teachers, 3 head teacher were having curriculum and 3 were having EPM Subject. The 8 head teachers were having minimum 1 subject such as Health, Economics, Administration, Sociology, Account, Environment, Statistics, Edu. Development.

Distributed Leadership Attributes Based on Demographic Information

This section consists of the head teachers distributed leadership attributes namely sharing, collective, collaborative, co-leader and democratic. To find out the distributed leadership I had designed the questionnaire tools of two types of questions which represents the general information and their distributed leadership in terms of five components. The questionnaires were constructed to have the answer relationship between Head teachers distributed leadership attributes and demographic variables. Through questionnaires the sum of total data was collected. Every questions were made to check the head teachers' responses in the form of Likert Scale formatting Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree. To observe the data there were 43 questions in the closed form of Likert. The questions were statements related to attributes. Sharing had the 9 questionnaires, collective had 9 questionnaires, collaborative had 8 questionnaires, co-leader had 7 questionnaires and democratic had 10 questionnaires. The answers of every questionnaire were given by 165 School head teachers of Kathmandu, Lalitpur and

Bhaktapur districts. The reflection of their answers towards questions related to relationship between Head teachers DL attributes and demographic variables as distributed in the Public Secondary School where they have been teaching and working as a leader of School.

Assumption tested for parametric test

There are some basic assumptions for testing normality which contribute to strong results. There were various statistical assumptions to predict and contribute for testing in terms of collected data through different tools. Among those statistical assumptions, normality of data is the fundamental for computing the analysis. Sujianto (2009) states “Normality distribution test is a test to measure whether our data has a normal distribution or not”. Statistics test like students t-test and the one way and two-way ANOVA require a normally distributed sample population. Likewise, normality is assessment, I used graph for measuring normal distribution of data.

Figure 2

Histogram of Normality

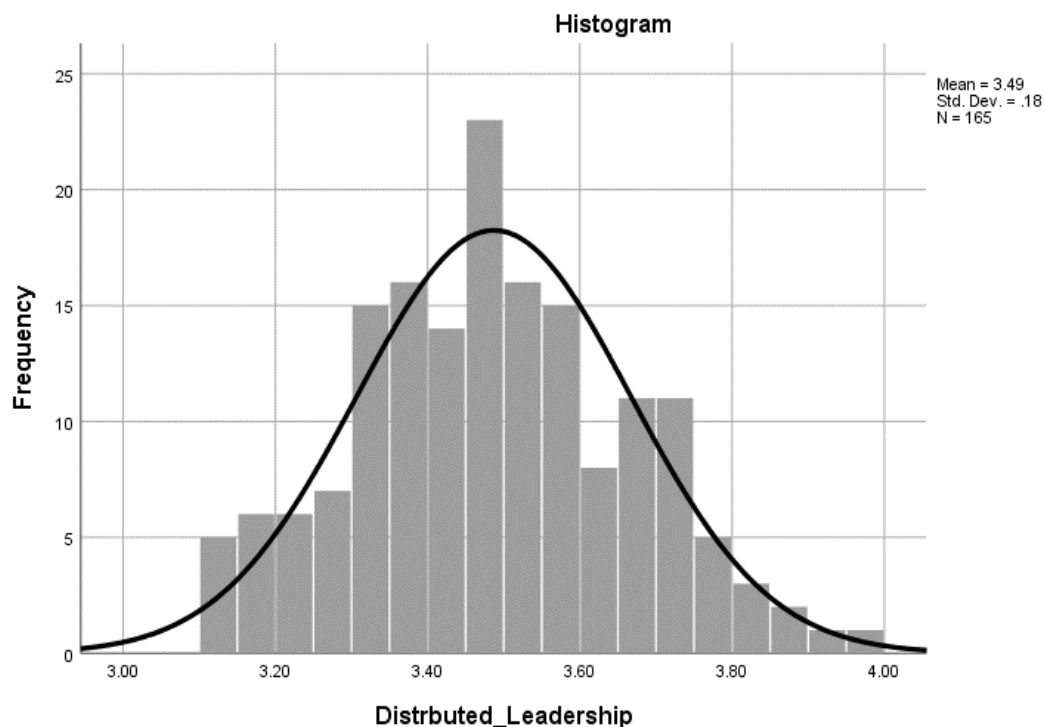


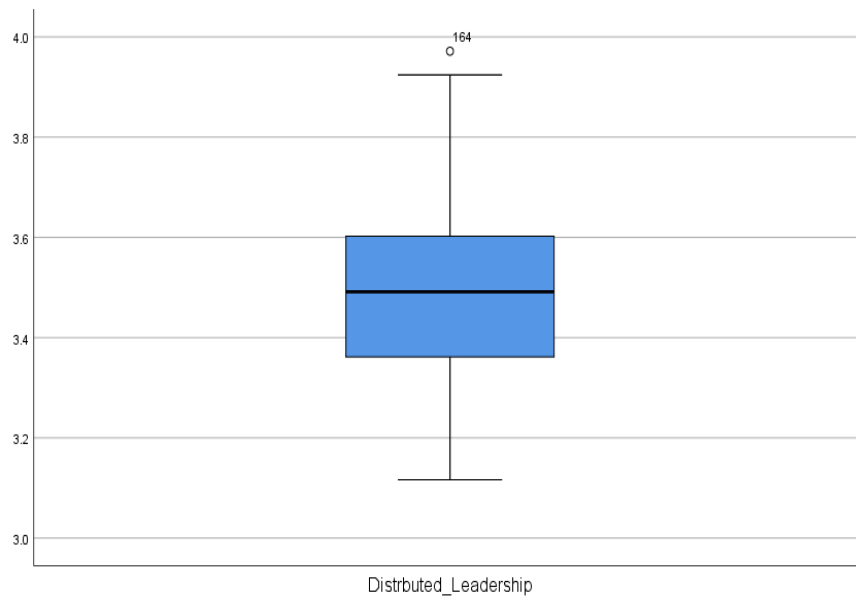
Table 13*Normality Test of Attributes Using Skewness and Kurtosis*

Attributes	Z Value of Skewness	Z value of Kurtosis
Sharing	-1.81	-0.93
Collective	-0.80	-1.40
Collaborative	1.02	-1.99
Coleader	1.96	0.27
Democratic	-1.48	0.97
Distributed Leadership	0.89	-0.91

These Z-values of Skewness and Kurtosis lies between the +2 to -2 ranges which give meaning of collected data in this study were normally distributed (Garson, 2012). This normal distribution of data permitted the researcher to operate a parametric test. To ensure for the parametric test where the samples were taken at random, in this study the dependent variables were to be normally distributed and there were to be equivalent variance across the population (Wilcox, 1995, Hecke, 2010). The 165 head teachers sample were selected randomly from the populations of 281 Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur. The above values of Skewness and Kurtosis of table 13 displays the value is between the standard range. One of the values of Kurtosis was found (= -1.99) in collaborative and Skewed (=1.96) in co-leaders.

Box Plot Test for Normality

To measure the normality test by using box plot the following observation were found out from the normal test as parametric operation. I used box plot under graphic statistics in which head teachers distributed attributes were summed up. Among five attributes the out layers were not appeared which tested individual and Distributed Leadership. So, the normality test helped me to operate the further parametric test.

Figure 3*Box Plot Test for Normality***Table 14***Test of Homogeneity of Variances on Gender*

Attributes		Levene			
		Statistic	df1	df2	Sig.
Sharing	Mean	3.955	1	163	0.048
Collective	Mean	0.023	1	163	0.880
Collaborative	Mean	0.018	1	163	0.894
Coleader	Mean	1.439	1	163	0.232
Democratic	Mean	0.001	1	163	0.976
Distributed leadership	Mean	0.298	1	163	0.586

The above table of homogeneity depicts that there is significant difference between the distributed leadership and sharing attributes across gender variable which has ($p = 0.048$) significant value, other four remaining attributes permitted to ensure the parametric test. The collective, collaborative, co-leader and democratic has the no significant result i.e. $p > 0.05$.

Table 15*Gender Wise Distributed Leadership Attributes*

Attributes		Sum of Squares	Df	Mean Square	F	Sig.
Sharing	Between Groups	0.186	1	0.186	3.907	0.050
	Within Groups	7.752	163	0.048		
	Total	7.938	164			
Collective	Between Groups	0.169	1	0.169	2.486	0.117
	Within Groups	11.103	163	0.068		
	Total	11.272	164			
Collaborative	Between Groups	0.040	1	0.040	0.690	0.407
	Within Groups	9.351	163	0.057		
	Total	9.391	164			
Coleader	Between Groups	0.034	1	0.034	1.213	0.272
	Within Groups	4.567	163	0.028		
	Total	4.601	164			
Democratic	Between Groups	0.147	1	0.147	1.680	0.197
	Within Groups	14.291	163	0.088		
	Total	14.438	164			
Distributed Leadership	Between Groups	0.104	1	0.104	3.228	0.074
	Within Groups	5.233	163	0.032		
	Total	5.337	164			

From the above table, it shows there is no significant relationship between all the attributes of distributed leadership with Gender. Distributed leadership mean square is 0.104 between the group and 0.032 is appeared in within the group.

Further, the above table 15 of descriptive result, it displays that the mean value of female head teachers on distributed leadership and its' each components is slightly higher as compare to male head teachers on the respective components as adopted study from Brown (2014). However, the difference is not significant. For the detail description, the descriptive result of analysis statistics is presented in table 'C' of Annex section.

Table 16*Age Wise Test of Homogeneity of Variance*

Attributes		Levene			
		Statistic	df1	df2	Sig.
Sharing	Mean	.522	2	162	.595
Collective	Mean	.947	2	162	.390
Collaborative	Mean	.979	2	162	.378
Coleader	Mean	.729	2	162	.484
Democratic	Mean	1.160	2	162	.316
Distributed Leadership	Mean	.159	2	162	.853

There is no significance between age group and attributes of distributed leadership. Therefore, the data is homogeneity. So the test of Levens test of assumption is meet for parametric test. So, there is no significant relationship on distributed leadership and its' demographical attributes across age of yielded the no significant result i.e. >5% significant level.

Table 17*Age Wise Distributed Leadership Attributes*

		ANOVA				
		Sum of Squares	Df	Mean Square	F	Sig.
Sharing	B. Groups	.003	2	.001	.028	.972
	W. Groups	7.935	162	.049		
	Total	7.938	164			
Collective	B. Groups	.055	2	.028	.399	.672
	W. Groups	11.217	162	.069		
	Total	11.272	164			
Collaborative	B. Groups	.149	2	.075	1.307	.274
	W. Groups	9.241	162	.057		

	Total	9.391	164			
Coleader	B. Groups	.002	2	.001	.042	.959
	W. Groups	4.599	162	.028		
	Total	4.601	164			
Democratic	B. Groups	.128	2	.064	.725	.486
	W. Groups	14.310	162	.088		
	Total	14.438	164			
Distributed Leadership	Between Groups	.037	2	.019	.568	.568
	Within Groups	5.300	162	.033		
	Total	5.337	164			

The above table shows p value of the leadership attributes > 0.05 . Therefore, we can conclude that there is no significant difference in distributed leadership attributes (sharing, collective, collaborative, coleader, democratic and distributed leadership) across age groups (20-30, 30-40, 40 -50 and 50-60).

Table 18

Teaching Experience Wise Test of Homogeneity of Variance

		Levene			
		Statistic	df1	df2	Sig.
Sharing	Mean	.559	3	161	.643
Collective	Mean	1.323	3	161	.269
Collaborative	Mean	1.022	3	161	.384
Coleader	Mean	.070	3	161	.976
Democratic	Mean	1.622	3	161	.186
Distributed	Mean	1.212	3	161	.307

The above test of homogeneity in regard teaching experience there is no significant differences between teaching experience and HTs' distributed leadership. The Levene statistics show sharing has the 0.64, collective has 0.26, collaborative has 0.38, co-leader has 0.97, democratic has 0.18 and distributed leadership has 0.30 insignificant values i.e. $p > 0.05$.

Table 19*Teaching Experience Wise Distributed Leadership Attributes*

		ANOVA				
		Sum of Squares	Df	Mean Square	F	Sig.
Sharing	Between Groups	.349	3	.116	2.465	.064
	Within Groups	7.590	161	.047		
	Total	7.938	164			
Collective	Between Groups	.143	3	.048	.688	.561
	Within Groups	11.130	161	.069		
	Total	11.272	164			
Collaborative	Between Groups	.131	3	.044	.761	.518
	Within Groups	9.259	161	.058		
	Total	9.391	164			
Coleader	Between Groups	.015	3	.005	.171	.916
	Within Groups	4.586	161	.028		
	Total	4.601	164			
Democratic	Between Groups	.072	3	.024	.269	.848
	Within Groups	14.366	161	.089		
	Total	14.438	164			
Distributed Leadership	Between Groups	.082	3	.027	.841	.473
	Within Groups	5.255	161	.033		
	Total	5.337	164			

The above table shows p value of the leadership attributes > 0.05 . Therefore, we can conclude that there is no significant difference in distributed leadership attributes (sharing, collective, collaborative, coleader, democratic and distributed leadership) across teaching experience groups (1-10, 11-20, 21-30 and 31-40).

Table 20

Qualification Wise Test of Homogeneity of Variances

		Levene			
		Statistic	df1	df2	Sig.
Sharing	Mean	1.034	8	154	.413
Collective	Mean	1.086	8	154	.376
Collaborative	Mean	1.185	8	154	.311
Coleader	Mean	2.327	8	154	.022
Democratic	Mean	1.519	8	154	.155
Distributed Leadership	Mean	.629	8	154	.753

The above homogeneity test represents that there is significant difference between the distributed leadership and co-leader attribute, which has ($p=0.02$) significant value, other four remaining attributes permitted to ensure the parametric test.

Table 21*Qualification Wise Distributed Leadership Attributes*

		ANOVA				
		Sum of		Mean		
		Squares	Df	Square	F	Sig.
Sharing	Between	.666	10	.067	1.410	.180
	Groups					
	Within Groups	7.272	154	.047		
	Total	7.938	164			
Collective	Between	1.308	10	.131	2.021	.035
	Groups					
	Within Groups	9.965	154	.065		
	Total	11.272	164			
Collaborative	Between	.738	10	.074	1.314	.227
	Groups					
	Within Groups	8.652	154	.056		
	Total	9.391	164			
Coleader	Between	.468	10	.047	1.742	.076
	Groups					
	Within Groups	4.133	154	.027		
	Total	4.601	164			
Democratic	Between	1.081	10	.108	1.246	.266
	Groups					
	Within Groups	13.357	154	.087		
	Total	14.438	164			
Distributed Leadership	Between	.592	10	.059	1.920	.046
	Groups					
	Within Groups	4.745	154	.031		
	Total	5.337	164			

The above table shows p value of the leadership attributes < 0.05 in collective (0.035) and distributed leadership (0.046). Therefore, we can conclude that there is

significant difference in distributed leadership attributes (collective, and distributed leadership) across qualification wise groups. During the empirical study, the researcher determined that all the schools are in need of strategic distribution in order to ensure effective teamwork (Triegaardt, 2013).

Table 22

Experience (Position) Wise Test of Homogeneity of Variances

Attributes		Levene			
		Statistic	df1	df2	Sig.
Sharing	Mean	1.506	4	160	.203
Collective	Mean	.233	4	160	.920
Collaborative	Mean	.744	4	160	.564
Coleader	Mean	1.295	4	160	.274
Democratic	Mean	1.892	4	160	.114
Distributed Leadership	Mean	.234	4	160	.919

The above table points out there is no significant difference between experience of head teacher and their attributes. The sharing has .20 significant level, .92 of collective, .56 of collaborative, .27 of co-leader, .11 of democratic and .91 of Distributed leadership. According to Levene test homogeneity a non-significant result indicates (>0.05) that meet the assumption of homogeneity variance.

Table 23*Experience (position) Wise Distributed Leadership attributes*

		ANOVA				
		Sum of		Mean		
		Squares	Df	Square	F	Sig.
Sharing	Between	.059	4	.015	.299	.878
	Groups					
	Within Groups	7.879	160	.049		
	Total	7.938	164			
Collective	Between	.176	4	.044	.633	.639
	Groups					
	Within Groups	11.097	160	.069		
	Total	11.272	164			
Collaborative	Between	.228	4	.057	.995	.412
	Groups					
	Within Groups	9.163	160	.057		
	Total	9.391	164			
Coleader	Between	.114	4	.028	1.014	.402
	Groups					
	Within Groups	4.487	160	.028		
	Total	4.601	164			
Democratic	Between	.146	4	.037	.410	.802
	Groups					
	Within Groups	14.292	160	.089		
	Total	14.438	164			
Distributed Leadership	Between	.063	4	.016	.478	.752
	Groups					
	Within Groups	5.274	160	.033		
	Total	5.337	164			

The above table shows p value of the leadership attributes > 0.05 . Therefore, we can conclude that there is no significant difference in distributed leadership attributes (sharing,

collective, collaborative, coleader, democratic and distributed leadership) across experience in position groups (1-10, 11-20, 21 -30, 31-40 and 40 to above).

Table 24

Training status (In days) Wise Test of Homogeneity of Variances

Attributes		Levene			
		Statistic	df1	df2	Sig.
Sharing	Mean	.918	3	161	.434
Collective	Mean	.107	3	161	.956
Collaborative	Mean	4.189	3	161	.007
Coleader	Mean	3.134	3	161	.027
Democratic	Mean	.333	3	161	.802
Distributed Leadership	Mean	1.630	3	161	.184

The above table shows that there is significant difference between training days of head teacher practice of distributed leadership and their training status in collaborative and co-leader. The collaborative has .007 significant level and co-leader has .027 significant level. According to Levene test homogeneity a non-significant result indicates (>0.05) that meet the assumption of homogeneity variance in majority of the constructs. The above statistical test demonstrates that the assumption of equal variance in the sample (homogeneity) of variance (Martin & Bridgmon, 2012).

Table 25*Training status (In days) Wise Distributed Leadership Attributes*

		ANOVA				
Attributes		Sum of Squares	Df	Mean Square	F	Sig.
Sharing	Between Groups	.321	3	.107	2.259	.084
	Within Groups	7.618	161	.047		
	Total	7.938	164			
Collective	Between Groups	.873	3	.291	4.504	.005
	Within Groups	10.400	161	.065		
	Total	11.272	164			
Collaborative	Between Groups	1.066	3	.355	6.872	.000
	Within Groups	8.325	161	.052		
	Total	9.391	164			
Coleader	Between Groups	.068	3	.023	.805	.493
	Within Groups	4.533	161	.028		
	Total	4.601	164			

Democratic	Between	.371	3	.124	1.416	.240
	Groups					
	Within	14.067	161	.087		
	Groups					
	Total	14.438	164			
Distributed Leadership	Between	.449	3	.150	4.926	.003
	Groups					
	Within	4.888	161	.030		
	Groups					
	Total	5.337	164			

The above table shows p value of the distributed leadership attributes < 0.05 in collective (0.005), collaborative (0.000) and distributed leadership (0.003). Therefore, we can conclude that there is significant difference in distributed leadership attributes (collective, collaborative and Distributed Leadership) across training status groups.

For significant construct Post Hoc test (Tukey test) is used and the table is presented in Annex (Table –T). The result show that the distributed leadership of the head teacher with training status is significant by the group of 1 to 90 days and 91 to 180 days where the p value is .004. Therefore, we can claim that the head teachers' taking the training of 1 to 90 or 91 to 180 is effective for practicing distributive leadership.

Level of Head Teachers Distributed Leadership in Public Secondary Schools

This chapter includes the collected information (Primary data) about head teachers distributed leadership and their level of demonstration among three districts Schools of Kathmandu, Lalitpur and Bhaktapur. The Sharing, collective, collaborative, co-leader and democratic were the attributes for finding out to what extend the head teachers demonstrate their distributed leadership in Schools. For this purpose, the collected primary data were

analyzed and interpreted through descriptive statistics like frequency, Mean score and Standard deviation.

Table 26

Attributes Wise Level of Head Teachers Distributed Leadership

Attributes	Mean	SD	Level of HTs'
Sharing	3.61	.220	Moderate
Collective	3.42	.262	Moderate
Collaborative	3.43	.239	Moderate
Coleader	3.47	.167	Moderate
Democratic	3.48	.296	Moderate
Distributed Leadership	3.45	.232	Moderate

Above table shows the level of head teachers distributed leadership attributes in the Public Secondary School of Kathmandu, Lalitpur and Bhaktapur. I categorized the mean score in the three levels as high, moderate and low which were derived from Lindell's (1997) criteria as follows: Scale Level Score (1.00 - 2.33) Low, Score (2.34 - 3.66) Moderate and Score (3.67 - 5.00) High. This chapter contributes to analyze and determine the level of head teachers distributed leadership through the derived mean and standard deviation respectively. Moreover, I arranged the obtained mean score in three different categories as High, Moderate and Low one to one. To score the mean of attributes of the head teachers distributed leadership got same value which categories in moderate. The attributes sharing has mean = 3.61 and SD = .220, collective has mean = 3.42 and SD = .262, collaborative has mean = 3.43 and SD = .239, co-leader has mean = 3.47 and SD = .167, democratic has mean = 3.48, and SD = .296 and total sum of five attributes has mean = 3.45 and SD = .232 respectively. To compare the mean and standard deviation of the above table which was derived from Lindell (1997), it seems moderate level of head teachers

distributed leadership among to all attributes. These results represent Public Secondary Schools head teachers are more concerned about the sharing attributes which was found mean score 3.61 and standard deviation .220. It reveals Public Secondary Schools head teachers demonstrate and utilizes their distributed leadership to support, motivate and scaffold each student for achieving moderate efficiency and for uplifting the schools.

Table 27

District Wise Level of Head Teachers Distributed Leadership

Districts	N	Mean	Std. Deviation	Level
Kathmandu	97	3.45	0.16	Moderate
Lalitpur	41	3.52	0.23	Moderate
Bhaktapur	27	3.56	0.15	Moderate
Total	165	3.49	0.18	Moderate

Above table shows that the head teachers distributed leadership is moderate. It also depicts that The mean of Kathmandu depicts 3.45, Lalitpur 3.52 and Bhaktapur 3.49. This displays that the three districts were not identified in the categories of higher and lower range. To compare the three districts level of three districts head teachers DL leadership, Bhaktapur districts has the highest mean having 3.56 mean and 0.15 standard deviation whereas, Kathmandu has the lowest mean 3.45 and SD=0.16 and finally Lalitpur has 3.52 mean and 0.23 SD. It is found that head teachers distributed leadership level is moderate. If we compare the assumption propounded by Lindell's hypothesis: Scale Level Score (1.00 - 2.33) Low, Score (2.34 - 3.66) Moderate and Score (3.67 - 5.00) High. From the assumption it is shown that the level of HT's is not identified the highest score 3.67-5 and even there is no lowest level score.

Table 28*Position Wise Level of Head Teacher Distributed Leadership*

HTs' position(years)	N	Mean	Std. Deviation	Level
1 to 10	2	3.4451	.10837	Moderate
11 to 20	115	3.4912	.17999	Moderate
21 to 30	34	3.4995	.18268	Moderate
30 to 40	12	3.4332	.19783	Moderate
41 to above	2	3.3938	.19279	Moderate
Total	165	3.4870	.18039	Moderate

The above table associates with the head teachers' position in years of Public Secondary Schools of three districts. To observe the head teachers position tabulation indicated five categories (1-10, 11 -20, 21-30, 31-40 and 41 to above). The number of position in (11 – 20 years) represents 115 having 3.49 mean and SD 0.18. The categories under 1 to 10 and 41 to above indicates similar number of HTs' 2 and 3.44 mean having SD =.108, 3.39 mean having SD =.192. The result depicts that level of head teachers' position is moderate.

Table 29*Gender Wise Level of Head Teacher Distributed Leadership*

Gender	N	Mean	Std. Deviation	Level
Male	138	3.4759	.18007	Moderate
Female	27	3.5436	.17444	Moderate
Total	165	3.4870	.18039	Moderate

The above table represents that the gender wise level of head teachers of the Public Secondary Schools of 3 districts. According to table 29, the number of male (138) head teachers has the mean 3.47 and SD=.180. Similarly, the number of female head teachers

indicates 27 and its mean is 3.54 with SD=.174 and sum up gender wise level mean = 3.48 with SD=.180. From the table, it is shown that the gender wise level of head teachers is moderate level in terms of male and female using T-test according to Lindell, Scale Level Score (1.00 - 2.33) Low, Score (2.34 - 3.66) Moderate and Score (3.67 - 5.00). Gender wise description identifies that both the male and female do not represent high and low level. Therefore, the result shows gender wise level of head teacher is moderate.

Table 30

Teaching Experience Wise Level of Head Teachers' Distributed Leadership

Teaching Experience	N	Mean	Std. Deviation	Level
11 to 20	2	3.5527	.08569	Moderate
21 to 30	21	3.5296	.21346	Moderate
31 to 40	76	3.4666	.18134	Moderate
41 to above	66	3.4949	.16960	Moderate
Total	165	3.4870	.18039	Moderate

The above table associates with the head teachers teaching experience of Public Secondary Schools of three districts. To observe the head teachers teaching experience tabulation indicated four categories (11 to 20, 21 to 30, 31 to 40 and 41 to above). The number of teaching experience in (11 to 20 years) represents 2 having 3.55 mean and SD=.085. The categories under 21 to 30 represents 21 and having mean 3.52 with SD = .21 and 31 to 40 indicates 76 having mean 3.46 with SD= .18 which is the highest number and 41 to above indicates 66 having mean 3.49 with SD= .16. The sum up total level of HTs' seems at 3.48 mean with SD =.18. The above table indicates the result of teaching experience of HTs' is moderate.

Table 31*Training Wise Level of Head Teacher Distributed Leadership*

Training Skills(days)	N	Mean	Std. Deviation	Level
1 to 90 days	30	3.3828	.14826	Moderate
91 to 180 days	129	3.5059	.17535	Moderate
181 to 270 days	3	3.6064	.23848	Moderate
270 to 365 days	3	3.5935	.31723	Moderate
Total	165	3.4870	.18039	Moderate

The above table associates with the head teachers training skills (days) of Public Secondary Schools of three districts. To observe the head teachers training skills (days) tabulation indicated four categories (1 to 90, 91 to 180, 181 to 270 and 271 to 365). The number of training skills (days) in (1 to 90) represents 30 having 3.38 mean with SD= .14. The categories under 91 to 180 represents 129 and having mean 3.50 with SD =.17, 181 to 270 and 270 to 365 indicates same number 3 having mean 3.60 and 3.59 with SD .23 and .31 respectively. The sum up total level of HTs' in training skills (days) seems at 3.48 mean with SD= .18. The above table indicates the result of training skills (days) of HTs' is moderate. To over view Subedi (2017) study associating relation head teachers' leadership in public schools of Nepal, conclusion on level wise description, head teachers' attributive leadership was shown in just an acceptable level. To observe the data head teacher distributed leadership is seen as moderate level, in the previous researcher related DL with teachers effective in school investigation indicate that there is a statistically significant relationship between distributed leadership and teacher self-efficacy with a moderate level (Demarco, 2018).

Chapter Summary

I mentioned the statistical procedure for testing assumption frequency, mean, T-test, normality and ANOVA test in this chapter. Furthermore, relationship between head teachers distributed leadership was found out by the general information: qualification, teaching experience of Head Teachers, gender wise description, age of head teacher, experience in Head teachers' position in years, subject specification, head teachers' skills training. To ensure the parametric test, the samples were taken for the Z-values of Skewness and Kurtosis which lied between the +2 to -2 ranges were conducted as normality test. Female head teachers practice distributed leadership at higher level as compared to male head teachers. Age wise description shows the age group 30-40 Head teachers has the slightly higher distributed practice than others age group. In relation to distributed leadership practice with the experience years 11-30 years has more level of distributed leadership practice as compare to the other head teachers. The head teachers with the qualification of M.Ed., M.Phil. and M.A have the more level of distributed leadership practice as compared to others. Significant difference was found between the head teachers distributed leadership practice and qualification in co-leaders attributes in homogeneity test. There is insignificant difference between head teachers distributed leadership practice and teaching experience. The training status of head teachers with 181 to 270 and 270 to 365 days have slightly higher level of distributed leadership practice as compared to others.

Level of head teachers distributed leadership of the three district was found moderate. Similarly, attribute wise, position wise, gender wise, teaching experience and training skill wise level of head teachers' distributed leadership was found moderate.

CHAPTER V
RELATIONSHIP BETWEEN HEADTEACHERS' DISTRIBUTED LEADERSHIP AND
STUDENTS' LEARNING ACHIEVEMENT

I have presented the inferential analysis of third research question which represents relationship between Head Teachers' Distributed Leadership and Students' Learning Achievement. It deals with the correlation and regression analysis. Purpose of designing this unit is to find out HTs' distributed leadership and students' learning achievement. This chapter consisted of four sections as head teachers' distributed leadership in three districts, students' learning achievement of three districts, correlation coefficient between HTs' distributed leadership and students' learning achievement and contribution of HTs' distributed leadership for students' learning achievement (Regression analysis).

Head Teachers Distributed Leadership in Three Districts

In this section head teachers' distributed leadership in Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur, was computed district wise using Analysis of Variance(ANOVA) test in terms of the five attributes like sharing, collective, collaborative, co-leader and democratic. This ANOVA test was done which represented third research question of this study. Further, the question was related to relationship between head teachers' distributed leadership and students' learning achievement. Here, I have analyzed the district wise leadership which is given below in table 32.

Table 32*District Wise Head Teachers' Leadership*

ANOVA					
Distributed Leadership	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.325	2	.163	5.259	.006
Within Groups	5.012	162	.031		
Total	5.337	164			

The above table 32 shows p value of all the distributed leadership < 0.05 . Therefore, we can conclude that there is significant difference in distributed leadership attributes between the groups across three districts (Kathmandu, Lalitpur and Bhaktapur) wise head teachers' leadership in Public Secondary Schools. It was found significant value (0.006).

Students' Learning Achievement of Three Districts

In this section, I have mentioned the students' learning achievement (GPA) of Public Secondary Schools of three districts. To address questions, I used the statistical procedure ANOVA test relating to students' learning achievement between and within the group of Kathmandu, Lalitpur and Bhaktapur respectively. The fact that one variable can influence distributed leadership and students' learning achievement. Here, I have used the test of analysis of variance of schools' GPA in the same categories. The following table 33 reveals the district wise learning achievement of the students' and their GPA from the available data.

Table 33*Students' District Wise Learning Achievement*

ANOVA					
Student Schools GPA	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.134	2	.067	.658	.519
Within Groups	16.557	162	.102		
Total	16.692	164			

The above table 33 shows p value of all the distributed leadership >0.05 . Therefore, we can conclude that there is no significant difference in distributed leadership attributes between the groups across three districts (Kathmandu, Lalitpur and Bhaktapur) wise learning achievement in Public Secondary Schools. It was found p- value =.519.

Correlation Coefficient between HTs' Distributed Leadership and Students' Learning Achievement

In this section, relationship between head teachers' distributed leadership and students' learning achievement in Public Secondary Schools of Kathmandu, Lalitpur and Bhaktapur, was computed using correlation coefficient in terms of the five attributes like sharing, collective, collaborative, co-leader and democratic and Schools GPA as the learning achievement. Further, the questionnaires were related to relationship between head teachers' distributed leadership and students learning achievement. Karl Pearson (1989) describes coefficient of correlation as implemented to obtain the relationship between five dependent variables of HTs' Leadership and the correlation among five attributes and students' GPA is statistically derived and result is calculated in the following table 34.

Table 34*Correlation Coefficient of HTs' Distributed Leadership and Students' Schools' GPA*

		Student Schools GPA
Distributed Leadership	Pearson Correlation	.113
	Sig. (2-tailed)	.148

The above table is associated to correlation coefficient of head teachers distributed leadership and students' school GPA. Creswell (2020, p. 338) states "Correlation is a statistical test to determine the tendency or pattern for two or more variables' or two sets of data to vary consistently". It was calculated the correlation with coefficient between the two variables namely independent and dependent using Karl Pearson correlation having significant probability p- value within two tailed test between the variables.

From the above calculation, it depicts that no significant relation between distributed leadership and students' GPA. However, there is a very low positive correlation, which was derived from Karl Pearson's coefficient of correlation as a linear correlation coefficient falls in the value range of -1 to +1 (Karl Pearson, 1989). The calculated value of the above table ($r=.113$) indicates a very low positive correlation. The significant value (2-tailed) ($p = 0.148$) means no significant correlation between distributed leadership and students' GPA. There was a moderate correlation between GPA and distributed leadership (Creswell, 2020).

HTs' Distributed Leadership and Students' Learning Achievement (Regression P-P Plot)

I have analyzed this section with third research question which was associated to the relationship between head teachers' distributed leadership and students' learning achievement. For this analysis, I used regression analysis to find out difference between independent variables and dependent variables. Kvalesh (2013) identifies that R^2 can be less

than zero, most often this equation is used if equation 2 of Kvaleh. R^2 can be greater than one. R^2 is a major of the goodness of fit of a model. Furthermore, regression measure the R^2 coefficient of determination is a statistical major of how well the regression predications approximate the real data point. For measuring the data in the range of R^2 of one indicated between the independent and dependent variables an R^2 of 1 indicated that the regression predications perfectly fit the data. There are some other indications of the researchers throughout the world like, Kitchen Sink regression focuses on different contrast than Kvaleh where R^2 is used, predictors are calculated by ordinary least squares regression. This exemplifies a drawback to one possible used of R^2 where one might keep adding variables to increase the R^2 value. To prove the R^2 predictor in regression with linear, I used the normal p-p plot of regression standardized residual linearity below:

Figure 4

p-p plot for linear regression

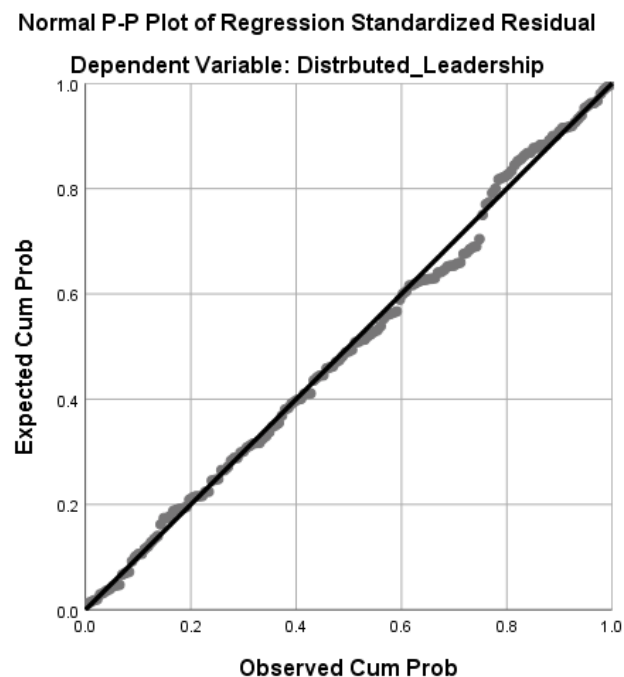


Table 35*Model Summary (Correlation between Variables)*

Regression

Model Summary^b			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.113 ^a	.013	.007	.17978

a. Predictors: (Constant), Student Schools GPA

b. Dependent Variable: Distributed Leadership

The above table displays the regression of the distributed leadership of head teachers' (Independent variables) and students' learning achievement (Dependent variables). Further, the above analysis depicts (R= .113) and ($R^2 = .013$). The adjusted ($R^2 = .007$) and Std. error of the estimate is (.179). 1.3% (0.013) of the dependent variable (students' learning achievement) is explained by distributed leadership.

Table 36*Relationship between Distributed Leadership and Students' Learning Achievement*

(Residual)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.068	1	.068	2.114	.148 ^b
	Residual	5.269	163	.032		
	Total	5.337	164			

a. Dependent Variable: Distributed Leadership

b. Predictors: (Constant), Student Schools GPA

The above table 36 result shows that p-value is .148 which is greater than 0.05, therefore we can conclude that there is no significant difference between Distributed Leadership and Students' Learning Achievement.

Contribution of HTs' Distributed Leadership for Students' Learning Achievement

I have examined two variables by calculating on the basis of regression analysis in this topic. Especially in the regression model, this study deals with independent variables in terms of head teachers distributed leadership and the students' average GPA of School as the dependent variable. These two variables are measured on interval scale; thus the regression model permitted for analyzing the collected data. Furthermore, in this study the collected distribution data is seen normal, the regression model $Y = a + bX$ was derived by Kerlinger (2011).

Table 37

Regression Analysis between HTs' Distributed Leadership and Schools' GPA

Coefficients ^a						
Model		Unstandardized		Standardized		
		Coefficients		Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.335	.106		31.581	.000
	Student Schools GPA	.064	.044	.113	1.454	.148

a. Dependent Variable: Distributed Leadership

The above coefficient shows the constant significant reveals 0.000 concerning correlation assumption developed by (Ravid, 2012), exposes a low correlation value lying in the range between numeric value (0.00 and 0.20 between) which predicts significance through statistics processing. Table above shows the coefficient results. As indicated b value is .064, which means that the change in dependent variable i.e. students' learning achievement by one unit will bring the change in the independent variable i.e. DL by (.064) units. However, result is not significant as p-value 0.148 is more than 5% level of significant.

The model can be assumed as follows:

Where,

$$Y = a + b X$$

Y = Learning Achievement

a = constant, b = regression coefficient, X= Distributed Leadership

Here, Learning Achievement is the composite mean score of students' SEE result. Now putting the value in regression model, $Y = a + b X$

$$Y = 3.33 + .064 (X)$$

The regression model is $Y = 3.33 + .064 (X)$,

Students' learning achievement = $3.33 + .064 (DL)$.

The head teacher distributed leadership contributes 0.064 unit i.e. 6.4% in students' learning achievement (GPA).

Chapter Summary

I calculated the statistical procedure for testing ANOVA which shows a significant value between the districts and head teachers' distributed leadership. the correlation with coefficient between the two variables namely independent and dependent using Karl Pearson correlation having significant probability p- value within two tailed test between the variables were calculated. The analysis depicts ($R^2 = .013$). The adjusted ($R^2 = .007$) and Std. error of the estimate is (.179). The result of coefficient and model summary shows that p-value is 0.148 which is greater than 0.05. Therefore, we can conclude that there is no significant relationship between Distributed Leadership and Students' Learning Achievement. The coefficient results indicate that the beta value is .013, which means students' learning achievement is explained by distributed leadership by 1.3%. Similarly, students' learning achievement change by one unit will bring the change in the distributed leadership by 0.064 units.

CHAPTER VI

FINDING AND DISCUSSION

In this section the finding consists of relationship between head teachers' distributed leadership and students' learning achievement. It also includes research hypothesis of this study: H1: There is a different between head teachers' distributed leadership and demographic variables of head teachers. H2: There is a relationship between head teachers' distributed leadership and students' learning achievement. Further, the result of this study was based on the questionnaires associated to relationship between HTs' distributed leadership and demographic variables, and demonstration of head teachers' distributed leadership and relationship between HTs' DL and Similarly, I have included major key findings of this study in the first part and discussion of the findings in the students' learning achievement second part. The major findings in terms of results from data which were collected through questionnaires and analysis of computation have been presented in the given sub-topics.

Key Finding

The key finding was on the basis of head teachers' self-responses. Out of six demographic variables of the head teachers, qualification and training status were found significant. Level of head teachers was found moderate in districts, training, experience in position, attributes, age and gender. The relationship between head teachers' distributed leadership and students' learning achievement was found very low positive correlation. Further, co-leader and collaborative were found significant in relation training demographic variable. There was found significant difference between training days and collaborative, collective and distributed leadership of HTs'. It was found significant difference between qualification and co-leader, collective and distributed attributes in relation to qualification of

HTs'. Likewise, collaborative, collective and distributed leadership attributes were found significant difference in training days of head teachers (Demographic variables).

Co-leader, collective and distributed leadership attributes were found significant difference across head teachers' demographic variable qualification. Head teachers level was found moderate in distributed attributes, district wise distributed leadership, sharing, collaborative, collective, co-leader and democratic attributes were found of moderate level. In addition, experiences in position, training status were also found moderate level. District wise correlation and students' GPA was found very low positive correlation. It was found significantly correlated $p=0.006$. The head teacher distributed leadership contributes 0.064 unit i.e. 6.4% in students' learning achievement (GPA).

Discussion of the Finding

Discussion of my findings has been summarized under the major four themes: (a) Situation of distributed leadership and Demographic variables of head teachers', (b) Level of head teachers' distributed leadership, (c) Relationship between Head Teachers' Distributed Leadership and Students' Learning Achievement, (d) Contribution of head teachers' distributed leadership for obtaining students' learning achievement (GPA) based on the research questions.

Situation of distributed leadership and Demographic variable of head teachers

The results reveal findings and major themes which were identified above. Out of six demographic variable, significant difference was found between qualification and training status. Qualification was found significant difference across collective where (sig. = .035), coleader (sig. = .022) and distributed leadership (sig. = .046). Training status was found significant difference across head teachers' distributed leadership attributes where collaborative (sig. = .000), collective (sig. = .005), coleader (sig. = .027) and distributed leadership (sig. = .003) respectively

Educational international (2018) identified deputy principals' responsibility in using collaboration and sharing accountability. Further, it pointed misuse behavior of teachers due to power which was provided them and suggested to be trust among teachers. Distributed leadership is all about the sharing of leadership activities but not the delegation of leadership activities (Harris,2005: Spilland, Halverson & Diamond, 2001). Sharing of leadership tasks are a key element of distributed leadership which can have an influence on the development of the school (Triegaardt, 2013). Also Triegaardt (2013) study revealed that, 85% of respondents support his conclusion i.e. distributed leadership is a sharing responsibilities to achieve school goals. These all theories support my study as sharing of leadership is significantly related with Head Teachers' distributive leadership. Significant relationship between sharing leadership and DL scales were found by Goksoy, S. (2016). It also did not identify much distinction between them.

Collective teamwork is significantly related with effective distribution of leadership inside schools (Triegaardt, 2013). Grenda (2011) in his study finds that collaborative nature of middle school support distributed leadership. The distributed leadership of Head Teachers play vital role within a school environment of collaboration where staffs were able to choose suitable and meaningful roles connected to teaching and learning of students (Chamverland, 2009). In this study, collective and collaborative leadership activities are significantly related with distributed leadership as Grenda (2011), Triegaardt (2013) and Chamverland (2009) suggested in their finding.

The homogeneity test of this study represents that there is significant result between the distributed leadership and coleader attribute, which has ($p=0.02$). Triegaardt (2013) supports this finding as it stated that distributed leadership helps school performance through the interaction of co-leaders. This study contradicts the statement of Bolden (2011) findings where democratic leadership style is significant with distributive leadership.

In the similar way, Riddle (2020), identified strong relationship with the perceived level of DL readiness. Differences were found between gender relating to different dimension concerning mission and vision. Contradiction was found in the present study comparing moderate to strong relation.

To relate the empirical studies to connecting DL theory, theorist of distributed leadership carried out in their research paper HTs' cannot provide long service as leader of schools. Lambert (2003) viewed contradictory opinion by indicating the appropriate instructions and actions performed by leaders in good consequences. Wu (2020), claimed that current trend for shifting stable leadership provides acceptable result. In addition, distributed leadership can be as simple as a head teachers inspiring teachers as they can yield on leadership duties in schools.

According to Spillane (2006), a concurrent interesting practice visualized by administrators and teachers make significantly affective performance of an organization. Likewise, there is strong influence through leader on teachers to work according to condition stated by Elmore (2000). Leithwood (2008), measured abilities built by teachers performed acceptable outcome. Regarding principal of DL practice supported as mediator leader of schools significantly fulfilled gaps in the absence of principals (Grootenboer, 2018), derived from Groon (2002) ideas.

Level of head teachers' distributed leadership

The key findings revealed that head teachers' level was found moderate. Similarly, district wise, attribute wise: sharing, collaborative, collective, co-leader and democratic were found moderate. Experience, training status level were also found moderate. The mean of attributes found sharing = 3.61, collective = 3.42, collaborative = 3.43, co-leader = 3.47, democratic = 3.48 and distributed leadership = 3.45. The mean score in the three levels as high, moderate and low were derived from Lindell's (1997) criteria as follows: Scale Level Score (1.00 - 2.33) Low, Score (2.34 - 3.66) Moderate and Score (3.67 - 5.00) High.

Similarly, Goksoy (2016), revealed perspectives responded as medium level positively, in distributed leadership and their levels in terms of district, attributes, experiences in positions.

Finding of Riddle (2020), showed differences among some demographic variables relating level of DL factors. Significant differences sketched in terms of sharing attributes. This level of programmatic finding from the study revealed contradictory to present study. The research study by Goksoy (2016), pointed similar association between DL and sharing variable but this was not difference in other dimensions. In this study, all levels of head teachers distributed leadership were found moderate, mean appeared not more than 3.66 and not less than 3.33 to compare the range of mean adopting Lindell (1997).

Subedi (2017), carried out dissertation on Leadership attributes of the head teachers was just in acceptable level. The mean of Kathmandu depicts 3.45, Lalitpur 3.52 and Bhaktapur 3.49. To compare the three districts level of three districts head teachers DL leadership, Bhaktapur districts has the highest mean having 3.56 mean. The gender wise level of head teachers shows that the mean = 3.47 and female head teachers mean = 3.54. The position wise level of head teachers shows 11 to 20 years found mean = 3.49, 21 to 30 mean = 3.49. Teaching experience wise head teachers shows mean = 3.55 of 11 to 20 years, and 3.46 of 31 to 40. Training wise level of head teachers found mean = 3.60 of 181 to 270 days and mean = 3.38 of 1 to 90 days.

Attributes wise distributed leadership of HTs' was similarly carried out by the Educational Policy Analysis and Strategic Research (2018) which concluded research in 462 teachers and result showed moderate level wise DL accessing their attributes within team by sharing democratic with suitable observation, help and functions balanced. In this research 165 head teachers' respondents' perspectives were collected through questionnaires in the Likert Scales which revealed the level of HTs' moderate in all levels as well as the head teachers' demographical variables.

Relating this finding values in this scores which was calculated using Mean all the levels of head teachers distributed leadership occupies (2.34 to 3.66) moderate scores where the mean scores simulated 3.61 were the highest scores. There were no any calculations appearing less than 3.38 mean scores. This calculation of Mean scores extracted by Lindells Scale Level scores. There were some similarities and differences between the three levels carried by various researchers. Here, my concern was that categories of mean scores were closely similar beginning 3.38 mean score to 3.61 mean scores.

Level of head teachers distributed leadership in public schools in terms of attributes wise, gender wise, districts wise, position wise, teaching experience wise and training wise scores concluded in the moderate level. Here, it was dug out by some pre studies carried by previous researchers whether they observed their levels in the developed form of Lindells having 1.00 to 5.00 or similar and different levels of scores.

Furthermore, I reviewed the context of international dissertation which was completed and concluded by Vilasquez (2021) who stated the status level of distributed leadership and demographic attributes that were observed moderate. I tried to compare Dulal (2020) in the context of community schools of Kathmandu districts where/while practicing their TFL at higher level showed the vital role to enhance learning achievement.

Relationship between Head Teachers' Distributed Leadership and Students' Learning Achievement

The result of relationship between head teachers' distributed leadership and students' learning achievement displays that there was found very low positive correlation. It was significantly correlated (sig. = .006) in the district wise and students' GPA. To compare Velasquez (2021), finding significance were identified between the two variables: predictor and criteria. A measurable test Ware (2019), carried dissertation and findings reflected correlation between the school features within achievement scores and growth scores, it was

revealed significant p value having .01 through t-tailed statics derived the values developed from Ravid (2014) having scores lying 0.00 to 0.40 in terms of given variables.

The contradicted studies of Dampson et. al (2017) emphasized teachers' individual freedom while making decision rather than over stress and burden teacher staff and member interests make perceiving decision.

The study carried out by Wu (2020) explored proof being held between leader principal with related students' outcomes, from his study it was statistically positive association shown. Ware (2019), claimed in his dissertation depicted statistically significant correlation between the distributed leadership and teacher returning scale which is similar to this study of correlation. A wide range of study carried out by Hongde and Jambo (2019), focused on the effect constituted positive outcome. Comparing conclusion of Demarco (2018), relation to leading school an effective role is the need for holistic change. Ndyali (2013) claimed low performance of students occurs due to HTs role in community school education system. It was found in the study of Tanzania community secondary school where as present study had the similar performing role of head teachers to some extent as well as the education system.

This dissertation was carried out on the basis of research in New Jersey School comparatively in Public Secondary Schools of Nepal Kathmandu, Lalitpur and Bhaktapur. It appeared that head teachers perform their distributed leadership and work by collaborating in team where building the practice of collective works contributed in students' learning achievement.

Contribution of head teachers' distributed leadership for obtaining students' learning achievement (GPA)

On the basis of the finding of this result it revealed the contribution of head teachers in relation to distributed leadership for obtaining students' learning achievement. The head teacher distributed leadership contributes 0.064 unit i.e. 6.4% in students' learning

achievement (GPA). (Kerlinger, 2011) stated with regard to computational analysis underlying the statistical procedural $y = a + bx$. International studies carried by following people in different times carried on the contribution of leadership to the dependent factors. Concluding comparisons by Tian (2016) emphasized human resources indicated that head teachers as powerful and strong resource organization who performed and exercise being an administrator for building strategic connected development.

Regarding leadership Leithwood (2009), argued distributive perspective had effective efforts on those who can change and improve organization. Discussing developed idea from Harris (2013) & Buskey (2016), a positive effect can be obtained through principals who teach, observe helps for further working. In this study, head teachers' distributed leadership contributes with 0.064-unit change which was not higher leadership identified.

Reviewing conclusion by Kelchtermans (2016), main role of principals for solving contradiction in schools is by maintaining available division of functions. Discussing findings carried out by Pierro (2020), significant differences were seen in NJSLA scores which affected as non-significance differences were identified in achieved DL readiness. Demarco (2018), focused collaborative task by which key contributions appear through school leader to motive others.

Discussion Section

This study shows that democratic leadership style is not more preferred leadership style in the context of Public Secondary Schools of 3 districts. Autocratic style of leadership is most preferred leadership style than democratic style although significantly good results were found by democratic style (Oyugi & Gogo, 2019). Authoritarian leadership was the dominant style of leadership used by Public School (Achimugu & Obaka, 2019). They also found that the results performed by school having Head Teacher with democratic style are far better than others. According to these theories I concluded that this might be the result

why the public schools are not performing well in students' Learning achievements as this study concludes that there was less use of democratic style of leadership in public schools of three districts. Even if some schools' results were appeared far better to compare which seemed low GPA scores of students. Similarly, the schools which have been exercising democratic participation among teacher staffs have been performed well and visible transparent result in the national board of Nepal SEE 2022. In this research, HTs democratic attribute was found insignificant in relation to distributed leadership due to less uniformity leadership throughout all public schools of Kathmandu valley. Though HTs practice their DL attributes among teacher staff while executing and implementing holistic curriculum, teachers may not grasps the strategies with lack of proper knowledge, skills, lack of training and adequate subject wise command over related teaching items.

There were only three factors directly involved in achievement of students in school i.e., Head Teacher, Teacher and Students. Head teacher lead the school and take all responsibilities of school activities while teachers complete the responsibilities given by head teachers and teaches the students. Then students perform according to their teacher's guidance. This study only describe the distributed leadership of Head teacher related to students' learning achievements. But there are also two personals who are directly involved with this achievements i.e., teachers and students which are not included in this survey. If this study also includes teacher's and student's opinion about head teachers' leadership inside school, there might be possibilities of finding different results. So these are the limitations of this study. It was discussed about limited variable for the performance of students while there are many factor which affect students' performance like family condition, motivation towards better result. Socioeconomic status impact on academic achievement (Misty & Laura, 2011).

Head teachers DL enhance SLA from my finding however there is no uniformity while conducting and collecting this research, as it singles out stating HTs roles seemed very much interesting, paramount and significant as well as straight forward. It was proved that the more the sharing leadership of HTs is there, the more acceptable moderate result of the public secondary schools can be obtained. Even if these realities which directly impacted teachers single out, I did not participant teachers in this study, further researcher in this arena they can find out. Ndyali (2013) in his study concluded that students' poor academic performance is the reason behind the roles of HTs in community schools and the education system. Students' learning achievement (GPA) is depended upon HTs' DL roles by which shared, practiced delegated and dispersed by them in collaboration collectively in schools.

Research carried on HTs' distributed leadership in different context and area including delimited parameters (factors, components) some of the researchers included teachers and head teachers' roles in schools as the independent paramount duties and responsible towards students' outcomes, strength and weakness, public and private schools with different criteria and contents(title). Finding of Chang (2021) depicted DL was as goodness-of-fit and satisfactory. Further, DL not only had a positive influence on academic optimism but also affected students' learning achievement. The present study similarly simulated role of HTs DL low positive correlation in the contexts of Public Secondary Schools. Discussing in this study title related to HTs' Distributed Leadership roles in the contexts of local public system of Nepal is so important that various programs for enhancing schools as goodness and fit model which have been launched through school head. To add more HTs' are given full authority to observed, supervise, monitor and handle the holistic performance of schools as an administrator and secretary of the School management committee where he or she has to observed teachers' academic performance in terms of subject wise learning achievements. Further, Education Act has provisioned to regulate rules and regulations formulated by the government of Nepal that is, implement the central

circular that are practicing under District Education Coordination Units monitoring through the main head of schools which has to be shared with their teachers.

Comparing leadership styles in different contexts conclude made by (Chukwusa, 2018) autocratic leadership style prevents the use of creative ideas to problem solving; therefore, leaders should learn to exercise restraint in the use of the style in the running of their institutions. In this study, I could not deny the private school have better result than Public Schools even though they are operated through autocratic leadership under head teachers. It is also in Public Schools of Kathmandu, Lalitpur and Bhaktapur have low achievement rate than private school although private school are operated through autocratic leadership. But there are many factor involving in this comparison. The main factor involve in any leadership technique in the school is motivation of teacher. In autocratic leadership method, all the activities of school are operated directly or indirectly through principals. Head Teacher of private school have all the power like teacher's appointment and termination, Students' admission, Salary of teacher. These are the motivation factors of teachers in private school, so they give their full energy to make performance of student better. This is because they have to secure their job and they might get some incentive if their students give better performance. But in public school of Nepal, all the power related to teachers like appointment, termination, salary is in government's hand.

In the study of Chiu and Khoo (2005) it was suggested that there should be equal opportunities for higher overall students learning achievement which is linked up with one another in terms of students who have better facilities for using learning activities and privileged students. Likewise, overall, students scored lower when parents job status had a larger effect on students' performance. Talking on resource learning facilities which are provided in schools is such factors that comparatively the private schools utilizes and mobilizes their rich resources and teaching materials consequently learning achievement is better. Private

school have better infrastructure than public school. Private school give better facilities like tours, provide extra classes and individual care to their students. These factor make private school attractive to teachers and students. So this might also give them better performance in results.

In the study Gratz & Wiborg, (2022) deals the associations between parents' economic resources, measured by parental earnings and wealth, and school grades differ children's school grades. The selection of bright and better graded students from pre entrance system before admission for formal classes make better achievement. On the other hand, poor graded students have to admit in public schools. Private school students have every learning facilities and family environment comparatively better than public schools' students. There is also trend about having better result of students in private school. So, this might be one reason for having better results in private school. So, Head Teachers in public school are only allowed to motivate teachers with their leadership technique. Head Teachers don't have any motivational factor rather than their own leadership. There comes distributed leadership to play vital role. Teachers are allowed to lead some activities in school so that they get motivated. If teachers get some credit on activities lead by them, they get motivated and happy. Also they became responsible towards their role which is given to them from Head Teachers. Also they get busy and active in school time which makes students' performance better. So Distributed Leadership is better for public school than autocratic leadership.

This study was carried on delimited area of Kathmandu, Lalitpur and Bhaktapur districts only in the Public Secondary Schools, and the head teachers of these schools who have been working as a head of schools, monitor, observer, supervisor and an official authority person who has lots of authorities, duties and responsibilities as well as accountabilities concerning with deliberating, sharing the circular designated by applying rules and regulations laden by upper education officials DECU Ministry of Education and

Technology. I have kept my consideration with the research topics Students' Learning Achievement which that can cover wide range of outcomes but in this term and condition the students' learning achievement of the three districts public schools was inquired. The delimitation was overviewed due to specify and aiming purpose of raising problems. Further, there were 165 schools' students who appeared and take part in examination held by the National Education Board (SEE, 2022). While surveying and collecting this secondary sources of data I visited the selected schools for recording and observing the data. I used the SEE result which was published and authentic resources available through DECU of the three districts and some of the results sheets from related and selected schools. Subedi (2017) pointed out that head teachers' role was appeared in just an acceptable which was positive association between head teachers' leadership connecting in public schools of Nepal. Even this study indicated a significant predication related to the overall collective leadership behavior of public schools' head teachers could contribute to creating conducive in schools which is closely sketched out the students' learning achievement in the existing situation of schools. Similarly, in the findings of Rai (2019) concluded the role of head teachers having vital position for improving schools as a whole. This thesis also revealed direction and guidance of head teachers provide appropriate role exercising with relevant to public schools' circumstances and students' learning achievement.

Reviewing the context of head teachers and learning achievement which were carried by Dulal (2020) connecting with head teachers' leadership of TFL (Transformational Leadership) showed level of head teachers in Kathmandu districts seemed higher in community schools. According to his finding, the two ways of identification were pointed out either significant differences or non-significance differences across head teachers TFL relating their age, training, experiences were no significant. In the same study, significant were found the head teachers' differences by gender male head teachers practice at higher level in the community schools of Kathmandu districts. Even

this study observed sample schools of Kathmandu were found to be below performing than the average compare to national standard. In my study, I observed significantly found in head teachers distributed leadership attributes relating qualification and training status. The insignificant were found demographic variables gender, age, teaching experience, experience in head teacher position. In the study of Dulal (2020) no significant differences appeared HTs' TFL across age, training status and experiences. To compare demographical variables' like age and experience was found no significant differences'. But in this study, it was pointed out no significances in gender, age, teaching experiences and experience in head teachers position which were contrasted with gender and experience in head teachers' position. Similarly, significant difference was found by gender male head teachers practice in the study of Dulal which were contrasted with my present study as age was found no significant difference in my study through homogeneity and ANOVA test.

The demonstration of distributed leadership was found moderate level in local and international situation of school wise, district wise and within and between the demographical variables Kandel (2020) observed in his study that TFL of head teachers in the all dimensions seemed higher level relating education, and age. In his study, continuance comment was observed moderate level. It is similar to this study lying 2.34 to 3.66 level scores derived by Lindell. The contrast is observed in this study that community schools head teachers of Kavreplanchowk districts, their organizational commitment with individual attributes found high level, from this conclusion it pointed out an effective performance of school and crucial role of head teachers played by them in school wise leadership. Similarly, Velasquez (2021) focused on the level of leadership attributes status of distributed leadership and the demographic attributes significantly performed leadership role by HTs' and teachers.

Chapter Summary

To sum up, the finding and key findings qualification and training status were found significant. Level of head teachers was found moderate in districts, training, experiences in position, attributes. Age and gender. The relationship between head teachers distributed leadership and students' learning achievement was found very low positive correlation.

In other hand, coleader and collaborative were found significant difference across training demographic variable. There was found significant difference between training days and collaborative, collective and distributed leadership of HTs'.

Significant difference was identified DL between collective attributes and DL regarding qualification where significant level is < 0.05 i.e. 0.035 and distributed leadership has ($P = .046$) value. Lindell, Scale Level Score (1.00 - 2.33) Low, Score (2.34 - 3.66) Moderate and Score (3.67 - 5.00). Head teachers level was found moderate in distributed attributes, district wise distributed leadership, sharing, collaborative, collective, coleader and democratic attributes found moderate level. In further, experiences in position, training status were also found moderate level. District wise correlation and students' GPA was found very low positive correlation. It was found significantly correlated $p = 0.006$. The head teacher distributed leadership contributes 0.064 unit i.e. 6.4% in students' learning achievement (GPA).

CHAPTER VII

SUMMARY, CONCLUSION AND IMPLICATION

This chapter initiates with a summary followed by the conclusion of this study. Finally, I have presented the implication of this research.

Summary of the Study

The head teachers are the main performers for delivering quality education in public secondary school. The HTs' distributed leadership play significant role in obtaining the students' learning achievement. The head teachers' attribute among students may impact positive relationship between and within the groups and perform whole school education system. Furthermore, the head teacher's distributed leadership is key attribute for holistic School GPA. Dynamic school leader has to be accountable leadership for leading the associated organization. DL focuses on the educational leaders for cooperating and participating where every aspect take part.

In other words, DL as an applicable and practical attribute, share work load. HTs can operate and participate every aspect of schools and they may execute like a tool which is practically logical. In the other hand, the recent National Education Policy has mentioned the applied policies for enhancing public schools productive institution which is possible by the effective coordination through HTs' leadership. The head teacher is an academic as well as administrative leader of the school. Considering this point, this research was carried out to measure the contribution of head teacher's distributed leadership and students' learning achievement.

This study adopted survey design and it included 281 number of School Head teachers from Kathmandu, Lalitpur and Bhaktapur districts as its study population. Out of

this study population, I selected Head teachers as the sample size by following probability simple random sampling.

I adopted the self-administered Likert Scale which consisted of head teachers' distributed leadership and students' learning achievement. Likewise, statement of the problems was raised by constructing the research questionnaires. The purposes of study concerned with the relationship between the head teachers' distributed leadership and students' learning achievement. Likewise, the three research questionnaires were designed for conducting the research study as well as the hypothesis of study were also assumed. To justify the rationale of the study the government office, MOE of Nepal, Department of Education, District Education Co-ordination Unit, Resource Center and the Public Secondary Schools of the Kathmandu valley were consulted. The significance behind the rationale of this study consisted the curriculum development center, education policy maker and the head teachers of government aided Public Secondary Schools as the leader and authority persons of academic sector. The study was delimited in the three districts Public Secondary Schools and thus title associated to relationship between the head teachers' distributed leadership and students' learning achievement of Kathmandu, Lalitpur and Bhaktapur districts. Similarly, five distributed leadership attributes were only studied which was carried by different researchers associated to distributed leadership.

The second chapter was related to review of the theoretical literature where I reviewed and studied the theories of distributed leadership, theory of organization leadership, attributes of distributed leadership. The articles, journals, books, theses report, proposal, dissertation and resource online materials and e-library were reviewed while developing the conceptualized framework. In this way, I reviewed the National Education Policy of Nepal (2076), constitution of Nepal in regard education provisions, international declaration and program associated to education sectors like SIP (2009-2015). SSRP (2015-2018), SSDP (2016-2023) and UNESCO (2015) Incheon declaration Education (SDG4,

2015-2030). On the basis of these national and international provisions, I designed an executive conceptual framework by relating the theoretical assumptions of independent variables with relation to the students' learning achievement as dependent variables.

The methodology section includes a research paradigm and philosophical paradigm namely ontology, epistemology and axiology. Moreover, population and sampling procedures, strategy of sampling, research tools and instruments, questionnaires validity and reliability (Tools) by piloting test.

I collected primary data from the respondent Head teachers by administering the self-administered questionnaires and then it was analyzed. After then I illustrated the findings. The derived findings were interpreted to identify the answer to each research questions of this study. The school head teachers performed positively moderate correlation for obtaining the students' learning achievement.

Conclusion of the Study

Distributed leadership among head teachers of public secondary schools was observed in the situation of present day. Relationship between head teachers' distributed leadership and students' learning achievement play vital role in public secondary schools for attaining students' better learning GPA. The characteristics attribute of HTs' can perform effective, fruitful and work efficiency for developing every competency in terms of distributed leadership: sharing, collective, collaborative, co-leader and democratic. Furthermore, HTs' are the significant, crucial, as well as responsible and accountable authorities of the schools who incorporate their distributed leadership. Those head teachers have become popular in education and school due to its sharing as well as attributive nature. They have got incomparable freedom which is provisioned in the rule and regulation, constitutional right to education, national and international education programs and declarations with regards to school improvement and all round development of children and education system. It is observable when school head teachers implement attributes fairly in

Public Secondary Schools as their distributed nature being the head of school impact positive among students' and school education system as a whole.

In conclusion, relationship between head teachers' distributed leadership was found out by the general information: qualification, teaching experience of Head Teachers, gender wise description, age of head teacher, experience in head teachers' position in years, subject specification, head teachers skills training. Female head teachers practice distributed leadership at higher level as compared to male head teachers. Age wise description shows the age group 30-40 head teachers have slightly higher distributed practices than others age group. Significant differences were found between head teachers DL practice and qualification in co-leaders attributes. There is insignificant difference between head teachers distributed leadership practice and teaching experience.

Level of head teachers' distributed leadership of the three district was found moderate. Similarly, attribute wise, position wise, gender wise, teaching experience and training skill wise level of head teachers distributed leadership was found moderate. The correlation was found positively moderate between dependent and independent variables.

Implications of the Study

Relationship between head teachers' distributed leadership concerning students' learning achievement contributes the schools' entire achievement and results. It makes the head teachers active, effective, participatory for improving the holistic GPA of students' as well as spread over positive relationship among different factors in Public Secondary Schools. I identified the following implication from this study:

Implications for Policy

This study has made some useful implication which have been applied in the current days in public secondary schools through the head teachers' distributed leadership and students' learning achievement. However, the government of Nepal, MOE and Department of Education has developed a few policy documents, which explain and make provision for

head teacher's leadership role, duties and authority. These policies (teacher's code of conduct, regulations, and Education Act) indirectly address few concerns about the head teacher's leadership duties and authorities. Results may offer insights for policymakers to develop the head teacher's distributed leadership and schools' learning achievement. It contributes to policymakers to evaluate the current status regarding head teacher's leadership and learning achievement of the schools. Thus, these all efforts help policymakers to develop the appropriate provision and promote the head teacher's leadership and holistic result of school. The formulation of policy on head teachers' leadership can enhance students' learning achievement of schools.

This study has concluded that the distributed leadership of HTs play crucial role as well as significant to the policy maker for formulating their plans and strategy to uplift students' learning achievement by provisioning necessary Act, Rule and Regulations regarding education systems like wise to fulfill the National goal of education, head teachers should be handed over full authorities under the supervision of government of Nepal that they should obtain targeted learning achievement according to the commitment and responsibilities at schools. This also supports not only the head teachers' duties and accountabilities' but also head teachers' practices of delegate leadership to teachers in which essential attributes are exercises in visible way. Furthermore, the implementation of finding indicates head teachers can share their experiences among the teachers and they move up their collective tasks for improving SLA within an academic year by implementing education operation annual calendars. Along with collaborative task teachers may participate in the different committees, take part in seminar, projects, extra-curricular activities for the holistic developments of students.

Implications for School Head Teachers

Leading to school by head teacher having roles and responsibilities for achieving high educational achievement, the head teachers of public secondary schools perform their

vital role to uplift the visible output of school in terms of students' learning achievement. This study can be executed as the source of information for school head teachers for practicing leadership in a school. Further, this reality concerning leadership can provide adequate support to school head teachers to understand and address the problems by developing and implementing school policies and, programs circulated by the government of Nepal for attaining the objectives between schools and students. Additionally, this study provides the dynamics of knowledge to the mutual relationship as the pragmatic tool and the head teachers' personal as well as academic attributes. The knowledge generated from the study can be supportive for the school head teachers to solve the issue of leadership output. It can help to formulate academic plans which are operated within an academic year. It also contributes to the school head teachers for executing effective leadership in the public schools. The distributed leadership supports to encourage and establish the high mutual relationship among head teacher, teachers and students in schools. Furthermore, the establishment of head teachers' distributed leadership eventually enhances the academic learning achievements of school by using head teachers' attributes. HTs can implement the rules and regulations circulated by the government, and also can make annual plan with the help of School Management Committee, Teachers Parents Association by discussing and listing education agendas relating SLA and subsequent of improvement at schools. Head teachers may design code of conduct which are applicable that the teachers must follow while facilitating in school environment. They can share the power and disperse leadership in organized way. For this purposes HTs should utilized the maximum resources of schools in terms of human, human skills, improvement of physical infrastructures and strengthen economical source for further sustainable welfare of schools.

Implications for Further Research

Present work was carried out among public secondary schools' head teachers in relation to the students' result of SEE (2022) by delimiting into three districts of Kathmandu

valley. So, there can be similar and different research studies entitling the same topics and components for the further researcher issues. Statements can be raised by adopting research questionnaires of different design either quantitative or qualitative nature. It's only the result of three districts which were appeared in same year, researcher can carry higher and lower level results. This study indicates the result of SEE of the government aided Public Secondary School, there may be other researchers among public and private schools result comparison. Present study contributes to measure the contribution of head teacher's DL and students' learning in the Public Secondary School. This study contributed for the researchers improving their extension level of demonstration in the schools as a leader head, so far as it was predicted significant and keeps mutual belongs between improvement predictors. But there are still many facets for identifying at similar titles. Generally, the school head teachers possess similar attributes, but they also show unique characteristics. So, this study can be a new approach for other upcoming researchers for investigating synonymous topics students' GPA in the present days.

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ANNEX I
RESEARCH QUESTIONNAIRES

Title: - Relationship Between Head Teachers’ Distributed Leadership and Students’ Learning Achievement

I would like to inform you that I’m conducting research study on Head Teachers Distributed Leadership and Students learning achievement. For this study purpose, I want to collect primary data from your school. Specifically, these data will be collected through questionnaire instruments. This survey study aims to carry out the head teachers distributed leadership and students’ outcomes of selected delimited area. Moreover, I hereby request you that, as the head of Public Secondary School, you will be participant and respond the given questionnaires set in close ended forms.

If you agree to respond to this survey questionnaire, please respond in the designed Likert Scale. If not then, not responding is also accepted. As a student of KU, I abide by the rules and regulations. So, your individual and institutional privacy will be kept secret. I heartily welcome you to my survey study and hope that you will respond to this questionnaire.

Researcher

Rajan Kumar KC (M.Phil. student KU)

Section “A”

A	General Information
1	<p><i>This cell includes information required only for communication. Name and contact information of respondent and the institute/school will be confidential and will not be used anywhere in study report.</i></p> <p>Full Name: _____</p> <p>Phone Number: _____</p> <p>Email ID: _____</p> <p>Name of School: _____</p>
2	Your qualification: _____
3	Teaching Experience (in years): _____
4	Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female

5	Your age: 20-30 [], 30-40 [], 40-50 [], 50-60 []
6	Experience in Head teacher's Position (in years): _____
7	Subject of Specialization: _____
8	Have you received training for leadership related skills? If yes, state number of days, if not write zero. ....Days.

Questionnaire for Head teachers

Consent: Do you agree to respond to this survey? • Yes/Agree • No/Not Agree

Note: If respondent does not agree, stop here and go to next respondent.

Section "B"

The statements given in the following table is based on your agreement or disagreement.

Likert Scale: **4 = Strongly Agree, 3 = Agree, 2= Undecided, 1=Disagree, 0 =Strongly Disagree**

Statements	4	3	2	1	0
1. We often exchange the student's learning achievement among teaching staff for better academic performance. हामी प्राय विद्यार्थीको सिकाई उपलब्धीहरुलाई शिक्षक सहकर्मीबीच शैक्षिक उपलब्धीको लागी आदान प्रदान गर्छौं ।	4	3	2	1	0
2. I share schools' operational calendar with my teaching member and implement it. मैले विद्यालयको वार्षिक शैक्षिक कार्यपत्रो सहकर्मी साथीहरूसँग छलफल गरि कार्यान्वयन गर्छु ।	4	3	2	1	0
3. We usually follow national curriculum framework after discussing, proliferating in the time of implementation. हामी सामान्यतया राष्ट्रिय पाठ्यक्रम प्रारूपलाई छलफल र प्रबोधिकरण गर्दै कार्यान्वयन गर्छौं ।	4	3	2	1	0
4. We head teacher and teacher share accountability for students' academic performance. हामी प्र.अ.र शिक्षकले विद्यार्थीको वार्षिक उपलब्धि हासिल गर्न दायित्व बाँडफाँड गर्छौं ।	4	3	2	1	0
5. As a dynamic head teacher of a school, I improve my weaknesses by sharing experiences. एक गतिशिल प्र.अ.को रुपमा मैले आफ्ना कमिकमजोरीहरुमा सुधार गर्दै अनुभवहरु आदानप्रदान गर्दछु ।	4	3	2	1	0
6. I share the current leadership skills, experiences, competencies and capabilities among staff. मैले हालसालको नेतृत्वशिप, सक्षमता, खुबी र अनुभवहरु कर्मचारीहरुमा आदान प्रदान गर्दछु ।	4	3	2	1	0
7. I always have efforts of sharing and encouraging students and teachers by focusing on students' overall learning achievement.	4	3	2	1	0

म सधैं विद्यार्थीको समग्र शैक्षिक उपलब्धिलाई विद्यार्थी र शिक्षक समक्ष आदान प्रदान गर्ने गराउने गर्दछु					
8. We have such a practice that activities of school are discussed with the stakeholders. हाम्रो त्यस्तो अभ्यास छकी विद्यालयका गतिविधिहरु सरोकारवालाहरूसँग छलफल गरिन्छ ।	4	3	2	1	0
9. I am used to sharing the information circulated by the government of Nepal to all teachers. मैले नेपाल सरकारद्वारा जारी गरिएका सूचना विद्यालयका सबै शिक्षकहरुलाई जानकारी गराउने गरेको छु ।	4	3	2	1	0
10. I have a crystal clear vision and mission to move up my school collectively. मसँग विद्यालय सञ्चालन गर्न स्पष्ट कार्यदिशा, दूरदृष्टि र सामुहिक भावना छ ।	4	3	2	1	0
11. Parents have to encourage schools' collective leadership. अभिभावकले विद्यालयको सामुहिक नेतृत्वलाई प्रोत्साहन दिनुहुन्छ ।	4	3	2	1	0
12. We develop Schools' improvements plan working collectively with teachers and stakeholders. हामी विद्यालय सुधार योजना, शिक्षक र सरोकारवालाहरूसँग सामुहिक छलफल गरी निर्माण गर्दछौ ।	4	3	2	1	0
13. We (Head teacher and Teachers) work in team for establishing common aim and objectives of school. हामी विद्यालयको साझा लक्ष्य उद्देश्यलाई स्थापित गर्न सामुहिक कार्य गर्छौ ।	4	3	2	1	0
14. I warmly welcome the appropriate suggestions given by individual teacher. म हरेक शिक्षकले व्यक्तिगत रुपमा दिएका उपयुक्त सल्लाहहरुलाई हार्दिकता पूर्वक ग्रहण गर्दछु ।	4	3	2	1	0
15. As School is a learning community, we continually strive for improvements and managements of learning experiences of students and teachers collectively. विद्यालय सिकाई समुदाय भएकाले शिक्षक र विद्यार्थीहरुको सिकाई अनुभवहरुको प्रभावकारी सुधार र व्यवस्थापन गर्न सामुहिक रुपमा प्रयत्नरत छौ ।	4	3	2	1	0
16. I work with teachers to develop and implement schools annual Academic Calendar. मैले वार्षिक शैक्षिक योजना निर्माण र कार्यान्वयन गर्दा विद्यालयका कार्यरत शिक्षकहरूसँग सहकार्य गर्दछु ।	4	3	2	1	0
17. We work with community for overall development of the school. हामी विद्यालयको समग्र विकासका लागि समुदायसँग मिलेर कार्य गर्छौ ।	4	3	2	1	0
18. We have a clear division of work for teaching and non-teaching staff at the school. हामीसँग विद्यालयमा शिक्षक तथा कर्मचारीको स्पष्ट कार्य विभाजन छ ।	4	3	2	1	0
19. We conduct teaching activities at school by discussing with teachers. हामी शिक्षकहरूसँग छलफल गरी विद्यालयका क्रियाकलापहरु सञ्चालन गर्छौ ।	4	3	2	1	0

20. I respect collaborative effort of teachers. म सबै शिक्षकहरूद्वारा सहकार्य गरी गरिएको कार्यलाई सम्मान गर्दछु ।	4	3	2	1	0
21. I provide time for teachers to collaborate on educational issues. म शैक्षिक सवालहरूमा सामुहिक कार्य गर्न शिक्षकहरूलाई समय उपलब्ध गराउँछु ।	4	3	2	1	0
22. Parents coordinate with leadership of school for better learning performance of their children. अभिभावकले बालबालिकाको प्रभावकारी सिकाईका लागि विद्यालय नेतृत्वसँग सहकार्य गर्नुहुन्छ ।	4	3	2	1	0
23. Schools' leadership team work collaboratively for planning activities. विद्यालयका नेतृत्व गर्ने समूहहरूले क्रियाकलापहरू निर्माण गर्न सामुहिक कार्य गर्छन् ।	4	3	2	1	0
24. I co-ordinate with other teacher leaders of school and extend to level of leadership in regards own rights, responsibilities and duties according to educations' act. मैले शिक्षा नियमावली अनुसारका आफ्ना अधिकार, कर्तव्य र उत्तरदायित्व अन्य नेतृत्व तहका शिक्षकहरूसँग सहकार्य गर्दछु ।	4	3	2	1	0
25. Co-leader performs their roles and responsibilities in collaboration with teachers to maintain quality learning environment. सह नेतृत्वले आफ्ना भूमिका र जिम्मेवारी गुणस्तरीय सिकाई वातावरण कायम गर्नको लागि समूहमा कार्य गर्ने गर्दछन् ।	4	3	2	1	0
26. I create friendly environment and work jointly with all stakeholders at school. म विद्यालयमा सहज वातावरण सृजना गरी सबै सरोकारवालासँग सामुहिक सहकार्य गर्दछु ।	4	3	2	1	0
27. Co-leaders support me to deal with educational issues raised by students and teachers. विद्यार्थी र शिक्षकहरूले उठाएका शैक्षिक मुद्दाहरूको छिनोफानो गर्न मलाई सह नेतृत्वले सहयोग गर्ने गर्दछ ।	4	3	2	1	0
28. Co-leaders and teachers help me to create environment for better learning experiences. सह नेतृत्व र शिक्षकहरूले विद्यार्थीको राम्रो सिकाई अनुभवहरूको लागि वातावरण सृजना गरी सहयोग गर्ने गर्छन् ।	4	3	2	1	0
29. In our school teachers are considered as classroom leader. हाम्रो विद्यालयमा शिक्षकहरूलाई नेतृत्वकर्ताको रूपमा हेर्ने गरिन्छ ।	4	3	2	1	0
30. Co-leaders of my school also work for professional development activities. मेरो विद्यालयका सह नेतृत्वले पेशागत विकासका कामहरू पनि गर्ने गर्नुहुन्छ ।	4	3	2	1	0
31. Assistant head teacher of school get authority for leading in the absence of head teacher. सह प्र.अ.ले प्र.अ.को अनुपस्थितिमा नेतृत्व गर्ने आधिकारीकता प्राप्त गर्दछन् ।	4	3	2	1	0
32. Co-leaders help to perform better students' learning outcomes and satisfaction. सह नेतृत्वले बढी राम्रो विद्यार्थीको सिकाई र सन्तुष्टि गर्न मलाई सहयोग गर्ने गर्छन् ।	4	3	2	1	0

सह-नेतृत्वहरूले विद्यार्थीको राम्रो र सन्तोसजनक नतिजा ल्याउन सहयोग गर्ने गर्नुहुन्छ ।					
33. Co-leaders work with head teacher effectively in School. विद्यालय सह नेतृत्वहरूले प्र.अ.सँग प्रभावकारीरूपले काम गर्ने गर्नुहुन्छ ।	4	3	2	1	0
34. We organize SMC by representing parents of all caste, area, gender, level and community. हामी विद्यालय व्यवस्थापन समिति गठन गर्दा सबै जाति, क्षेत्र, लिङ्ग, वर्ग र समुदायका अभिभावकहरूको प्रतिनिधित्व गराउछौं ।	4	3	2	1	0
35. I am used to supporting new educational ideas and innovation equally. मैले अभियन्ताहरूको शैक्षणिक नविनतम विचारलाई समान रूपमा समर्थन गर्ने गरेको छु ।	4	3	2	1	0
36. I have established inclusive communication channel between parents and school, so they communicate their interest clearly. मैले अभिभावक र विद्यालय बीच सञ्चार सञ्जाल स्थापना गरेको छु ताकि उहाँहरूले आफ्नो चासोमा आदानप्रदान गर्नुहुन्छ ।	4	3	2	1	0
37. I am used to emphasizing on inclusive decisions while changing instructional program. मैले शैक्षिक कार्यक्रमहरूमा परिवर्तन गर्दा समावेशी निर्णयमा जोड दिने गरेको छु ।	4	3	2	1	0
38. I have encouraged all the staff to participate in workshop, seminar and meeting. मैले सबै शिक्षक सहकर्मीहरूलाई कार्यसाला, गोष्ठी र बैठकमा सहभागी हुन प्रेरित गरेको छु ।	4	3	2	1	0
39. SMC, head teacher and teachers perform to achieve the expected educational goals of school. विद्यालय व्यवस्थापन समिति, प्र.अ. र शिक्षकहरूले अपेक्षित शैक्षिक उद्देश्य पूरा गर्न कार्य गर्नुहुन्छ ।	4	3	2	1	0
40. I provide the opportunities to take leadership for working in team at school. मैले विद्यालयमा, समूहमा काम गर्नको लागि नेतृत्व लिने अवसर प्रदान गर्दछु ।	4	3	2	1	0
41. I give chances to the new teachers to take lead of school activities. म नयाँ शिक्षकहरूलाई विद्यालयका गतिविधिहरूमा नेतृत्व गर्ने अवसर प्रदान गर्दछु ।	4	3	2	1	0
42. We are used to providing professional development opportunities to male and female teachers in school on the basis of equality and equity. हामी महिला र पुरुष शिक्षकलाई पेशागत विकास गर्ने अवसर समानता र समताको आधारमा प्रदान गर्ने गर्दछौं ।	4	3	2	1	0
43. We provide scholarship to the specified (dalit, handicapped, economically deprived) groups of community. हामी लक्षित समूहलाई छात्रवृत्ति प्रदान गर्ने गर्दछौं ।	4	3	2	1	0

Thanking for responding
questionnaires.

ANNEX II

RESEARCH QUESTIONS AND STATISTICAL TOOLS

S.N.	Research questions	Dependent variable	Independent variable	Statistical tools
1	What is the relationship between distributed leadership and demographic variable of head teachers?	Distributed leadership	Demographic variable	Mean Percent Normality Test
2	To what extend school head teachers demonstrate distributed leadership in schools?	Distributed leadership		T test and ANOVA
3	What is the relationship between head teachers distributed leadership and students learning achievement?	Students learning achievement	Distributed leadership	Correlation and Regression

ANNEX III

TABLES

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Sharing	Male	138	3.6006	.22610	.01925	3.5626	3.6387	3.11	4.00
	Female	27	3.6914	.16973	.03266	3.6242	3.7585	3.22	4.00
	Total	165	3.6155	.22001	.01713	3.5817	3.6493	3.11	4.00
Collective	Male	138	3.4155	.26008	.02214	3.3717	3.4592	2.89	4.00
	Female	27	3.5021	.26576	.05115	3.3969	3.6072	2.89	4.00
	Total	165	3.4296	.26217	.02041	3.3893	3.4699	2.89	4.00
Collaborative	Male	138	3.4257	.23671	.02015	3.3859	3.4656	3.00	3.88
	Female	27	3.4676	.25380	.04884	3.3672	3.5680	3.00	4.00
	Total	165	3.4326	.23929	.01863	3.3958	3.4694	3.00	4.00
Coleader	Male	138	3.4702	.16344	.01391	3.4427	3.4977	3.14	3.86
	Female	27	3.5090	.18680	.03595	3.4351	3.5829	3.14	3.86
	Total	165	3.4765	.16749	.01304	3.4508	3.5023	3.14	3.86
Democratic	Male	138	3.4674	.30089	.02561	3.4167	3.5180	2.50	4.00
	Female	27	3.5481	.26943	.05185	3.4416	3.6547	3.10	4.00
	Total	165	3.4806	.29671	.02310	3.4350	3.5262	2.50	4.00
Distributed_Leadership	Male	138	3.4759	.18007	.01533	3.4456	3.5062	3.12	3.92
	Female	27	3.5436	.17444	.03357	3.4746	3.6126	3.23	3.97
	Total	165	3.4870	.18039	.01404	3.4592	3.5147	3.12	3.97

Test of Homogeneity of Variances					
		Levene			
		Statistic	df1	df2	Sig.
Sharing	Based on Mean	3.955	1	163	.048
	Based on Median	3.070	1	163	.082
	Based on Median and with adjusted df	3.070	1	162.713	.082
	Based on trimmed mean	3.966	1	163	.048
Collective	Based on Mean	.023	1	163	.880
	Based on Median	.011	1	163	.915
	Based on Median and with adjusted df	.011	1	161.870	.915
	Based on trimmed mean	.020	1	163	.888
Collaborative	Based on Mean	.018	1	163	.894
	Based on Median	.022	1	163	.883
	Based on Median and with adjusted df	.022	1	156.269	.883
	Based on trimmed mean	.016	1	163	.899
Coleader	Based on Mean	1.439	1	163	.232
	Based on Median	1.356	1	163	.246
	Based on Median and with adjusted df	1.356	1	161.589	.246
	Based on trimmed mean	1.489	1	163	.224
Democratic	Based on Mean	.001	1	163	.976
	Based on Median	.000	1	163	.983
	Based on Median and with adjusted df	.000	1	158.085	.983
	Based on trimmed mean	.003	1	163	.960
Distributed_Leadership	Based on Mean	.298	1	163	.586
	Based on Median	.598	1	163	.440
	Based on Median and with adjusted df	.598	1	159.070	.440
	Based on trimmed mean	.351	1	163	.555

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Sharing	Between Groups	.186	1	.186	3.907	.050
	Within Groups	7.752	163	.048		
	Total	7.938	164			
Collective	Between Groups	.169	1	.169	2.486	.117
	Within Groups	11.103	163	.068		
	Total	11.272	164			
Collaborative	Between Groups	.040	1	.040	.690	.407
	Within Groups	9.351	163	.057		
	Total	9.391	164			
Coleader	Between Groups	.034	1	.034	1.213	.272
	Within Groups	4.567	163	.028		
	Total	4.601	164			
Democracy_average	Between Groups	.147	1	.147	1.680	.197
	Within Groups	14.291	163	.088		
	Total	14.438	164			
Distrbuted_Leadership	Between Groups	.104	1	.104	3.228	.074
	Within Groups	5.233	163	.032		
	Total	5.337	164			

Descriptive

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minim.	Maxim
Distributed_Leadership	Kathmandu	97	3.4514	.15879	.01612	3.4194	3.4834	3.12	3.97
	Lalitpur	41	3.5213	.22564	.03524	3.4501	3.5925	3.12	3.92
	Bhaktapur	27	3.5626	.14602	.02810	3.5048	3.6204	3.26	3.87
	Total	165	3.4870	.18039	.01404	3.4592	3.5147	3.12	3.97
Sharing	Kathmandu	97	3.5682	.21449	.02178	3.5249	3.6114	3.11	4.00
	Lalitpur	41	3.6477	.24583	.03839	3.5701	3.7253	3.11	4.00
	Bhaktapur	27	3.7366	.13128	.02527	3.6847	3.7886	3.44	4.00
	Total	165	3.6155	.22001	.01713	3.5817	3.6493	3.11	4.00
Collective	Kathmandu	97	3.3918	.23575	.02394	3.3442	3.4393	2.89	4.00
	Lalitpur	41	3.4715	.32846	.05130	3.3679	3.5752	2.89	4.00
	Bhaktapur	27	3.5021	.22087	.04251	3.4147	3.5894	2.89	3.89
	Total	165	3.4296	.26217	.02041	3.3893	3.4699	2.89	4.00
Collaborative	Kathmandu	97	3.3879	.22642	.02299	3.3423	3.4335	3.00	4.00
	Lalitpur	41	3.4756	.25344	.03958	3.3956	3.5556	3.00	4.00
	Bhaktapur	27	3.5278	.23084	.04442	3.4365	3.6191	3.00	3.88
	Total	165	3.4326	.23929	.01863	3.3958	3.4694	3.00	4.00
Coleader	Kathmandu	97	3.4608	.15844	.01609	3.4289	3.4927	3.14	3.86
	Lalitpur	41	3.4994	.21182	.03308	3.4325	3.5662	3.14	3.86
	Bhaktapur	27	3.4984	.11400	.02194	3.4533	3.5435	3.29	3.71
	Total	165	3.4765	.16749	.01304	3.4508	3.5023	3.14	3.86
Democratic	Kathmandu	97	3.4485	.27655	.02808	3.3927	3.5042	2.50	4.00
	Lalitpur	41	3.5122	.35156	.05491	3.4012	3.6232	2.70	4.00
	Bhaktapur	27	3.5481	.26943	.05185	3.4416	3.6547	2.90	4.00
	Total	165	3.4806	.29671	.02310	3.4350	3.5262	2.50	4.00

Descriptives									
						95% Confidence			
				Std.		Interval for Mean			
		N	Mean	Devianti	Std.	Lower	Upper	Minimu	Maximu
				on	Error	Bound	Bound	m	m
Sharing	30-40	6	3.6296	.22951	.09370	3.3888	3.8705	3.22	3.89
	40-50	34	3.6209	.24484	.04199	3.5355	3.7063	3.11	4.00
	50-60	125	3.6133	.21428	.01917	3.5754	3.6513	3.11	4.00
	Total	165	3.6155	.22001	.01713	3.5817	3.6493	3.11	4.00
Collective	30-40	6	3.4815	.31164	.12723	3.1544	3.8085	3.00	3.78
	40-50	34	3.4575	.29558	.05069	3.3544	3.5606	2.89	4.00
	50-60	125	3.4196	.25158	.02250	3.3750	3.4641	2.89	4.00
	Total	165	3.4296	.26217	.02041	3.3893	3.4699	2.89	4.00
Collaborative	30-40	6	3.5625	.20540	.08385	3.3470	3.7780	3.25	3.88
	40-50	34	3.4596	.25879	.04438	3.3693	3.5499	3.00	4.00
	50-60	125	3.4190	.23453	.02098	3.3775	3.4605	3.00	3.88
	Total	165	3.4326	.23929	.01863	3.3958	3.4694	3.00	4.00
Coleader	30-40	6	3.4768	.17282	.07055	3.2954	3.6581	3.29	3.71
	40-50	34	3.4839	.18594	.03189	3.4190	3.5488	3.14	3.86
	50-60	125	3.4745	.16334	.01461	3.4456	3.5034	3.14	3.86
	Total	165	3.4765	.16749	.01304	3.4508	3.5023	3.14	3.86
Democratic	30-40	6	3.4667	.36697	.14981	3.0816	3.8518	2.80	3.90
	40-50	34	3.5353	.33564	.05756	3.4182	3.6524	2.70	4.00
	50-60	125	3.4664	.28283	.02530	3.4163	3.5165	2.50	4.00
	Total	165	3.4806	.29671	.02310	3.4350	3.5262	2.50	4.00
Distrbuted_Leade rship	30-40	6	3.5234	.20512	.08374	3.3081	3.7387	3.14	3.75
	40-50	34	3.5114	.19947	.03421	3.4418	3.5810	3.18	3.97
	50-60	125	3.4786	.17451	.01561	3.4477	3.5095	3.12	3.92
	Total	165	3.4870	.18039	.01404	3.4592	3.5147	3.12	3.97

Descriptives									
		95% Confidence Interval for Mean							
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minim	Maxim.
Sharing	SLC	2	3.2778	.23570	.16667	1.1601	5.3955	3.11	3.44
	B.Ed	6	3.5926	.13456	.05493	3.4514	3.7338	3.44	3.78
	BBA	1	3.4444	.	.	.	.	3.44	3.44
	B.SC	2	3.3333	.31427	.22222	.5097	6.1569	3.11	3.56
	B.A	11	3.5354	.22121	.06670	3.3867	3.6840	3.22	3.78
	M.Ed	78	3.6396	.22451	.02542	3.5890	3.6902	3.11	4.00
	M.A	29	3.6552	.24005	.04458	3.5639	3.7465	3.11	4.00
	MBA	6	3.5926	.22951	.09370	3.3517	3.8334	3.33	3.89
	M.Sc	17	3.5621	.13305	.03227	3.4937	3.6305	3.33	3.78
	M.Phil	12	3.6389	.21254	.06136	3.5038	3.7739	3.33	4.00
	PhD	1	3.7778	.	.	.	.	3.78	3.78
Total	165	3.6155	.22001	.01713	3.5817	3.6493	3.11	4.00	
Collective	SLC	2	3.0556	.07857	.05556	2.3497	3.7615	3.00	3.11
	B.Ed	6	3.4630	.10924	.04460	3.3483	3.5776	3.33	3.56
	BBA	1	3.2222	.	.	.	.	3.22	3.22
	B.SC	2	3.0556	.23570	.16667	.9379	5.1733	2.89	3.22
	B.A	11	3.3333	.29397	.08864	3.1358	3.5308	2.89	4.00
	M.Ed	78	3.4772	.25708	.02911	3.4192	3.5352	2.89	4.00
	M.A	29	3.4406	.26806	.04978	3.3386	3.5426	2.89	3.89
	MBA	6	3.3519	.28473	.11624	3.0530	3.6507	3.00	3.78
	M.Sc	17	3.3072	.26796	.06499	3.1694	3.4450	2.89	3.67
	M.Phil	12	3.5278	.17164	.04955	3.4187	3.6368	3.22	3.78
	PhD	1	3.3333	.	.	.	.	3.33	3.33
Total	165	3.4296	.26217	.02041	3.3893	3.4699	2.89	4.00	
Collaborative	SLC	2	3.0625	.08839	.06250	2.2684	3.8566	3.00	3.13
	B.Ed	6	3.3542	.26712	.10905	3.0738	3.6345	3.00	3.75
	BBA	1	3.2500	.	.	.	.	3.25	3.25
	B.SC	2	3.1250	.17678	.12500	1.5367	4.7133	3.00	3.25
	B.A	11	3.3864	.22676	.06837	3.2340	3.5387	3.00	3.63
	M.Ed	78	3.4696	.24190	.02739	3.4150	3.5241	3.00	4.00
	M.A	29	3.4526	.25533	.04741	3.3555	3.5497	3.00	3.88
	MBA	6	3.3958	.16615	.06783	3.2215	3.5702	3.13	3.63
	M.Sc	17	3.3971	.19880	.04822	3.2948	3.4993	3.00	3.75
	M.Phil	12	3.4375	.24133	.06967	3.2842	3.5908	3.00	3.88
	PhD	1	3.2500	.	.	.	.	3.25	3.25
Total	165	3.4326	.23929	.01863	3.3958	3.4694	3.00	4.00	

Coleade	SLC	2	3.2874	.20448	.14459	1.4503	5.1246	3.14	3.43
	B.Ed	6	3.4535	.10725	.04378	3.3410	3.5661	3.29	3.57
	BBA	1	3.1429	.	.	.	.	3.14	3.14
	B.SC	2	3.4320	.00000	.00000	3.4320	3.4320	3.43	3.43
	B.A	11	3.4181	.10046	.03029	3.3506	3.4856	3.14	3.57
	M.Ed	78	3.5121	.17256	.01954	3.4732	3.5510	3.14	3.86
	M.A	29	3.4938	.16851	.03129	3.4297	3.5579	3.14	3.86
	MBA	6	3.3815	.14777	.06033	3.2265	3.5366	3.14	3.57
	M.Sc	17	3.4134	.14202	.03444	3.3404	3.4864	3.14	3.71
	M.Phil	12	3.4643	.19383	.05595	3.3411	3.5874	3.29	3.86
	PhD	1	3.5714	.	.	.	.	3.57	3.57
Total	165	3.4765	.16749	.01304	3.4508	3.5023	3.14	3.86	
Democratic	SLC	2	3.3000	.00000	.00000	3.3000	3.3000	3.30	3.30
	B.Ed	6	3.3167	.19408	.07923	3.1130	3.5203	3.00	3.50
	BBA	1	3.5000	.	.	.	.	3.50	3.50
	B.SC	2	3.4500	.77782	.55000	-	10.4384	2.90	4.00
							3.5384		
	B.A	11	3.3818	.33710	.10164	3.1554	3.6083	2.80	4.00
	M.Ed	78	3.4885	.29541	.03345	3.4219	3.5551	2.70	4.00
	M.A	29	3.4862	.29121	.05408	3.3754	3.5970	3.00	4.00
	MBA	6	3.5667	.26583	.10853	3.2877	3.8456	3.20	4.00
	M.Sc	17	3.4000	.29580	.07174	3.2479	3.5521	2.50	3.80
	M.Phil	12	3.7000	.22962	.06629	3.5541	3.8459	3.30	4.00
PhD	1	3.4000	.	.	.	.	3.40	3.40	
Total	165	3.4806	.29671	.02310	3.4350	3.5262	2.50	4.00	
Distrbuted_Leadership	SLC	2	3.1967	.08607	.06086	2.4233	3.9700	3.14	3.26
	B.Ed	6	3.4360	.11684	.04770	3.3134	3.5586	3.30	3.61
	BBA	1	3.3119	.	.	.	.	3.31	3.31
	B.SC	2	3.2792	.23020	.16278	1.2109	5.3475	3.12	3.44
	B.A	11	3.4110	.16357	.04932	3.3011	3.5209	3.12	3.68
	M.Ed	78	3.5174	.18558	.02101	3.4755	3.5592	3.14	3.97
	M.A	29	3.5057	.18766	.03485	3.4343	3.5771	3.20	3.92
	MBA	6	3.4577	.16369	.06682	3.2859	3.6295	3.27	3.74
	M.Sc	17	3.4159	.14340	.03478	3.3422	3.4897	3.13	3.59
	M.Phil	12	3.5537	.15016	.04335	3.4583	3.6491	3.32	3.79
	PhD	1	3.4665	.	.	.	.	3.47	3.47
Total	165	3.4870	.18039	.01404	3.4592	3.5147	3.12	3.97	

Descriptive									
						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minim.	Maxim.
Sharing	1 to 10	2	3.6111	.07857	.05556	2.9052	4.3170	3.56	3.67
	11 to 20	115	3.6106	.22240	.02074	3.5695	3.6517	3.11	4.00
	21 to 30	34	3.6438	.20245	.03472	3.5732	3.7144	3.11	4.00
	30 to 40	12	3.6019	.28212	.08144	3.4226	3.7811	3.11	4.00
	41 to above	2	3.5000	.07857	.05556	2.7941	4.2059	3.44	3.56
	Total	165	3.6155	.22001	.01713	3.5817	3.6493	3.11	4.00
	Collective	1 to 10	2	3.5556	.31427	.22222	.7320	6.3792	3.33	3.78
11 to 20		115	3.4261	.26447	.02466	3.3772	3.4749	2.89	4.00
21 to 30		34	3.4673	.25037	.04294	3.3800	3.5547	2.89	4.00
30 to 40		12	3.3426	.26992	.07792	3.1711	3.5141	2.89	3.67
41 to above		2	3.3889	.39284	.27778	-.1406	6.9184	3.11	3.67
Total		165	3.4296	.26217	.02041	3.3893	3.4699	2.89	4.00
Collaborative		1 to 10	2	3.1875	.08839	.06250	2.3934	3.9816	3.13	3.25
	11 to 20	115	3.4435	.23604	.02201	3.3999	3.4871	3.00	4.00
	21 to 30	34	3.4375	.25047	.04296	3.3501	3.5249	3.00	4.00
	30 to 40	12	3.3854	.23512	.06787	3.2360	3.5348	3.13	3.75
	41 to above	2	3.2500	.35355	.25000	.0734	6.4266	3.00	3.50
	Total	165	3.4326	.23929	.01863	3.3958	3.4694	3.00	4.00
	Coleader	1 to 10	2	3.5714	.20203	.14286	1.7563	5.3866	3.43	3.71
11 to 20		115	3.4793	.17522	.01634	3.4470	3.5117	3.14	3.86

Democratic	21 to 30	34	3.4931	.15343	.02631	3.4396	3.5467	3.29	3.86
	30 to 40	12	3.3943	.12418	.03585	3.3154	3.4732	3.14	3.57
	41 to above	2	3.4303	.00245	.00173	3.4083	3.4523	3.43	3.43
	Total	165	3.4765	.16749	.01304	3.4508	3.5023	3.14	3.86
	1 to 10	2	3.3000	.14142	.10000	2.0294	4.5706	3.20	3.40
	11 to 20	115	3.4965	.27110	.02528	3.4464	3.5466	2.70	4.00
Distributed_Leadership	21 to 30	34	3.4559	.34394	.05899	3.3359	3.5759	2.70	4.00
	30 to 40	12	3.4417	.42310	.12214	3.1728	3.7105	2.50	4.00
	41 to above	2	3.4000	.14142	.10000	2.1294	4.6706	3.30	3.50
	Total	165	3.4806	.29671	.02310	3.4350	3.5262	2.50	4.00
	1 to 10	2	3.4451	.10837	.07663	2.4715	4.4188	3.37	3.52
	11 to 20	115	3.4912	.17999	.01678	3.4580	3.5245	3.12	3.92
	21 to 30	34	3.4995	.18268	.03133	3.4358	3.5633	3.12	3.97
	30 to 40	12	3.4332	.19783	.05711	3.3075	3.5589	3.13	3.73
	41 to above	2	3.3938	.19279	.13632	1.6617	5.1260	3.26	3.53
	Total	165	3.4870	.18039	.01404	3.4592	3.5147	3.12	3.97

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			
						Lower Bound	Upper Bound	Minimum	Maximum
Sharing	11 to 20	2	3.6667	.15713	.1111	2.2549	5.0785	3.56	3.78
	21 to 30	21	3.6614	.24210	.05283	3.5512	3.7716	3.11	4.00

	31 to	76	3.565	.21862	.0250	3.515	3.615	3.11	4.00
	40		8		8	8	7		
	41 to	66	3.656	.20785	.0255	3.605	3.707	3.11	4.00
	above		6		8	5	7		
	Total	16	3.615	.22001	.0171	3.581	3.649	3.11	4.00
		5	5		3	7	3		
Collective	11 to	2	3.555	.31427	.2222	.7320	6.379	3.33	3.78
	20		6		2		2		
	21 to	21	3.486	.27772	.0606	3.360	3.613	2.89	3.89
	30		8		0	4	2		
	31 to	76	3.406	.28374	.0325	3.341	3.471	2.89	4.00
	40		4		5	6	3		
	41 to	66	3.434	.23039	.0283	3.377	3.491	2.89	4.00
	above		3		6	7	0		
	Total	16	3.429	.26217	.0204	3.389	3.469	2.89	4.00
		5	6		1	3	9		
Collaborative	11 to	2	3.562	.08839	.0625	2.768	4.356	3.50	3.63
	20		5		0	4	6		
	21 to	21	3.494	.25762	.0562	3.376	3.611	3.13	4.00
	30		0		2	8	3		
	31 to	76	3.424	.23812	.0273	3.369	3.478	3.00	4.00
	40		3		1	9	8		
	41 to	66	3.418	.23767	.0292	3.360	3.477	3.00	3.88
	above		6		6	1	0		
	Total	16	3.432	.23929	.0186	3.395	3.469	3.00	4.00
		5	6		3	8	4		
Coleader	11 to	2	3.428	.20203	.1428	1.613	5.243	3.29	3.57
	20		6		6	4	7		
	21 to	21	3.477	.17667	.0385	3.396	3.557	3.14	3.86
	30		0		5	6	4		
	31 to	76	3.469	.16890	.0193	3.430	3.507	3.14	3.86
	40		3		7	7	9		
	41 to	66	3.486	.16557	.0203	3.445	3.526	3.14	3.86
	above		1		8	4	8		
	Total	16	3.476	.16749	.0130	3.450	3.502	3.14	3.86
		5	5		4	8	3		
Democratic	11 to	2	3.550	.07071	.0500	2.914	4.185	3.50	3.60
	20		0		0	7	3		
	21 to	21	3.528	.34372	.0750	3.372	3.685	2.80	4.00
	30		6		1	1	0		
	31 to	76	3.467	.30436	.0349	3.397	3.536	2.70	4.00
	40		1		1	6	7		
	41 to	66	3.478	.27874	.0343	3.410	3.547	2.50	4.00
	above		8		1	3	3		

	Total	16	3.480	.29671	.0231	3.435	3.526	2.50	4.00
		5	6		0	0	2		
Distrbuted_Leader ship	11 to	2	3.552	.08569	.0606	2.782	4.322	3.49	3.61
	20		7		0	7	6		
	21 to	21	3.529	.21346	.0465	3.432	3.626	3.14	3.89
	30		6		8	4	7		
	31 to	76	3.466	.18134	.0208	3.425	3.508	3.12	3.97
	40		6		0	2	0		
	41 to	66	3.494	.16960	.0208	3.453	3.536	3.13	3.81
	above		9		8	2	6		
	Total	16	3.487	.18039	.0140	3.459	3.514	3.12	3.97
		5	0		4	2	7		

Descriptive

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minim	Maxim
						Lower Bound	Upper Bound		
Sharing	1 to 90 days	30	3.5296	.17673	.03227	3.4636	3.5956	3.11	3.78
	91 to 180 days	129	3.6305	.22445	.01976	3.5914	3.6696	3.11	4.00
	181 to 270 days	3	3.7407	.27962	.16144	3.0461	4.4354	3.44	4.00
	270 to 365 days	3	3.7037	.23130	.13354	3.1291	4.2783	3.44	3.89
	Total	165	3.6155	.22001	.01713	3.5817	3.6493	3.11	4.00
	Collective	1 to 90 days	30	3.2778	.23840	.04352	3.1888	3.3668	2.89	3.78
91 to 180 days		129	3.4608	.25538	.02249	3.4163	3.5053	2.89	4.00
181 to 270 days		3	3.5556	.29397	.16973	2.8253	4.2858	3.33	3.89
270 to 365 days		3	3.4815	.33945	.19598	2.6382	4.3247	3.11	3.78
Total		165	3.4296	.26217	.02041	3.3893	3.4699	2.89	4.00
Collaborative		1 to 90 days	30	3.2750	.17494	.03194	3.2097	3.3403	3.00	3.88
	91 to 180 days	129	3.4603	.23541	.02073	3.4193	3.5013	3.00	4.00
	181 to 270 days	3	3.6250	.25000	.14434	3.0040	4.2460	3.38	3.88
	Total	162	3.4118	.23846	.02073	3.3730	3.4497	3.00	4.00

	270 to 365 days	3	3.6250	.33072	.19094	2.8034	4.4466	3.25	3.88
Coleader	Total	165	3.4326	.23929	.01863	3.3958	3.4694	3.00	4.00
	1 to 90 days	30	3.4349	.14758	.02694	3.3798	3.4901	3.14	3.71
	91 to 180 days	129	3.4851	.16839	.01483	3.4557	3.5144	3.14	3.86
	181 to 270 days	3	3.4773	.08150	.04705	3.2749	3.6798	3.43	3.57
	Total	165	3.5238	.35952	.20757	2.6307	4.4169	3.14	3.86
Democractic	Total	165	3.4765	.16749	.01304	3.4508	3.5023	3.14	3.86
	1 to 90 days	30	3.3967	.33268	.06074	3.2724	3.5209	2.70	4.00
	91 to 180 days	129	3.4930	.28400	.02500	3.4435	3.5425	2.50	4.00
	181 to 270 days	3	3.6333	.35119	.20276	2.7609	4.5057	3.30	4.00
	Total	165	3.6333	.37859	.21858	2.6929	4.5738	3.20	3.90
Distrbuted_Leadership	Total	165	3.4806	.29671	.02310	3.4350	3.5262	2.50	4.00
	1 to 90 days	30	3.3828	.14826	.02707	3.3274	3.4382	3.12	3.73
	91 to 180 days	129	3.5059	.17535	.01544	3.4754	3.5365	3.13	3.97
	181 to 270 days	3	3.6064	.23848	.13768	3.0140	4.1988	3.40	3.87
	Total	165	3.5935	.31723	.18315	2.8054	4.3815	3.23	3.81
	Total	165	3.4870	.18039	.01404	3.4592	3.5147	3.12	3.97

Table 'C'
Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Sharing	Male	138	3.6006	.22610	.01925
	Female	27	3.6914	.16973	.03266
Collective	Male	138	3.4155	.26008	.02214
	Female	27	3.5021	.26576	.05115
Collaborative	Male	138	3.4257	.23671	.02015
	Female	27	3.4676	.25380	.04884
Coleader	Male	138	3.4702	.16344	.01391
	Female	27	3.5090	.18680	.03595

Democratic	Male	138	3.4674	.30089	.02561
	Female	27	3.5481	.26943	.05185
Distrbuted_Leadership	Male	138	3.4759	.18007	.01533
	Female	27	3.5436	.17444	.03357

Table 'T'
Multiple Comparisons

Multiple Comparisons							
Tukey HSD							
	(I) Have you..leadership related skills?If yes, state number of days, if not zero,.....Days (Binned)	(J) Have you..leadership related skills?If yes, state number of days, if not zero,.....Days (Binned)	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Collaborative	1 to 90 days	91 to 180 days	-.18527*	.04609	.001	-.3049	-.0656
		181 to 270 days	-.35000	.13769	.057	-.7075	.0075
		270 to 365 days	-.35000	.13769	.057	-.7075	.0075
	91 to 180 days	1 to 90 days	.18527*	.04609	.001	.0656	.3049
		181 to 270 days	-.16473	.13280	.602	-.5095	.1800
		270 to 365 days	-.16473	.13280	.602	-.5095	.1800
	181 to 270 days	1 to 90 days	.35000	.13769	.057	-.0075	.7075
		91 to 180 days	.16473	.13280	.602	-.1800	.5095
		270 to 365 days	.00000	.18566	1.000	-.4820	.4820
	270 to 365 days	1 to 90 days	.35000	.13769	.057	-.0075	.7075
		91 to 180 days	.16473	.13280	.602	-.1800	.5095
		181 to 270 days	.00000	.18566	1.000	-.4820	.4820
Collective	1 to 90 days	91 to 180 days	-.18303*	.05152	.003	-.3168	-.0493
		181 to 270 days	-.27778	.15390	.275	-.6773	.1217
		270 to 365 days	-.20370	.15390	.549	-.6032	.1958
	91 to 180 days	1 to 90 days	.18303*	.05152	.003	.0493	.3168

	181 to 270 days		-.09475	.14843	.919	-.4801	.2906
	270 to 365 days		-.02067	.14843	.999	-.4060	.3647
181 to 270 days	1 to 90 days		.27778	.15390	.275	-.1217	.6773
	91 to 180 days		.09475	.14843	.919	-.2906	.4801
	270 to 365 days		.07407	.20752	.984	-.4646	.6128
270 to 365 days	1 to 90 days		.20370	.15390	.549	-.1958	.6032
	91 to 180 days		.02067	.14843	.999	-.3647	.4060
	181 to 270 days		-.07407	.20752	.984	-.6128	.4646
Distrbuted_Leadership	1 to 90 days	91 to 180 days	-.12313*	.03532	.004	-.2148	-.0314
	181 to 270 days		-.22359	.10551	.151	-.4975	.0503
	270 to 365 days		-.21066	.10551	.194	-.4846	.0633
	91 to 180 days	1 to 90 days	.12313*	.03532	.004	.0314	.2148
	181 to 270 days		-.10046	.10176	.757	-.3646	.1637
	270 to 365 days		-.08753	.10176	.825	-.3517	.1767
181 to 270 days	1 to 90 days		.22359	.10551	.151	-.0503	.4975
	91 to 180 days		.10046	.10176	.757	-.1637	.3646
	270 to 365 days		.01293	.14227	1.000	-.3564	.3823
270 to 365 days	1 to 90 days		.21066	.10551	.194	-.0633	.4846
	91 to 180 days		.08753	.10176	.825	-.1767	.3517
	181 to 270 days		-.01293	.14227	1.000	-.3823	.3564

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

ANNEX IV

LEVEL OF HTS' DISTRIBUTED LEADERSHIP

Descriptive

95% Confidence								
Interval for Mean								
			Std.	Std.	Lower	Upper		
	N	Mean	Deviation	Error	Bound	Bound	Minimum	Maximum
1 to 10	2	3.4451	.10837	.07663	2.4715	4.4188	3.37	3.52
11 to 20	115	3.4912	.17999	.01678	3.4580	3.5245	3.12	3.92
21 to 30	34	3.4995	.18268	.03133	3.4358	3.5633	3.12	3.97
30 to 40	12	3.4332	.19783	.05711	3.3075	3.5589	3.13	3.73
41 to above	2	3.3938	.19279	.13632	1.6617	5.1260	3.26	3.53
Total	165	3.4870	.18039	.01404	3.4592	3.5147	3.12	3.97

ANNEX VI

CORRELATION COEFFICIENT AND REGRESSION

Student Schools GPA		
Distrbuted_Leadership	Pearson Correlation	.113
	Sig. (2-tailed)	.148

Residuals Statistics^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.4327	3.5453	3.4870	.02041	165
Residual	-.40235	.49396	.00000	.17924	165
Std. Predicted Value	-2.659	2.857	.000	1.000	165
Std. Residual	-2.238	2.748	.000	.997	165

a. Dependent Variable: Distrbuted_Leadership

Regression				
Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.113 ^a	.013	.007	.17978

a. Predictors: (Constant), Student Schools GPA

b. Dependent Variable: Distrbuted_Leadership

ANNEX VII

SAMPLES SCHOOLS

Public Secondary School of Kathmandu, Lalitpur and Bhaktapur

Sample Schools

Nepal Yubak, Paknajol, KMC

Shramik Shanti SS Chyasal, LTP

Jana Kalyan SS Kisipidi, Mahadevthan, Chandragiri

Mahendra Bhrikuti SS Ekantakuna,LTP

Ganesh SS Chapali, Bhadrakali, Budhanilkhanta
Mahankal SS Mahabouddha
Mangal SS Kirtipur Ktm
Bishankhu Narayan SS Godamchaur LTP
Prabhat SS Thankot, Chandragiri
Narayan Jana SS Matsegaun
Balambu SS Balambu,Chandra giri
Guheshwori Bal Shikshya SS,Thapathali, KMC
Saraswoti SS Tokha
Jalapadevi SS, Dhapakhel,LTP
Bhagawati SS Sankhu, Sankarapur, KTM
Chunadevi SS Nagarkot BKT
Mahendra SS Bouddha
Shree Sisneri SS LTP
Shree Kali Devi SS Pyutar LTP
Bagiswori SS BKT
Padmakanya SS Dillibazar, KMC
Manamaiju SS Tarakeshwor-9
Mahendra Gram SS Tikathali Lalitpur
Shree Mahalaxmi SS Lubhu LTP
Shree Yuwa Pratibha Vidya Mandir SS Khokana LTP
Janasewa SSPanga, Kritipur
Nandi SS Naksal, KMC
Namuna Machhindra SS LTP
Balbebasaeyee SS sifalchaur,KMC
Champadevi SS, Basan, Chalnakhel, Daxinkali
Jalupa SS Gongabu, Tokha

Prabhat SS Nagal,KMC

Saraswoti Bidhya Griha Nawadurgasthan BKT

Bagh Bhairab SS Champadi, Kritipur

Vishworastriya SS Dhalpa, Kritipur

Bal Sudhar Griha SS Madhyapur Sanothimi BKT

Gandhi Adarsha SS Manohara, Kageswori

Ganesh SS Nagadhish BKT

Shree Mahankal janajagriti SS Golputar, Budhatilkhanta

Gorakhnath S.S. Dhokasi, Kritipur

Panchakanya SS Chaimale, Daxinkali

Nava Adarsha SS Basantapur-23, KMC

Sarada SS sinamangal

Devi Ma.Vi ,Devichaur,LTP

Sahayogi SS Gokerneshwor-4

Saradha SS Yalachhe BKT

Shree Manohar SS Tokha-10

Shree Ratnarajya SS Baneshwar

Shree Jana Bikash SS Jharuwarashi,LTP

Tilingatar SS Dhapakhel, Tokha

Shree Padam SS Darbarchetra BKT

Krishna ss, Dahachowk,chandragiri

Shree Padma Prakash SS Dhapasi

Bagh Bhairav Secondary S. Lalitpur

Shanti Nikunj SS Bhagawatibari, KMC

Shanti Niketan SS Sipadole BKT

Mahendra Adarsha SS LTP

Madan Smarak pulchowk, LTP

Janajagriti SS Kapan, Budhanilkhanta
Shram Rastriya SS Kumarigal kmc
Panchakanya SS Swichatar, Nagarjun
Gita Mata SS Bijeshwori, KMC
GothBhanjyang SS Dalchoki, Konjosom LTP
Bhakta Bidhyashram SS Raktakalitore,Kmc
Bhimsengola SS Raktakali,KMC
Jwaladevi Bidhyamandir Bishankhu Narayan LTP
Shanti Vidyagriha SS Lainchaur, KMC
Kanya Mandir SS Neukha, KMC
Chandi Bhairav SS Chisapani, Chandragiri
Jyoti SS Gundu, BKT
Tangal SS Tangal
Nawa Adarsha SS KMC-23
Jana Bikash SS Matatirtha, Chandragiri
Bhagyodaya SS Sankhu, Sankrapur, Ktm
Bashu SS Kalighat BKT
Jana Kalyan SS Bauddha, Mahankal, KMC
Janaprabhat SS Kalimati KTM
Janabikash SS Balkhu, KMC
saraswoti SS Thecho LTP
Panchakanya SS Chhauni, KMC
Sahid Sukra SS Bagbazaar, KMC
Koteswor Saraswoti SS, Koteswor, KMC
Siddhi Ganesh SS Pakanjol, Sworakhuttye
Chamunda SS Jorpati, Gokarneshwor, KTM
Medha SS Nekhapukhu BKT

Tyouda SSAsan KTM

Kendriya Bahira SS Naksal

Ugratara SS Bajrayogini, Sankrapur, Ktm

Bal Premi SS Thimi BKT

Mahendra Shanti SS Balkot BKT

Janapath SS Kalanki

Shree Krishna SS Dhapakhel LTP

Navayug SS KMC-21

Mangala Devi SS Battisputali, Kmc

Sirutar SS Bhaktaput Na PA BKT

Janajagriti Gyanrasmi SS Banasthali

Basbari SS Pipalbot SS KMC

Arunodaya SS Jorpati, Gokarneshwor

Shree Bal Kumari SS Sunakoti LTP

Kirti SS Kirtipur KTM

Gupteshwor SS , Nallu , Konjusom, LTP

Gambhir samundra setu ss, imadol, LTP

Shree Saraswati SS Lele-5

Pragati Sikshya Sadan SS LTP

Shree Mangal SSNaikap Chandragiri

Samaj Sudhar SS BKT

Paropakar Adarsh SS, Teku, KMC

Himalaya SS Newroad, KMC

KhokanaJana SS Khokana, Daxinkali

Tej Binayak SS Gothatar, 8, kageswori

Bode SS BODE BKT

Shree Balkumari SS, Kirtipur-5 Bhaktapati

Buddha SS Chhampi LTP
Adarsh SS Sanothimi BKT
Shree Shanti Vidyashram SS LTP
NilBarahi SS Tankeshwor, KMC
BijayaSmarak SS Dillibazaar,KMC
Gokarna SS, Patichar, Gokarna
Pharping SS Pharping Daxinkali
Janak SS Gimdi, LTP
Bani Bilas SS Chapagaun,LTP
Adinath SS Chobhar, Kritipur
Siddheshwor SS Newbaneshwor, shantinagar
Juddodhya SS, Kshetrapati,
Mahendra Rastriya SS Baluwatar
Bhuwaneshwori SS Nangkhel BKT
Astha Mahila SS Gattaghar BKT
Adarsha Azad SS Bhelukhel BKT
Sitala SS Balaju, KMC
Ammarjyoti SS Swichatar, Nagarjun
Krishna SS Bageshwori Kharipati BKT
Saraswoti SS Nakhel BKT
Viswa Niketan SS KTM
Nagarjun SS Goldhunga, Tarkeshwor
Pathapradasakh SS Badikhel LTP
Jorpati SS BKT
Shree Ganesh SS Chhaling BKT
Shree Shringery community SS LTP
Chundevi SS Thankot, Chandragiri

Hallchowk SS Nagarjun
Gyanodaya SS Bafal, KMC
Tri-Padma Vidyashram SS LTP
Saraswoti Niketan SS Barmatole, Teku
Adarsh SS Laiku BKT
Phulchoki SS Lalitpur
Vaishnabi SS Kirtipur
Shanti Niketan SS Rammandir BKT
Ganesh SS Bharwacho BKT
Kuleshwor SS Kuleshwor, KMC
Shree Sitapaila mavi Lampakha, Nagarjun-4, KTM
Shree Navajyoti SS LTP
Prithivi Narayan SS Goldhunga, Tarkeswor
Mangalodaya SS Thankot Chandragiri
Tarun SS Bipass, Balaju
Shivapuri SS Baluwatar
Bal Vinod SS Natole LTP
Tika Bidhyashram SS Sanepa, LTP
Patan S.S, LTP
Siddhi Ganesh SS Kageshwori, KTM
Bajra Barahi SS LTP
Shree Harisiddhi SS LTP
Kitini SS Lalitpur
Guheshwori SS Sinamangal, KMC
Shree Dhumrabaraha SS
Shree jana Udaya SS Khokana, LTP

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