

**A COMPARATIVE STUDY OF TEACHER EDUCATION AND
TEACHING PROFESSION IN NEPAL AND INDIA**

A THESIS

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requirements for the award of the degree*

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Supervisor

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AUGUST, 2020

DEDICATION

I wholeheartedly dedicate this study to my **beloved parents** and **respected teachers** who have been my source of inspiration to move on right path and to my wife **Durga**, daughter **Jyoti** and son **Abhishek** who have offered unwavering support and encouragement during my doctoral journey.

DECLARATION

I declare that this written submission represents my ideas in my own words, and wherever others' ideas and words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all the principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the University and thus can evoke penal action from the sources which have not been properly cited or from whom proper permission has not been taken when needed.

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CERTIFICATE

I hereby certify that the work which is being presented in the thesis entitled "A COMPARATIVE STUDY OF TEACHER EDUCATION AND TEACHING PROFESSION IN NEPAL AND INDIA" in partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy in Education and submitted in the Department of Education of the Kumaun University, Nainital is an authentic record of my own work carried out during a period from 24 August, 2017 to 10 August, 2020 under the supervision of Dr. R. S. Pathani, Professor and Head, Department of Education, SSJ Campus Almora, Kumaun University Nainital.

The matter presented in this thesis has not been submitted by me for the award of any other degree of this or any other University/Institution.


(MADAN SINGH DEUPA)

This is to certify that the candidate has put more than 200 days attendance during the course of his Ph.D. thesis and the above statement made by him is correct to the best of my knowledge.


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ABSTRACT

Keywords: Comparative study, Teacher education, Teaching profession, Achievement, Intelligence, Attitude, Job satisfaction

Development of every nation depends upon quality of education, quality of education is directly related to effective teaching, effective teaching depends on competency of teachers and competent teachers are produced by effective teacher education programme. There are many countries, which have made significant progress within period of 50 to 100 years, but India and Nepal both are unable to do expected progress in spite of being ancient countries.

Purpose of this study was to analyze the teacher education programme (B.Ed.) with its strengths and weaknesses, to identify the academic achievement and intelligence level of students enrolling in teacher education programme, to identify the attitude and job satisfaction levels of government schoolteachers in Indo-Nepalese context and to compare them. Research design used for this study was exploratory sequential mixed design. Normative survey and phenomenological approach were used as methods of this study. Uttarakhand and Uttar Pradesh of India and Bagmati Pradesh and Sudurpashchim Pradesh of Nepal were determined as study area. Total sample of 657 (400 schoolteachers, 250 B.Ed. students and 7 educators) was selected from 78 schools and 11 departments/colleges of education by random/accidental and purposive sampling.

Review of the literature revealed that South Korea is one of the countries across the globe, which made significant development within the short period of six decades with the help of competent teachers and quality education. Literature also pointed out that teaching profession held high social status in some countries like Korea, Japan, China, and UK in the past which is slightly declining at present. Teaching profession is relatively less prestigious in USA and it has low social status in India and Nepal. Teachers of Korea, Japan, China, UK and USA enjoy high salaries; teachers' salaries are comparatively low in India and Nepal. It was also found that the concept of teacher education has various commonalities almost across the world regarding its meaning, duration, course of studies and types/phases.

Some of the researches on teacher quality and student achievement show that there is poor relationship between teacher performance and student learning but most of the researches

indicate that student achievement is highly affected by ability of the teacher. Developed countries have good understanding of the relation between capable teachers and quality of education, so these countries have strict criteria to select candidates for teacher education programme but developing countries do not have such rigid criteria.

Required data was collected by using four tools (intelligence scale, attitude scale, job satisfaction scale and interview schedule) and document study. Mean, SD, correlation, variance and t-test were used as quantitative techniques. Intelligence scale and job satisfaction scale used in this study were respectively developed by Dr. G. C. Ahuja and Dr. Meera Dixit. Both the tools were published by National Psychological Corporation Agra. Attitude scale was developed and standardized by the researcher himself on the basis of sample size of 374 selected from three districts of Nepal and two districts of India.

Mostly, two-year professional B.Ed. in India and four-year integrated B.Ed. in Nepal are in practice. In both the countries, high achievers give low priority to teacher education. In India, eligibility for teacher education is undergraduate or above with minimum 50% marks, while in Nepal, students after completion of grade 12 with at least grade D+ or equivalent are eligible to enroll in teacher education. Enrollment criteria in both the countries are weak, which is why low achievers are frequently enrolling in teacher education programme. In both the countries, some commonalities and some differences were found in teacher education programme. Selected universities in India were found to have 11 to 15 professional courses while in Nepal, 5 to 9 professional courses were included in B. Ed. programme. Duration of practice teaching in India was found 4 to 5 months, but in Nepal student-teachers are sent to schools for only one month.

Teaching profession is also considered as less attractive profession in comparison to other government services in both the countries. Teaching profession is less prestigious and less lucrative though salary and other facilities of teachers in India are comparatively higher than in Nepal. Teachers in India are used for non-academic works by government authorities. In Nepal, political interference was found in teaching profession. Some of the teachers were found involved in politics. In both the countries, teachers are not given appropriate rank in national protocol. The fairness of recruitment, transfer, promotion and rewards in teaching profession is questionable in both the countries.

Percentages of above average achievers (high, very high and extremely high achievers) enrolling in teacher education in Nepal and India were found 4% and 46.50% respectively.

Seventy four percent below average achiever (low, very low and extremely low achievers) are enrolling in teacher education in Nepal while in India this percentage is 28.50%. Only 8% above average intelligent (extremely high, very high and high) students are enrolling in teacher education in Nepal, while 42.50% above average intelligent students are enrolling in teacher education in India. Percentages of below average intelligent (low, very low and extremely low) students enrolling in teacher education in Nepal and India were found respectively 70% and 26.50%.

In Nepal, 20.50% of teachers were found having favorable attitude towards teaching profession, out of which 0.50% were extremely favorable, 4% were highly favorable and 16% were favorable. In contrast, this percentage in India was 64.50% out of which, 3% were extremely favorable, 19.50% were highly favorable and 42% were favorable. Percentages of teachers having neutral and negative attitude towards teaching were respectively found 33.50% and 46% in Nepal. In India, 25.50% teachers were found having neutral attitude while 10% have negative attitude towards teaching profession.

Percentages of teachers who are not satisfied with their job were found 40% and 7.78% respectively in Nepal and India. In Nepal, 13% teachers were found extremely dissatisfied, 12% were highly dissatisfied and 15% were below average dissatisfied. Percentages of extremely dissatisfied, highly dissatisfied and below average dissatisfied teachers in India were found respectively 0%, 1.67% and 6.11%. Thirty seven percent (9% extremely satisfied, 10% highly satisfied and 18% above average satisfied) teachers in Nepal and 81.67% (43.33% extremely satisfied, 26.67% highly satisfied and 11.67% above average satisfied) teachers in India were found satisfied with their job.

Results of t-test revealed that mean achievement score and mean intelligence score of students enrolling in teacher education in India were significantly higher than mean achievement score and mean intelligence score of students enrolling in teacher education in Nepal. Similarly, mean attitude score, and mean job satisfaction score of teachers of India were found significantly higher than mean attitude score and mean job satisfaction scores of teachers in Nepal. All these results were found significant at 0.01 level of significance. Again, in all cases of achievement, intelligence, attitude and job satisfaction, effect of independent variable (country) was found either very high or high.

Results of this study also unveiled that nature of gender ratio in teaching profession and teacher education in both the countries is similar. Currently, almost one-third of female

teachers were found involved in teaching profession, but this ratio was found just in reversed order (i.e., almost two-third) in teacher education programme.

Government of both the countries should identify the actual causes of enrollment of low achievers in teacher education, unfavorable attitude of schoolteachers towards teaching profession and low level of job satisfaction to solve related issues and hence improve quality of education. They should also review their policies regarding eligibility and enrollment criteria of teacher education programme, salaries and other facilities, provisions and actual practice of promotion, rewards and punishment, transfer, opportunities of career development, roles and responsibilities, and prestige of teachers.

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ABBREVIATIONS AND NOTATIONS

ARNEC	:	All Round National Education Committee
B. Ed.	:	Bachelor of Education
COVID	:	Corona Virus Disease
<i>df</i>	:	Degree of Freedom
DIET	:	District Institute of Education Training
FU	:	Far western University
GDP	:	Gross Domestic Product
GGTI	:	G C Ahuja Group Test of Intelligence
GPA	:	Grade Point Average
HDI	:	Human Development Index
HLEC	:	High Level Education Commission
HLNEC	:	High Level National Education Commission
KU	:	Kumaun University
MEXT	:	Ministry of Education, Culture, Sports, Science and Technology
NAEP	:	National Assessment of Educational Progress
NCED	:	National Center for Educational Development
NCERT	:	National Council of Educational Research and Training
NCTE	:	National Council of Teacher Education
NEC	:	National Education Commission
NESP	:	National Education System Plan
NNEPC	:	Nepal National Education Planning Commission
NPE	:	National Policy on Education
NTE	:	National Teacher Examination
OECD	:	Organization of Economic Cooperation and Development
PISA	:	Program for International Students Assessment
PRP	:	Performance Related Pay
PST	:	Pre- Service Teacher
RU	:	Rohilkhand University
SACMEQ	:	South and Eastern Africa Consortium for Monitoring Educational Quality
SD	:	Standard Deviation

SLC	:	School Leaving Certificate
SPSS	:	Statistical Package for Social Sciences
TIMSS	:	Trends in International Mathematics and Science Study
TSC	:	Teacher Service Commission
TU	:	Tribhuvan University
UNESCO	:	United Nations Educational Scientific and Cultural Organization
UNO	:	United Nations Organization
US\$:	United States Dollar
α	:	Level of Significance
P_{20}	:	Twentieth Percentile
σ	:	Standard Deviation
<	:	Less than
\geq	:	Greater than or equal to

LAYOUT OF THE THESIS

According to the nature of information and data analysis procedures, this study is divided in to five chapters mentioned as below:

Chapter 1: Introduction

Concept and meaning of education, aim of education and concept of teacher education are discussed as background of the study. Position of teacher, teaching and education in ancient time, relation of education and progress of the country, current demographic and educational position of Nepal and India, brief comparison of these two countries with some developed countries across the world are included in statement of the problem. Similarly, objectives of the study, research questions and hypotheses, significance of the study, delimitations of the study and operational definitions of the key terms are kept in this chapter.

Chapter 2: Review of Literature

This chapter is divided in to six sections. Review of related literature on teacher education abroad (USA, UK, China, Japan and Korea) is included in the first section. Second section comprises review of literature on teacher education in Nepal and India. Similarly, review of literature on comparative study of teacher education is kept section three and literature on academic achievement, intelligence, attitude and job satisfaction is reviewed in section four. Conclusion of the literature is mentioned in fifth section, and conceptual and theoretical frameworks of the study are presented in the sixth section.

Chapter 3: Methodology of the Study

In this chapter, research design, research method, population, locale, and sample and sampling technique of the study are described. Similarly, descriptions of the tools used in this study are mentioned in this chapter. Detailed description of the development and standardization procedures including construction of the draft, validation, piloting, scoring, item analysis, estimation of reliabilities, factor analysis, development of norms and formation of the final attitude scale were included in this chapter. This chapter also includes data collection procedures and techniques, description of the variables and ethical considerations used in this study.

Chapter 4: Results and Discussions

This is the penultimate chapter of the study. Presentation of all the required data, analysis and interpretation according to the nature of information is made in this chapter. Whole chapter is divided in to the seven sections; each out of first six sections is related to one of the objectives of this study. Comparison of the curriculum of teacher education in Nepal and India is made in first section. Strengths and weaknesses of teacher education of both countries on the basis of qualitative information obtained through interview were identified in second section. In third, fourth fifth and sixth sections, researcher has identified academic achievement, intelligence, attitude and job satisfaction levels (achievement and intelligence of B. Ed. students, and attitude and job satisfaction of schoolteachers) for both countries and compare them using quantitative techniques. Analysis of gender participation has made in seventh section.

Chapter 5: Summary and Conclusions

Summary of the study is presented in first section of chapter five. Similarly, conclusions, implications and suggestions for further research are presented in second section of this chapter. There were some limitations of this study, which are mentioned in third section.

Chapter - 1

Introduction

1.1 Background of the Study

There are no any unanimous opinions on how and when were the earth, the world and the universe created. Science claims that the earth was formed 4.54 billion years ago when a piece was separated from the sun. There are also so many religious views. According to Hindu religion, *Bramha* (god of creation in Hinduism) had created the earth 155.5 trillion years ago (Deupa, 2017, p. 9). For the Hindus, the structure of universe was like an egg encased in seven concentric shells, each made of a different element (Steiner, 2006, p. 235). Similarly, Islamism believes that the universe was created by *Allah* in six days in six phases but time of creation is unknown. Christianity has its opinion that the earth was formed by God six thousand years ago and first human being *Adam* was created. Whatever be the time and cause of creation of the universe and the earth, it is believed that the ancestors of human beings were in existence about 6 million to 280 million years ago and it is assumed that the human being in present form was developed two hundred thousand years ago (Deupa, 2017, p. 9). The human civilization is a very complex thing, made up of many small and big contributions from different people in the world (Cubberley, 2003, p. 13).

Among all of the living beings, doubtlessly education has made human beings one of the supreme creatures. Curiosity, doubt, dissatisfaction, language, intelligence, socialization, family relationships, scientific innovations, information and communication technology and so many other factors developed the concept of education. At present, education is taken as

one of the most important and inseparable aspects of human civilization. Education has a crucial role in the foundation of society (Gunnarsdottir, 2016, p. 1). Education is not only important for the livelihood of individuals but it is also necessary to develop the sense of humanity and brotherhood for entire human civilization. Education is the only weapon for all-round development of persons, progress of society and nations, and it is education that confronts the human civilization from violence, terror and wars like First World War and Second World War. This is the reason that the UNO has rightly enlisted education as the basic human right on its document of Universal Declaration of Human Rights (1948) in Article 26 as: "(1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit. (2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace. (3) Parents have a prior right to choose the kind of education that shall be given to their children" (UNO, 1948, p. 54). Education is the most profitable and beneficial investment of a country for making progress by reducing inequality (Khan and Haseeb, 2017, p. 13).

Another educational concept but developed much later than education is 'Teacher Education'. The impact of any educational system depends on the effectiveness of teachers or the educational leaders of that educational system (Doyran, 2012, p. 1). Teacher is an important part of formal education and mainly responsible for implementation of educational programme. The quality and effectiveness of education depends upon the effective teaching, effectiveness of teaching depends upon the ability of the teachers, and qualified teachers can be produced by well-managed and effective teacher education.

1.1.1 Concept and meaning of education

Human race and concept of education emerged simultaneously, but meaning and objectives of education underwent certain changes during the course of time (Rao, 2014, p. 2). Education is a social process and social process is directly related to human behavior. As human behavior is changing in nature, nature of education is also changeable with reference to time, place and context. To understand the concept of education, the etymological

meaning, narrower meaning, wider meaning, aim and goals of education are discussed briefly.

1.1.1.1 Etymological meaning of education

The English word 'Education' was derived from the Latin word 'Educare' or 'Educere'. The meaning of educare is 'to raise' or 'to bring up' and the meaning of educere is 'to lead forth' or 'to come out'. Thus, the etymological meaning of education is to develop the good qualities and bring out inherent abilities of every individual. It is also believed that the word education has been derived from the Latin term 'Educatum' which implies the act of teaching or training (Rao, 2014, p. 3).

1.1.1.2 Narrower meaning of education

In a narrow sense, education is a purposeful activity planned to develop an individual's potential. Narrower meaning of education includes the aim of education in terms of degrees or certification or promotion. Generally, this meaning of education indicates the impartation of knowledge, skill, attitudes and habits by schools or higher education institutions for the development of the individual (Rao, 2014, p. 4). The following opinions of some other educationists make narrow meaning of education more clear (Kumar and Ahmad, n. d., p. 4).

- i. "The culture which each generation purposefully gives to those who are to be its successors, in order to qualify them for at least keeping up, and if possible for raising the level of improvement which has been attained." –John Stuart Mill
- ii. "In narrow sense, education may be taken to mean any consciously directed effort to develop and cultivate our powers." –S. S. Mackenzie

In the narrower sense, education is regarded as instruction and acquisition of knowledge Raymont (cited in Rao, 2014, p. 5)

1.1.1.3 Broader meaning of education

Broader meaning of the education is the latest concept of education. It clarifies the meaning of education on wider sense. According to broader meaning, education is a lifelong process to gain experiences, knowledge and wisdom formally, informally and incidentally at different stages of life. In this sense, education is not only an instrument of social change, but also a long-term investment in national development (Rao, 2014, p. 5). Bellingham's Dictionary of Education (2002, p. 83) defines education in the broad sense as:

A Comparative Study of Teacher Education and Teaching Profession in Nepal and India

Any process, formal or informal, that helps develop the potentialities of human beings, including their knowledge, capabilities, behavior patterns, and values. The developmental process provided by a school or other institution that is organised chiefly for instruction and learning. The total development acquired by an individual through instruction and learning. In business or official connections, the institutional instruction that the individual has had. The area of study concerned with teaching and learning, including professional teacher education.

Lifelong learning and learning throughout life are the part of education in its broader sense. In its wider sense, education is the total development of the personality and consists of all those experiences, which affect the individual from birth until death. Following definitions clarify the broader meaning of education (Kumar and Ahmad, n. d., p. 5).

i. "By education, I mean the all-round drawing out of the best in child and man's body, mind and soul." –M. K. Gandhi

ii. "Education, in its broadest sense, is the means of the social continuity."

–John Dewey

1.1.1.4 Definitions of education

Some of the definitions of the education given by the educators of the east and the west are given below:

i. "Education is the manifestation of perfection already in man. Like fire in a piece of flint, knowledge exists in the mind. Suggestion is the friction; which brings it out."

–Swami Vivekananda

ii. "The highest education is that which does not merely give us information but makes our life in harmony with all existence."

–Rabindranath Tagore

iii. "Education is something, which makes a man self-reliant and self-less." –Rigveda

iv. "Education is that whose end product is salvation." –Upanishada

v. "Education develops in the body and soul of the pupil all the beauty and all the perfection he is capable of." –Plato

vi. "Education is the child's development from within." –Rousseau

vii. "Education is the harmonious and progressive development of all the innate powers and faculties of man- physical, intellectual and moral." –Pestalozzi

- viii. "Education is not a preparation for life, rather it is the living. Education is the process of living through a continuous reconstruction of experiences. It is the development of all those capacities in the individual which will enable him to control his environment and fulfill his possibilities." -John Dewey

1.1.2 Aims of education

Different philosophers, social reformers and educationists have formulated different aims of education for individual and society keeping into consideration various needs and ideas. Some of these are as follows (Shrivastava, 2009, pp. 328-340):

- i. Knowledge aim
- ii. Cultural development aim
- iii. Character development aim
- iv. Vocational aim
- v. Harmonious development aim
- vi. Citizenship aim
- vii. The complete living aim
- viii. Physical development aim
- ix. Leisure utilization aim
- x. Adjustment aim
- xi. Self-expression aim
- xii. Self-realization aim

There may be so many other aims or goals of education drawn from different sources. These are: (a) Desires and aspirations of the society, and (b) Vision about an educated individual ((Arora, 2014, p. 44). The UNESCO's Commission on Education in the 21st Century, chaired by Jacques Delors, in its report *Learning the Treasure Within* (1996), identified the following four pillars of learning.

- i. Learning to know
- ii. Learning to do
- iii. Learning to live together
- iv. Learning to be

These pillars broadly determine the goal of education for 21st century (UNESCO, 1996, pp. 86-94).

1.1.3 Concept of teacher education

It is widely believed that the quality of teachers and teaching are among the most important factors shaping the learning and growth of students (Ingersoll, 2007, p. 1). To achieve the pre-determined objectives of the educational programme and to make it fruitful the teaching must be effective but without qualified teachers, teaching cannot be made effective because the quality of teaching depends on the teachers (Kanatani, as cited in Mizuno, n.d., p. 247). Teaching is not only learning to mimic the actions of another educator- even a very good one. Teachers know many things related to teaching and learning like variety of assessment techniques, build up relations with parents to bring out the best in child, and make teams of professional educators that can transform schools (Imig, 1996, p. 14).

Teaching is complex, because it involves many of the factors that affect teachers' teaching; factors such as the emotional, economical, cultural, social and of course, political condition of teachers' life. They have also an important responsibility to educate the generation who will run the society in future (Avanaki and Sadeghi, 2014, p. 1156). Teachers are at the center of the educational process and without good teachers, all other innovations are doomed to failure... (Altbach, as cited in Gao, 2009, p. 9). That is why, every educational system needs qualified teachers, and qualified teachers can be produced with the help of teacher education. To produce qualified and capable teachers the concept of teacher education has developed worldwide for last few centuries. International studies show that teacher education and teacher training programs in many countries have been gradually promoted from low ranked institutions to universities (Zhu and Han, 2006, p. 66).

1.1.3.1 Meaning of teacher education

The general meaning of teacher education is an educational program developed to produce qualified teachers. Teacher education refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviors and skills they require to perform their tasks effectively in the classroom, school and wider community ("Teacher Education", n. d., p. 1). Good's dictionary of Education (as cited in Bhattacharjee, 2015, p. 213) defines Teacher Education as "All formal and informal activities and experiences that help to qualify a person to assume the responsibility as a member of the educational

profession or to discharge his responsibility most effectively". Similarly Bellingham's Dictionary of Education (2002, p. 315) defines the teacher education as:

Coursework and experiences designed to prepare an individual to become a teacher or to improve the teaching skills of those already practicing. Education for teachers prior to employment is termed "pre-service". "In-service" training is for teachers who have obtained a teaching degree and are employed in the profession. The very broad field of study and instruction concerned with professional preparation for careers in teaching, administration, or other specialties in education, particularly in the levels of preschool, elementary and secondary education. Also called professional teacher education.

The National Council for Teacher Education has defined teacher education as – "A programme of education, research and training of persons to teach from pre-primary to higher education level" ("Concept of Teacher Education", n. d., p. 2). Teacher education encompasses teaching skills, sound pedagogical theory and professional skills (National Campaign for Education Nepal, n. d., p. 6).

Teacher Education = Teaching Skills + Pedagogical theory + Professional skills.

Thus, the teacher education is an educational programme that is related to the development of teacher proficiency and competence to empower the teachers so that they can gain required knowledge, skills and attitude, and face the challenges within profession.

1.1.3.2 History of teacher education

History of education and history of human civilization seemed to have been developing parallelly. However, the history of teacher education is not as old as the history of education. In most of the countries across the globe, formal concept of teacher education had developed in last two centuries. In USA, the arrival of common school in 1830s and establishment of first state normal school in Lexington, Massachusetts in 1839 founded the concept of teacher education (Labaree, 2008, pp. 291-292). In England, formal concept of teacher education developed in early nineteenth century when a formalized network of denominational residential teacher training colleges emerged to fulfill the demand for qualified teachers in 1820s to 1840s (Robinson, 2006, p. 21).

The history of teacher education in China is related to Nanyang Gongxue in Shanghai and Jinshi Daxuetang established in 1897 and 1898 respectively while formal independent system

for teacher education was set up in 1904 (Yiming and Yanping, 2011, p. 31). The basis of the teacher education system in Japan was established by the late 1890s (Kimura, and Iwata, 2007, p. 21). The history of teacher education in India is as old as the history of Indian education itself. India has one of the largest systems of teacher education in the world. Education of teachers must have been born in India in 2500 B.C. (Bhattacharjee, 2015, p. 213) but teacher training institutions have come into existence since the beginning of the nineteenth century ("History of Teacher Training in India", n. d., p. 24). Nepal has a history of seven decades of teacher education after the establishment of College of Education in 1956 (National Campaign for Education Nepal, n. d., pp. 6-7) while the first Normal School was established in Kathmandu in 1954 to provide teacher training to primary schoolteachers (Menon, 1968, p. 2).

In 1906-1956, the program of teacher preparation was called teacher training. It prepared teachers as technicians focusing only on skill training, which makes the concept of teacher education very narrow. As W.H. Kilpatrick put it, "Training is given to animals and circus performers, while education is to human beings" ("Concept of Teacher Education" n. d., p. 2).

1.1.3.3 Types of teacher education

Generally there are three types of teacher education (Handicap International, 2014, pp. 2-3):

- i. *Pre-service training* (Pre-service training takes place before teachers start their job. This refers to student teachers who will become teachers after completing their pre-service training).
- ii. *In-service training* (This training is given to those teachers who are already working as teachers or qualified as teachers).
- iii. *Distance learning* (This type of teacher training is used for those students/teachers who are unable to attend training events due to problems with scheduling or long distance travel).

On the basis of teachers' career development, teacher education is divided into three phases ("Teacher Education", n. d., pp. 3-4):

- i. *Initial teacher training / education* (a pre-service course before entering the classroom as a fully responsible teacher).

- ii. *Induction* (the process of providing training and support during the first few years of teaching or the first year in a particular school).
- iii. *Teacher development or continuing professional development (CPD)* (an in-service process for practicing teachers).

1.1.3.4 Objectives of the teacher education

Objectives of teacher education are as follows ("Teacher Education", n. d., pp. 4-5):

- i. Imparting an adequate knowledge of the subject- matter.
- ii. Equipping the prospective teachers with necessary pedagogic skills.
- iii. Enabling the teacher to acquire understanding of child psychology.
- iv. Developing proper attitudes towards teaching.
- v. Developing self-confidence in the teachers.
- vi. Enabling teachers to make proper use of instructional facilities.
- vii. Enabling teachers to understand the significance of individual differences of child and to take appropriate steps for their optimum development.
- viii. Development of the ability to give direct satisfaction of parents from the achievement of children in terms of:
 - a. Proper habits of taking care of the body,
 - b. Proper attitudes reflected in the behavior of the children at home, in the school, in the streets, at the farms and fields etc. and
 - c. Progress in the class.

Effective teaching and learning is the product of various factors. These factors are directly related to the quality of education in general and to successful classroom instruction in particular. These factors are background of the teacher, his/her competencies, pre-service and in-service training, teacher student interaction, efficient use of instructional time and materials and assessment of student achievement. It is imperative that for better planning of effective and efficient education in our institutions the above factors should be well conceived, properly organized and diligently implemented (p. 39).

Teaching is a highly noble profession and teachers are always a boon to the society. Since a teacher is a role model for the students, job satisfaction and performance of teachers have become very vital in the fields of education (Chamundeswari, 2013, p. 420). The quality of teaching has been gradually declining across the world, which has indicated that the skills of

teachers have come down due to the outdated preparation of the teachers (Leigh and Mead, 2005).

1.2 Statement of the Problem

In human civilization, progress, development, confusion, and problems go side by side. Researches and experimental studies have focused to solve these problems and explore the new knowledge. In educational field, there are also so many problems on various aspects of education like; educational objectives, methods, instructional materials, learning teaching activities, evaluation procedures, teacher, learner, management, administrators, and globalization and localization of the education. One of the most important aspects of education system today is teacher education. Teacher education is a program to produce qualified teachers. If teacher education is not well managed and teaching profession is not prestigious, its direct effect will be upon teacher and entire educational system. According to Hannaway and Mittleman (2011), the influence of teachers in student achievement is unequivocal, so much that they considered the most important within school factor for student learning.

Goodson (as cited in Avanaki and Sadeghi, 2014, p. 1157) rightly said, "Any profession whose essential theoretical and practical knowledge does not have a high in universities and other institutions of higher education must count itself deprived and, in the long run, be diminished in status." In ancient time, teacher was taken as a highly reputed person and teaching has high social status. However, at present, it seems that the reputation of teaching profession is declining in so many countries. In Japan and Korea as in the United States, teachers have come under increasing criticism in recent years (Fujita, as cited in Ingersoll, 2007, p. 7). In Hong Kong, teaching is taken as prestigious occupation above accountants, engineers, scientists, doctors, and artists (Lai et al., 2005) but currently the students admitted to teacher education programs in the comprehensive universities generally have lower prestige than that of those admitted to other disciplines (University of Hong Kong, 2007).

Education is taken as long-term investment for development of every country. There are so many countries like America, Japan, China, and South Korea, which made significant progress in short time with the help of education. Dedicated and capable teachers are responsible for the effective education on those countries, and credit for capable teachers goes to well managed teacher education and prestigious teaching profession. Nepal and India

both are ancient countries with so many commonalities and diversities in language, cultures, religions, custom and rituals, societal structures and many other things. History and nature of education in these two countries also do not differ much than each other. Generally, education of Nepal is being affected by the education system of India. In spite of being ancient countries, India and Nepal could not make the expected progress in comparison to other developed countries.

India is the second highest populous country in the world after China. India occupies 2.4% of the total land of the world while approximately 17% of the world population resides here. Population of India in first Census 1901 was 238,396, 327 and this figure reached to 1,210,193,422 in 2011 (Demographic Trends of India, n. d., pp. 60-65). India's population was estimated as 1,314 million in 2015 (Population Education and Health Research Center (P) Ltd., 2016, p. 12); 1,328.9 million in 2016 (Population Reference Bureau, 2016, p. 13) and 1339.18 million in 2017 (World Development Indicators database, World Bank, 2018, p. 1). Similarly first census showed the population of Nepal as 5,638,749 (Sharma, n. d., p. 1) which grew up to 26,494,504 in 2011 (Government of Nepal, 2014, p. 19). Population of Nepal met the figure 28.0 million in 2015 (Population Education and Health Research Center (P) Ltd., 2016, p. 12); 28.4 million in 2016 (Population Reference Bureau, 2016, p. 13) and 29.3 million in 2017 (World Development Indicators database, World Bank, 2018, p. 1). In 2018, Nepal ranked 48 occupying 0.39% population of the world. Estimated population of Nepal was 29.74 million in 2018 (United Nations, Department of Economics and Social Affairs, Population Division, 2017).

The researcher made a comprehensive study of literature on various aspects of present status of Nepal and India. In 1951 when Nepal emerged as a "new nation" after the fall of the Rana Oligarchy, it had only 9,000 pupils in primary, 1,700 in secondary schools and a little over one hundred in two undergraduate colleges. There was no university. Adult education stood at a bare 5% (Mathema, 2007, p. 46). Literacy rates in the years 1971, 1981 and 1991 were 13.9%, 23.3% and 39.6% respectively (GC and Shrestha, 2014, p. 202). This rate increased to 53.74% in 2001 and 65.94% in 2011 (Ministry of Education, 2015 a, p. 3). India's literacy rate at the time of independence was 12% (Ministry of Human Resource Development, 2016, p. 2). These rates gradually increased to 18.3%, 28.3%, 34.5%, 43.6%, 52.2%, 64.8% and 73% in the years 1951, 1961, 1971, 1981, 1991, 2001 and 2011 respectively (Government of India, 2016 a, p. 17).

Life expectancies of Nepal and India are 68 years (131st rank) and 66 years (141st rank) (List of Countries by Life Expectancy, 2016) while human development indices (HDI) are respectively 0.548 (145th rank) and 0.609 (130th rank) (List of countries by Human Development Index, 2016). One of the most important indices, which show the progress of any nation, is per capita income. PCI of Nepal and India are US\$ 751 (164th rank) and US\$ 1,617 (140th rank) (List of countries by GDP, 2016).

Literacy rate, HDI, PCI and life expectancy are some important indices to indicate the progress or development of the country. Some sources also show that there are so many countries like Norway, Luxemburg, Switzerland, USA, UK, Australia, Japan etc. having literacy rates around 100%, HDI around 0.9, PCI ranging from US\$ 30,000 to 100,000 and life expectancies above 80 years. Being ancient countries, Nepal and India both are unable to make expected progress and are still in the category of developing countries.

The researcher analyzed the related literature and concluded that one of the most important factors for development of the nation is education. Quality of education depends upon effective teaching-learning, effectiveness of teaching-learning depends upon ability, attitude and satisfaction of the teacher, capable teachers can be produced by effective teacher education programme and effectiveness of teacher education programme depends upon the relevant curriculum/courses and its implementation, enrolment of high achiever and intelligent students in teacher education programme. This conclusion indicates that the problem of progress of Nepal and India is directly related to teacher education and teaching profession, it needs to make a study on the present status of teacher education programme and teaching profession of Nepal and India. Regarding this context, the statement of the problem for this study is given below:

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1.3 Objectives of the Study

The objectives of this study are as follows:

- i. To compare the curriculum of teacher education (B. Ed.) programme of Nepal and India.

This objective was fulfilled by following auxiliary objectives-

- a) To compare objectives of teacher education programme.
- b) To compare course of study of teacher education programme.
- c) To compare teaching-learning methods of teacher education programme.
- d) To compare assessment procedures of teacher education programme.
- ii. To identify the strengths and weaknesses of teacher education programme of Nepal and India.
- iii. To compare academic achievement of students of teacher education programme of Nepal and India.
- iv. To compare intelligence level of students of teacher education programme of Nepal and India.
- v. To compare the attitude of schoolteachers of Nepal and India towards teaching profession.
- vi. To compare the job satisfaction levels of schoolteachers of Nepal and India.

1.4 Research Questions and Hypotheses of the Study

1.4.1 Research questions

This study was guided by the following research questions:

- i. Are the objectives of teacher education programme sufficiently appropriate to fulfill the individual and national goals?
- ii. Are the courses of study of teacher education programme developed on the basis of local and global standards?
- iii. Do the courses suffice to produce competent teachers?
- iv. What are the teaching-learning methods used in teacher education programme?
- v. Are the assessment procedures based on recent advances in the field of education?
- vi. What are the strengths and weaknesses of teacher education programme of Nepal/India?
- vii. What are the problems in teaching profession?
- viii. How can teaching profession be made effective?
- ix. What is the achievement and intelligence level of students enrolling in teacher education?
- x. What is the attitude of teachers towards teaching profession?
- xi. Are teachers satisfied with their jobs? What is the level of their job satisfaction?

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1.4.2 Hypotheses

After finding out the academic achievement and intelligence of students, and attitude and job satisfaction level of teachers, they were compared. As the comparison was made on the basis of two countries, there was one independent variable with two categories for all the dependent variables, so *t*-test was used for the comparison to test the following hypotheses:

- i. There is no significant difference between the mean achievement scores of students of teacher education programmes of Nepal and India.
- ii. There is no significant difference between the mean intelligence scores of students of teacher education programmes of Nepal and India.
- iii. There is no significant difference between the mean attitude scores of teachers of Nepal and India towards teaching profession.
- iv. There is no significant difference between the mean job satisfaction scores of teachers of Nepal and India.

1.5 Significance of the Study

Education is one of the crucial factors for development of the nation, and quality education can be gained by the capable teachers and well managed teacher education programme. Colleges of teacher education have a major responsibility to determine the path and future of the nation (Darling-Hammond, 2010, pp. 35-36). Good teaching is the most critical part of a solid education (Roth and Swail, 2000, p. 1). So many factors make teaching an extraordinarily difficult job. One of most important factors, which make teaching difficult, is student without which learning cannot be completed. Teaching is not like other professions, which are independent to carry out their work without directly depending on clients. Effectiveness of teaching is directly related to learning of the students. Teachers can only accomplish their goals if students are willing to learn. They cannot on their own make learning happen (Labaree, 2008, p. 299).

Currently, an intense debate is taking place in many parts of the world about the kind of teaching and teacher education that should define education in the twenty first century (Zeichner, 2014, p. 551). There should be continuous researches on the every aspect of teacher education so that its strengths and weaknesses can be identified and improved as necessity. At present, the impact of globalization can be seen across the world. It developed the concept of global village, which closely interrelates the educational system and teacher

education programme worldwide. Due to globalised nature of education, the use of international comparative studies has become a major feature in policymaking and related process characterized by increased technological, information and pedagogical transfer (Adamson, 2012, p. 641).

Comparative study is one of the latest approach emerged in the field of research. It will be relevant to make a comparative study of teacher education programme and teaching profession in Nepal and India so that the effectiveness of teacher education and teaching on both countries can be identified, analyzed and made necessary suggestions to improve it. There are so many countries in the world, which have made significant progress within the short period by the help of quality education. But in spite of being ancient countries, Nepal and India are unable to get expected progress in the field of economy, trade and commerce, science and technology, information and communication technology, infrastructures, and many other things. Although, there can be seen a little progress in Indian economy and some other aspects like information and communication technology, industry, agriculture, education and other infrastructures but the rate of progress is very low and insufficient.

These circumstances indicate that the education in Nepal and India is not much effective. As the quality of education directly depends upon the ability, attitude and satisfaction of teacher and capability of teacher is determined by the teacher education, teacher education and the teaching profession should be overviewed regularly in these countries. South Korea has made a significant progress on short duration through quality education. According to Bermeo (2014, p. 135), South Korea's quality education system rests on four pillars: "(1) putting education at the center of a long-term development strategy, (2) getting the right people to become teachers, (3) developing these people into effective instructors, and (4) prioritizing information and communications technology in education".

This situation regarding the education, teacher education and teaching profession of India and Nepal make a context to originate the proposal for study. In this study, various aspects of teacher education and teaching profession of Nepal and India were analyzed separately and a comparison was made between these two countries. Thus, the significance of this study is pointed out below:

- i. Study identified the achievement and intelligence level of students currently enrolling in teacher education programme.

- ii. Study revealed the attitude and job satisfaction level of schoolteachers in teaching profession.
- iii. It familiarized the various aspects of teacher education programme and teaching profession in Nepal and India to corresponding stakeholders.
- iv. It provided suggestions to formulate appropriate teacher education policies to corresponding authorities.
- v. It will help to improve the teacher education programme, enhance the capability of teachers and hence improve the quality of education.
- vi. This study compared the teacher education programme and teaching profession of Nepal and India that will help to compare these things of Nepal and India with other countries.
- vii. It will help further researches by providing literature and necessary guidelines on comparative studies.

1.6 Delimitations of the Study

Research is a time, labor and resources consuming task. The area, population, and sample of the research may be broad. Although the broad and deep research may cause the more reliable, valid and generalisable results but limited time, resource, manpower and skill make the researcher to delimit the various aspects of the research. This study was delimited to:

- i. General structure, curriculum, enrollment on the basis of academic achievement and intelligence of teacher education programme.
- ii. Current status, attitude of schoolteachers towards teaching profession and job satisfaction in teaching profession.
- iii. Two provinces (Sudurpaschim Pradesh and Bagmati Pradesh) of Nepal and two states (Uttarakhand and Uttar Pradesh) of India.
- iv. Seven districts (Almora, Nainital, Champawat and Udham Singh Nagar of Uttarakhand; Pilibhit, Bareilly and Lakhimpur Khiri of Uttar Pradesh) of India and five districts (Kanchanpur, Kailai and Dadeldhura of Sudurpaschim Pradesh and Kathmandu and Bhaktapur of Bagmati Pradesh) Nepal.
- v. Comparison of teacher education mostly based on two universities of Nepal and two universities of India.
- vi. Students of B. Ed. first year/first semester.
- vii. Government teachers of school (primary, junior secondary and secondary) education.

- viii. Comparison of academic achievement, intelligence, attitude and job satisfaction on the basis of percentages of subjects under various levels of interpretation and t-test for independent samples.
- ix. Normative survey for quantitative data and phenomenological approach for qualitative information.

1.7 Operational Definitions of the Key Terms

1.7.1 Teacher education

In this study, teacher education was defined as the Bachelor of Education (B.Ed.) programme run by faculty/department of universities or their affiliated colleges/campuses.

1.7.2 Achievement

In this study, educational achievement was defined as the marks or grade point average (GPAs) obtained by the students in final examination of just previous grade that is grade 12 or its equivalent.

1.7.3 Intelligence

In this study, the intelligence of the students was defined as the scores obtained by the standardized Group Intelligence Test (GGTI-A), developed by G. C. Ahuja, Former Researcher Officer, Central Institute of Indian Languages Mysore and published by National Psychological Corporation, Agra, India.

1.7.4 Attitude

In this study, attitude of teachers was defined as the score obtained by the Likert's type attitude scale developed and standardized by the researcher.

1.7.5 Job satisfaction

In this study, the job satisfaction of the teachers was defined as the scores obtained by the standardized Job Satisfaction Scale (JSST-DM), developed by Dr. Meera Dixit, Department of Education, National Degree College, Lucknow and published by National Psychological Corporation, Agra, India.

Chapter - 2

Review of the Related Literature

2.1 Review of Literature on Teacher Education Abroad

2.1.1 Teacher education in USA

Roth and Swail (2000) made a study on *Certification and Teacher Preparation in the United States*. This paper mainly analyzed the significant teacher-shortage dilemmas that affect schools and communities in the Pacific. This study has concluded that the different modes of teacher preparation attract definable types of individuals. Generally, college- and university-based traditional teacher-education programs attract those who have planned to teach since early in their educational careers and those who have the necessary time to become certified teachers. While alternative programs generally attract older individuals with career experience in other fields and individuals who do not have time for or interest in completing a college- or university-based teacher-training program (p. 22). There were following recommendations also given regarding the complex issues of teacher preparation and certification (p. 25):

- i. Raise the status of and standards for teaching.
- ii. Work with all sectors of the postsecondary continuum to develop original model programs for preparation and certification.
- iii. Establish an online network for teacher preparation and ongoing professional development.

- iv. Initiate new recruitment programs.
- v. Focus on the areas of highest need.
- vi. Eliminate all emergency-certification programs.

A discussion was made by Labaree (2008) on the history of teacher education in the university. History of teacher education in the United States was discussed in detail. In United States, teaching existed long before teacher education. Education took place at home, church, a variety of lyceums and public lectures, apprenticeships, dame schools, private tutors, public and private schools, and colleges in nineteenth century. The arrival of the common school in 1830s initiated a process of simplifying this complex structure of education and making it look more like the present system.

To fulfill the demand of teacher that arose with the adoption of the common school model, normal schools were established. After shifting of education from voluntaristic mode of delivery to a systematic and public sponsored form, teaching required systematic training and professional certification for teachers in order to ensure that they were capable for teaching. There were so many forms of normal schools, but state normal school was taken as most influential form. First state normal school was opened in Lexington, Massachusetts in 1839. Initial phase of the course of study provide pupil teachers the subject matter they had not received in their earlier education and professional courses, to give them necessary skills in the arts of teaching.

The number of state normal schools grew to 39 in 1870, 103 in 1890, 180 in 1910 (Ogren, as cited in Labaree, 2008, p. 293). This rapid increment of normal schools and enrollment in these institutions lowered their status and the quality of their programs. High demand of teachers in common schools make the conversion of normal schools into teachers colleges. By the start of the twentieth century normal schools had been converted into teachers college by state legislatures and by the end of 1911, the number of teachers college became 88. Teachers colleges were renamed as "State college" with diversifying their programs from 1920s and by the 1950s all teachers colleges became state colleges. University of Iowa established the first permanent professorship in pedagogy in 1873 (Tyack, Clifford & Guthrie as cited in Labaree, 2008, p. 295). The same was done in the University of Michigan in 1879; Columbia in 1887; Chicago, Stanford, and Harvard in 1891; Berkeley in 1892; and Ohio State in 1895 (Clifford & Guthrie as cited in Labaree, 2008, p. 295). This led to the evolution

of departments and beginning of independent professional schools 150 years ago. As a result, teacher education ended in universities in the United States.

A was study made by Darling-Hammond (2010) in *Teacher Education and the American Future*. This study revealed that in the USA, an amount of \$ 6 billion was proposed to spend annually for investing in the teaching profession, through service scholarships for preparing those who will teach in high-need fields and communities, investments in improved teacher education, stronger accountability, mentoring for all beginning teachers, professional development and collaboration time, and career ladder programs, both to reward expert teachers and to share teaching expertise (p. 35).

Zeichner (2014) made a discussion on *The struggle for the soul of teaching and teacher education in the USA*. United States has a teaching force of approximately 3.6 million teachers teaching in about 90,000 schools (US Department of Education 2011 cited in Zeichner, 2014, p. 552). Approximately 1400 colleges and universities are authorized to offer teacher education programmes in the US and increasingly a variety of other non-profit and for-profit programmes, including school districts themselves, are running programmes that currently prepare about one-third of the new teachers in the nation each year (National Research Council, 2010 cited in Zeichner, 2014, p. 552).

For most of the formal history of teacher education in the USA, a variety of pathways in teaching have existed both inside and outside colleges and universities. Currently, there are two general approaches to teacher education in the USA. First, there are college-recommending programmes, where all of the initial teacher preparation is completed before individuals assume full responsibility for a classroom as "teachers of record". Secondly, there are 'early-entry' or 'direct entry' programmes where much of teachers' initial education is completed by individuals while they are fully responsible for a classroom of students (p. 559).

2.1.2 Teacher education in UK

Shakoor (1964) found in a study that in 1900, there were three avenues of approach to the profession of teaching- the pupil-teacher system, the residential colleges and the day training colleges. The pupil-teacher system was introduced in England in 1846. The 45 residential colleges that were in existence in 1900 were established by churches and voluntary bodies. The establishment of the day training colleges in 1890 in connection with university colleges

and colleges that formed part of a university ushered in a new era in teacher training by linking it with universities and so with the main current of higher education (pp. 1-2).

Thomos (1983) found no truly satisfactory general history of teacher education in England and Wales (p. 69). Teacher training in the universities began half a century after the colleges of education had commenced work and their greater freedom from central control produced curricular variations (p. 74).

Crook (2002) made a study on *Educational Studies and Teacher Education* revealing the facts about the teacher education of UK. The study concluded that the Robins Report (Ministry of Education 1963 as cited in Crook, 2002, p. 3) supported the development of an all-graduate teaching profession throughout the UK redesigning the training colleges as degree awarding 'college of education' and the launch of the new, university-validated- initially so, at least- B Ed degree. By 1970, 21 English and Welsh universities had adopted the B Ed (Browne, 1980 as cited in Crook, 2002, p. 3).

The first British university chairs in education were established in Scotland in 1876 at Edinburgh and St Andrews, but the professors and their staffs played no part in the training process, which was the responsibility of specialist colleges. Teacher Agency displaced the Council for the Accreditation of Teacher Education (CATE) and reformed the teacher education in 1993 (p. 4).

According to the study of Robinson (2006) on *Teacher Training in England and Wales: Past, Present and Future Perspectives*, the arrival of mass organized elementary schooling for children of the working classes, led by the principal religious societies, created an urgent demand for new teachers from 1805 onwards. This demand developed school-based training where large number of pupils were introduced by very few adult staff. Throughout the 1820s, to 1840s, a formalized network of denominational residential teacher training colleges emerged to fulfill the demand for qualified teachers. In 1846, the government created the pupil-teacher system. Pupil-teachers were usually apprenticed for five years, commencing at the age of thirteen. Newly considered school boards criticized this pupil-teacher system in the 1870s and 1880s for its narrowness, poor quality and standards of recruitment, and low levels of professional and academic instruction and vision (pp. 21-22).

By the late 1880s, pupil teacher centers were established where pupil teachers experience first half of their training in school based practice and rest of the half in specially designated

centers, staffed by the elementary teaching profession. In 1888, a government inquiry into state education, the Cross Commission, advocated the training of teachers in universities and setting up of educational faculties to foster the academic study of education and research. In 1890, the government made regulations for the administration of grant aid to day-training colleges. Local Education Authorities (LEAs) made by the 1902 Education Act was responsible for providing training and instruction for teachers. Educational reorganization after 1944 marked the abolition of an uncertificated route into the teaching profession, the ultimate vision being an all-graduate profession (pp. 22-23).

Following the Robbins Report on Higher Education in 1963, teacher training was brought in universities, both administratively and academically. The four years B. Ed. degree was introduced for selected students in the training colleges. In 1972, James Report recommended to make teaching an all-graduate profession. The period from the late 1980s to the present has been characterized by a move towards greater government control of teacher training (p. 24).

Jeong (2009) analyzed the teacher policy in England. In England, under the 1944 Act and subsequent regulations, three main categories of teacher emerged – qualified, temporary and occasional teachers. Temporary and occasional teachers are classified as non-qualified teachers. Temporary teachers were those candidates who took up a teaching post whilst awaiting entry to a course of teacher training and occasional teachers were those employed to fill causal vacancies or in an emergency when qualified teachers were not available (pp. 207-208). From the mid 1980s, new performance management systems began to be developed in the British public services, and were further developed in the first half of the 1990s with the introduction of Performance Related Pay (PRP) in the Inland Revenue, the Employment Service and the NHS. In parallel with this policy stream, the conservative government also attempted to introduce PRP in schools (p. 240). This study also found that the annual salaries of full time qualified teachers of primary and secondary level were £ 2,120 and £ 2, 380 in 1974 which increased by the 1996 to £ 21, 370 and to £ 22, 730 respectively (p. 232).

2.1.3 Teacher education in China

China is a country with a history of thousands of years but its history of formal teacher education is less than a hundred years old (Tan, Zhuang & Wendel, 1985 cited in Li, 1999, p. 179). In China, *Shifan* refers to teacher education in Chinese, literally meaning "teacher model". After the foundation of Peoples Republic of China in 1949, normal schools, teacher

colleges and normal universities where teachers were trained, were widely established and called "Shifan" schools or Shifan colleges or universities (Zhu & Han, 2006, p. 66). In the last fifteen years, however, teacher education has undergone tremendous innovations in accordance with the country's energetic drive for social reform aimed at modernization to transform it into a great powerful socialist country with modern agriculture, industry, national defense and science and technology (Li, 1999, p. 179). In China currently teachers' social status is declining due to two factors: first involvement of high proportion of women in teaching profession and second is low income in this profession (Gao, 2009, p. 13).

Yiming & YanPing (2011) made a study on *Characterizing reform and change of teacher education in China in the new era*, which analyzed the history, and present status of teacher education in China. This study showed that the history of teacher education in China is related to Nanyang Gongxue (a Higher Public School) in Shanghai (predecessor of Jiaotong University) established in 1897 and then Jinshi Daxuetang, the Imperial University of Peking (predecessor of Beijing University) established in 1898. Formal independent system for teacher education was set up in 1904, while higher learning followed the line "Chinese learning for fundamental principles and Western learning for practical use". The intermediate and advanced schools geared towards training teachers for primary and junior secondary education, which later turned into normal schools and normal universities (p. 31).

In 1922, public school system of China was changed to structure 6-3-3 (6 years primary, 3 years junior secondary and 3 years senior secondary level) similar to that of the U.S. This new structure of school education diversified the teacher education as normal schools, specialized teacher training colleges, normal colleges and normal universities for different level of schooling. Teacher education system of China entered a new stage in 1949 with the founding of People's Republic of China. Soviet model of teacher education and experience was borrowed to consolidate the three-tier teacher training system. All the teacher education institutions became public ownership and highly centralized under the administration of the central government (p. 31).

Closed education system of China became somewhat open after reform in 1979. Law for Compulsory Education issued in 1986 increased the demand of teachers. Scholarships were provided for students to enter in teacher education and the required students were contracted to teach in schools. In-service training for teachers was mounted in large scales. By 1995, there were 236 Normal Universities, 987 intermediate teacher training normal schools, 242

colleges of education and 2,031 schools of continuing education for teachers. In 2010, the Chinese government issued its guiding document on education, *Outline of National Mid- and Long-term Educational Reform and Development (2010-2020)*. The outline laid emphasis on the importance of and requirements for "strengthening the construction of the teacher force" (pp. 31-34).

YU (2013) found in a study that nearly all the teachers teach only one subject, even at primary schools in China (p. 15). The study entitled *Teacher Education in China: Current Situation & Related Issues* has also discovered that teaching is a feminine career at the pre-school level, but definitely not at the secondary level. Female full-time teachers are 48.36% at senior secondary schools, 50.13, at junior secondary schools, 58.68% at primary schools, and 97.56% at pre-school education institutions (p. 16). All the curriculums of teacher education of Zhejiang Normal University of China comprise three parts: general education, subject knowledge and pedagogy, and teaching training (p. 29). Subject knowledge is emphasized more than pedagogical knowledge according to the curriculum framework of teacher education in China (p. 28).

Andersson & Nordstrom (2014) made a qualitative study on *How the educational system in China is designed*. The purpose of this study was to examine and gain a deeper understanding of China's school system. In China, the duration of teacher education for high school teacher is four years. Teacher education pays more attention to the teachers to make them professional. The teacher education system is very scientific and well organized. The universities also have resources to train a lot of post-graduates and doctors (p. 33). The teacher in China starts with a three-year bachelor degree in mathematics, and methodology courses are given separately after that (p. 35). One important factor for the mathematical achievement in China is that the government and the education department pay a lot of attention to teaching skills within mathematics. Mathematics is a compulsory subject in kindergarten, primary school, middle school and secondary school (p. 38). Teacher uses methods that are more theoretical in classroom. Chinese students are not so free to do or explore in the classroom. They just imitate (p. 40).

OECD (2016) made a study on Chinese education. According to this study, China has the largest education system in the world with almost 260 million students and over 15 million teachers in about 514,000 schools, excluding graduate education institutions (p. 9). Traditionally, teaching has been a very respectable profession in China. In 1985, the

government proclaimed 10 September a holiday – annual Teachers' Day. In 1986, the law on compulsory education pronounced that the entire society should respect teachers. Teachers' Law was issued in October 1993 that codified protection for teachers' rights and clearly stated their responsibilities (p. 17). According to the new training policy, each teacher in public primary and secondary schools must take no less than 360 class hours of training every five years. The government also holds training programmes for educational administrators, especially for school principals. New school principals or aspiring principals are required to take over 300 class hours of training focusing on the skills needed for their positions. They are also required to take no less than 360 class hours of training every five years (p.19). In China, the Teachers' Law guarantees teacher salaries. Reform of the teacher salary structure, introduced in 2009, presented a new way of calculating teacher's salaries based on performance. In the new system, teacher salary is composed of four parts: Post salary, grade salary, performance salary and allowance, where post salary and grade salary are the basic salaries. The bonus component of performance salary amounts to 30% of the total, and is mainly related to workload and actual contribution (pp. 21-22).

2.1.4 Teacher education in Japan

Kimura & Iwata (2007) identified the historical trend of teacher identity in Japan under seven periods. The basis of the teacher education system in Japan was established by the late 1890s after Meiji Government promoted the arrangement of the systems and curriculum of Normal Schools based on 'Ordinance for Normal Schools' in 1886 and the 'Ordinance for Normal School Education' in 1897. The Special Committee for Education 1917, Educational, and Cultural Policy Council 1924 made recommendations for educational reform. Increasing enrollment ratio made the high demand of teachers that made the teaching profession less popular in Japan. This was the second period, that is, The Establishment of the School System (pp. 21-24).

The third period was the Age of Japan on a War Footing (1930s-1945) in which progress of Second World War deteriorated the quality of teachers. 'Open system' for teachers certification was implemented in Postwar Reform period (1945-1950s). The period of 1960s to 1970s is taken as High Growth Period (Period 5) in Japan. During this period, policies of 'modernization', 'increasing efficiency' and 'specialization of teachers' at schools were implemented. In the 6th period, the Period of Stable Growth and the collapse of the Bubble (1980s and 1990s) economic growth stabilized but new problems like school violence,

truancy, and bullying appeared in education. The duration onward 1990s is taken as 7th period: The Education Issues of the 21st century. In this period, 'private sector concept' is emphasized to improve the efficiency and quality of educational service (pp. 24-27).

Haruo, Hiroki & Akira (2013) analyzed the teacher education in Japan based on experiment study. In this study, they found that the Ministry of Education, Culture, Sports, Science and Technology (MEXT) enforced a system of "certificate renewal course" that required educators to acquire the advanced knowledge and skills every 10 years in cooperation with a university. A comprehensive review of policies to improve the quality of in-service teacher, including enhancement of pre-service teacher training courses in universities was begun by MEXT (p. 1). In this study, an experiment-learning program for science teacher education has been developed and practice of some programs has been carried out to students of teacher training and in-service teachers. The paper also introduced the current situation of teacher education in Japan and some trials of the training program with experiment study (pp. 1-2).

Yasuyuki (2015) conducted a research on *On 'Japanese Style' Teacher Education Reform: Considering Issues of Quality Development under an 'Open System'*. The purpose of this study was to elucidate a relationship between "university" and "teacher education", to clarify a Japanese teacher education system based on "Open System", to identify limits and harmful effects of quality enhancement measures that are led by policies with power, and to point out future issues of teacher education in Japan. Conclusion of the study revealed that a complication of teacher education policy in Japan is rooted in a gap between an image of teachers, which is held by society as a whole and the reality of Japanese university education. Further, the enforcement of the current approval system is deficient as a quality assurance measure causing many harmful effects.

Yamasaki (2016) made another study on *Teachers and Teacher Education in Japan*. This study revealed that in 1949, a teacher certification law was established in Japan with three types of certification: a normal certificate (Class 1 and Class 2), a provisional certificate, and a temporary certificate. There were five types of normal and provisional certificates: elementary school teacher, junior high school teacher, high school teacher, kindergarten and special need school teacher certificate (pp. 19-20). Advanced certification is conferred to those who have earned a master's degree at graduate school. Class 1 and Class 2 certification are conferred to those who have earned a bachelor's degree at university and as associate degree at junior college (p. 22). As of 2016, there are 44 schools of teacher education among

the 47 prefectures of Japan, which are the major providers of compulsory schoolteachers in each prefecture (p. 24). In Japan, the annual salary for new teachers is approximately 3.5 million yen, which increases each year to approximately 7 million yen at the age of 40 and goes to 9 million at the retirement age of 60. Teacher's salaries are approximately 4% higher than civil servant (p. 27).

A study on Japanese educational system by Gunnarsdottir (2016) revealed that the Japanese educational system is often praised in the media for its high standards of education and gets attention from overseas (Cave, 2001 cited in Gunnarsdottir, 2016, p. 1). Being a teacher in Japan brings with it societal respect. It is also a safe job to choose for a stable income and currently it has a guaranteed job safety (p. 13).

2.1.5 Teacher education in Republic of Korea

In just a few decades, South Korea has transformed itself from an underdeveloped nation to an industrialized country exploring high technology products (Domjahn, 2013, p. 16). It is due to quality education. In Korea, teachers have a responsibility to guide students on the right path. The qualifications of students-teachers who enroll in teacher training institutes are excellent. The student-teachers who join teacher training institutes score in the top 5% on the college entrance examination. These top quality students complete their four years college and become the nation's teachers (Kim et al., 2012, pp. 6-7).

As per the study of Kim (2002), Korea's social infrastructure, including school facilities were devastated just four decades ago due to the Korean War. By 2000, Korea's GDP stood at US\$ 457.4 billion, the twelfth largest in the world. Education has been one of the major sources of economic growth and social development in Korea. Korea's tertiary education sector is as large as those in developed countries. The education structure of Korea is 6+3+3+2/4 (primary + middle school + high school + junior college/college or university). Higher education institutions with four-year undergraduate programs are classified into four categories: college and universities, teacher's colleges and colleges of education, air and correspondence universities and open universities, and theological colleges, seminaries and others (p. 29).

Kim and Han (2002) flashed the teacher education in Korea through their study. In Korea, there are Normal Schools as the high school-level teacher education institution. Government established these schools to produce elementary school teachers whose demand was

skyrocketed during 1950s and 1960s. Normal schools were incorporated into two-year universities of education as a result of massive restructuring of teacher education system (p. vi). Teacher education courses are offered in comprehensive universities. There are 132 universities offering teacher education courses, out of which 25 national or public universities and 107 private universities. There are also 11 universities of education in Korea founded by the national government (p. vii). Korea's education system is based on the 6-3-3-4 ladder structure with the type of schools largely divided into national, public and private. The proportion of private schools in the entire secondary schools system is very high as compared to other countries (pp. ix-x).

According to this study, after restructuring the Korean society and the economic depression, university students show a strong preference toward the teaching profession as this seems to guarantee tenure and the stable status of the national public servant. Any movement to other occupations remains very weak. National universities of education that train elementary school teachers whose employment possibility is very high, attract many excellent students. However, the attractiveness of a teaching career has now decreased due to relatively weak salary and poor personnel management system compared to other occupations (pp. x-xi). In Korea, service of the private school teachers follows the regulation of the National Public Servant Law. That is why, they retain the rights similar to those of the public school teachers (p. 45).

Bermeo (2014) made a study on *South Korea's successful education system: lessons and policy implication for Peru* and found that one of the most distinctive characteristics of the South Korean people is their fervor for education, a fervor that is probably not equaled in the world. This focus on learning originates largely from the age-old Confucian belief that man can be made better through education and that only the most educated should govern the country and society (Kim-Renaud as cited in Bermeo, 2014, pp. 135-136). Although the state in South Korea does not allocate a large amount of money to education (only 5% of gross national product), South Korea's educational quality in terms of student learning outcomes is one of the highest in the world (p. 136). South Korean students always perform in the top ranking among countries participating in international test such as the Program for International Students Assessment (PISA; World Bank, 2014 as cited in Bermeo, 2014, p. 136).

In 2012, OECD average amount in education was 5.8%. In the same year, Korea's education budget of entire government budget was 16.2%. One more factor making the Korean education effective is salary of Korean teacher. The salary of teachers is high in South Korea and increases overtime. In 2000, the annual salary of primary school teachers was US \$ 39, 720 which increased to US \$ 46,338, which was significantly higher than the OECD averages which was US \$ 39, 401 (OECD, 2012 as cited in Bermeo, 2014, p. 137).

Yoon (2014) found that Korea faces a particular set of problems related to education policy, arguably caused by an intensified gap between the rich and the poor in their level of education due to excessive investment in private education. Korean society, which views education as a means of moving up in social class and creating wealth, has lost confidence in public education. Evidences revealed that the education gap cannot be resolved by the current institutions and policies for public education in Korea (Yoon, 2010 as cited in Yoon, 2014). A fundamental problem in the education system in Korea is the absence of education policies that enable public education to compete with the high quality of comparatively expensive private education (pp. 174-175).

2.2 Review of Literature on Teacher Education in Nepal and India

2.2.1 Teacher education in Nepal

Menon (1968) studied the primary school teacher training in Nepal. According to this study, organized education in Nepal had its beginnings only in 1951 when the country had not more than 200 primary schools. Teacher training in Nepal has a history briefer than that of organized schooling, because it did not exist in the country before 1954. The Nepal National Education Planning Commission appointed by His Majesty's Government recommended that immediate priority should be given to providing short-term training facilities for teachers so that 1,000 teachers could be trained every year. His Majesty's Government and Government of USA signed a contract to achieve this urgent need, which stipulated that the University of Oregon should provide technical assistance for teacher training program in Nepal. This initiation led to establish the first normal school at Kathmandu in 1954 to provide teacher training to primary schoolteachers and in-service training for teachers who are working in primary schools. To fulfill the need of teacher training in remote areas of the country, mobile

teams of teacher educators with the necessary minimum books and equipment travelled in different parts of the country and conducted the normal school programme for teachers in the nearby areas (pp. 1-2).

During 1956-1966 the mobile teams conducted 96 sessions of primary teacher training courses in 29 out of 75 districts in the country and it trained 5, 626 out of 6, 329 or 89% teachers. In 1966, five regular centers were established in Birgunj, Dharan, Kathmandu, Palpa and Pokhara (p. 2). In 1967, His Majesty's Government started extension program of teacher training in which District Education Inspectors nominated remote area teachers to train during the two months summer or winter vacation at the nearest primary school Teacher Training Centre. There was also a provision of teaching licenses at this duration. A candidate who had passed the eighth grade and wanted to get employed as a primary school teacher was provided an emergency license valid for three years but could be renewed after the candidate had successfully undergone the extension program (p. 3).

The curriculum in theory and practice of education followed at the centers was prescribed by His Majesty's Government and has set the following objectives: "i) First, the teacher should be professionally competent; ii) Second, the teacher should possess a broad general education to service him as a teacher and as an adult; iii) Third, the teacher should be personally competent in the basic vocational crafts and skills required to teach them and iv) Fourth, the teacher should be well developed personally and skilled in the process of continuously improving himself" (p. 7). This study also found that there were not sufficient books in the libraries of teacher training centers. Few books were available in library written in English language. As student-teachers had passed only the eighth grade examination and did not have proficiency in English, they could not be benefited by those books. There were also some books written in Hindi on some subjects in educational theory and practice. Those books were very unsuitable for student-teachers because they were written for secondary school teacher training in India (p. 11). At that time, teaching in primary schools as a career did not attract many secondary school leavers in spite of the recent increases of salary scales of primary schoolteachers (p. 29).

A qualitative case study approach was made by National Campaign for Education Nepal (n. d.) on "Pre- Service Teacher Education in Nepal" to identify the status of secondary level pre-service teacher education (i. e., B. Ed. programmes) in Nepal at that time. The study was guided by three research questions: "How has the present day PST curriculum addressed the

need of 21st century pedagogical skills? What are the employment opportunities for the PST graduates as teachers in schools? And How can the PST education institutes improve their programs to meet the policy gap in curriculum and its practices?" Dean and assistant Dean of the Faculty of Education, Department Heads, the trainer, the trainee, school head teachers, District Education Officers and policy makers were the key informants for this study. Interview schedule was prepared to collect necessary information. This study revealed that in Tribhuvan University, around 70-75% could not complete their B. Ed. degree each year. Their condition after failure had not been searched yet. In the past 5 years the number of teachers passing B. Ed. and looking for the job seemed to have been around 38, 000. Almost all B. Ed. holders applied and got teaching license out of which only 2,767 were recommended for job by Teacher Service Commission (TSC) by 2016 through two advertisements.

The Government of Nepal has made teacher education mandatory for all schoolteachers since 1971. Three qualifications: minimum academic qualifications; teaching license; and the success in teacher employment examinations are necessary to be a teacher (p. 5). In practice, teacher education has been considered important in phases. The first one is the training of teachers prior to their teaching career, which is called the pre-service teacher training or education. The second phase is the induction training where the new teachers are oriented about school atmosphere and other pedagogical aspects. The third one is the professional development opportunities provided to the working teachers which is also called the in service teacher training or education (p. 5).

In Nepal, until 1986 the pre-service teacher education for the primary teachers was 10 months provided by the College of Education. National Education Systematic Plan changed school structure to 3+4+3 (3 years' primary, 4 years lower secondary and 3 years of secondary education) in 1971. The duration of teacher education for primary, lower secondary and secondary education was 10 months, 2 years, and 2 years respectively. Until today, there has been no mandatory provision of training to teach grade 11 and grade 12 although the recent Education Act Eighth Amendment (2016) indicated to take measures in this regard (p. 7). In 1980, primary teachers were trained through Radio. Later in 1993, National Center for Educational Development (NCED) was established under the Ministry of Education as an apex body for teacher training and started to train the teachers already in job (p. 8). On the recommendation of the High Level Task Force, teaching license was made mandatory after

the seventh amendment of Education Act in 2001 (HLTF, 2001 as cited in National Campaign for Education Nepal, n. d.).

After the establishment of Tribhuvan University, all the programmes of College of Education were brought under the University. Later Kathmandu University started teacher education program for primary teachers (2002) and Early Childhood teachers (2009). Purwanchal University started its pre-service secondary teacher education through distance mode in 2005 (p. 9).

Far-Western University and Mid Western University are also running the teacher education program at Bachelor (B. Ed.) and Master (M. Ed.) level after their establishment in 2010. Currently there are 11 universities functioning in Nepal.

Andersson and Lindkvist (2000) made a study on *Education in Nepal-A Study of Nepalese Teachers' Views on their School Situation*. The purpose of this study was to find out what working procedures are used in Nepalese schools and teachers' views on how schools are organized and how the school system is structured in Nepal. Researchers also studied the National Curriculum and other official documents that existed in Nepal, to support teachers planning their teaching. This research was based on ethnographic approach. This study revealed that the teachers in Nepal face several challenges in their profession. The whole teaching situation is based upon the fact that pupils should pass the SLC-exam. Teachers have plenty of good and wise ideas to improve the current education system, and for this teachers and the local school should be given more responsibility and freedom in their work. This study also found that the level of pupil activity was low and most of the pupils were quite bored. Teacher taught in rather traditional way using lecturing method.

UNESCO (2015) discussed the education structure of Nepal which basically consists of "a) pre-primary education (PPE) or early childhood development (ECD), for children reaching 4 years of age; b) primary level of grade 1 to 5, the minimum age of children for admission at grade 1 is 5 years old; c) basic education level of grade 1 to 8 including five years of primary and three years of lower secondary; d) secondary level of grade 9 to 10; e) higher secondary level of grade 11 and 12 and f) higher education level after grade 12 (Bachelors in general stream 3-4 years, professional/technical programmes 4-5 years, and Masters level programmes 2 years" (pp. 7-8).

At present, there are only two official levels of school education: Basic education and Secondary education. Duration of basic education is of eight years including 5 years of primary education and 3 years of lower secondary education. However, the concepts of primary education and primary teacher are still in practice. Secondary education comprises two years of secondary level and two years of higher secondary level; the concept of higher secondary is currently out of practice.

A study entitled *A Study of Achievement and Intelligence Level of Students in Secondary Education in Nepal with Regard to Education Stream* was conducted by Deupa and Pathani (2018) on 150 secondary school students. The purpose of this study was to compare the achievement and intelligence level of secondary education students of science, management and education stream. This quantitative analysis found that the mean scores of grade point averages and intelligence of science stream students were greater than management stream students and average scores of management stream students were greater than education stream students. *F-test* revealed that there was significant difference among the mean scores of science, management and education stream students at significance level $\alpha = .01$. Results showed that the students with low educational achievement and intelligence level are enrolling in education stream i.e. teacher education in Nepal (p. 1).

2.2.2 Teacher education in India

History of Teacher Training in India (n. d.) discussed the historical background of teacher training in India. According to this study, teacher-training institutions have come into existence since the last century. As described by S. N. Mukerji (1960) there were three phases in teacher education: (1) pupil-teacher system, (2) teacher training and (3) teacher education. Pupil teacher system was existent in the period of 1800 to 1822. In this period, people were rarely interested in teacher education. Demand of primary teacher was fulfilled by private organizations. In this system a class was given in charge of a monitor, who was an advanced student conducting his study, that's why the system is called 'Monitorial System' (p. 25).

In Calcutta, the Calcutta school society was established in 1819 to train the teachers, and a central school for teacher education was set up in Madras in 1826 on the suggestion of Sir Thomas Munro. In 1881-82, there are 106 normal schools with 3,886 pupil teachers in the whole of India (which included Pakistan and Burma) (pp. 26-27). The trend of teacher education was mostly seen between 1882- 1947. After the recommendations of the Indian

Education Commission of 1882, and Government of India's Resolution on Education Policy of 1904, training of teacher became articulate. By the end of nineteenth century, there were six training schools for secondary teachers (pp. 27-28). The Calcutta University Commission of 1919 further strengthened the concept of teacher training by emphasizing the necessity of systematic research work and training the teachers on large scale. The Hartog Committee of 1929 also made very important recommendations for teacher trainings and because of these recommendations, some universities started the Department of Education. As a result of these efforts, there was a rise of about 61% of training of secondary and primary teachers by 1946-47 (pp. 29-30).

This study also indicated that the concept of teacher education rigidly developed since independence. The teachers for lower secondary or higher primary classes were generally under-graduate and were trained in secondary training schools. Graduate teachers got their professional education in training colleges, which provided a one-year training course, and the successful teachers were awarded the B. Ed., Dip. in Educ., or L. T. degree certificates in different universities (p. 31). In 1960, the four year integrated program was instituted by Kurukshetra University based on the pattern of American Teachers Colleges, for training of teachers and was started in the College of Education of this university (p. 33).

The Teacher Education in Post Independence India (n. d.) described the position of teacher education in India after independence. The national scenario of Teacher Education in India after independence was influenced by emerging socio economic and political situations. Different committees and commissions were set up by the Government of India to address the issues of general and teacher education. In 1948, the Central Institute of Education was established in Delhi and the Government Training College at Allahabad was developed into the Central Pedagogical Institute (pp. 40-41).

After independence, the first University Education Commission (1948-1949) Chaired by Dr. S. Radhakrishnan suggested that for improvement of teacher training, the teacher educators had to look at the whole course from a different angle that the theory and practice should support each other and courses in the theory of education had to be flexible and adaptable to local circumstances. In 1950, the first conference of Training Colleges in India was held at Baroda and in 1951, the second all India Conference was held at Mysore, which suggested substituting the term "Education" for "Training" and widened its scope (p. 41).

This study further stated that the Secondary Education Commission (1952-53) emphasized that the most important factor in educational reconstruction is the teacher, his personal qualities, his educational qualifications, his professional training and the place he occupies in the school as well as in the community. Commission found three types of teacher training institutions: Primary (Basic) Teacher Training, Secondary Teacher Training Institution and Training Colleges. It also recommended three years' teaching experience for M. Ed. admission after graduation in education (p. 42).

National Council of Educational Research and Training (NCERT) was established in 1961 to improve school education to training, research, publication and coordination. The NCERT established four Regional Colleges of Education, one each at Ajmer, Bhubaneswar, Bhopal and Mysore (p. 43). Another education commission was set up by the Government of India under the chairmanship of Dr. D. S. Kothari in 1964 known as Kothari Commission. This commission pointed out the weaknesses of the existing system of teacher education and suggested removing the isolation of teachers' college from universities, introducing integrated courses of general and professional education, planning for the expansion of training facilities, and introducing an M. A. degree in education (p. 44).

An important effort to improve the teacher education was made by Government of India in 1973 by establishing the National Council of Teacher Education (NCTE) to work as a national advisory body for teacher education. NCTE drafted a curriculum for preparing teachers for the new 10+2 pattern, clearly defined the objectives of teacher education, developed the relationship with the community, and defined the role and functions of the teacher in the emerging Indian Society. National Policy of Education (NPE) and Plan of Action (POA) came into existence in 1986 and 1972. NPE stressed to the teacher education programme. Training schools were upgraded to District Institute of Education Training (DIET) and training colleges were upgraded into Colleges of Teacher Education (CTE) and Institutes of Advanced Studies in Education (IASE) (p. 47).

NPE was revised in 1992 by Acharya Ramamurthy Committee, which developed a human approach in education and emphasized more on value-oriented education. Gradually, the impact of policy of Liberalization, Privatization and Globalization (LPG) was also seen in education (p. 48).

Bhattacharjee (2015) made a discussion on process of teacher education in India. In this study, history of teacher education in India has been divided into five parts and various
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aspects related to teacher education in each part have been highlighted. In the beginning of Hindu civilization, teaching was concerned with teaching of 'Vedas'. Out of four classes of Hindu society, Brahmins served as teachers and were held in high esteem by society. The formal system of teachers' training emerged during Buddhist period. Teachers made spiritual help and promoted learning through religion among the disciples by teaching, by putting question to them, by exhortation, and by instruction. Oral recitation, exposition, debate, discussion, question-answer and use of stories were used as teaching methods. Formal system of teacher training was not found in Muslim period. In the holy Koran, education was urged as a duty and in Islamism, education was held in high esteem. The Mohammedan rulers in India founded schools (Maktabs), Colleges (Madrassahs) and libraries in their dominions (p. 214).

The Danish Missionaries established a normal school for the training of teachers at Serampur near Calcutta. In Madras, Dr. Andrew Bell started the experiment of monitorial system which formed the basis of teacher training programme for the time being. In 1826, the first normal school was started in Madras under the management and with the finance of the British Government. In 1847, a normal school was started in Bombay in the Elphinstone Institution and in 1849, Calcutta too had a normal school (p. 215).

2.3 Review of Literature on Comparative Study of Teacher Education

A comparative study of teacher preparation and qualifications was made by Ingersoll (2007) on six nations and one autonomous region: China, Japan, South Korea, Singapore, Thailand, the United States, and Hong Kong. The objective of this study was to compare how each nation defines teacher qualifications and standards and then to address the question: how well are different educational systems succeeding in ensuring all students taught by qualified teachers? The study analyzed related issues by examining comparative data on the basis of three research questions: "what are the problem requirements and standards to become a teacher? What are the levels of qualifications of the current teaching force? and what proportions of teachers are not qualified in the subjects they teach?"

This study revealed that many Asian nations have a tradition of respect for teachers. In Singapore, teacher-education students are among the top third in the nation academically. In Hong Kong, China, Korea, and Japan teaching has high social status and teacher enjoys

respect. In Thailand, teaching was a second career choice while in United States, teaching has been considered a less attractive and less desirable line of work compared with the more prestigious professions. This study also concluded that Japan has the least and United States has most number of teachers without a teaching certificate or license in the field taught in four academic fields: Native Language, Math, Science, and Social Science.

Drewitz (2009) made a comparative study of teacher education entitled *On Evaluating Teacher Education Programs in China, Russia, India, Mexico, and the United States*. This study highlighted and analyzed the various aspects of teacher education in these six nations like educational structure, course of study, certification program, and model of transcripts available by some selected universities. In United States, higher education institutions, universities and colleges provide 2-year Associate degree programs, 4-year Bachelor's degree programs, Post-Baccalaureate programs, Master's degree programs and Doctoral programs. In Russia, pre-primary and primary/basic schoolteacher education is provided by non-university level institutions while university-level institutions, Academies, Pedagogical Institutes, and Universities provide secondary school teacher education. In India, NCTE and NCERT administrate teacher education. University and national or state recognized colleges provide teacher education.

Adamson (2012) detected the impact of forces of globalization on teaching profession. This was a review study of eight papers published in *Teaching and Teacher Education* over the past twenty years. This study concluded that the impact varies in different context, according to local factors. It also suggested possible future agenda for international comparisons.

The overall aim of the paper by Avanaki and Sadeghi (2014) was to understand the contribution that teacher education can make to the quality and effectiveness of the educational experience and wider personal development of the learners, drawing on effective practice. This study found that the main problem with Iranian teachers training is its centralization and lack of practice in the English language and the link with theoretical course work accomplished by student teachers. One of the main problems with teacher education in Iran is that many of its courses are still learned theoretically, so the practice aspect of it needs more time and allocations (p. 1156).

A discussion on *Teacher Education Case Studies in Comparative Perspective* was made by Pusztai and Engler (Eds. 2014). This study focused on teacher training and profession in Italy, teacher training system in Spain, initial and continuous teacher education systems in A Comparative Study of Teacher Education and Teaching Profession in Nepal and India

Romania, educational policy aspects of teacher's continuing professional development in Poland and Hungary, and teacher recruitment in Slovakia.

Jancsak (2014) made a study on *Choosing teacher education and commitment to the teaching career*. In this study, trend of university students taking part in teacher education was analyzed. Sample of 1, 210 students participating in school subject teacher education of 19 faculties at 12 training institutes in Hungary was taken to collect data. In this article, research finding of recently conducted studies on students participating in Hungarian teacher education were summarized. The Institute for Educational Research conducted a study (Lukacs and Nagy, 2002 as cited in Jancsak, 2014) with sample size 997. Two groups were made as "faithful" group who applied exclusively for teacher education and the "trying elsewhere" group, who also applied for programs other than teacher education. The result of this study revealed that the faithful group includes 17% students in the case of secondary school teacher education, and 25% and 50% students in the case of college-level and lower primary teacher education programmes.

In another study, a questionnaire (five-point scale) was developed by Jancsak (2014) to identify the rank (appreciation they receive from society) out of fifteen professions. Prestige-wise order from highest to lowest was found as: lawyers, university instructors, economists, medical doctors, mechanical engineers, pharmacists, computer programmers, journalists, pastors, secondary school teacher, primary school teacher, kindergarten teachers, lower primary teachers, librarians and dormitory teachers.

Sagi and Ercsei (2014) made a study related to teacher education. The problem of the study was "Who is willing to be a teacher? Causal factors of bachelors choosing teacher education". Survey method was used on the regular BA-level students to collect required data. A two-stage stratified proportional sampling technique was used to select sample. The study was based on the research question: What factors influence students in a bachelor's level education when choosing to continue their studies in a teacher or non-teacher degree program at master's level? Results of this study showed that majority (81%) of students in full time under graduate education would like to continue their studies at master's level after the completion of B. A.-level education. There were found no significant differences between the further study intentions of BA (Humanities) and B. Sc. (Science-Technology) students. However, significant difference was found between whatever or not they wish to continue their studies in teacher or non-teacher master level education. Fifty percent B.A.

(Humanities) students were found to be interested in teacher education at master level while this rate is only 25% for B. Sc. (Science-Technology) students.

Farah, Fauzee and Daud (2014) conducted comparative study on teacher training program including Islamic Republic of Afghanistan, Islamic Republic of Iran and Islamic Republic of Pakistan. This study concluded that all the three countries are resources constraint countries, particularly Afghanistan followed by Pakistan. The study also suggested that the governments of each country required to pay proper attention on education sector.

Mizuno (n. d.) made a comparative study of teacher education in Japan, Korea and Australia. The study almost focused on English teachers and English education. This study concluded that the working environment in English Language Training needs to be improved. English teachers should be provided varied training or studying opportunities. In comparison to South Korea and Australia, Japan needs to improve the teacher education in certain areas like workloads, job guarantees and financial support at both public and private schools.

Messo and Panhwar (n. d.) argued that the issues of lack of accountability, lack of incentives, little hope of a career track, and motivation are all highlighted as problems confronting teachers, more over these issues appear to be widespread resulting from the failure of the system. The objective of this study was to make comparative analysis of teacher education program in Germany and Japan and its feasibility for adoption in Pakistan. This mainly focused on related literature review; however, educational issues of selected countries were superficially discussed. All the educational policies of Germany and Japan depend on economic stability of their countries although political situation or atmosphere plays vital role in making such beneficial educational policies for the commoners. However, in Pakistan, it is entirely different regarding political situation and economic condition.

Another comparative study of teacher education was made by Ries, Cabrera and Carriedo (2016) in the United States and Europe. The aim of this study was to compare the main elements of teacher training; duration, curriculum and the induction process. To perform this cross-national study, comparative methodology was used. The research focused on document analysis and internet research including various EU and US databases. The study was made among the three European countries: Spain, Luxembourg and Iceland, and Texas of US.

The comparison of teacher training was made on four aspects: training model and duration, curriculum, assessment, and induction. Three European countries had different training

models based on duration. Spain was implementing a 4+1 model (post graduate degree), but from 2015 onwards Spanish government made the provisions to choose 3+2 or 4+1 model. In Iceland, the Act No. 87/2008 made a two-year master's degree mandatory and the teacher education model adopted was 3+2. Luxembourg had three or four-years of bachelor's degree and one- or two- year master's degree. Thus, the training model became 3+2 or 4+1. For four years bachelor's program and for a post baccalaureate program, students had to spend one more year making the training model 4+1.

In EU countries, the fundamental content of the teacher training courses curriculum was the same. However, emphasis given to subject matter differed. In Texas, curriculum requirements were different according to the certification (elementary or secondary).

Assessment procedures to appoint teacher also varied in these countries. In Spain, teachers were appointed in public schools through a state-examination after completing the teacher training program. In Luxembourg and Iceland, candidates for teacher training program were selected by specific examinations, interviews, and personality test. Selection occurred prior to the training process, which then granted access to a job as a teacher. In Texas, to be appointed as teacher, firstly teaching certification had to be obtained which was granted after the candidate had completed the program of study and passed the state certification exams. The last component compared in this study was induction, which was only found in Luxembourg for two years duration. One more difference found in these countries related to teacher profession was salary. Teachers of Luxembourg received double or even triple the amount received by Spanish and Icelandic teacher.

A comparative analysis of education policies for in-service teachers in Brazil and Mexico made by Kalmus and De Souza (2016) exposed the homogeneities and heterogeneities underlying in policies of Brazilian and Mexican in-service teacher education. Analysis of the policies of in-service teacher education since the 1990s showed that in Brazil General Law of Education was made on 1996 while in Mexico it appeared in 1993. Division of responsibility for education levels between municipal, state and federal government, including their funding was found as democratization process in Brazil. In Mexico, planning, financing and evaluation continued to be the federal government's responsibility. In Brazil, mostly public universities were responsible for in-service teacher education, but in Mexico, until 2009; state departments of education and thereafter public and private universities, departments of

education, companies, and NGOs provided in-service teacher education. Again, Brazil gave more emphasis on the use of distance education while this practice was not found in Mexico.

Another comparative study of teacher education was conducted by Khan and Haseeb (2017) on Indonesia, Malaysia and Pakistan. The main objective of this study was to increase understanding on the importance of education, in particular on the significance of teacher education in a comparative study on Indonesia, Malaysia and Pakistan. Methodology of the study was not mentioned in this study. This study introduced three countries demographically and highlighted the general education structure including teacher education. Conclusion of this study revealed that literacy rate of Indonesia is 90% which was highest among three countries, and that of Pakistan was 54.9% bearing the least literacy rate. Public sector spending of Malaysia, Indonesia and Pakistan on education were 5.9%, 3.6% and 2.1% of GDP respectively. Pupil-teacher ratio of Malaysia in primary and secondary education was 15.9% and 14.8%, which in case of Indonesia and Pakistan were 12.7% and 13.7%, and 39.8% and 39.9% respectively.

2.4 Review of Literature on Academic Achievement, Intelligence, Attitude and Job Satisfaction

2.4.1 Academic achievement

A study made by Strauss and Sawyer, 1986 (as cited in Darling-Hammond, 2000, p. 9) on teachers of North Carolina on the basis of average scores of National Teacher Examination (NTE) found a strong influence in average school district test performance. This study revealed that a 1% increase in teacher quality as measured by NTE scores, declined 3% to 5% in the students failing in exam.

The 50-state survey conducted on *Teacher Quality and Student Achievement: Recommendations for Principals* found following factors related to teacher quality and student achievement:

- i. Verbal ability,
- ii. Content knowledge,
- iii. Education coursework on teaching methods in their discipline,
- iv. Scores on state licensing exam,

- v. Teaching behaviors,
- vi. Ongoing voluntary professional learning,
- vii. Enthusiasm for learning,
- viii. Flexibility, creativity and adaptability,
- ix. Amount of teaching experience,
- x. Demonstrated skills in asking students higher order questions and probing their responses,
- xi. Class sizes, planning time, opportunities to work with colleagues, curricular resources (p. 65).

Researches also confirm that teacher's classroom expertise is an essential factor in student achievement (Darling-Hammond 1999; Haycock 1998, 2000; Hill and Crevolla 1999; Sanders and Rivers 1996 as cited in Kaplan, 2001, p. 67).

This study indicated a number of factors related to teacher quality and student achievement. Most of the factors were related to teachers' individual ability, competency and behavior. This study showed that teacher is the most important aspect for student achievement and quality education.

Wenglinsky (2001) discussed the relationship between teacher's ability and student's achievement by making a study on *Teachers Classroom Practices and Student Performance: How Schools Can Make a Difference in America*. This study tested two hypotheses related to teacher quality (the teacher's classroom practices, the professional development the teacher receives in support of these practices and characteristics of the teacher external to the classroom, such as educational attainment), and student academic performance. These hypotheses were tested by using National Assessment of Educational Progress (NAEP). NAEP is an America's national assessment program administered every year or two in various subjects to nationally represent samples of fourth, eighth, and twelfth graders. A sample of 7,146 eight-graders who took the 1996 mathematics assessment was analyzed (p. 8). Six aspects of student background and three aspects of teacher quality were measured by using questionnaire (p. 9). Results showed the positive effect of teachers' classroom practices on students' performance. This study found that school matters because they provide a platform for active, as opposed to passive teachers (p. 31).

This study was also based on teachers' practice and students' performance in American context. Related hypotheses were tested using the results of the NAEP, a regular assessment process of America. Eighth graders slightly above seven thousands were taken as a sample. Results were only based on mathematics assessment. Results of this study also supported that the ability of teacher and student learning were positively correlated. However, the conclusion would have been more reliable if the results had been based on assessment of more than one subject.

A study on *Teachers' Qualifications and Their Impact on Student Achievement Findings from TIMSS-2003 Data in Israel* was made by Zuzovsky (2003) to analyze the relationship between teachers' qualification and student achievement. The study was based on the sample of 371 mathematics teachers and 317 Science teachers who participated in TIMSS-2003 in Israel and 4,000 students in 149 sampled classes (p. 4). Result was analyzed statistically using breakdown of the group means of student achievement and multilevel regression analysis using HLM6 software (p. 5). Result showed that the qualifications and experiences of teachers have only marginal and statistically non-significant positive effects on student achievement (p. 9).

Zuzovsky also tried to establish the relationship between teachers' qualification and student achievement by taking results of Israeli teachers and students participating TIMSS-2003. This study revealed that there is poor relationship between the qualifications of teachers and students achievement. However, the conclusion was based only on two subjects: mathematics and science.

Rivkin, Hanushek and Kain (2005, pp. 449-450) made a study on *Teachers, Schools, and Academic Achievement*. The primary objective of this empirical analysis was to obtain estimates of differences in teacher contributions to student learning that eliminate the major sources of possible contamination from student selection or teacher assignment practices. Following conclusions about public elementary education were drawn from this study:

- i. Teachers and therefore schools matter importantly for student achievement.
- ii. Achievement gains are systematically related to observable teacher and school characteristics, but the effects are generally small and concentrated among younger students.

- iii. The disjuncture between estimates of the variation of teacher quality and the explanatory power of measured teacher characteristics created a clear dilemma for policy makers.

Study made by Rivkin, Hanushek and Kain also supported more or less the results obtained by Kaplan (2001), Wenglinsky (2001) and Zuzovsky (2003). According to this study, teachers and schools have important effect on student achievement but this study also concluded that the effect of teachers and schools was not equal on students of all level. Younger students were more affected by teachers and schools.

OECD (2005) made a study of 25 educational systems around the world, thereby producing three main findings: "(a) The largest variations in student learning are attributable to what students bring to school (ability, attitude, background), (b) teacher quality is the single most important school variable and (c) most research on teacher quality is narrowly focused on test scores and readily measurable teacher characteristics". Characteristics that are harder to measure but vital to student learning (such as clarity, enthusiasm, creativity, warmth and the ability to create effective learning environments and relations) are typically not measured (p. 2). This report also mentioned, "Teaching is a profession in long term decline. As societies have become wealthier and educational qualifications have increased and employment opportunities expanded, teaching's appeal ... does seem to have diminished" (p. 5).

This was comparatively broad study related to teacher quality, school and student learning. OECD also concluded teacher quality as an important school variable but it emphasized more on students' background, ability and attitude for student learning. This study also questioned those researches focused on teacher qualification and student learning which did not include clarity, enthusiasm, creativity, ability to create effective learning environments etc. as teacher characteristics responsible for students learning.

A study had been conducted by Altinok (2013) on the effect of teacher quality on the pupil achievement in 15 African countries, which took part in an international student achievement test, the SACMEQ. In this study, it was found that the top performing country in teacher score is Seychelles in reading by scoring 831 points while in mathematics teachers from Kenya perform the highest with 906 points. Results also revealed the positive correlation ($r = .35$) between student and teacher performance in reading. Performance of teachers and pupils of Seychelles and Malawi implied that an increase of about 1 point in teacher performance in

reading is equal to an increase of 1.3 points for pupils (143/111). Similarly for mathematics, an increase of about 1 point in teacher performance indicated an increase of 1.7 point in pupil score (104/61) (pp. 13-14).

This was an international study on relationship between teacher quality and student achievement. Results based on SACMEQ establish a quantitative relationship between teacher performance and student achievement.

Snook, O'Neill, Birks, Church and Rawlins (2013) mentioned in a study on the topic *The Assessment of Teacher Quality: An investigation into current issues in evaluation and rewarding teachers* that the socio-economic background and prior experience of students are the main influences on learning. Despite the OECD's claim of the critical importance of teachers, it is important to remember that the student is of paramount importance. Personal ability, cultural norms, values, skills, and background experience of the students have crucial role in learning (pp. 2-3).

Conclusion of this study was a little bit different from other studies. According to this study, background of the student is more responsible for learning while other studies emphasize more on teachers for students' achievement.

Lukas and Samardzic (2015) made a study on *Admission Requirements for Teacher Education as a Factor of Achievement* on some developed countries like Finland, Japan, Korea, Singapore and developing countries like Croatia, India, Russia and Turkey. Results showed that the developed countries had strict entry requirements to teacher colleges and had better understanding of the importance of selecting the best candidates into the teaching profession. This study also showed that the developed countries achieved better results in PISA tests which indicated a connection between the selection of more capable candidates for teaching profession.

Finnish education is taken as one of the best education system in the world. Many colleagues of Finnish teachers around the world take them as their role model. Teaching profession is one of the most respected professions in Finland. Selection criteria for candidates of teacher education in Finland are: (a) Necessary to finish high school education and pass a demanding graduate exam with honors, (b) Entrance bonus upon enrollment for extracurricular activities, (c) Required excellent interpersonal skills, (d) Entrance exam to test the knowledge of

pedagogical literature, (e) Experimental test of social interaction and communication skill, and (f) Explanation of choosing teaching as a future profession (p. 14).

Discipline and respect are embedded in Japanese education system. Teachers are expected to fully devote to their profession and teach their students seriously. In Japan, it is believed that success or failure of education greatly depends on quality of teachers. Selection criteria for teacher education are: (a) Candidates must pass the written exam with special assessments, (b) Assessment of the character, and (c) Test of sense of teaching profession, management skills and previous work experience (p. 10).

In Korea teaching is a very popular profession as long-term employment, good wages and working conditions are provided to teachers. Number of seats for entering the teacher education college is determined by the needs for recruiting teachers. Selection criteria for teacher education in Korea are: (a) Selected among the top 5% of students who complete high school, (b) High school grades, (c) School teacher's recommendation for admission to teacher training college, and (d) Entrance test followed by examination of attitude and interview about the teacher's profession and ethics (pp. 2-3).

In Singapore, school fees and scholarships for students of teacher training colleges are financed by state. The number of teachers who will retire in the near future determines number of seats for teacher education. Criteria used for selection of candidates are: (a) Selected among the one third of the most successful students based on the high school grades, (b) Entrance exam, and (c) Interview to prove that they have the passion and values needed for the teaching profession, willingness to learn and communication skills in order to be good teachers (p. 15).

In Russia, provisions are strong for selection of candidates for teacher education. Criteria for selection of candidates in teacher education are: (a) Number of seats in teacher education are so open that there may be 3 to 17 candidates for one available seat, (b) High school specialization in courses of pedagogical knowledge and future occupations and (c) About 70% of students attending classes on pedagogical knowledge and future occupations continue their education in teacher training colleges (p. 12). In Croatia, requirements to teacher colleges are: (a) Average scores of high school, (b) Results of graduate (Croatian language, Mathematics and Foreign language), and (c) College entrance exam (some colleges do not have entrance exam and some of them have) (p. 11).

In India, admission requirements in teacher education vary from state to state. The main condition to get enrolled in teacher education programme to be a primary school teacher is ten or twelve years of schooling but in some states graduation is additional requirement. Candidate must have a degree in required subject to be a high school teacher (p. 6). Similarly, in Turkey, candidate for teacher education is selected on the basis of high school grades and entrance exam. Entrance test includes literacy, grammar, reading, math skills, problem solving and interpretation of graphs and tables (p. 1).

This study gives a clear picture of selection criteria of students for teacher education programmes in developed and developing countries. Developed countries have comparatively more strict and clear criteria like higher GPAs or academic achievement, knowledge of content and pedagogy, social interaction and communication skills, character, interview, justification to choose teaching as profession, reference letter, attitude, etc. However, there are no such strong criteria in developing countries for selection of candidates in teacher education.

According to Casey and Childs (2007, pp. 6-7) Standardized tests are used to select the candidate for teacher education in United States. Specific pre-requisite education courses, content knowledge, attitudes, readiness to learn pedagogical knowledge and skills are tested to select the most qualified candidate.

Some of the studies found that the admission criteria are not strong predictor of effective teaching performance. A study based on 1,062 pre-service teachers of elementary and secondary level revealed that Pre Professional Skill Test (PPST) Reading, Writing and Mathematics scores did not significantly correlate with student teaching performance. However, these scores on Reading, Writing and Mathematics correlated .27, .28 and .19 respectively with GPA and GPA correlated .10 with student teaching performance (Mikitovics and Crehan, 2002 as cited in Casey and Childs, 2007, p. 13).

2.4.2 Intelligence

During the review of literature, the researcher rarely found the studies made on general intelligence. Most of the researches were conducted on emotional intelligence. A study on *Analysis of the emotional intelligence level of teachers was made by Birol, Atamturk, Silman and Sensoy (2009)* to analyze the emotional intelligence level of teachers in terms of

demographic characteristics, subjects they study, and type of school in which they work. A sample of 253 from 870 secondary schoolteachers was selected by using theoretical sample size table to determine the appropriate sample size for the study (pp. 2607-2608). Demographic information sheet and emotional intelligence questionnaire were used as data collection tools. Researchers combined Daniel Goleman's emotional intelligence scale and Brett Anthony Hayward's "Wolmaran's ECP Scale" to form new emotional intelligence scale with 43 items. The Chronbach's alpha of this scale was 0.93. ANOVA, t-test and Pearson correlation were used as statistical techniques. Data was analyzed using SPSS (pp. 2608-2609). Results of the study revealed that the mean scores of emotional intelligence of teachers were higher than average (79.2%) (p. 2613). An association was found between emotional intelligence and school type, subject area and demographic characteristics. No significant difference was found between the seniority/age of participants and their emotional intelligence, but there was significant difference between the emotional intelligence of teachers who work in state school and teachers working in private schools. The emotional intelligence of teachers working in state schools was higher than those of teachers in private schools. There was also no significant difference between the education level of teachers and their emotional intelligence (p. 2614).

In this study, a new emotional intelligence scale was developed by the researcher by combining Daniel Goleman's emotional intelligence scale and Brett Anthony Hayward's Wolmaran's ECP scale. Researchers did not mention the interpretation criteria for this new combined scale; however, Cronbach's alpha showed that the scale is very highly reliable. Emotional intelligence of teachers was found to be associated with type of school, subject area and demographic characteristics. It means subject area is the indicator of level of emotional intelligence but it does not depend upon education level of teacher.

Hans, Mubeen and Al Rabani (2013) carried out a research on emotional intelligence among teachers of private educational institutions in Muscat (Oman). The objectives of this research were to study the phenomena related to emotional intelligence among teachers, to examine the level of emotional intelligence on the basis of gender, age, qualification and work experience, and to find out the importance of emotional intelligence in personal, academic and career success of teachers. In this study, descriptive survey method was used under descriptive research design. A sample of 100 teachers teaching in management and engineering programs was selected by using proportionate stratified random sampling.

Questionnaire was used to collect required data and analysis was made by descriptive statistics (pp. 361-362). Study found that the teachers of private educational institutions have high level of emotional intelligence (p. 364).

This study is different from other similar studies related to emotional intelligence on the basis of one of its objectives in which the researchers tried to find out the importance of emotional intelligence in personal, academic and career success of teachers. Emotional intelligence of teachers of private institutions was found high though the sample size was a little bit small and teachers were selected only from management and engineering stream.

A research was made on *Educational Competencies and Emotional Intelligence Level of Teachers* by Anna (2015) by taking a sample of 120 elementary school (women only) teachers. A questionnaire made by researcher was used to evaluate the teachers' competencies and Two Dimensional Inventory of Emotional Intelligence DINEMO was used for determining emotional predispositions. This study was focused on finding teachers' emotional intelligence, their competencies, and correlation between emotional predispositions and coping in educational situations (p. 61). It was found that 30% of the teachers have high level of emotional intelligence, 54% have average and 16% teachers have low level of emotional intelligence. Results of this study also revealed that the educational competencies of teachers also found according to their levels of emotional intelligence (p. 62).

In this study, almost one-third of elementary schoolteachers were found have high level of emotional intelligence while half were found have low level of emotional intelligence. As this study was based only on female teachers, findings cannot be applicable for all teachers.

Singh (2015) studied the emotional intelligence of teacher educators in relation to certain demographical variables. The purpose of this study was to find out the level of emotional intelligence of teacher educators (pre-service) at secondary level and to study the differences in the level of emotional intelligence of teacher educators between the groups regarding gender, locality, marital status and work experience (p. 2886). A sample of 35 (19 male and 16 female) teacher educators attending refresher course at Himachal Pradesh University, Shimla (India) was selected in this study. In this study, two instruments rating scale with 20 statements (16 positive and 4 negative) and interview schedule were applied to collect data using survey method. The rating scale was three point (always, sometimes and never) with reliability 0.77 (p. 2887). Result showed that 53% teacher educators were found to have

average emotional intelligence, 26% have above average and 21% teacher educators have low level of emotional intelligence.

This study also concluded that there was no significant difference in the emotional intelligence of male and female, and high and low work experienced teacher educators while significant difference was found in the emotional intelligence in urban and rural teacher educators, and married and unmarried teacher educators (pp. 2888-2889).

Result of this study is showing that the percentage of secondary level pre-service teacher educators having average emotional intelligence is very near to the percentage of female elementary schoolteachers lying in same category in the study made by Anna (2005). Percentages of teachers/educators lying on the categories above average and below average are slightly different. Findings of this study are not very reliable to generalize because only 35 teacher educators of a single university/institute were selected as respondents.

Naqvi, Iqbal and Akhtar (2016) discussed the relationship between emotional intelligence and performance of secondary schoolteachers. This study was descriptive and survey method was used to collect the data. A sample of 950 secondary schoolteachers was selected from five districts in Lahore division. To measure emotional intelligence of teachers, Trait Emotional Intelligence Questionnaire (TEIQue) comprising 40 items and developed on seven point Likert scale was used. The reliability of this tool calculated by the researchers for local context was 0.70. Mean, standard deviation and Pearson's correlation were calculated by using SPSS-15 to analyze the data (p. 216). Mean emotional intelligence score was found 143.31 while maximum score was 210 (p. 217). This study explored that there exists statistically significant positive relationship between emotional intelligence of teachers and their performance (p. 220).

Sample size of this study is comparatively large and selected from broad area. Percentage of mean emotional intelligence scores of secondary schoolteachers was found 68.24%. Reliability of the tool computed by the researcher for local context was high. This study supported the fact that performance of teachers increases as their emotional intelligence increases.

2.4.3 Attitude

Allport (1935) defined the attitude that, "an attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all the objects and situations with which it is related" (p. 34). Again, attitude is defined by Robbins (1994) as "Attitudes are evaluation statements, either positive or negative, about objects, people or events. Attitude expresses how an individual feels about something" (p. 17).

Hellfritsch and Rostker (1945) demonstrated the importance of attitudes towards teaching almost 75 years ago. Recently, Stronge (2002) has shown the attitudes like caring, fairness, respect for students, peers, parents and community, enthusiasm, motivation and dedication to teaching are necessary for pre-service teachers to become successful teachers (as cited in Casey and Childs, 2007, p. 4).

Azeem, Mahmood, Rehman, Afzal, Muhammad and Idrees (2009) constructed an attitude scale to measure pre-service teachers' attitude towards the teaching profession in Lahore Pakistan. The major objective of this study was to develop an attitude scale for the measurement of professional attitude of prospective teachers towards teaching. Design of the study was descriptive in nature (p. 180). A sample of 115 was selected randomly out of total 161 students. A 6-point Likert type scale consisting 49 items with 9 negative and others positive statements were developed by the researchers which was reduced to 30 items after piloting. The reliability coefficient Cronbach Alpha was 0.85 (p. 182). The six experts validated this scale (p. 183). This study concluded that most of the students studying in various teacher-training courses have no interest in teaching, negative attitude towards teaching profession and they have no priority to join teaching department and were forced to join teaching profession due to unemployment (pp. 184-185).

The Likert type attitude scale used for this study was highly reliable and valid as it was validated by six experts. Results indicate that the selected respondents of Lahore, Pakistan had negative attitude and were not interested in teaching profession. If this type of pre-service teachers are recruited in teaching profession, they may cause the low student achievement and hence reduce the quality of education which directly affect the progress of the nation. This is the main reason for most of the countries unable to make expected progress.

A research was made by Hussain, Jamil, Noor, Sibtain and Shah (2011) on the problem *Relationship between the Professional Attitudes of Secondary Schoolteachers with Their Teaching Behavior in Pakistan*. A sample of 50 teachers and 100 students of Dera Ismail Khan City was selected and two Likert type scales (attitude scale and teaching behavior scale) each containing 30 statements were used to collect necessary data. The mean and standard deviation for the attitudes of teachers were 3.70 and 0.702 while the same statistics for behavior of the teachers were found as 3.90 and 0.712. The correlation between the attitudes of the teachers and the teaching behavior was 0.835 and found significant at 0.05 level of significance, which is a high correlation (pp. 43-44). This study concluded that the education system of Pakistan needs revolutionary efforts to improve the situation, one of these efforts may include the improvement of teacher education, so there is burning need to change the behavior and attitude of the teachers positively to meet the demand of the day (p. 39).

Mean attitude score of secondary schoolteachers of Dera Ismail Khan City, Pakistan was found 3.70, which indicate that most of the teachers had either neutral, or just above neutral attitude towards teaching profession. Attitude of most of the teachers and their teaching behavior were not in the favor of teaching profession that is why researcher suggested to improve teacher education in Pakistan. Findings of this study were also similar to findings of the study made by Azeem et al (2009).

Alkhateeb (2013) conducted a study to identify the attitudes of education students towards teaching profession in Qatar. The study was guided by two research questions and quantitative approach was used to analyze the data. The unidimensional, 34-item 5-point Attitude Scale towards Teaching Profession was used to measure the attitude. A sample of 334 undergraduate students majoring in education was selected out of which 216 (64.7%) of the students indicated their GPAs were 3.00 or higher and 17 (5.1%) reported their GPAs were 2.00 or lower. It was found that 277 (82.9%) of students had positive attitudes, 4 (1.2%) were neutral and 53 (15.7%) had negative attitudes towards the teaching profession (pp. 2-4).

In this study, almost two-third of the students enrolled in teacher education programme were found to have GPAs 3.00 or higher, one-sixth of the students were found to have GPAs 2.00 or below. This result clearly indicates that in Qatar, most of the students having high academic achievement are enrolled in teacher education programme. Again, results show that more than four-fifth of the students had positive attitude while nearly one-sixth of the

students had negative attitudes towards teaching profession. Although significant number of students enrolling in teacher education were found high achiever and in favor of teaching profession but one-sixth part of the students were, low achiever and equal portion had negative attitude towards teaching profession. This much number of students may badly affect the quality of education if recruited as teachers.

Professional attitudes of prospective teachers enrolled in public and private institutions were compared by Riaz, Habib, Riaz and Uzair-ul-Hassan (2013) in Punjab (Pakistan). A sample of 240 prospective teachers of B. Ed. session 2012-2013 (120 from public teacher training institutions and 120 from private teacher training institutions) was selected by using convenience sampling technique. "Attitude Scale towards the Profession of Teaching" developed by Ustuner (2006) was used to collect required data (p. 280). This tool was comprised on a single dimension Likert type scale having 5-points with 34 items. Its concurrent validity was 0.89, reliability coefficient in terms of its score stability was .72 and its internal reliability coefficient, Cronbach Alpha was .93. Mean, standard deviation and *t*-test were used as statistical techniques and collected data was analyzed through SPSS software (pp. 281-283).

Results of this study revealed that mean score and standard deviation of professional attitude of prospective teachers enrolled in public institutions were 133.966 and 14.496 while the same statistique for prospective teachers enrolled in private institutions were 130.500 and 22.589. Value of *t*-test (1.396) is less than the critical value (1.960) which indicates that there is no significant difference in the level of professional attitude of prospective teachers enrolled in public and private institutions (p. 283).

Test used in this study was very highly valid and reliable. Though, the mean attitude score of prospective teachers of public institutions was slightly higher than the mean attitude score of prospective teachers of private institutions, *t*-test showed that the difference is not significant.

Mehmood, Akhter, Ch and Azam (2013) made a study on *Attitude of Prospective Teachers Towards Profession- A Measure for Institutional Development*. The objective of this study was to measure the professional attitude of the Master level students of Institutes of Education and Research and University of Education Lahore (Pakistan), and compare the attitudes on the basis of gender, teaching experience, age groups, educational backgrounds and parents' educational career. A sample of 150 students was randomly selected and a Likert

Scale with 20 statements related to job, teaching profession, social status and economic status was self constructed by the researchers to collect the data. Data was analyzed by statement wise frequency distribution (on five points, strongly disagree to strongly agree) and percent analysis. Study concluded that prospective teachers have very positive attitude towards teaching profession and majority is devoted and dedicated for this profession.

A self constructed Likert type scale comprising 20 statements was used in this study. Steps of standardization were not followed to construct the attitude scale. This study found that prospective teachers had very positive attitude and they were dedicated for teaching profession. This conclusion is just opposite to the conclusions of the studies made by Azim et al (2009) and Hussain et al (2011) in Pakistan.

Another study on *Attitude towards teaching profession* was conducted by Andronache, Bocos, Bocos and Macri (2014) in Romania. A sample of 82 students of Masters in Science education was selected out of them 72% of the participants are licensed in educational sciences and 64% of them came from urban areas. The average age of participants was $M = 23.81$ years. A correlational design was used to identify the relationship between the components of attitude (cognitive, affective and behavioral) (p. 629). A Likert Scale with 5 points containing 34 items was used to identify future potential teachers' attitude towards teaching profession. Mean, standard deviation and Pearson correlation were used as statistical techniques. IBM SPSSTM software was used to analyze the obtained data (p. 630). Result revealed that there was significant positive correlation ($r = .871$) between the cognitive and affective dimension while it was found that there was no significant correlation ($r = .124$) between the cognitive and the behavioral dimension. Similarly, there did not exist significant correlation ($r = .096$) between the behavior and the affective dimension (p. 630).

Means of the statements related to cognitive, affective and behavioral dimensions were 3.82, 4.03 and 2.71. Total mean 3.52 showed the favorable attitude toward teaching profession while there was a major difference between the behavioral dimension of attitude towards teaching profession and the other two dimensions – cognitive and affective (pp. 630-631).

Educational science and non-educational science background students of Masters from urban and rural areas were selected for this study. Statements were based on three components of attitude; cognitive, affective and behavioral. Result was interpreted on the basis of mean attitude scores of all components. Mean scores of components cognitive and affective were

indicating favorable attitude while mean score of behavioral component was in favor of unfavorable attitude.

An attitude scale was constructed by Renthlei and Malsawmi (2015) to measure the attitude of schoolteachers of state of Mizoram (India) towards teaching profession. This scale is comprised of 126 statements related to classroom teaching, financial aspects, social aspects, academic responsibility, personality of the teachers, value system of the teachers and professional growth. Altogether 22 statements (10 positive and 12 negative) were included in final scale. Split half reliability and concurrent validity were found .69 and .84 respectively (pp. 29-31). This study found that out of 453 high schoolteachers 3.09% teachers have very high attitude towards teaching profession, 17.44% have high, 62.03% have moderate, 13.47% have low and 3.97% have very low attitude towards teaching profession. Result was interpreted as 20.53% teachers have favorable attitude, 62.03% have neutral and 17.44% teacher have unfavorable attitudes towards teaching (p. 34).

Out of 126 statements included in seven aspects, only 22 statements were used to construct final scale. Indices of reliability and validity are showing the tool was reliable and valid. Although, the reliability is estimated only on the basis of split-half method. Result was interpreted on five categories very high attitude to very low attitude towards teaching profession. Results showed that almost four-fifth of schoolteachers of Mizoram were found have either neutral or unfavorable attitude towards teaching profession. If this much portion of teachers who are not favorable towards their profession are involved in teaching then one can easily guess the level of students' achievement and quality of education.

An assessment of prospective teachers' attitude towards teaching profession was done in Northwest University, Kano-Nigeria by Musa and Bichi (2015). The aim of this study was to determine the attitudes of student teachers attending teacher-training programs in the Faculty of Education at Northwest University, Kano towards teaching profession. This study also intended to determine whether the attitudes of the prospective teachers towards the profession of teaching differ according to some variables including gender, program of study and level of study (p. 19).

A quantitative descriptive survey design was used in this study. A sample of 220 (116 males and 104 females) was selected by using stratified random sampling method for the departments, programmes and the level. Professional Attitude Scale for Prospective Teachers

(PASPT) based on 5-point Likert response mode developed by the researchers (with 15 items, 9 positive and 6 negative) was used to collect necessary data. The coefficient of reliability (Chronbach's alpha) of the attitude scale was 0.78. Result of this study revealed positive attitude towards teaching profession. Respondents agreed that teaching is interesting and a well-respected profession (pp. 19-21). Mean attitude of the prospective teachers towards the teaching profession and standard deviation were 3.41 (out of total score 5) and 0.869 respectively. Overall 68.2% respondents were in favor (strongly agree and agree) of teaching profession (p. 21).

In this study, researcher used 5-point Likert type self constructed attitude scale including only 15 statements. Although mean attitude score was 3.41 (near to undecided or neutral) out of 5, however overall two-third of the prospective teachers of Northwest University, Kano-Nigeria were found to have positive attitude towards teaching profession.

Soibamcha (2016) conducted a study to identify the attitude of teachers towards teaching profession at Imphal West District, Manipur (India). The objective of this study was to test two hypotheses; teachers' educational qualifications and attitudes towards teaching profession are independent, and age has nothing to do with attitudes towards teaching profession. This research was based on case study approach under normative survey. A sample of 150 teachers (75 males and 75 females) from 15 government and 15 private secondary schools was selected by using the simple random sampling technique. The mean and SD of the age of the teachers were 39.48 and 10.21 respectively. To collect required data, Teacher Attitude Inventory (TAI) developed by Ahluwalia (2006) was used. This inventory is a Likert type scale comprising 56 positive and 34 negative items, altogether 90 items within six sub scales. Further, this scale consists 43 items measuring the attitude in favorable direction and 47 unfavorable direction. Its reliability was 0.88 (p. 104).

Chi-square test and percentage were used as statistical techniques to analyze the data. Chi-square test did not indicate the significant difference in attitude between more qualified and less qualified teachers, and younger teachers and older teachers. However, more qualified teachers and younger teachers have more favorable attitude towards teaching profession (p. 104).

Number of statements were sufficient in the tool used for this study and reliability index is showing that the tool was highly reliable. Non-parametric test was used in this study. More

qualified and younger teachers were found have more favorable attitude towards teaching profession but result was statistically not significant.

2.4.4 Job satisfaction

Job satisfaction is the function of the degree to which one's needs can be satisfied (Kuhlen, 1963 and Glimmer, 1966) and operationalized as a discrepancy between 'how much is there now' and 'how much there should be' (Wanous and Lawer, 1972). Teacher satisfaction is affected by intrinsic factors like students characteristics and perceptions of teacher control over the classroom environment (Lee, Dedrick and Smith, 1991); extrinsic factors like salary, perceived support from administrators, school safety and availability of school resources (Bobbit, Leich, Whitener and Lynch, 1994) and demographic factors like age, education, marital status and gender (Eichinger, 2000). According to Pii (2003), the factors that significantly related with job satisfaction are compensation, recognition, institutional policies and practices, working conditions, supervision and human relations. It has been identified that absenteeism, irregularity and lack of commitment are all effects of low job satisfaction (Bennell and Akyeampong, 2007 as cited in Nigama, Selvabaskar, Surulivel, Alamelu and Joice, 2018, p. 2646).

The concept of intrinsic and extrinsic motivational factors relating to the experience of job satisfaction was first documented by Herzberg, Mousner, Snyderman and Barbara (1967). Job satisfaction is strongly influenced by the rewards that the individual receives from his or her work (Mosley, Meggins and Pietri, 1993). Lack of job satisfaction resulted in frequent teacher absenteeism from school, aggressive behavior towards colleagues and learners, early exit from the teaching profession and psychological withdrawal from the work (Mwamwenda, 1995). In the UK, low job satisfaction has been cited as a possible cause of the current teacher crises (Crossman and Harris, 2006 as cited in George, Louw and Badenhorst, 2008, p. 140).

Tuettemann (1991) revealed that classroom success, acknowledgement and recognition were considered to be important factors associated with job satisfaction by teachers in Western Australia while Rice and Schneider (1994) concluded that participation in decision making and autonomy were identified as contributing to job satisfaction in Australia. Similarly, Scott, Cox and Dinham (1999) found that student learning and achievement, professional

development, relationship with colleagues and the status and image of teaching were taken as influencing factors of job satisfaction among teachers in the United Kingdom.

Sharma and Jyoti (2006) carried out a study on *Job satisfaction among schoolteachers* in Jammu city to analyze the various aspects of job satisfaction among government and private schoolteachers. This was an empirical study based on evaluative and diagnostic attempt. A sample of 150 teachers out of total research population 955 was selected by using a three digit random number table while the sample size (after dropping 30 questionnaires that were not filled properly) was 120 (p. 352). Required data was collected by using a questionnaire (prepared on the guidelines of the Job Descriptive Index, JDI) and Likert's five-point attitude scale (p. 353).

Analysis of the data revealed that job security and guiding approach by the principal added to the job satisfaction of government secondary schoolteachers while under estimation of the profession by society and the anti-social elements among the students lead to dissatisfaction (p. 355). Similarly, private primary schoolteachers were found satisfied from the students and the physical environment and they got minimum satisfaction from the pay and rewards (p. 356). Most of the government teachers were found dissatisfied with the promotion policy while most of the private schoolteachers reported lack of job security (p. 360).

This study showed the criteria for satisfaction and dissatisfaction of government and private schoolteachers are different. Government schoolteachers were satisfied by job security and cooperation of the principal while private schoolteachers were satisfied by physical environment and behavior of the students. Again, government teachers were found to be dissatisfied in teaching profession by promotion policy, less social respect and annoying activities of some of the students, but private teachers were dissatisfied by lack of job security, pay and rewards. Here, job security and students are two common things, which are working as opposite criteria for government and private teachers for satisfaction and dissatisfaction.

George, Louw and Bandenhorst (2008) conducted a research on teachers' job satisfaction in the Windhoek region of Namibia. Objective of this study were to measure job satisfaction and burnout of secondary schoolteachers on the basis of seven biographical variables; gender, age, marital status, school area, teaching experience, highest academic qualification and rank. Random sampling technique was used to select a sample of 337 secondary schoolteachers

from government schools (p. 135). A biographical questionnaire developed by the researchers, Minnesota Satisfaction Questionnaire (MSQ) and The Maslach Burnout Inventory (MBI) were used as tools to collect required data (pp. 140-141). A multivariate analysis of variance (MANOVA) (p. 143), mean and standard deviation were used as statistical techniques (p. 144). Results indicated that the job satisfaction profile of the teachers have significantly high levels of dissatisfaction with the intrinsic factors of their work and a significant correlation was found between the Namibian teachers' levels of burnout and job satisfaction (pp. 149-150).

In this study, two readymade and one, self-constructed tool by the researcher were used. Results indicated that teachers of selected area in Namibia were significantly dissatisfied on their work. Job satisfaction and burnout were correlated and found significant correlation in this study.

Chamundeswari (2013) carried out a study on job satisfaction and performance of schoolteachers to investigate the relationship and difference in job satisfaction and performance of teachers in state, matriculation and central board schools at the secondary level in India (p. 422). A sample of 588 teachers (196 from the state board schools and 198 from the matriculation board schools and 194 from the central board schools) was chosen to collect data. Manual for the Minnesota Satisfaction Questionnaire (Weiss and Others, 1967) and Effective Performance Appraisals (Maddux, 2004) were used as tools to measure job satisfaction and performance respectively. The researcher established the reliability of the tools by conducting pilot study. Reliabilities (Chronbach's alpha) of both tools (job satisfaction and performance) were found as 0.84 and 0.72 respectively (pp. 423-424).

This study concluded that job satisfaction and performance of teachers were significantly and positively correlated with each other (p. 424). Similarly, analysis of variance revealed that there was a significant difference in job satisfaction and performance of teachers in different categories of schools at the secondary level (p. 425).

Researcher used two readymade tools for this study but she made a pilot study to compute the reliability indices, which indicated that both the tools were highly reliable. Result showed that performance of teachers is positively affected by their level of job satisfaction. Again, job satisfaction level of secondary schoolteachers of different categories is not equal.

Msua (2016) discussed the job satisfaction among teachers in public secondary schools in Tanzania. Objectives of this research were to explore the level of job satisfaction, discover factors contributing to job satisfaction and determine job satisfaction differences by age, sex and working experience among teachers in public secondary schools in Tanzania. This study was based on case study design. A sample of 94 (84 for questionnaires and 10 for interview) was selected, and questionnaire, semi-structured interview, structured interview and documentary review were used to collect data (pp. 10-11). Mean, standard deviation, percentage and *t*-test were used as statistical techniques. Data was analyzed through SPSS version 17.0 (pp. 12-14). The study concluded that teachers in public secondary schools in Tanzania generally have higher job satisfaction. The motivators and hygiene factors were confirmed to have great contribution on job satisfaction among teachers in public secondary schools in Tanzania (p. 15).

Case study design was used in this study. Case study is generally used in qualitative research. Although, tools used were appropriate to collect qualitative data but quantitative techniques were used to analyze the data. Research identified the factors, which were responsible for higher job satisfaction level of public secondary schoolteachers in Tanzania.

Nigama, Selvabaskar, Surulivel, Alamelu and Joice (2018) made a study on job satisfaction among schoolteachers in Tamil Nadu (India). The objectives of this study were to measure the level of satisfaction of teachers in private and government schools and compare it with respect to school management and gender (p. 2646). Descriptive research design was used in this study. A five point Likert type scale consisting two parts (demographic profile and job satisfaction) was used to collect required data. Random sampling technique was used to select a sample of 100 teachers (p. 2647). The result of this study revealed that the mean score for all factors indicating the level of satisfaction is above average. Result also showed that there is no significant difference in the job satisfaction level of government and private schoolteachers as well as the male and female teachers at 0.05 level of significance (p. 2651).

This study was focused on two objectives; measurement of level of job satisfaction of private and government schoolteachers and to compare it. Level of job satisfaction was interpreted on the basis of average score. Job satisfaction level of private and government schoolteachers; and male and female teachers was not significantly different.

Mondal, Shrestha and Bhaila (2011) made a study in schoolteachers' job stress and job satisfaction in Kaski districts of Nepal. Study was conducted on randomly selected 69 teachers of government and private schools. Researchers used Teacher Job Satisfaction Questionnaire (TJSQ) developed by Lester (1987) to measure job satisfaction by omitting some items and modifying wordings. Researchers concluded that the schoolteachers were partly satisfied with responsibility to their work, relationship with students and the work itself. Study also found that female teachers are more satisfied in their job than male teachers.

A study on job satisfaction among teachers in Nepal was made by Thadathil (2015) on 411 teachers of government and private schools of three districts Kathmandu, Lalitpur and Jhapa. This was a comparative study between government and private schoolteachers on the 15 parameters like enjoy the job, like the head master, fair pay, promotion chance, recognition etc. This study concluded that the general level of job satisfaction among both government and private teachers of Nepal is high.

2.5 Conclusion of Literature Review

Although concept of teacher education was emerged long ago in ancient countries like India, Nepal, Japan, China and other western countries but formal development of teacher education took place since last two or three centuries in most of the countries. In USA, first normal school for teacher education was opened in Massachusetts in 1839 while in UK; the pupil-teacher system was introduced in England in 1846. China bears a history of thousands of years but its history of teacher education is less than a hundred years old. Normal schools, teacher colleges and normal universities called *Shifan* schools or *Shifan* colleges/universities were established after the foundation of Peoples Republic of China in 1949. The basis of teacher education system in Japan was established by the late 1890s after the Meiji Government promoted the normal schools. Similarly, in Korea, normal schools were established in the decade of 1950s.

In Nepal, the history of teacher education is briefer than that of organized schooling. First normal school was established in Kathmandu in 1954. The concept of teacher education was developed in the period of 1800 to 1822 in India after the establishment of pupil teacher system. In present, each country is making proper efforts for development of teacher education programme as the effectiveness of education system and hence the progress of the nation is directly depends upon the teacher education. Researches are being done on the

teacher education frequently. There were also so many comparative studies made by the researchers on the teacher education of the various countries.

Review of the literature also revealed that the South Korea is one of the countries across the globe, which made significant development in the field of teacher education and education within a short period of six decades. Literature also pointed out that teaching profession held high social status in some countries like Korea, Japan, China, and UK in past days and slightly declining in present. Teaching profession is relatively less prestigious in USA and it has low social status in India and Nepal. Teachers of Korea, Japan, China, UK and USA enjoy high salaries; teachers' salaries are comparatively low in India and Nepal. It was also found that the concept of teacher education has various commonalities almost across the world regarding its meaning, duration, course of studies and types/phases.

Some of the researches on teacher quality and student achievement show that there is poor relationship between teacher performance and student learning but most of the researches indicate that student achievement is highly affected by ability of the teacher. Developed countries have good understanding of the relation between capable teachers and quality of education so these countries have strict criteria to select candidates for teacher education programme but developing countries do not have such rigid criteria.

Most of the researches were focused on emotional intelligence of teachers. These studies were generally based on quantitative design. Researches indicate that there is positive correlation between emotional intelligence of teachers and their performance. In Indian context, some researches show that emotional intelligence of state school teacher is higher than private schoolteachers. Some also indicate that emotional intelligence level of most of the schoolteachers is lying either under average or below average.

Positive attitude towards teaching profession is a most important aspect of teachers for effective teaching. Some researches of Pakistan showed that most of the teachers/prospective teachers have negative attitude towards teaching profession while some indicated that prospective teachers have very positive attitude towards teaching. A study conducted in Mizoram, India revealed that only one-fifth of schoolteachers have favorable attitude towards teaching profession while another study conducted in Manipur, India revealed that qualified and younger teachers have more favorable attitude towards teaching profession. Another

Nigerian study on attitude showed that overall more than two-third of prospective teachers were in favor of teaching profession.

Researches on job satisfaction revealed that classroom success, acknowledgement, participation in decision making, autonomy, compensation, recognition, institutional policies, working conditions, supervision and human relations are factors having positive effect on job satisfaction. Lack of job satisfaction causes absenteeism, irregularity, lack of commitments, aggressive behavior, early exit from profession and psychological withdrawal from the work. A Namibian study showed that the teachers' level of job satisfaction was significantly low while public schoolteachers in Tanzania have higher job satisfaction. In Jammu, government schoolteachers were found have high job satisfaction due to job security and dissatisfied with the promotion policy, student behavior and lack of social respect. Another study made in India indicated that job satisfaction was significantly and positively correlated with performance of the teacher. Level of satisfaction of schoolteachers was found above average in Tamil Nadu.

Researcher could not found even a single study exactly made on the attitude of government schoolteachers towards teaching profession in Nepal. However, rare studies were found on job satisfaction of government schoolteachers. Two papers belonging to job satisfaction were reviewed out of which one revealed that teachers in Nepal are partially satisfied while other concluded that teachers' overall level of job satisfaction is high.

2.6 Conceptual and Theoretical Frameworks of the Study

Before planning the research, the study should be set in to a framework to provide the essential support for the study components and make clear the context of the study for the reader (Crawford, 2020, p. 35). Researchers often use the terms literature review, conceptual framework, and theoretical framework interchangeably to explain each other (Rocco and Plakhotnik, 2009, p. 121). Some authors consider the concepts of conceptual framework and theoretical framework synonymous while others treat them as different. According to Maxwell (2013), Robson and McCartan (2016), and Merriam and Tisdell (2016), there is a synonymous relationship between conceptual and theoretical frameworks (as cited in Crawford, 2020, p. 37). These frameworks guide the researcher and offer the foundation for establishing its credibility (Adom, Hussein and Agyem, 2018, p. 438). In this study, conceptual framework and theoretical framework are mentioned separately.

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2.6.1 Conceptual framework of the study

According to Maxwell (2013, p. 39) "Conceptual framework is the actual ideas and beliefs that you hold about the phenomena studied, whether these are written down or not; this may also be called the 'idea context' for the study". The goal of a conceptual framework is to categories and describes concepts relevant to the study and map relationships among them (Rocco and Plakhotnik, 2009, p. 122). After the sufficient review of literature, a solid concept of the research can be formed as a conceptual framework.

To develop a clear conceptual framework, researcher used the three sources of conceptual framework; experience, literature and related theories (Crawford, 2020, p. 43). Researcher experienced that after completion of the school education, high achievers go to other academic fields and poor students are enrolling in teacher education programme. Schoolteachers are also reluctant on their job and are not satisfied. Related literature showed that there are provisions for teacher education programme in almost all countries of the world to produce teachers. Developed countries have clear and strict criteria to select high achiever and most capable candidates for teacher education programme but these criteria could not found in developing countries. Researcher also found from related literature that teachers of developing countries are unfavorable to their profession and are dissatisfied. Researcher searched some related theories.

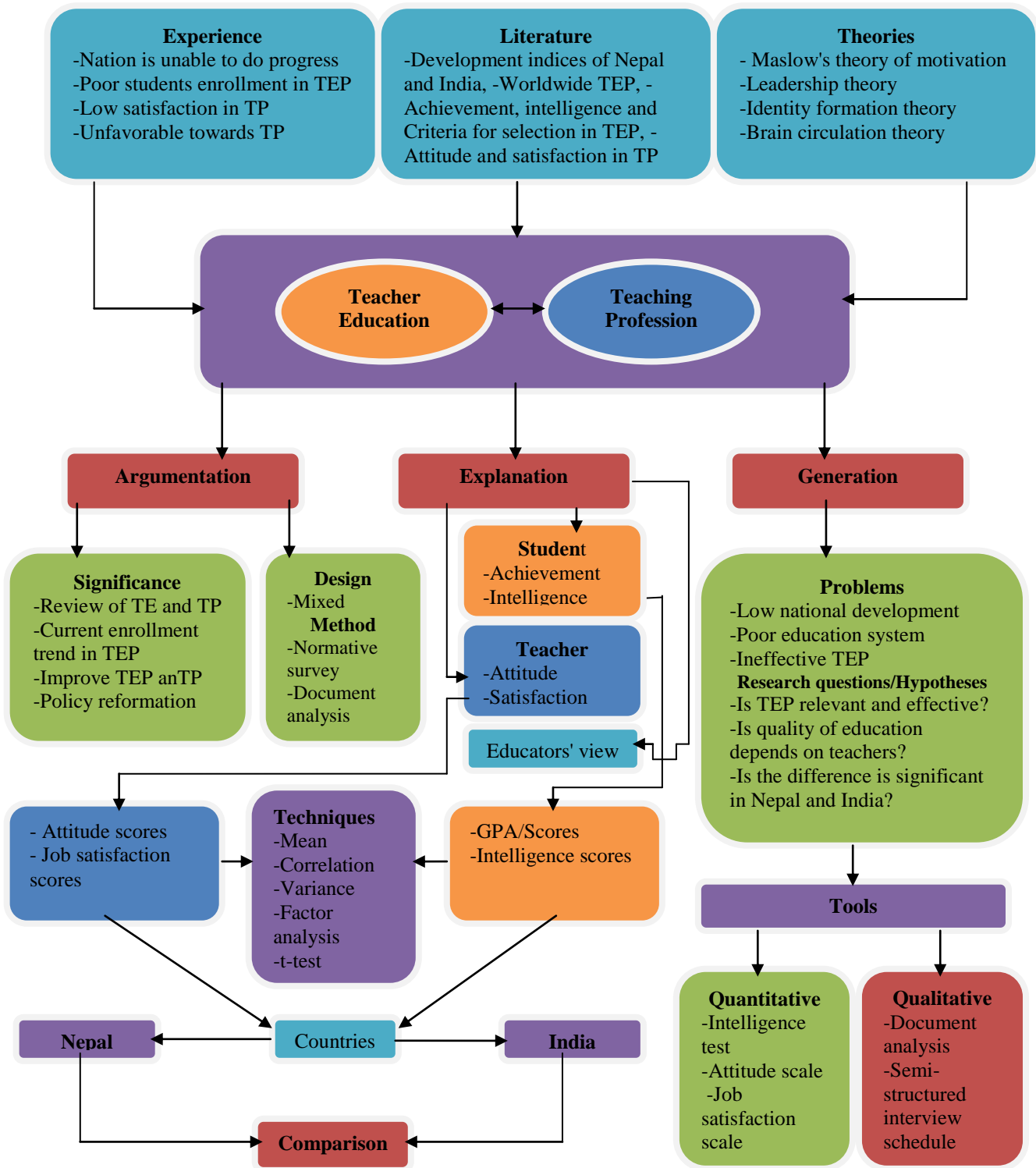
Purpose of conceptual framework was mentioned on the basis of argumentation, explanation and generation (Crawford, 2020, p. 41). Review of teacher education programme and teaching profession, current enrollment trend in teacher education programme, improvement in teacher education programme and teaching profession, and to provide suggestions for reformation of educational policies were its significance. Design was mixed and survey and document analysis were used as methods. Achievement and intelligence scores were obtained from students enrolled in teacher education programme. Similarly, teachers were selected to measure their attitude and job satisfaction level.

Low national development, poor educational system and ineffective teacher education programme were identified as problems. Researcher constructed related research questions and necessary hypotheses were formulated to test. Three tests were administered to obtain quantitative data while interview schedule was used to collect qualitative information. Statistical techniques mean, correlation, variance, factor analysis and t-test were used to

analyze the quantitative data. Finally, data was compared between Nepal and India. A systematic relation among concepts, variables, empirical research and methodology (Peshkin, 1993 as cited in Adom, Hussein and Agyem, 2018, p. 439) is presented in figure 2.1.

Figure 2.1

Conceptual Framework of the Study



2.6.2 Theoretical framework of the study

Theoretical framework of the study can be defined as "any empirical or quasi-empirical theory of social and/or psychological processes, at a variety of levels ... that can be applied to the understandings of phenomena" (Anfara and Mertz, 2015, p. 15). Ravitch and Riggan (2017) take the framework of the study as combined form of the conceptual and theoretical frameworks. According to them, parts in the framework referred to theories and relationships of things form the concepts. Thus, the conceptual framework presents the overall structure of the study and the theoretical framework within it explains the relationships that are explored within the study (pp. 11-12). The theoretical framework is considered as one of the most important aspects in the research process, it is also often used in doctoral coursework (Grant and Osanloo, 2014, p. 12) to formulate problem, review the literature and determine methodology.

Researcher developed the theoretical framework for this study by identifying self-experience and beliefs of the selected problem area. Then several theories intersecting the epistemological values of the study were considered on the basis of their importance. A brief literature review was made to support these theories and finally following theories were selected to develop the theoretical framework of this study.

2.6.2.1 Maslow's theory of motivation based on the needs hierarchy system

Job satisfaction, motivation and reward systems are considered as the parts of organizational theory. Out of these, motivation is taken as the most effective as it overlaps in to both job satisfaction and rewards system (Pardee, 1990, p. 3). Motivation is an important factor required to improve work productivity that is why educational administrators need to have a firm understanding of how it relates to job satisfaction and reward system (Pardee, 1990, p. 5). According to Yorks (1976, p. 21), motivation can be defined as "Those forces within an individual that push or propel him to satisfy basic needs or wants".

Maslow (1954) developed a theory of motivation based on the needs hierarchy system involving five categories of motives arranged with lower-level needs to higher-level needs. Hamner and Organ (1978, p. 137-138) described five general levels of needs as below:

- i. Physiological needs:
Food, water, sex, and shelter.

ii. Safety needs:

Protection against danger, threat, and deprivation, behavior which arouses uncertainty with respect to continued employment or which reflects favoritism or discrimination, unpredictable administration of policy are powerful motivators of the safety needs in the employment relationship at every level.

iii. Social needs:

Giving and receiving of love, friendship, affection, belonging, association, and acceptance. (If the first two levels are fairly well gratified, a person becomes keenly aware of the absence of friends.)

iv. Ego needs:

- Need for achievement (n Ach), adequacy, strength, and freedom. In essence, this is the need for autonomy or independence.
- Status, recognition, appreciation, and prestige. In essence, this is the need for self-esteem or self-worth.

v. Self-actualization needs:

The need to realize one's potentialities for continued self-development and the desire to become more and more of what one is, and what one is capable of becoming. (The conditions of modern industrial life afford only limited opportunity for the self-actualizing need to find expression.).

Hierarchy of needs determine a person's level of aspiration (Haimann, 1973, p. 217), and attitudes determine the individual route (Haimann, 1973, p. 219). This theory clearly indicates that there are five types of general needs of people from lower to higher level. Firstly, persons want to fulfill their physiological needs then safety needs and social needs respectively. After fulfillment of these needs, they want to fulfill their ego needs, which include achievement, freedom, recognition, appreciation and prestige. Finally, there are self-actualization needs at the top of hierarchy of needs. This theory is directly related to attitude and job satisfaction of teachers in this study.

2.6.2.2 Theory of brain drain

In this century, the migration of highly qualified persons is considered as a natural phenomenon and is called as knowledge society or knowledge economy era. So many researches were conducted since the mid of last century on the new tendencies of migration of highly skilled persons who firstly migrated to foreign country and then coming back to

their motherland. Most of the researchers name this process as brain drain or brain gain and returning tendencies of migrants to their countries back as brain circulation (Daugeliene and Marcinkeviciene, 2009, p. 49 and Kone and Ozden, 2017, p. 2).

Other related studies have shown that unfavorable conditions in developing countries “push” students out, while favorable conditions in developed countries create a “pull” toward studying and possibly establishing residency and a career (Portes, 1987; Khadria, 1999 as cited in Varma and Kapur, 2013, p. 315). Whatever be the causes of pulling and pushing, the migration of students from developing countries to developed countries is termed as “brain drain” for developing countries and “brain gain” for developed countries (Bhagwati and Hamada 1974; Gaillard and Gaillard 1997; Carrington and Detragiache 1999; Docquier et al. 2007 as cited in Varma and Kapur, 2013, p. 315).

The concept of brain drain was introduced to the United Nations' debates in the late 1960s, and the concept of brain circulation was came in to existence in 1990s (Daugeliene and Marcinkeviciene, 2009, p. 50; Ray, 2012, p. 1) though term brain drain was firstly used by the British Royal Society in 1950s and 1960s (Ray, 2012, p. 1). Brain drain also termed as “brain hemorrhage”, “brain overflow” and “brain transfer” while substitutes for brain circulation are “brain exchange”, “brain mobility”, “brain pendulum”, “brain return” and “reverse brain drain” (Varma and Kapur, 2013, p. 316). Brain drain is creating the problems in the economic growth of developing countries due to an outflow of much needed technically skilled people (Bhagwati, 1976; Bohning, 1982 and Commander et al. 2004 as cited in Varma and Kapur, 2013, p. 317).

According to United Nations (2013) estimations, there are total 232 million immigrants in 2013 in the world while another estimation of World Bank (2016) has shown this number as 250 million for 2015 (Kone and Ozden, 2017, p. 1). Nepal and India both are developing countries and the tendency of brain drain can be frequently seen in these countries. Varma and Kapur (2013, p. 323) made a study on students of Indian Institute of Technologies (IIT) and found that 30% students want their higher study after graduation from abroad while 21% students want to have their higher study in India. In 2010, 1,670,775 Indians were in United States as immigrants out of which 75% were tertiary educators (Kone and Ozden, 2017, p. 3).

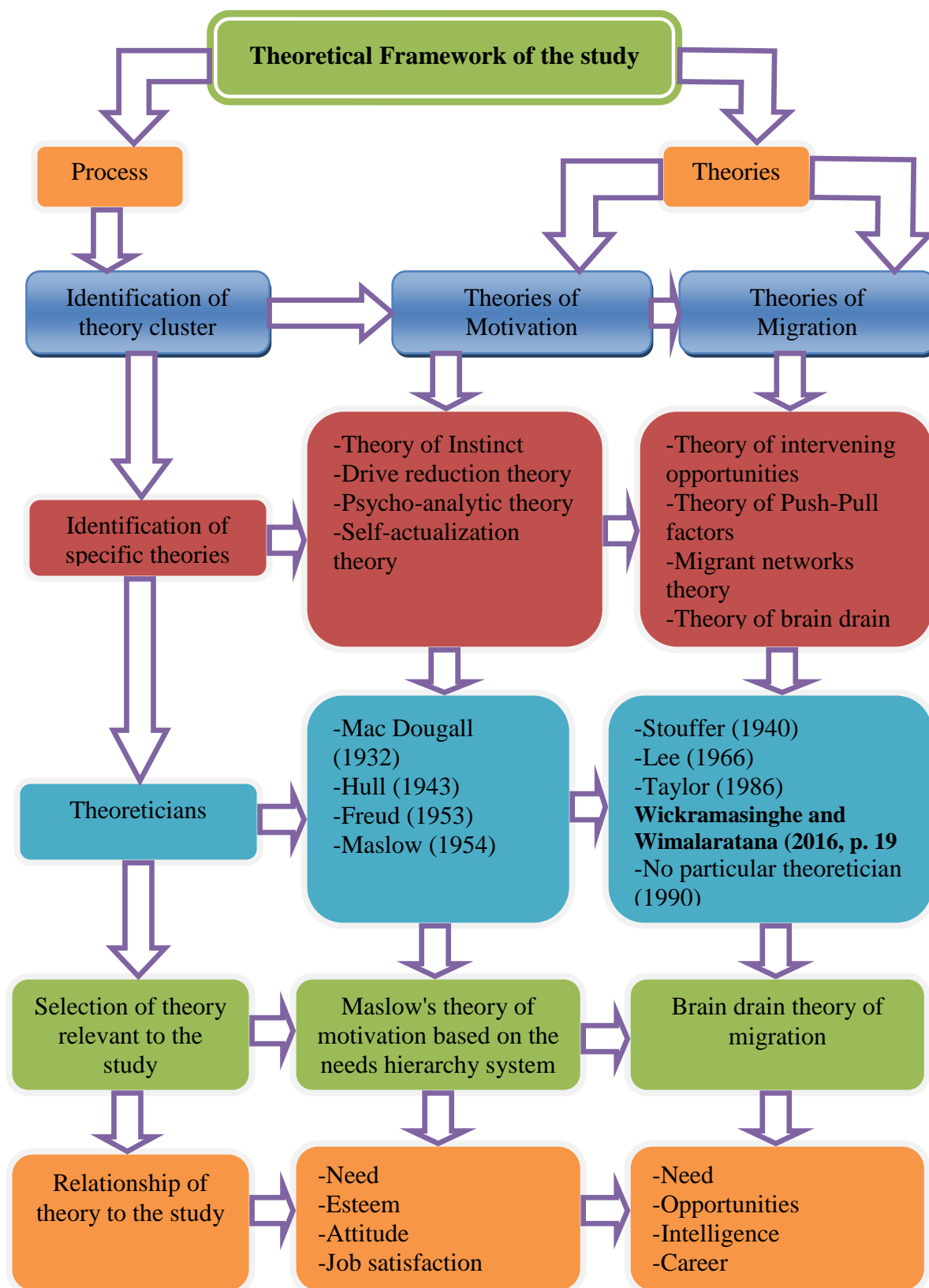
According to the report of Census 2011, a total of 110, 564 students from Nepal went abroad for studies (International Organization for Migration, 2019, p. 65) and according to the report

of Non Residents Nepalese Association (NRNA), about two million people have migrated to Europe, America, Australia, South East Asia, Middle East, Africa and Latin America (Bhattarai, 2011, p. 346). Records of the Ministry of Education, Science and Technology (MOEST) shown that 63,259 "Certificates of no objection (which is required to study abroad) were issued in 2018/2019. The student migration rate is sharply increasing with a nearly six-fold increase in that fiscal year (International Organization for Migration, 2019, p. 65).

Thus, the theory of brain drain says that the high-skilled people of developing countries naturally flow to developed countries. This phenomenon causes negative impact on the progress of developing countries while developed countries benefitted by it. At present, teaching profession is not taken as very much prestigious profession in Indo-Nepalese context, and salaries and other facilities provided to the teachers are also low in comparison to the developed countries. This situation might be a major cause for Indo-Nepalese high-skilled manpower to migrate in developed countries.

Graphical presentation of development process of theoretical framework of this study is given in figure 2.2.

Figure 2.2

Theoretical Framework of the Study

Chapter - 3

Methodology of the Study

3.1 Research Design of the Study

According to Kerlinger (1986, p. 279), "A research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems. The plan is the complete scheme or programme of the research. It includes an outline of what the investigator will do from the hypotheses and their operational implications to the final analysis of data." Thus, generally research design is considered as the road map of the research used to conceptualize an operational plan to complete the study and obtain valid and accurate information to the research questions or hypotheses.

However, in current practice research design is taken as the major approach of the study regarding the nature of the data and its analysis procedures. In mixed method, combination or integration of qualitative and quantitative data is used. Mixed method again includes major three types of designs based on use of qualitative and quantitative information; convergent parallel mixed method, explanatory sequential mixed method and exploratory sequential mixed method (Creswell, 2014). In this study, both types of qualitative and quantitative data were collected. The views of participants collected through interview were transcribed, processed, explored and analyzed first; and then the information is triangulated by the analysis and interpretation of quantitative data. Thus, the research design used for this study was *Exploratory Sequential Mixed Method*.

3.2 Research Method of the Study

As it was a mixed design, both qualitative and quantitative data was used in this study. Primary and secondary both type of data was collected by using methods related to qualitative and quantitative techniques. Quantitative design includes experimental and survey methods, and qualitative design includes ethnography, grounded theory, phenomenology, narrative research and case study (Creswell, 2014). Thus, in this study, normative survey method for quantitative data, and phenomenological approach and document analysis methods were used to collect qualitative information.

3.3 Population of the Study

A population is any group of individuals that has one or more characteristics on common and that are of interest to the researcher (Best and Kahn, 2010, p. 13). For this study, students of B. Ed. first year/semester, government schoolteachers, professors/teacher educators of universities/educational agencies were taken as population.

3.4 Locale of the Study

As this is the comparative study between two countries Nepal and India, the study was conducted in two states; Sudurpaschim Pradesh and Bagmati Pradesh of Nepal and two states; Uttarakhand and Uttar Pradesh of India.

3.5 Sample and Sampling Techniques

The well-specified and identifiable group is known as a population or universe and the selected number of persons or objects is known as a sample (Singh, 2012, p. 339). The quality of a piece of research stands or falls not only by the appropriateness of methodology and instrumentation but also by the suitability of the sampling strategy that has been adopted (Cohen, Manion and Morrison, 2010, p. 100). In this study, following samples were selected by using the sampling strategies/techniques mentioned below.

3.5.1 Selection of universities/colleges

Two government universities (See Appendix-I) with B. Ed. programme one from each state and 9 their respective departments/colleges (See Appendix-II) were selected from India.

A Comparative Study of Teacher Education and Teaching Profession in Nepal and India

Similarly, two government universities (See Appendix-I) and 2 related department/college (See Appendix-II) were selected from Nepal. Thus, altogether 4 universities and 11 their respective departments/colleges were selected by using purposive sampling method.

3.5.2 Selection of schools and teachers

A total of 50 schools (14 secondary, 11 junior secondary and 25 primary) from 3 districts Almora, Champawat and Udham Singh Nagar of Uttarakhand and 2 districts Pilibhit and Lakhimpur Khiri of Uttar Pradesh, India (See Appendix-III) were selected by convenience-sampling method. Similarly, 28 schools (22 secondary and 6 basic) of 3 districts Kanchanpur, Kailali and Dadeldhura of Sudurapashchim Pradesh and 2 districts Kathmandu and Bhaktapur of Bagmati Pradesh, Nepal (Appendix-IV) were selected by same technique. To identify the attitude of teachers towards their profession, 200 schoolteachers from India and 200 from Nepal were selected. Again, to find the level of job satisfaction, 180 teachers from India and 100 teachers from Nepal were selected by random/accidental sampling method.

3.5.3 Selection of students

Total 250 students of B. Ed. programme first year/semester, 100 from each states of India and 50 from Sudurapashchim Pradesh of Nepal were selected by using systematic random sampling method.

3.5.4 Selection of educators

Altogether 7 educators (personnel of universities/colleges, faculties and various educational agencies) 4 from Nepal and 3 from India were selected by purposive method.

3.6 Tools for Collection of Data

In a research study, researcher have to obtain some information directly on the process of research and some information required is already available and need only be extracted. Based upon these broad approaches to information gathering, data can be categorized as primary data and secondary data (Kumar, 2014, p. 171). In this study, both primary and secondary data was used. Intelligence scale, attitude scale, job satisfaction scale and semi-structured interview schedule were used to collect primary data, and secondary data was gathered through document study.

3.6.1 Document study

To get necessary information on teacher education and teaching profession in Nepal; curriculum of B. Ed. (Tribhuvan University and Far western University), Education in Nepal: Report of the Nepal National Education Planning Commission 1956, Report of the National Education Commission 1992, National Curriculum Framework for School Education in Nepal 2007, School Sector Reform Plan 2009-2015, Draft of High Level Education Commission 2017 and Report of High Level National Education Commission 2019 were studied. For Indian context, Curriculum of B. Ed. (Kumaun University and Rohilkhand University), National Curriculum Framework 2005, National Policy on Education 2016, Draft National Educational Policy 2019 and related other literature was reviewed.

3.6.2 Intelligence test

To find and compare the intelligence level of the students studying on B.Ed. first year/semester a standardized *G. C. Ahuja Group Test of Intelligence (GGTI)* developed by Dr. G. C. Ahuja, Former Research Officer, Central Institute of Indian Languages Mysore and published by National Psychological Corporation, Agra (India) was used (See Appendix-V).

Ahuja (2009) constructed this test to assess the general mental ability of pupils of age group 13 to 17+ years studying in classes VIII to XI. The whole test is divided in to eight sub-tests out of which test-I is an additional test, just used to motivate and mentally prepare the students for other real seven tests. Scores obtained in test-I are not included in total scores. Description of sub-tests, number of items and time allocated for each test were as below:

Table 3.1

Number of Items and Time-limits for each Sub-test of GGTI-A

Sr. No.	Sub-test	Number of items	Time-limit (Minutes)	Average time (Seconds)	Remarks
I.	Following Directions	9	4	26.67	Additional
II.	Classification	20	4	12	
III.	Analogies	20	4	12	
IV.	Arithmetic Reasoning	6	4	40	
V.	Vocabulary	40	4	6	
VI.	Comprehension	8	4	30	
VII.	Series	12	4	20	
VIII.	Best Answers	20	4	12	
Total		135	32	13.33	

Source: GGTI (2009)

Preliminary tryout of this test for piloting was carried out on 10,132 students of Greater Bombay, India. Maximum score of this test was 126 for seven sub-tests, 9 marks of test-I are not added to total marks. Time allocated for this test is 4 minutes per sub-test and almost equal time is needed for instructions for administration of the test. Thus, total time required for administration of this test is around 1 hour and 15 minutes.

Reliability of this test has been calculated by two methods. The coefficient of reliability obtained by test-retest method was found $.84 \pm .021$. Reliability coefficient by split-half method (correlation between scores on odd and even items) was $.951 \pm .004$ and reliability of the full test obtained by Spearman-Brown Prophecy formula was $.974 \pm .003$. The average validity of the battery of seven tests was calculated by five methods namely: Symond's method, 27% upper and lower groups, Lawshes Nomo graph, Flanagan's product-moment 'r' coefficient, and Kelley's method and were found 11.187, 39.80, 1.59, .543, and 1.555 respectively. These coefficients are indicating that the test is highly reliable and valid. Similarly, average difficulty level of the battery of seven tests was 30.41, which shows that the test is moderately difficult. The standard error of measurement (SEM) for boys and girls were 3.52 and 3.58 respectively. The test is also provided with age norms, class norms, percentile ranks, sigma scores, standard scores and deviation intelligence quotients. Deviation Intelligent Quotient (DIQ) is given by:

$$DIQ = 1.64 (T\text{-score}) + 18 \quad \dots\dots\dots 3.1$$

3.6.3 Attitude scale

3.6.3.1 Construction of the draft

Researcher himself standardized a Likert's type 5-point attitude scale to measure the attitude of government schoolteachers. Initially 50 statements related to various aspects like responsibility, politics, satisfaction, livelihood, interest, prestige, salary, career development, difficulties in profession, creativity, involvement and national priority were constructed. These statements were given to four experts (two experts of Nepal and two experts of India). On the basis of valuable suggestions of the experts, 10 statements were rejected and a draft was prepared including 40 statements out of which 24 were favorable (Positive) and 16 were unfavorable (Negative) towards teaching profession. Here, the statement which was in favor of the teaching profession, considered as favorable or positive statement and the statement

not in the favor of teaching profession was taken as unfavorable or negative statement. Two separate scales with same statements were developed for Nepal and India.

As this attitude scale was constructed to measure and compare the attitude of teachers of Nepal and India, two sets of bilingual scales were developed. One set was developed in Nepali and English language and other was in Hindi and English language. These sets were provided to experts of Nepali, Hindi and English languages for grammatical and linguistic correction.

3.6.3.2 Piloting

To standardize the attitude scale, researcher carried out a pilot study on a sample of 374 schoolteachers of five districts. This is a comparative study between Nepal and India that is why sample was taken from both Nepal and India to standardize the attitude scale so that cultural and demographic effects on the study can be minimized. Random sampling technique was used to select the teachers from three districts Kanchanpur, Kathmandu and Bhaktapur of Nepal, and Chapmawat and Udham Singh Nagar of India. Randomly selected sample comprised 248 male teachers and 126 female teachers of 47 government schools (36 secondary schools out of which 29 were from Nepal and each school includes junior secondary and primary level, 8 junior secondary/basic schools and 3 primary schools). Attitude scales with 40 statements were given to teachers and collected next day.

3.6.3.3 Scoring

Out of 40 statements, 24 statements were positive (favorable) and 16 statements were negative (unfavorable). After collecting the attitude scale, scoring was made on the basis of direction of the statements. For favorable statements, scores were given 5,4,3,2 and 1 according to the degree of agreement that is strongly agree to strongly disagree and unfavorable statements were scored just opposite to the favorable statements that is scores 1, 2, 3, 4 and 5 were given to strongly agree to strongly disagree.

3.6.3.4 Item analysis

According to Singh (2006, p. 47) "Item analysis is a technique through which those items which are valid and suited to the purpose are selected and the rest are either eliminated or modified to suit the purpose". Generally, difficulty level, power of discrimination and power

of distracters are computed to analyze the appropriateness of items in quantitative item analysis. But tool used in this study was attitude scale and attitude scale includes statements as test items. These statements have neither difficulty level nor power of distracter; statements have only power of discrimination. To identify the discrimination power of statements on the basis of t -value, Edwards (1957, p. 153) suggested the following formula:

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\Sigma(X_H - \bar{X}_H)^2 + \Sigma(X_L - \bar{X}_L)^2}{N(N-1)}}} \dots\dots\dots 3.2$$

Where, X_H = The score of a given individual for a given statement in the higher group.

\bar{X}_H = The mean score of the higher group for a given statement.

X_L = The score of a given individual for a given statement in the lower group.

\bar{X}_L = The mean score of the lower group for a given statement.

N = Number of subjects in the criterion group.

After replacing $\Sigma(X_H - \bar{X}_H)^2$ by $N\sigma_H^2$ and $\Sigma(X_L - \bar{X}_L)^2$ by $N\sigma_L^2$ formula 3.2 can be simplified as:

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\sigma_H^2 + \sigma_L^2}{N-1}}} \dots\dots\dots 3.3$$

But, generally formula 3.3 is used for small sample and following formula is used for large sample:

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\sigma_H^2}{N_H} + \frac{\sigma_L^2}{N_L}}} \dots\dots\dots 3.4$$

Again, for $N_H = N_L = N$,

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\sigma_H^2 + \sigma_L^2}{N}}} \dots\dots\dots 3.5$$

Using formula 3.5, discriminating power of all the 40 statements was calculated by taking 27% of the total students that is 101 students as higher group and an equal number of students as lower group. MS Excel was used to compute the t -values, which are presented in the table 3.2.

Table 3.2

Description of t-values of the Statements of Attitude scale

Statement No	t-values	Remarks	Statement No	t-values	Remarks
1	5.684	Accepted	21	8.578	Accepted
2	2.697	Accepted	22	7.605	Accepted
3	10.200	Accepted	23	5.615	Accepted
4	11.523	Accepted	24	11.948	Accepted
5	5.886	Accepted	25	10.862	Accepted
6	6.874	Accepted	26	10.288	Accepted
7	8.796	Accepted	27	2.443	Rejected
8	12.971	Accepted	28	6.386	Accepted
9	5.346	Accepted	29	8.459	Accepted
10	5.481	Accepted	30	8.953	Accepted
11	1.621	Rejected	31	11.656	Accepted
12	2.298	Rejected	32	4.515	Rejected*
13	10.362	Accepted	33	2.927	Rejected*
14	6.601	Accepted	34	9.193	Accepted
15	11.162	Accepted	35	2.546	Rejected
16	11.641	Accepted	36	11.667	Accepted
17	9.525	Accepted	37	11.060	Accepted
18	0.000	Rejected	38	3.285	Accepted
19	5.629	Accepted	39	10.612	Accepted
20	2.567	Rejected	40	7.320	Accepted

Here, *t*-values of the statements are ranging from 0.000 to 11.948. Critical value for two-tailed test and degree of freedom (*df*) = 101 + 101 – 2 = 200 at 1% level of significance ($\alpha = 0.01$) is 2.601. It means the items whose *t*-values are greater or equal to 2.601 are significantly discriminated the respondents having high and low attitude towards teaching profession. Statement number 11, 12, 18, 20, 27 and 35 having *t*-values less than 2.601 were rejected on the basis of item analysis because these statements were unable to discriminate the respondents having high and low attitude. Again starred (*) statement number 32 and 33 were rejected (although their *t*-values were greater than critical values) on the basis of suggestions provided by respondents during the data collection. Thus, total eight statements were rejected on the basis of item analysis and respondents' suggestions out of which seven statements were positive and one statement was negative.

3.6.3.5 Construction of the final scale

After item analysis of the statements, 32 statements were accepted out of which 17 statements were positive and 15 statements were negative in polarity. Thus, final attitude scale was constructed containing 32 statements. Two separate bilingual sets (Nepali-English and Hindi-
A Comparative Study of Teacher Education and Teaching Profession in Nepal and India

English) were developed one for Nepalese respondents and other for Indian respondents (See Appendices-VI and VII). Title of the attitude scale "Attitude of Teachers towards Teaching Profession", demographic and other information of the respondent, purpose of the test, method of giving response, request note and researcher's introduction were kept on cover page of the scale.

3.6.3.6 Reliability and validity

3.6.3.6.1 Reliability

Reliability is one of the most important technical properties of a test. According to Linn and Miller (2013, p. 104) "Reliability refers to the consistency of measurement, that is, how consistent test scores or other assessment results are from one measurement to other." Thus, if any test gives consistent scores when administrated repeatedly it can be considered as reliable test. Reliability of this attitude scale was estimated by split-half, test-retest and Chronbach alpha methods. Short description of each type of estimation of reliabilities are given below:

i) Split-half reliability

Split-half reliability of final test with 32 statements was found .767 using MS Excel. To obtain the reliability of the full test following Spearman-Brown Prophecy formula (Linn and Miller, 2013, p. 110) was used.

$$r_{tt} = \frac{2r_{1/2}}{1+r_{1/2}} \dots\dots\dots 3.6$$

Where,

r_{tt} = Reliability of the full test.

and, $r_{1/2}$ = Reliability of the half test.

Putting the value of $r_{1/2}$ (.767) in the formula 3.6, reliability of the full test was found .868.

ii) Test-retest reliability

To compute the test-retest reliability of the final scale, test was re-administrated on 101 teachers and both set of the scores were correlated. Pearson's r was found .800 that is test-retest reliability of the final attitude scale was estimated as .800.

iii) Cronbach's coefficient alpha

To estimate the reliability of the attitude scale based on internal consistency of the test, coefficient alpha was computed using following formula (Cronbach, 1951; Kaiser and Michael, 1975 as cited in Singh, 2012, p. 81):

$$r_{tt} = \alpha = \left(\frac{N}{N-1} \right) \frac{\sigma_t^2 - \Sigma(\sigma_i^2)}{\sigma_t^2} \dots\dots\dots 3.7$$

Where,

$r_{tt} = \alpha$ = Reliability of the full test.

N = Number of items in the test.

σ_t^2 = Variance of all scores on the test.

σ_i^2 = Variance of all individual scores in each item.

Using Excel spreadsheet, value of coefficient alpha was calculated as $\alpha = 0.845$.

Thus, these all types of reliabilities are indicating that the tool constructed is very highly reliable.

3.6.3.6.2 Validity

Validity is an important factor for effective research because invalid research is worthless (Cohen, Manion and Morrison, 2010, p. 133). Two types of validities were estimated for this attitude scale.

i) Content validity

If the test covers fairly and comprehensively the domain or items that it purports to cover, then the test is said to have content validity (Cohen, et al, 2010, p. 137). The four experts of the subject area established content validity and precision of the items were established by three experts of related languages.

ii) 27% upper and lower group method

In this method, two groups of 27% of total respondents having higher attitude and lower attitude were selected and *t*-test was used to check whether the difference of mean attitude scores of these two groups was significant or not. SPSS results of *t*-test are presented in table 3.3.

Table 3.3
SPSS Results of t-test for Validation of Attitude Scale

t-test for Equality of Means						
t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
34.538	200	.000	38.69307	1.12030	36.48394	40.90219
34.538	193.053	.000	38.69307	1.12030	36.48346	40.90268

From table 3.3, *t*-value is 34.538, *df* is 200 and *p*-value for two-tailed test is 0.000. This result implies that the difference of mean attitude scores of upper group and lower group is significant at 0.01 level of significance. This significant difference indicates that the scale is capable to discriminate the respondents having higher and lower attitude. Thus, both methods content validity method and upper-lower group validity method are clearly indicating the validity of the whole test.

3.6.3.7 Descriptive statistical values and normality of the scores of attitude scale

Descriptive statistical values (obtained by SPSS version 21) of all 374 scores of attitude test with 32 statements are presented in the table 3.4.

Table 3.4
Descriptive Statistical Values of Attitude Scores

		Statistic	Std. Error
Attitude score	Mean	99.3021	.82653
	Median	99.0000	
	Variance	255.498	
	Std. Deviation	15.98431	
	Minimum	60.00	
	Maximum	146.00	
	Range	86.00	
	Interquartile Range	23.00	
	Skewness	.114	.126
	Kurtosis	-.244	.252

Final standardized attitude scale consists 32 items. Each item has five options and scores for these options varies from 1 to 5. Thus, minimum possible score for each item is 32 and maximum possible score is 160. Highest and lowest scores obtained in this test were 146 and 60 respectively (table 3.4). Mean of the all scores is 99.302 and SD is 15.984. Values of skewness and kurtosis are .114 and -.244, again their respective standard errors are .126 and

.252 respectively. If absolute value of skewness or kurtosis is less than 1.96 (≈ 2) times of the values of their respective standard errors than distribution can be considered as normally distributed (Field, 2016, p. 11). Values of skewness, kurtosis and their respective standard errors are clearly showing that these scores are normally distributed.

Table 3.5

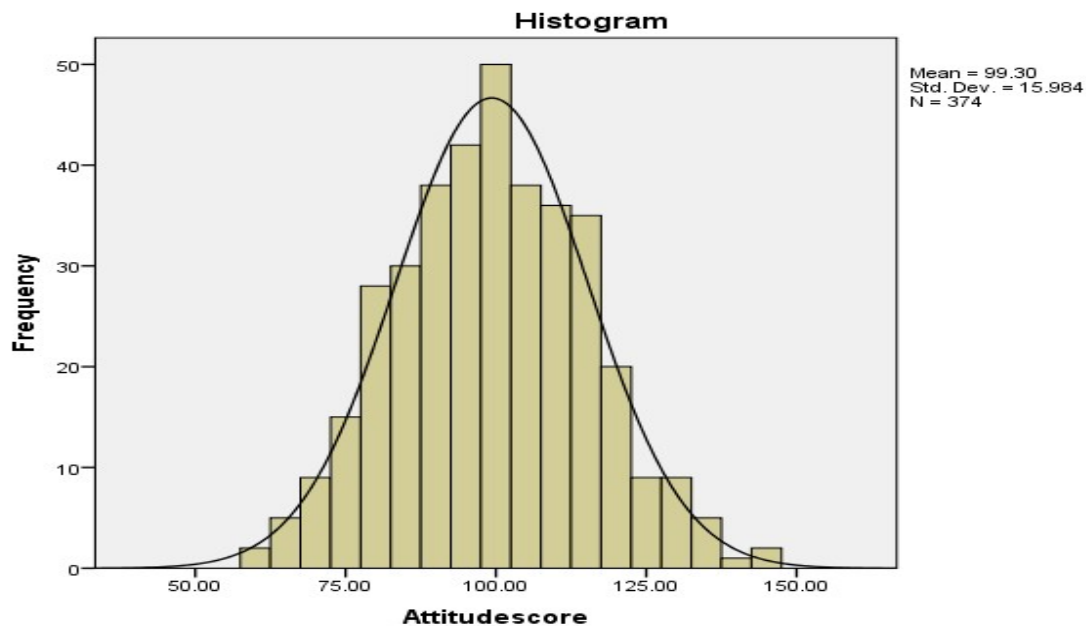
Test of Normality of Attitude Scores for Construction of the Tool

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Attitude scores	.031	374	.200	.996	374	.463

Results of Kolmogorov-Smirnov and Shapiro-Wilk tests of normality obtained by SPSS version 21 are presented in table 3.5. In this study, sample size was more than 50 ($N = 374$) therefore Kolmogorov-Smirnov test was used to determine the normality of the distribution (Tyagi, 2019 a, p. 6). Here, test statistic is .031 for df 374 while value of significance is .200. As the p-value is greater than 0.05 the difference is not significant that is the null hypothesis "The distribution of given scores is not significantly different than normal distribution" is accepted that is scores of attitude scale are normally distributed.

Figure 3.1

Histogram and Normal Probability Curve of Attitude Scores



Histogram and curve of attitude scores in figure 3.1 are also clearly indicating that the scores are normally distributed.

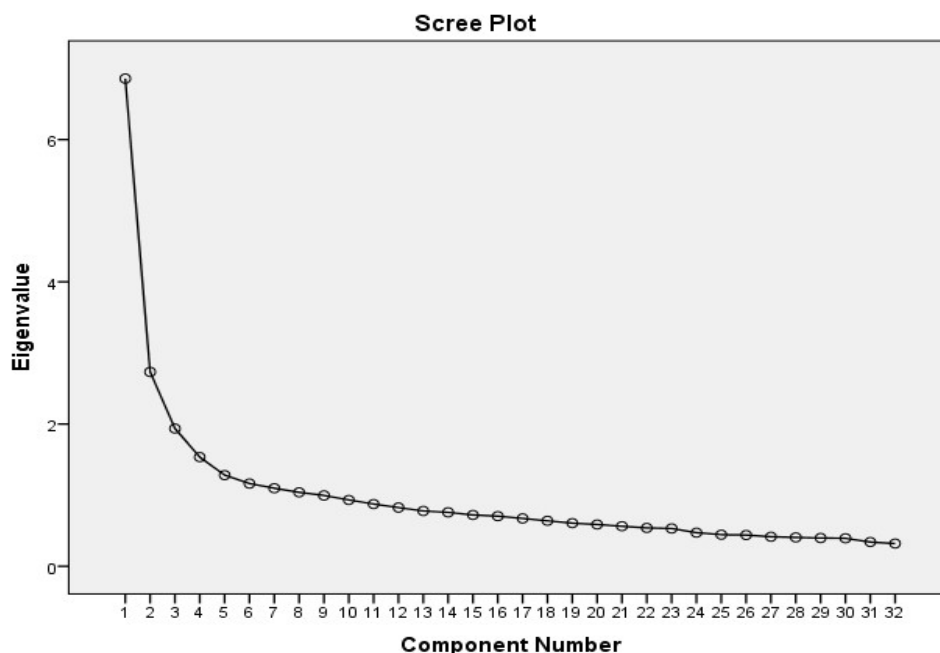
3.6.3.8 Factor analysis of attitude scale

After constructing the final attitude scale with 32 most appropriate statements, factor analysis was made to extract some factors related to these statements. Factor analysis is developed for analyzing the inter-correlations within a set of variables so that all variables within a group are highly correlated but have small correlations with variables in different groups.

Value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO test) was found 0.866 (suitability range is 0.5 to 1.0) which shows that data is suitable for factor analysis. There are number of ways to decide method of extraction of factors and number of factors to be extracted. In this study, factors were extracted by using Principal Component Analysis method and number of factors was determined by using Eigenvalues criteria. Eigenvalue represents the amount of variance in the original variables associated with a factor. Only factors with Eigenvalues greater than 1.0 are retained. Scree plot for component number and Eigenvalues is given in the figure 3.2. From figure 3.2, it is clear that there are eight components whose eigenvalues are greater than 1.0.

Figure 3.2

Scree Plot of the Statements Based on Eigen Values



To get the sharp grouping of variables, Varimax with Kaiser Normalization method was used.

Results obtained are presented in the table 3.6.

Table 3.6

Correlation of Statements within and between Factors

	Rotated Component Matrix^a							
	Components							
	1	2	3	4	5	6	7	8
S14	.709	.001	-.034	.129	.165	.107	.096	.057
S19	.661	.109	.195	.027	-.025	.007	.018	.166
S8	.653	.171	.123	.153	-.029	.093	.067	.302
S28	.640	.146	.131	.398	-.010	.062	.113	-.181
S20	.637	.104	.086	.341	.055	.242	-.153	.067
S23	.132	.710	.188	-.030	.040	-.137	-.090	-.157
S17	.126	.663	.124	-.008	.299	-.040	.069	.025
S21	.084	.635	.207	.125	.295	.162	-.027	-.029
S24	.046	.618	-.026	.182	-.080	.134	.183	.239
S22	.171	.534	-.005	-.056	.058	.098	.339	.279
S29	.121	.146	.682	.070	.173	.171	-.046	.043
S10	.173	.099	.666	.092	.149	.116	-.161	.112
S9	.096	-.021	.597	.042	.209	-.178	.086	-.042
S26	.004	.441	.581	.133	.074	.015	.121	.050
S5	-.007	.267	.453	.312	.280	.096	-.086	.033
S32	.187	-.050	.094	.714	.109	-.025	.024	.010
S31	.338	.072	.062	.613	-.006	-.050	.199	.121
S15	.141	.109	.153	.513	.430	.117	-.098	.092
S12	.100	.128	.044	.445	-.020	.407	-.242	.124
S27	.070	.064	.416	.438	-.123	.249	.233	.135
S13	.215	.267	.207	.391	.019	.327	-.210	.287
S11	-.097	.247	.112	.069	.645	-.027	.053	-.241
S2	.083	-.016	.334	.087	.624	.128	.124	.264
S1	.239	.015	.221	-.081	.609	-.049	.083	.087
S16	-.079	.322	.071	.087	.507	-.054	-.108	-.044
S18	.123	-.035	.003	.081	.098	.793	-.049	.078
S4	.112	.053	.105	-.019	-.085	.767	.098	.023
S30	.083	.081	-.011	.185	-.077	.055	.699	-.285
S3	-.026	.027	-.078	-.084	.091	-.139	.617	.265
S25	.245	.295	.211	-.055	.133	.148	.423	.056
S6	.292	.101	.062	.073	.056	.175	.128	.604
S7	.135	.010	.149	.427	-.055	.011	-.121	.588

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 9 iterations.

Rotated component matrix is clearly showing 8 factors on the basis of correlation of the statement with factors. First factor includes five statements with the correlation range .709 to .637. Similarly, second and third factors again each comprises five statements while fourth factor includes highest number of statements that is six statements. Again, fifth and seventh factors each include three statements, and least numbers of statements (two in each factor) are associated with sixth and eighth factors.

Correlation coefficients of all 32 statements with 8 factors are given in the table 3.6. On the basis of correlation, eight factors were extracted and labeled as given in the table 3.7

Table 3.7

Factor Wise Statements and their Labeling

Factors	Statements	Labeling
F ₁	14, 19, 8, 28 and 20	Responsibility and politics
F ₂	23, 17, 21, 24 and 22	Satisfaction and livelihood
F ₃	29, 10, 9, 26 and 5	Interest and prestige
F ₄	32, 31, 15, 12, 27 and 13	Salary and career development
F ₅	11, 2, 1 and 16	Involvement and future perspective
F ₆	18 and 4	Difficulty in profession
F ₇	30, 3 and 25	Creativity
F ₈	6 and 7	National priority

3.6.3.9 Norms and interpretation

To interpret the results of this study, two types of norms were developed.

3.6.3.9.1 Z-score norms

Scores of attitude scale are normally distributed so concept of z-score can be used here for best interpretation of the result. Z-scores of each individual raw score were calculated by using following formula:

$$Z\text{-score} = (X - \bar{X}) / \sigma \quad \dots\dots\dots 3.8$$

Where,

X = Individual score of respondents

\bar{X} = Mean of all scores

σ = SD of all scores

Z-scores of all raw scores were computed by using Excel spreadsheet and were found ranging from -2.458 to 2.921. Seven categories of z-score norms were developed and presented in the table 3.8.

Table 3.8*Z-score Norms and Interpretation for Attitude*

Range of z-scores	Interpretation
+2.16 and above	Extremely favorable
+1.39 to below +2.16	Highly favorable
+0.62 to below +1.39	Favorable
-0.15 to below +0.62	Neutral
-0.92 to below -0.15	Unfavorable
-1.69 to below -0.92	Highly unfavorable
Below -1.69	Extremely unfavorable

3.6.3.9.2 Percentile norms

To develop five-category percentile norms, values of the percentiles P_{20} , P_{40} , P_{60} and P_{80} were calculated. Categories to interpret the test results are presented in the table 3.9.

Table 3.9*Percentile Norms and Levels of Interpretation*

Percentiles	Score range	Interpretation
$P_{80} = 113$	113 and above	Highly favorable
$P_{60} = 103$	103 to 112	Favorable
$P_{40} = 94.2 \approx 95$	95 to 102	Neutral
$P_{20} = 85$	85 to 94	Unfavorable
	84 and below	Highly unfavorable

No time limit was given to fill this attitude scale, however researcher made a small study on time required to fill this scale and found that average time required for this scale was 16 minutes; 5 minutes for front page information and 11 minutes for responding 32 statements.

3.6.4 Job satisfaction scale

A standardized *Job Satisfaction Scale (JSST-DM)* developed by Dr. Meera Dixit, Department of Education, National Degree College Lucknow, U. P. (India) and published by National Psychological Corporation, Agra, India (See Appendix-VIII) was used to find and compare the job satisfaction level of schoolteachers of Nepal and India.

To develop the test, Dixit (2005) constructed 58 items both in Hindi and English languages. For correction and validation of the items, this preliminary form was given to eight experts of various institutions. The items on which 80% agreement was found were included in the scale and pre-testing was done on 100 individuals from different institutions of Lucknow city (p.4).

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After item analysis, 52 items were selected belonging to eight job factors, which are presented in the table 3.10.

Table 3.10

Distribution of Items in the Final Form of Job Satisfaction Scale

Job Factors	Items No.	No.
A Intrinsic aspects of the job	1, 11, 25, 30, 35, 46 and 52	7
B Salary, promotional avenues and service conditions	3, 12, 19, 20, 31, 34, 45 and 50	8
C Physical facilities	2, 10, 24, 29, 36,43, 48, 49 and 51	9
D Institutional plans and policies	4, 13, 26, 38, 40 and 47	6
E Satisfaction with authorities	5, 14, 21, 27, 32 and 41	6
F Satisfaction with social status and family welfare	8, 9, 17, 18 and 23	5
G Rapport with students	7, 15, 22, 28, 33 and 39	6
H Relationship with co-workers	6, 16, 37,42 and 44	5
Total		52

Source: Dixit (2005, p. 5)

Reliability of the test was estimated by split-half and test-retest methods. For English and Hindi version, Indices of reliability (N = 100) by split-half method were found .92 and .93 while these values obtained by test-retest method were .86 and .87 respectively (p. 5). Although no time limit for the administration of this test is recommended by the developer however usual time required for this test is mentioned one hour. There are five options; strongly agree, agree, undecided, disagree and strongly disagree for each statement and scores provided for these options are 5, 4, 3, 2 and 1 (p. 6).

In manual, there does not mention any negative (unfavorable) statement and its scoring system. But researcher found statement no. 30 as negative statement and scored it in reversed way. For Nepalese respondents, researcher translated the scale in Nepali language (See Appendix-IX)

Statistical results are given separately for primary teachers (N = 200), secondary teachers (N = 200) and total sample (N = 400). Mean values for primary teachers, secondary teachers and all teachers are 175.50, 169.00 and 172.25 while SDs for these teachers are 17.87, 16.90 and 17.38. For the purpose of interpretation of raw score, z-score norms have been developed separately for primary, secondary and general teachers. For general teachers, lowest and highest scores given in the manual are 131 and 215. On the basis of other statistical values, range of z-scores was found from -2.373 to +2.459 (pp. 6-9). Interpretation criteria are given

in the table 3.11 (Though, these are not the actual criteria given in the manual. Researcher found some mistakes in the interpretation criteria given in the manual and he developed the fresh criteria on the basis of given statistical values).

Table 3.11

Norms for Interpretation of Level of Job Satisfaction

Sr. No.	Range of z-scores	Grade	Level of job satisfaction
1.	+1.77 and above	A	Extremely high satisfaction
2.	+1.08 and below +1.77	B	High satisfaction
3.	+0.39 and below +1.08	C	Above average satisfaction
4.	-0.30 to below +0.39	D	Average/Moderate satisfaction
5.	-0.99 to below -0.30	E	Below average satisfaction
6.	-1.68 to below -0.99	F	Dissatisfaction
7.	Below -1.68	G	Extremely dissatisfaction

3.6.5 Interview schedule

A semi-structured open-ended interview schedule was prepared by the researcher and validated by the experts to collect required information from educators. Open-ended questions were constructed on various aspects of teacher education programme, teaching profession and general education of Nepal and India. Two separate sets of interview schedule were developed for Nepal and India using Nepali and English languages for Nepal, and Hindi and English languages for India (See Appendices-X and XI).

3.7 Data Collection Procedures and Techniques

Qualitative and quantitative both types of data was collected for this study. Qualitative data was collected by making the access on related documents and conducting interviews. Similarly, quantitative data was collected by field visits using normative survey method. Qualitative data collected through interviews was transcribed, processed and interpreted after presentation. Statistical procedures and techniques like mean, variance, correlation, and *t*-test were used to analyze and interpret the quantitative data. Quantitative analysis were made by using the MS Excel and SPSS version 21.

3.8 Variables

Variables are the conditions or characteristics that the experimenter manipulates, controls, or observes. The independent variables are the conditions or characteristics that the experimenter manipulates or controls to study their relationships while dependent variables

are the conditions or characteristics that appear, disappear, or change as the experimenter introduces, removes, or changes independent variables (Best and Kahn, 2010, pp. 167-168). In this study, dependent and independent variables were taken as below.

3.8.1 Independent variables

Comparison was made between Nepal and India, so country was taken as independent variable.

3.8.2 Dependent variables

In this study, academic achievement, intelligence, attitude and job satisfaction were taken as dependent variables.

3.9 Ethical Considerations

In research, investigator should have to follow some ethical guidelines to respect the interest and basic rights of the subjects. According to the *Collins Dictionary* (1979: 502), ethical means 'in accordance with principles of conduct that are considered correct, especially those of a given profession or group' (as cited in Kumar, 2014, p. 282). In this study, investigator followed the following ethical considerations:

3.9.1 Informed consent

In this study, respondents were informed prior to collection of information, and required data was collected according to their will.

3.9.2 Confidentiality

Collected data was used only for research purpose and kept confidential in order to protect subject's identity.

3.9.3 Privacy

The researcher maintained privacy. Beliefs, attitudes, opinions, records and other information were not shared with others without the subject's knowledge or consent.

3.9.4 Harmlessness

Required information was collected and used without any harm to the subjects.

3.9.5 Plagiarism

In this study, researcher did not present the work of others as his own and appropriate credit was given for the work of others through proper citation.

Chapter - 4

Results and Discussions

4.1 Comparison of the Curriculum of Teacher Education in Nepal and India

4.1.1 Present B. Ed. curriculum of Nepal

In Nepal, there is a provision of two types of B. Ed. programme; pedagogical B. Ed. programme after graduation and integrated B. Ed. programme after grade 12 or equivalent. Programme duration of B. Ed. after graduation is one year while integrated B. Ed. programme is designed for four years. In this study; objectives, course of study, instructional modes and assessment procedures of integrated B. Ed. programme of Tribhuvan University (TU) and Far western University (FU) are discussed.

TU has been implementing three year integrated B. Ed. programme since 1996 (before this the duration was of two years). Government of Nepal (2007, p. 50) recommended to restructure of teacher education, through the National Curriculum Framework for School Education, to make the teachers capable to handle multiple subjects. Following this policy, recently, TU modified its academic programmes and duration of Bachelor programmes has been made four years with two specialization subject areas: specialization major and specialization minor subjects in 2015 instead of single specialization area in three year B. Ed. programme. Four years B. Ed. programme implemented by TU is based in annual system. This programme is designed to produce capable teachers who can teach two subjects at secondary level (Tribhuvan University, 2015, p. 2).

FU was established in 2010 and it launched its educational programs in 2012. The Faculty of Education is the leading education provider faculty in the university. The faculty has run graduate (post graduate as well) programs in different subjects as integrated four years B. Ed. programme. B. Ed. programme is based on semester system and designed to specialize in major and minor areas.

4.1.1.1 Objectives

Objective is considered as a leading component of curriculum. All other aspects of the curriculum are developed/determined on the basis of objectives. After the establishment of democracy in Nepal in 1951, Nepal National Education Planning Commission (1956, pp. 157-158) had mentioned the purpose of teacher education in its report *Education in Nepal* as "The first and major purpose of the teacher training programme is to provide competent teachers to staff the schools of Nepal". The second purpose mentioned by NNEPC is "to provide for the development of a common curriculum and common methods for our schools" and the third purpose of teacher training is "to contribute to the continuous improvement of education". To achieve these purposes, this commission had set four objectives of the teacher education (pp. 158-159):

- i. To prepare professionally competent teacher.
- ii. To prepare teacher with a broad general education.
- iii. To prepare personally competent teacher in the basic vocational crafts.
- iv. To prepare personally well-developed teacher and skilled in the process of continuously improving himself.

According to National Education Commission (1992, p. 50), the main aim of the teacher education and teacher training programme is "To produce competent teachers, and to buttress, nation-wide, the edifice of education through their able and willing cooperation".

4.1.1.2 Course of study

TU has designed its B. Ed. programme comprising 22 courses including practicum as shown in the table 4.1.

Table 4.1*Description of Courses in B. Ed. Programme (TU)*

S. No.	Course area	Number of courses (Annual)	Full marks
1	Group A: Communication skills i) General English ii) General Nepali	2	$2 \times 100 = 200$
2	Group B: Professional course i) Philosophical and Sociological Foundations of Education ii) Educational Psychology iii) Curriculum and Evaluation iv) Instructional Technology Or ICT in Education Or ICT in Specialized subject	4	$4 \times 100 = 400$
3	Group C: Major courses	10	$10 \times 100 = 1000$
4	Group D: Minor courses	5	$5 \times 100 = 500$
5	Group E: Teaching practice (Practicum)	1	$1 \times 100 = 100$
Total		22	$22 \times 100 = 2200$

Source: Tribhuvan University (2015, p. 3)

In this course design, two courses are related to communication skills based on Nepali and English. Four courses are included in professional/pedagogical courses while major area comprises 10 courses, 5 courses are designed for minor area. There is one course as teaching practice to provide real classroom teaching experience to the pupil teacher. Out of total 22 courses, only four courses (18.18%) are included as professional/pedagogical courses. Professional/pedagogical content is less than one-fifth part of whole of the content and seems unable to provide sound knowledge and skills of pedagogy.

Course structure of FU also more or less similar to TU but programme is based on semester system. Total courses are divided in to five areas: general courses, professional courses, major courses, minor courses and practicum as shown in table 4.2. Each course is designed to allocate three credit hours.

Table 4.2*Description of Courses in B. Ed. Programme (FU)*

S. No.	Course area	Number of courses (Semester)	Credit hours
1	General courses i) English Grammar and Composition ii) Nepalese Study iii) Sadharan Nepali Rachana iv) English for Communication v) Sampreshan Ka Lagi Nepali vi) Study Skills in English for Academic Purposes vii) Computational Literacy viii) Fundamentals of Computers and Information Technology	8	$8 \times 3 = 24$
2	Professional courses i) Philosophies in Education ii) Learning, Teaching and Assessment iii) Education and Society iv) Educational Development in Nepal v) Alternative Thinking in Education vi) Diversity in Education vii) Introduction to Curriculum viii) Developmental Psychology	8	$8 \times 3 = 24$
3	Major courses	20	$20 \times 3 = 60$
4	Minor courses	6	$6 \times 3 = 18$
5	Teaching practice (Practicum)	1	$1 \times 3 = 3$
Total		43	$43 \times 3 = 129$

Source: Far western University (2012)

There are eight general courses, eight professional/pedagogical courses, twenty major courses and six minor courses in the B. Ed. programme of FU. Teaching practice is designed as one course. In general courses, five courses are developed for communication skills (Three for English and two for Nepali) and three courses are related to general knowledge about Nepal, and mathematical and computer literacy for higher education. Computational Literacy and Fundamentals of Computers and Information Technology as core courses are strengths of B. Ed. of FU but the course structure lacks courses/activities related to teaching methods/educational technology, school organization, planning and management, and community engagement. Out of 43 courses, only 9 (20.93%) courses (including practicum) are designed for professional/pedagogical knowledge and skills. Clearly, proportion of professional/pedagogical courses is inadequate to produce professionally competent teacher.

4.1.1.3 Instructional modes

Knowledge and skills are transferred/constructed in the classroom through the learning-teaching methods. Pedagogical aspects adopted by TU for B. Ed. programme are presented in table 4.3.

Table 4.3

Methodology and Techniques for Learning-teaching (TU)

S. No.	General instructional techniques	Specific instructional techniques
1.	Lectures	Small group discussion, Brain storming
2.	Discussion, Explanation	Pair work, Drill
3.	Problem solving	Presentation, Seminars
4.	Illustration	Library studies
5.	Demonstration, Role play	Project works, Practical work,
6.	Quizzes	Assignments
7.	Presentation	Self study
8.	Inquiry, Question answer	Report writing

In curriculum of four-year B. Ed. programme of TU, pedagogy is divided into two parts: general instructional techniques and specific instructional techniques. However, number of general instructional techniques for separate courses varies and specific instructional techniques are based on nature of content.

Modes of instruction and learning are separately mentioned in the curriculum of FU (Table 4.4). Like in curriculum of TU, specific instructional techniques were not mentioned, but most of specific instructional techniques given in the curriculum of TU are included in modes of instruction.

Table 4.4

Methodology and Techniques for Learning-teaching (FU)

S. No.	Modes of instruction	Modes of learning
1.	Lecture	Attending lectures,
2.	Seminar	Doing assignments,
3.	Exercises	Writing papers,
4.	Guided study	Independent and private study,
5.	Tutorial	Reading books, reviewing journals and papers,
6.	Independent study	Critiquing
7.	Project work	Group study, Field visit
8.	Practical work	Peer discussion

4.1.1.4 Assessment procedures

Evaluation procedure of TU is based on external assessment only. There is no provision of internal assessment. Techniques of continuous/formative assessment are used but, performance of students is not included in the final evaluation. Internal assessment is only used to give feedback to the students. Written examination is held at the end of the session as external assessment. Description of test items and allotted marks is presented in the table 4.5.

Table 4.5

Test Items and Allotted Marks for External Assessment (TU)

Types of questions	Total questions to be asked	Numbers of questions to be answered and marks allotted	Total marks
Group A: Multiple choice items	20 questions	20 x 1 mark	20
Group B: Short answer questions	8 with 3 'or' questions	8 x 7 marks	56
Group C: Long answer questions	2 with 1 'or' question	2 x 12 marks	24
Total	20 objective 10 subjective with 4 'or' questions	20 objective 10 subjective	100

Some of the courses of B. Ed. of TU are designed with theory and practical content. There is no uniformity in weightage given to theory and practical. In some courses, marks assigned for theory and practical are 80% and 20%, while in others these percentages are 50% and 50%. Minimum marks required to qualify the examination is 35% for theory and 40% for practical. There is no provision for immediate improvement, but student is promoted to next year even if he/she is unable to qualify the final examination and he/she have to appear in the examination of same subjects (in which student is not qualified) in next year. Placement criteria of TU for B. Ed. programme are presented in the table 4.6.

Table 4.6

Classification Criteria of Results (TU)

S. No.	Marks (%)	Division
1.	75% or above of the aggregate marks	Distinction
2.	60% or above of the aggregate marks but less than 75%	First
3.	45% or above of the aggregate marks but less than 60%	Second
4.	35% (40% for practical) or above of the aggregate marks but less than 45%	Third

Assessment system of FU for B. Ed. programme is divided in to two major parts: internal 40% and external 60%. Activities and marks allotted for internal assessment is given in the table 4.7.

Table 4.7

Activities and Allotted Marks for Internal Assessment (FU)

S. No.	Activities	Marks
1	Regularity and class participation (Attendance)	5
2	Class room presentation	5
3	Term paper	5
4	Investigative project work	5
5	Group work/discussion	5
6	Reflection notes	5
7	Mid-term exams	10
	Total marks	40

Remaining 60% marks again extended to 100 for external assessment, which is a written test. Details of test items and respective marks are presented in the table 4.8.

Table 4.8

Test Items and Allotted Marks for External Assessment (FU)

Types of questions	Total questions to be asked	Number of questions to be answered and marks allotted	Total marks
Group A: Multiple choice items	20	20 × 1 mark	20
Group B: Short subjective questions	8	6 × 8 marks	48
Group C: Long subjective questions	3	2 × 16 marks	32
Total	Objective: 20 Subjective: 11	Objective: 20 Subjective: 8	100

FU has set minimum marks 45 to qualify the examination. Marks obtained by the students in final written test (out of 100) are converted to 60% and added to the marks obtained in internal assessment (out of 40) to get the raw score in each course. These raw scores are converted to letter grade and hence respective grade values and grade points according to the scheme given in the table 4.9.

Table 4.9*Grading Scheme (FU)*

Marks	Letter grades	Grade values	Grade points	Remarks
80 – 100	A	4.00	12.00	Outstanding
75 – 79	A-	3.70	11.10	Excellent
70 – 74	B+	3.30	9.90	Very good
65 – 69	B	3.00	9.00	Good
60 – 64	B-	2.70	8.10	Fair
55 - 59	C+	2.30	6.90	Fair
50 - 54	C	2.00	6.00	Fair
45 - 49	C-	1.70	5.10	Poor
Less than 45	F	0.00	0.00	Fail

Letter grade is assigned on the basis of final raw score obtained by adding the marks of internal and external assessments, though students have to obtain separately 45% in internal and external assessments. Grading is divided in to eight categories. Cut off score is set as 45 and class intervals are created on the basis of class difference 5 except the highest grading which includes the difference of 21 marks. Number of grades (nine) is sufficient to categories the students on the basis of their ability but the grade values are not determined appropriately. This assessment is based on four-point grading system. Grade values for 45 and 49 marks (lower and upper limits of second last category) should be 1.80 and 1.96 respectively, but in above scheme this category is given grade value 1.70. Again, interpretation of grades B-, C+ and C is same. There is no provision for immediate improvement, but students can join next semester in case unable to qualify any particular semester.

4.1.2 Present B. Ed. curriculum of India

In India, pedagogical B. Ed. programme after graduation has been conducted since long time. Initially one year B. Ed. programme was introduced but it was not effective to produce competent teacher on content knowledge and pedagogical skills. Up to session 2014-15 these programmes were running in one year mode in the name of B.Ed. Keeping in view National Council for Teacher Education (NCTE) Regulation -2014, the programme shall now be of two years from the session 2015 onwards (Rohilkhand University, 2015, p. 1). According to the National Policy on Education 2016, "The one year programme did not equip the future teacher either with subject knowledge, nor teaching skills". Similarly, there was a provision of obtaining B. Ed. degree by correspondence courses for many years until these were shut down (Government of India, 2016 b, p. 67).

Regional Colleges of Education in India used to offer 4-year integrated teacher education programme after 12th. Now University of Delhi and Institute of Teacher Education Gujarat offer similar programmes. This policy also recommends that the possibility of introducing 5-year integrated course after standard X for elementary schoolteachers and 5-year course after 12th for higher secondary schoolteachers should be explored (Government of India, 2016 b, p. 68). Following the recommendations of National Policy on Education 2016, Draft National Education Policy 2019 has made a provision that "Each public university and model multidisciplinary college will offer a four-year teacher preparation programme by 2024 and 2029 respectively (Government of India, 2019, p. 288).

According to the objectives of this study, researcher studied the teacher education (B. Ed.) programme of Kumaun University (KU) of Uttarakhand and Rohilkhand University (RU) of Uttar Pradesh only. These universities are still running the two-year B. Ed. programme after graduation. B. Ed. programme of KU is based on semester system while RU has its B. Ed. programme in annual system. For the enrollment of candidates in existing B. Ed. programme, NPE 2016 has recommended that "For entry in existing B. Ed. courses, there should be minimum eligibility condition of 50% marks in graduation" (Government of India, 2016 b, p. 68). Both of the universities KU and RU have same eligibility criteria of 50% marks either in the Bachelor's Degree and/or Master's Degree in Sciences/Social Sciences/Humanity, and Bachelor's Degree in Engineering or Technology with specialization in Science and Mathematics with 55% marks for enrollment in B. Ed. (Kumaun University, 2015, p. 2 and Rohilkhand University, 2015, p. 1).

4.1.2.1 Objectives

Draft of National Education Policy 2019 mentioned its objective for *teacher* as "Ensure that all students at all levels of school education are taught by passionate, motivated, highly qualified, professionally trained, and well equipped teachers (Government of India, 2019, p. 113)". In the same policy, objective for *teacher education* is determined as "Ensure that teachers are given the highest quality training in content, pedagogy, and practice, by moving the teacher education system into multidisciplinary colleges and universities, and establishing the four-year integrated Bachelor's Degree as the minimum qualification for all schoolteachers" (Government of India, 2019, p. 283).

State wise variations in teacher education programme can be shown in India. SSJ Campus, Almora, Kumaun University has prepared an ordination and regulation regarding the B. Ed. programme. The main purpose of B. Ed. programme of KU is "The Bachelor of Education (B.Ed.) programme is a two year (four semesters) professional course that prepares teachers for upper primary or middle level (classes VI-VIII), secondary level (classes IX-X) and senior secondary level (classes XI-XII)" (Kumaun University, 2015, p. 2).

4.1.2.2 Course of study

KU is still running two-year B. Ed. programme after graduation so its course structure comprises only professional/pedagogical courses as shown in the table 4.10.

Table 4.10

Course Structure of B. Ed. Programme (KU)

S. No.	Name of the course	Marks		Total marks
		Internal	External	
Semester – First				
1	Philosophy & Sociology of Education	30	70	100
2	Childhood & Growing Up	30	70	100
3	Psychology of Learner	30	70	100
4	Principles and Methods of Teaching	30	70	100
Semester – Second				
5	Subject Knowledge and Pedagogy of two School Subjects	30+30 = 60	70+70 = 140	200
6	School Organisation and Management	30	70	100
7	Educational Technology and ICT	30	70	100
Semester – Third				
8	Visit to School	25	--	225
9	Internship (16 weeks)	50	150	
10	Gender, School and Society	15	35	50
10	Any one of: Environmental Education, Population Education and Value Education	15	35	50
11	Community Work	25	--	25
Semester – Fourth				
12	Education in Contemporary Indian Society	30	70	100
13	School Curriculum Development	30	70	100
14	Assessment and Learning	30	70	100
15	Language Across the Curriculum	50	--	50
Total marks		510	990	1500

Source: Kumaun University (2015, pp. 3-5)

KU has designed its B. Ed. programme in to 15 courses including internship and community work. Out of 15 courses, 13 are content courses and 2 are field engagement activities. Full marks for all courses is 1500; content courses are given 1250 marks and 250 marks are

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allocated for school visit/internship and community work. A full mark of three courses is 50 for each course while rest of the courses are allocated full marks 100. Professional and pedagogical courses related to philosophy, child psychology, teaching method, educational technology and ICT, assessment, curriculum and other contemporary issues in education are included in the course structure.

Table 4.11

Course Structure of B. Ed. Programme (RU)

S. No.	Name of the course	Marks		Total marks
		Internal	External	
Year – First				
1	Childhood and Growing Up	20	80	100
2	Contemporary India and Education	20	80	100
3	Learning and Teaching	20	80	100
4	Language across the Curriculum	10	40	50
5	Understanding Disciplines & Subjects	10	40	50
6	Gender, School and Society	10	40	50
7 (a)	Pedagogy of School Subject (Part-I)	10	40	50
	EPC-1 Reading and Reflecting on Texts	50	--	50
	EPC-2 Drama and Art in Education	10	40	50
	EPC-3 Critical Understanding of ICT	10	40	50
	Practical/Field engagement (Four weeks)	50	--	50
Year – Second				
7 (b)	Pedagogy of School Subject (Part-II)	10	40	50
	One other school subject	10	40	50
8	Knowledge and Curriculum	20	80	100
9	Assessment for Learning	20	80	100
10	Creating an Inclusive School	10	40	50
11	Optional Course	10	40	50
	EPC-4 Understanding the Self	50	--	50
	Practical/Field engagement (Sixteen weeks)	100	150	250
	Total marks	450	950	1400

Source: Rohilkhand University (2015, pp. 2-5)

RU has developed B. Ed. course cycle of total 11 courses (Table 4.11) for full marks 1400 out of which content courses and field engagement are allocated 1100 and 300 marks respectively. Five content courses are given full marks 100 and others are designed for full marks 50. Pedagogical/professional courses related to child psychology, learning-teaching, philosophy, curriculum, pedagogy, assessment and ICT are included in course structure while programme is unable to cover the courses on school organization, planning, management, supervision and monitoring.

4.1.2.3 Instructional modes

Learning-teaching method that is pedagogy is not specified in the ordinances for B. Ed. programme of both of the universities KU and RU. Though, courses are designed including theoretical and practical aspects and practicum/field work/assignments are enlisted in the syllabus of every course of both universities. These activities includes essay writing, discussion, unit test, assignments, observation, field visit, socio metric test, project work, problem solving etc in the courses of KU and field visit, assessing media, observation, seminar, stage show, writing test, preparation of learner profile, book review, workshop, debate, project work, assignments etc in the courses of RU. These are clearly indicating that lecture, discussion, field visit, project method, debate, workshop, problem solving, stage show, book review, seminar etc are used as learning-teaching methods in these universities.

4.1.2.4 Assessment procedures

B. Ed. programme of KU is in semester system and there is the provision of written test at the end of each semester. Assessment procedure is divided in to two major parts internal and external assessments. Out of full marks 1500, internal and external assessments are allotted 510 and 990 marks. For content course, internal assessment consists 30% while 70% marks are allotted for external assessment. Internal assessment is based on essay writing, discussion, unit test, assignments, observation, field visit, socio metric test, project work; problem solving etc and external assessment is a paper pencil test for content courses and observation and viva for internship. Description of test items for written test is given in the table 4.12.

Table 4.12:

Scheme of Test Items and Respective Marks for Written Examination (KU)

S. No.	No. of questions	Mark(s) per question	Total marks
For question paper of full marks 70			
1	10	1	10
2	5	2	10
3	5	4	20
4	2	15	30
Total	22		70
For question paper of full marks 35			
1	5	1	5
2	5	2	10
3	4	5	20
Total	14		35

Source: Kumaun University (2015, p.7)

Promotion to the next semester is admissible if a student passes at least 50% courses of the total (to be round off to the nearest lower digit say 2.5 becomes 2 and so on). Passing marks is determined 40% for theory courses and practicum/internal assessment and 50% for internship. There is no provision of improvement examination. Placement criteria of the university are according to the table 4.13.

Table 4.13

Classification Criteria of Results (KU)

S. No.	Marks (%)	Division
1	60% or above of the aggregate marks	First
2	48% or above of the aggregate marks but less than 60%	Second
3	40% or above of the aggregate marks but less than 48%	Third

Source: Kumaun University (2015, p. 8)

Paper format (table 4.12) for both types of question paper having full marks 70 and 35 are almost same. Only difference is found in number of questions and marks allotted in third type of questions that is given in serial number three. In this category of question, 5 questions of each 4 marks are given in paper with full marks 70 while 4 questions of each 5 marks are given in paper with full marks 35. From table 4.13, it is clear that students are categorized only in three categories. There is no provision of other divisions like *Distinction* or others. Students having marks 60% and above are kept in a single category *First Division*.

B. Ed. programme of RU is based on annual system. Like in KU, assessment system is divided in to internal and external assessments. Out of full marks 1400, internal assessment is allotted 450 marks while 950 marks are for external assessment. For content courses, weightage given to internal and external assessments are 20% and 80% respectively. Format for test items for written examination is given in the table 4.14.

Table 4.14

Scheme of Test Items and Respective Marks for Written Test (RU)

S. No.	No. of questions	Marks per question	Total marks
For question paper of full marks 80			
1	3 (Out of 5)	15	45
2	5 (Out of 8)	7	35
Total	8 (Out of 13)		80
For question paper of full marks 40			
1	2 (Out of 4)	10	20
2	4 (Out of 6)	5	20
Total	6 (Out of 10)		40

Source: Rohilkhand University (2015)

From table 4.14, there are only two groups consisting short and long answer type questions with choice for selection. Objective or very short answer type questions are not included in the test.

A candidate has to pass theory and practical/field work examinations separately. To pass in theory and practical/field engagement, a candidate must obtain 30% marks in each theory paper and 36% in the aggregate of theory papers. A candidate is promoted to second year only when he/she pass first year. There is a provision of improvement/back exam in one paper only. In practical/field engagement, pass percentage is 40%. Results of the students are classified as shown in the table 4.15.

Table 4.15

Classification Criteria of Results (RU)

S. No.	Marks (%)	Division
1	60% and above of the aggregate marks	First
2	48% and above of the aggregate marks below 60%	Second
3	36% and above of the aggregate marks below 48%	Third (For theory)
4	40% and above but below 48%	Third (For practical)

Source: Rohilkhand University (2015, p.5)

4.1.3 Comparison of teacher education programmes in Nepal and India

The common objective of teacher education programme in all over the world is to produce competent teachers required for effective teaching and quality education. Some of the aspects of teacher education in various countries are similar while others are different. In Indo-Nepalese context also, similarities and variations in teacher education were found. Comparison of teacher education in Nepal and India was made on the basis of these similarities and variations, and presented in the tables 4.16 and 4.17.

Table 4.16*General Comparison of Teacher Education Programme in Nepal and India*

S. No.	Criteria	India	Nepal
1.	Provider	Faculty/Department/colleges of education in universities, Regional Institutes of Education	Faculty/Department/colleges of education in universities
2.	Programme duration	Two years	Four years
3.	Nature	Pedagogical/professional	Integrated
4.	Eligibility	Undergraduate or above with minimum 50% marks	Grade 12 or above with minimum grade D+ or equivalent
5.	Session duration	Semester (KU) Annual (RU)	Semester (FU) Annual (TU)
6.	Improvement chance	Not available (KU) Available in one paper (RU)	Not available
7.	Future planning	Integrated B. Ed. after grade 12	Professional B. Ed. after undergraduate or above

Teacher education provider institutions in Nepal and India are almost similar (table 4.16). Faculty/department of education of the universities or colleges (government/public or private) affiliated to these universities run the teacher education programme. In India, there are some regional institutions also which play crucial role in the field of teacher education but in Nepal, there no any such type of institutions. Currently, most of the institutions in India are running professional B. Ed. programme and its duration is two years, but in Nepal, mostly four-year integrated B. Ed. programme is in practice. Eligibility criteria in India to apply for teacher education is undergraduate or above with minimum 50% marks while in Nepal, completion of grade 12 (or above) with minimum grade D+ (or above) is eligible for enrolling in B. Ed.

Some of the universities in India are running B. Ed. programme in annual system and others are in semester system. Similar practice seems in Nepal. Eligibility criteria for enrollment in teacher education programme in India are higher than Nepal. Provisions for improvement chances are also similar in India and Nepal. Some of the institutions provide chance for improvement in limited subjects while others are not. Most interesting thing for both countries is their future planning about nature of the programme. India is practicing professional B. Ed. after academic degree since long duration and now trying to change the design of the programme to integrated (academic and professional content within the same

programme) mode (Government of India, 2019, p. 288). On the other hand, Nepal has its long practice in integrated B. Ed. (though there is one year professional B. Ed. too) and now National Education Policy 2019 recommended for professional programme after completion of academic degree (Government of Nepal, 2019 b, p. 31).

Table 4.17*Academic Comparison of Teacher Education Programme in Nepal and India*

S. No.	Criteria	India	Nepal
1.	Objective	To produce competent teachers	To produce competent teachers
2.	No. of Professional courses (with practicum)	15 (semester) with full marks 1500 (KU) 11 (annual) with full marks 1400 (RU)	5 (annual) with full marks 500 (TU) 9 (semester) with 27 credit hours (FU)
3.	Pedagogy	Traditional and advance	Traditional and advance
4.	Grading	Numerical	Numerical (TU), Letter (FU)
5.	Evaluation	Internal 30%+External 70% (KU) Internal 20%+External 80% (RU)	Internal 40%+External 60% (FU) External 100% (TU)
6.	Minimum passing marks	40% for theory/practicum and 50% for internship (KU) 36% for theory and 40% for practical/field engagement (RU)	45% for theory and practical (FU) 35% for theory and 40% for practical (TU)
7.	Practicum	4-5 months	One month
8.	Classification categories	First division: 60% or above Second division: 48% to below 60% Third division: 40% to below 48% (KU), 36% to below 48% (RU)	Distinction ($\geq 75\%$), 1st division ($\geq 60\% < 75\%$), 2nd division ($\geq 45\% < 60\%$) and 3rd division ($\geq 35\% < 45\%$) (TU) Outstanding: (80-100)% Excellent: (75-79)% Very good: (70-74)% Good: (65-69)% Fair: (50-64)% Poor: (45-49)% (FU)

Again, from table 4.17, numbers of professional courses in India are comparatively more than in Nepal. Evaluation procedure includes internal and external assessment in both countries; however, institution wise variations are there. One of the major differences in teacher education programme in India and Nepal is in practicum/field engagement. In India, duration of field engagement/internship is 4 to 5 months, but in Nepal, pupil-teacher remains engage in field (practice teaching) only for one month.

Thus, there are so many commonalities and differences in the teacher education programme of Nepal and India. Kothari Commission (1964) recommended to introduce the integrated courses of general and professional education (The Teacher Education in Post Independence India, n. d., p. 44), but still most of the universities in India are running professional B. Ed. programme. In China, the duration of teacher education for high schoolteachers is four years and teacher education pays more attention to produce professional teachers (Andersson and Nordstrom, 2014, p. 33). Duration of teacher education in Nepal is also four year but programme is unable to produce competent teachers like in China.

In Korea, students for teacher education are selected among top 5% on the college entrance examination (Kim et al., 2012, pp. 6-7) and in Singapore, teacher-education students are among the top third in the nation academically (Ingersoll, 2007), but in Nepal and India eligibility and enrollment criteria for teacher education programme are very weak and low achievers get enrolled frequently.

4.2 Strengths and Weaknesses of Teacher Education in Nepal and India

To identify the strengths and weaknesses of teacher education programme of Nepal and India, researcher has made a comprehensive review of related literature and required information is collected through semi-structured interview.

To collect rich information about teacher education programme and teaching profession of both countries, researcher had made semi-structured interview with seven well renowned personalities/teacher educators/teachers of universities and schools. Face to face, interview was not possible due to epidemic COVID-19 spread all over the world. Interview was made on *Xiomi (Redme Note 7 Pro) Mobile* device and recorded on the same device. Researcher carefully transcribed the recording and processed the collected information.

4.2.1 Strengths and weaknesses of teacher education programme in Nepal

In the history of teacher education in Nepalese context, an institution for training teachers in basic education was established in Kathmandu in 1949 (The Nepal National Education Planning Commission, NNEPC, 1956, p. 155). First B. Ed. programme was run by College of

Education established in 1956 (All Round National Education Committee, 1961). Educational commission (NNEPC) established in 1954 (The National Education System Plan, 1971, p. 3) had clearly mentioned in its report about the training of teachers in chapter XII. Principles of education, Purposes of teacher education, Objectives of teacher education, Organization of the programme, Curricula for teacher training, Evaluating trainee progress, Recruitment, selection, and guidance of students, Certification of teachers, Placement of teachers and Teacher welfare are included in this section.

Another education committee All Round National Education Committee (ARNEC) 1961 had mentioned the concepts of training of primary schoolteachers and secondary schoolteachers in chapter 5. Similarly, National Education Commission (NEC) 1992 also mentioned the General Outline of Teacher Training and Recommendations under Teacher Training in chapter 8 (NEC, 1992, p. 50). Recently two education commissions: High Level Education Commission (HLEC)-2017 and High Level National Education Commission (HLNEC)-2019 were formed in Nepal. Though, report of HLNEC-2019 has accepted that education is infrastructure of infrastructures for national development (Government of Nepal, 2019 a, p. 26), draft report of HLEC 2017 (Government of Nepal, 2017) and final report of HLNEC 2019 both documents speak almost nothing about teacher education programme in Nepal.

There may not be effective teaching by the teachers having only knowledge of pedagogy and have not sufficient content. Low academic achievers (Grade point average 1.65) are enrolling in teacher education programme. Current motivation/incentives are not sufficient to attract high achievers in teaching profession. Subjects as Education, Humanities and Social Science, Management and Law are included in general subjects. Out of total enrollment in higher education, 42.25% are enrolled in Management faculty and 24.83% are in Education faculty (HLNEC, 2019, pp. 290-293). This enrollment shows that teacher education programme in Nepal is based on demand not need.

Required information obtained through interview on various aspects of teacher education and teaching profession is mentioned below:

i) Institutional provisions to provide teacher education programme

Subject 1: Currently faculties of education of various universities are running teacher education programmes in Nepal but this programme is based on residual approach. Universities make expenditure on other programmes and finally the budget is invested in

teacher education programme. Subject emphasized that universities and government should be aware of that "Quality teachers are costly, poor teachers cost more". In the country, largest employment area is teaching but teacher education programme is not given sufficient priority. To make teacher education effective, universities should be established in all seven provinces specially focused on teacher education programme.

Subject 2: Current institutions are not appropriate for effective teacher education programme. Teacher education is going on wrong direction after NESP (1971). Before this, normal schools and College of Education were giving teacher training rightly. At present, various universities in Nepal are providing teacher education through faculties of education. These are taken as *Deficiency Model* as these programmes are giving academic content and teaching pedagogy simultaneously but lack the content and pedagogy that should be given prospective teachers. Pupil teachers are neither competent in content nor in pedagogy. Our practice in teacher education is based on some of the countries like Sri Lanka, Philippines but these countries give content and pedagogy fully without compromise. Institutions of teacher education programme were mushroomed in Nepal within last few decades to impart teacher education on demand based but it should be need based. Commissions on education in Nepal separated the teacher education and teacher training. NCED used to give 10 months training to teachers but Asian Development Bank denied saying it training. Current provisions for teacher education are not appropriate, faculty/institute should develop teacher education programme to provide only professional and pedagogical knowledge/skills after gaining academic degree in content.

Subject 3: Current institutional provisions for teacher education are right but mushrooming of these institutions should be checked. Poor students are frequently entering in these institutions and institutions are unable to train these pupil teachers professionally and pedagogically. Pupil teachers sent to schools for internship/teaching practice are often found have less pedagogical knowledge/skills that are required for real class room teaching.

Subject 4: Institutional provisions for teacher education are right but more attention should be paid on effective implementation of various aspects of teacher education like entrance, practical, internship, assessments etc.

ii) Enrollment criteria in teacher education programme

Subject 1: Enrollment criteria used by institutions for candidates of teacher education programme are very weak. Low graders are frequently enrolling in teacher education. These criteria must be changed to ensure the enrollment of high achievers. System must be based on selective approach it should not be based on mass friendly approach. General education can be mass friendly but teacher education cannot. Student with grade less than B+ (70-80 marks) in grade 12 should not be eligible to enroll in B. Ed.

Subject 2: Teacher education is taken as last option. Students who are unable to enroll in other fields like medical, engineering, science and technology and other technical fields enrolling in teacher education. Selection criteria is very poor and not implemented strictly.

Subject 3: Enrollment criteria are very poor and these criteria are also not implemented strictly. These criteria should be changed so that only high/medium achievers can enroll in teacher education programme.

Subject 4: In Nepal teacher education is given less importance by society. Guardians and students think B. Ed. is most easy programme to pass that is why very poor students enroll in teacher education just to get a degree of bachelor. Although, students specializing in Mathematics, Science and English in teacher education programme are comparatively high achievers. Present enrollment criteria D+ (in grade 12) must be changed and students having at least grade B+ should be enrolled in teacher education.

iii) Ability/aptitude/intelligence of students entering in teacher education programme

Subject 1: Finnish education and teacher are taken as top in the world. Teaching is highly prestigious and teachers are provided highest salary among other public employees in Germany (Subject told a famous saying of German chancellor "Salaries of other employees cannot be equal to teachers because they prepare you"). In Nepalese context, high achievers/intelligent persons are not enrolling in teacher education programme and its effect can be seen in teachers. Some of the teachers are being competent on their own but system is unable to produce competent teachers. To make teacher education effective, the person having no commitment for teaching should not be enrolled in teacher education programme. Salary, pension and other facilities in teaching profession should be reviewed and increased significantly to make teaching profession and hence teacher education programme attractive.

Subject 2: (Laughing) Low graders/achievers are enrolling in teacher education. Lack of career development, social prestige and other facilities in teaching profession is making teacher education less attractive. Teacher education should be based on need not on demand to make it attractive.

Subject 3: Low graders (generally C and D category) are enrolling in teacher education programme. Guardians and even teachers also say that, "You are very poor so join teacher education programme". Lack of facilities, respect and dignity in teaching profession makes the teacher education less attractive. There are ways of earning (even illegal) in other fields of government employment (especially in civil service) so people attracted to other jobs.

Subject 4: Teacher education is less attractive so most talented and intelligent persons do not get enrolled in this programme. To make teacher education attractive, government should change/reform the policies regarding teacher education and teaching profession. Salary in teaching profession should be increased and attitude of people/society towards teaching profession should be changed.

iv) Curriculum development procedure of teacher education programme

Subject 1: Regional and local context is not appropriately addressed by present curriculum. Curriculum is developed centrally using top bottom approach. Curriculum should be developed in representative way but concern authorities are unable to do so. Curriculum of teacher education in Nepal is also unable to represent international context. So many innovations in the field of education are not included being more traditional. Developers of curriculum are not change oriented.

Subject 2: Main problem in the present curriculum of teacher education is conflict in the content and pedagogy. Concept of one year M. Ed. of TU is not successful due to conflict of content and pedagogy. Curricula are developed on the basis of competency and ease of professors/developers. Curricula are developed on reversed practice. Curriculum developers firstly select content on the basis their specialization and then determine objectives of the course. Hugh B. Wood (Educational Advisor, Nepal National Education Planning Commission, 1956) had made appropriate M. Ed. course but it was destroyed. Curricula are not reformed/updated timely.

Subject 3: Curriculum of teacher education is developed by copying international practice, which lacks originality. Stakeholders are either not involved in curriculum development process or involved only for formalities. Teachers produced by College of Education were far better than the teachers produced by present institutions.

Subject 4: Curriculum once developed is implemented for number of years and not updated timely.

v) Programme mode (annual/semester), objectives, content, pedagogy and assessment procedures of teacher education

Subject 1: Semester system is good initiation for teacher education. Objectives and content of teacher education are quite satisfactory. Learning-teaching methods are both teacher and learner centered. Assessment system is still traditional and unable to reflect the actual ability of the students. Periodic summative assessment is used mostly. Anxiety to some extent due to periodic assessment promotes learning. Currently, some of the institutions are using letter-grading system. Evaluation procedure is also break down in to continuous/formative and summative assessments. Generally, weightage given to internal assessment is 40% and external assessment is 60%, but due to 40% of internal assessment, grading of students seems higher than their actual ability.

Subject 2: Semester system is better, but it should be systematic and every activity must be on time. This system is not suitable for tourist students. Objectives of curriculum are not determined on the basis of actual diagnosis of needs. In the process of curriculum development, first step is determination of objectives and content should be selected to fulfill these objectives. But in Nepalese context, curriculum developers firstly select content on the basis of their specialization, so the content is affected by expertise of the curriculum developers. Education based subjects are not based on actual classroom practice; these are just developed as content. Due to integrated teacher education programme, academic content and professional/pedagogical contents are given simultaneously which lacks sufficiency of both academic and professional content. As teacher education is professional and training based programme, both content and pedagogy should be given fully even by increasing the duration of the programme. Most of the learning-teaching methods are traditional and assessment system is not effective.

Subject 3: Comparatively, semester system is better than annual system. Objectives of teacher education are theoretically good, but programme is unable to achieve these goals practically. Teacher education is a kind of training, but this programme is not properly training students. Content of teacher education programme is lacking pedagogy. Teaching methods are traditional. Assessment system is not based on recent advances on the field of assessment and is not very reliable.

Subject 4: Semester system is better for academic programmes, but it should be implemented effectively. Content of teacher education programme lacks practical aspects. Learning-teaching methods are not advanced and implementation part of assessment procedure is not very well. (Laughing) In Nepalese context, every academic plan/project "comes like a tiger and goes like a jackal".

vi) Government attention on teacher education

Subject 1: Government is not paying proper attention on both teacher education and teaching profession. Government is not considering teachers as other government employees. There is vast difference between the prestige/profile of joint secretary and first class teacher although they have equal ranking. Secretary has power and he is policy maker, while teacher has no power and he is the implementer of the policy. Teacher's voice is not heard by policy makers. Only a part of satisfaction for teacher is that there is provision of promotion to first class, grade, pension, equal salary, study leaves (rarely) for career development.

Subject 2: At present, government is paying some attention in teacher education than past days. But infrastructures for the implementation of the teacher education programme are still not well developed.

Subject 3: Government is less concerned about teacher education programme.

Subject 4: Government sees teacher education as a low priority sector.

vii) Attraction towards teaching profession

Subject 1: Teachers of Nepal are enjoying salary equal to other government employees, but it is not sufficient for their livelihood. Because other facilities like provision of education for their children, house rent allowances and others are not provided to teachers. Teacher becomes only knowledge giver, but has no power and money. The concept "politics and

governance is everything and we must move around it" has made teachers think that they should carry political bags. This all leads teacher to assume that he/she cannot make progress by professional efforts and he/she should go with political powers. Due to this, teaching profession is less attractive in Nepal.

Subject 2: Due to lack of social prestige, appropriate national ranking, power and earnings, educated manpower is less attracted towards teaching profession in Nepal. To make teaching profession attractive, government should ensure to enroll high achievers in teacher education, and recruit people in teaching profession with excellent salary and other facilities.

Subject 3: Teaching profession in Nepal is less attractive. Educated manpower involve in teaching profession if they have no any other options for employment. Some of the teachers join teaching profession by force and leave the job when they get other opportunities. There is the provision of two times or one and a half times salary and more facilities for some of the employees of other government employment sectors and those employees also involve in corruption. These make the earnings of other employees significantly higher than that of teachers. Thus, comparatively less earning and social respect is making teaching profession less attractive.

Subject 4: In Nepal, high achievers do not say that they want to become a teacher. Teacher profession lies in last priority for them.

viii) Salary and other facilities of the schoolteachers

Although salary of teachers in Nepal is equal to other government employees, teacher education and teaching profession are the factors, which are directly related to quality of education and quality of education is again directly related to the progress of a nation. For quality education, high achievers and intelligent persons need to be involved in teacher education and teaching profession, but for that, the present salary is not enough. All the subjects are univocal on salary and other facilities. They said that salary and other facilities are considerably lower in teaching profession as compared to other professions.

ix) Social prestige and national protocol of schoolteachers

Subject 1: Social prestige is low in teaching profession and school teacher is not addressed in national protocol list of Nepal.

Subject 2: University teachers are properly addressed in national protocol list of Nepal, while schoolteachers are not. But it does not matter because schoolteachers get respect from their students. Status of social respect in teaching profession is definitely low, but schoolteachers themselves are also responsible to some extent for this.

Subject 3: Social prestige of school teacher is very low. Subject expressed his attitude towards the status of social respect of teacher by saying that, "I want my child to sell peanuts in a vending cart, rather than making him a school teacher." He continued that, "if 'A' graded student is ensured to enroll in teacher education, then definitely the quality of education will rise, but the question is that 'why should high achievers join teacher education?'. Draft of High Level National Education Commission 2019 recommended that teacher should be given 10% more salary than other government employees, but I say that at present high achievers will not join teacher education even if they are given 100% more salary."

Teacher is not included in national protocol. Professors are given appropriate rank, but they are not given formal respects. Teachers should be provided appropriate rank in national protocol and should be kept at top of all equivalent categories.

Subject 4: Teaching profession in Nepal has low social prestige. Other government employees equivalent to schoolteachers are kept in national protocol list, but teacher is excluded.

x) State of professional responsibility of teachers

Subject 1: Teachers are reluctant to their profession. They are less responsible. Teachers show themselves more as right holders and less as duty bearers. Teachers should evaluate themselves.

Subject 2: (Laughing) Teachers are not responsible for effective teaching-learning; they just focus on just completing their courses. Some teachers are not competent on related content and pedagogy. Primary teachers should be more qualified because he/she has to deal with children. Qualification of all basic level teachers must be B.Ed. and their salary should be equal whether they teach in nursery classes or grade 1 to 8.

Subject 3: Teacher works actively in beginning but due to lack of career development and other issues in teaching profession, he/she becomes less accountable towards duties. Some of

the teachers are indifferent to their professional duties. One of the major causes for making teacher less responsible to their duties is direct/indirect political interference on teaching profession. Involvement of some of the teachers in political/organizational activities negatively affects the teaching-learning. Teachers are also unnecessarily accused of being irresponsible by government and educators.

Subject 4: Teacher's mentality is only being an employee. They are not dedicated to their profession. Teachers themselves are also responsible for their low respect.

xi) Relation of education and national development

Subject 1: Education and national development are closely related to each other. In developed countries, driver of development is education, but in developing countries like Nepal, it is just opposite, that is 'development becomes driver of education'. Whole education system should be reviewed and revised to make it driver of change. Teacher is considered as change agent, but in Nepalese context, teacher could not be so. Expenditure on education is taken as long term investment for the nation and "investing in education is investing on teachers".

Subject 2: Lack of access on education in the past days (in Rana period) and lack of quality of education at present are responsible for low development of Nepal. Various educational plans are not implemented and goals of educational commissions are not fulfilled.

Subject 3: There are so many factors responsible for the development of the nation. In Nepalese context, education system/quality of education is one major factor but government/leaders have no vision that national/scientific development can only be made by quality education.

Subject 4: Education is very important for national development. Quality Education is the backbone of national development. Education of leaders is also responsible for national development. Vision and mission of the national development depends on education of the leaders as well.

xii) Factors responsible for quality of education

Subject 1: Appropriate curriculum, competent teachers, effective implementation of educational programme, investment in education and political will have direct influence on quality of education.

Subject 2: Outdated curriculum, incompetent teacher, lack of dedication of teachers and less attraction towards teaching profession are responsible for low quality education.

Subject 3: To raise the quality of education, teacher must be competent on content and technology.

Subject 4: Low achievers' enrollment in teacher education, reluctance of teachers to their duty, political interference and attitude of society and nation towards teaching profession are responsible for low quality of education.

xiii) Budget allocated in education

Subject 1: More budgets on education imply more quality education. Percent of budgetary allocation should be increased and allocated to research to make teacher knowledgeable.

Subject 2: Nepal is developing country, so the budget allocated to education is sufficient, but it is not utilized properly. Most of the budget is utilized in salary, while the budget is very less in other professional activities.

Subject 3: Budget in education is insufficient. Percent of budget allocated to education is decreasing gradually every year.

Subject 4: Budget allocated to education is not sufficient and available budget is mostly used in salary/provident fund of teachers. Neither can public schools collect fees from students due to constitutional provisions of free education, nor does government provide proper fund. Available budget is also not utilized properly.

After comprehensive review of literature related to teacher education in Nepal and obtaining information through interview, the researcher identified some strengths and weaknesses of teacher education in Nepal. As teacher education is directly related to teaching profession, some of these strengths and weaknesses are also based on teaching profession. Identified strengths and weaknesses are pointed out below:

4.2.1.1 Strengths of teacher education programme in Nepal

- i. Faculties of Education of various universities are running teacher education programmes, which has made easy access to teacher education.

- ii. Teacher education programme is related to largest employment area in Nepal, which makes it more attractive.
- iii. Salary in teaching profession is same as in other government services.
- iv. There is practice of semester system and letter grading assessment.
- v. There are opportunities of promotion, study leaves, grades, pension etc.
- vi. There is gradual practice of advanced pedagogy, learner-centered teaching method and use of multi-media.
- vii. Teacher education is the second largest area in terms of student enrollment after Management discipline.

4.2.1.2 Weaknesses of teacher education programme in Nepal

- i. Teacher education programme in Nepal is based on residual approach. Universities make expenditure on other programmes and finally residual budget is invested in teacher education programme.
- ii. It is unable to produce competent teachers.
- iii. There are no any universities/institutions, which only focus on teacher education.
- iv. Present teacher education programme is based on deficiency model. Most of the institutions are running integrated B. Ed. programme with simultaneous content and pedagogy, but they are lacking in both.
- v. Teacher education programme in Nepal is demand based, which mostly focuses on quantity not on quality.
- vi. Mushrooming of B. Ed. colleges has lowered quality of teacher education.
- vii. Frequent enrollment of low achievers in teacher education programme is disastrous for national development.
- viii. Pedagogical knowledge/skill given to pupil-teacher is not sufficient for real classroom teaching.
- ix. Poor enrollment criteria and weak implementation has adversely affected the status of teacher education.
- x. Teacher education is considered as the last option for career development.
- xi. Teachers are given low importance and less respect by the society.
- xii. Lack of opportunities for career development demotivates people to be teachers.
- xiii. Curriculum of teacher education programme is unable to include local and global context in balanced way.

- xiv. Curriculum is developed on the basis of competency and ease of professors/developers.
- xv. Curriculum is not periodically updated.
- xvi. There is lack of involvement of all the stakeholders in curriculum development process.
- xvii. Use of traditional assessment system is not reliable in present context.
- xviii. Teacher education lacks proper government attention.
- xix. There is lack of proper rank of teachers in national protocol.
- xx. Teachers are getting insufficient salary and earnings compared to other employees.

4.2.2 Strengths and weaknesses of teacher education programme in India

Information obtained through interview on various aspects of teacher education programme and teaching profession in India is given below:

i) Institutional provisions to provide teacher education programme

Subject 1: In India, teacher education/pre-service training is given by universities and there are other institutions for in-service training. Current institutional provisions for teacher education are appropriate, but some of the universities need to establish department of education to provide teacher education.

Subject 2: Current institutional provisions are good for teacher education, but these faculties/institutions need to be reformed for effective implementation of teacher education programme.

Subject 3: Current institutional provisions for teacher education are according to the regulation of NCTE. These institutions are sufficient and appropriate, and there is no need of other alternative institutions.

ii) Enrollment criteria in teacher education programme

Subject 1: There are no unanimous criteria for enrollment of teacher education in India. These criteria vary state wise. Enrollment criteria are poor and unable to restrict the selection of poor students in teacher education programme. Criteria for selection of teacher education should be research based. In a study (conducted by interviewee), it was found that success in

M.Ed. is based on scores of high school (10th) and graduation and does not depend on marks of B.Ed. B.Ed. marks are totally unreliable to predict success in M.Ed. At present, some of the private colleges call students individually to enroll in their college.

Subject 2: There is no similarity in enrollment criteria. Generally, candidates for teacher education are selected on the basis of written entrance test. Some of the universities conduct entrance test including 30-40% of test items based on aptitude, while some other institutes enroll students on the basis of scores/grades of their graduate programme.

Subject 3: Admission criteria are centralized and decided by the state government. Students get enrolled in teacher education programme through test and are selected on the basis of merit. As the students are selected on the basis of merit, these criteria are sufficient to select high achievers. Except written entrance test, there are no other enrollment criteria in Indian context like separate aptitude/attitude test, interview, and reference letter from teachers and statement of purpose. Teaching aptitude must be tested to make teacher education effective.

iii) Ability/aptitude/intelligence of students entering in teacher education programme

Subject 1: In India, generally low achievers are being enrolled in teacher education programme. Teacher education is considered as the last option after medical, engineering and other fields. High achievers (even females) do not give top priority to teacher education.

Subject 2: After 12th grade, high achievers either go to medical/engineering sector or want to join civil service. At present, attraction towards teacher education is low because there is no job security after completion of B.Ed. as before. Females are comparatively more attracted towards teacher education because teaching profession is taken as easy and safe for females. Around 80,000 students per year are passing B.Ed. only in Uttarakhand, while the number of vacancies for lecturer, Licentiate Teachers (LT) and primary teacher are merely 2000-3000 in 5 years. A huge mass, which can be good teacher, is not being attracted to teacher education because of uncertainty in the job. Students of remote/rural area are getting enrolled in teacher education because they have no other options. Thus, medium and low achievers are enrolling in teacher education programme.

Subject 3: Students with mixed ability, aptitude and intelligence are entering in teacher education.

iv) Curriculum development procedure of teacher education programme

Subject 1: In India, universities develop necessary curricula for their teacher education programme. There is also NCF, which suggest developing curriculum, but it is suggestive, not prescriptive. All the stakeholders are not involved in curriculum development procedure. Experts of universities/department develop the curriculum. Main problem in curriculum development is incompetency of board members/head of the departments. There are major mistakes and overlapping in the curriculum of teacher education programme.

Subject 2: Curriculum is developed by universities at central level. It is quite good, but the main problem is that even the teacher educators do not know how to perform activities mentioned in the curriculum and how to implement it effectively. Teacher educators and students are not involved in curriculum development process. Orientation and curriculum dissemination programmes are not conducted. However, curriculum includes local, national and international aspects.

Subject 3: Curriculum is developed by university/institution as per the guidance of NCTE keeping area needed in view. Curriculum development process is quite satisfactory and it can be further improved by incorporating advanced curriculum development practice. Curriculum of teacher education is based on local, national and international context, but it is more theoretical in nature.

v) Programme mode (annual/semester), objectives, content, pedagogy and assessment procedures of teacher education

Subject 1: Academically, semester system is definitely better than annual system, but there are so many problems in administrative part of semester system; teacher is overloaded as he/she has to teach, make tests, administrate them and continuously give feedback to the students. Semester system is not suitable for students who are unable to regularly attend classes. Objectives of teacher education are quite satisfactory. Course of study is lacking technological content. Both traditional and advanced pedagogy is used in classroom, but learning-teaching methods are widely affected by physical infrastructures and other equipment available in the institution.

Subject 2: Semester system is of course better than annual system if there is sufficient manpower and other physical infrastructures. In semester system, student and teacher both

are (especially teacher) overloaded. At present, India's most of the institutions are not appropriate for semester system. Objectives are good. Content was updated after 2015 and selected on the basis of international practice. Learning-teaching methods are generally traditional, but teacher is not only responsible for the use of traditional methods; there is also lack of facilities to use advanced methods.

Some of the aspects of assessment procedure are not suitable. Student teacher has to perform 4 to 5 months teaching practice, which is too long, and pupil does not do it sincerely. He/she can also choose school at his/her locality and get totally out of contact of teacher. There is strong possibility of misuse of this period by pupil-teacher. This practice is sufficient for one month on regular contact of supervisor. In current assessment system, the students having less than 60% are rarely found. Again in B.Ed., most of the students score 80%-90% within 2 years, but they fail in national/state eligibility test. This shows that assessment system of teacher education is not very much reliable.

Subject 3: Annual system is better for teacher education because pupil teacher gets sufficient time to go through various papers and practical works. Objectives of teacher education are based on cognitive, conative and affective domains of the personality of the child. But these should be modified to prepare the teachers equipped with various skills required as per our local/national requirement. Content is quite sufficient on the basis of national/international context. Pedagogy used in teacher education is latest and innovative, but should be used as per the requirement and capacity of the teachers. Assessment procedure should be according to learning and it should develop higher order thinking. Current assessment system of teacher education in India is not based on higher order thinking. It needs some improvement.

vi) Government attention on teacher education

Subject 1: Government is not paying proper attention in teacher education. There is no department of education in some universities. Education is given lowest priority by government.

Subject 2: Government has proper attention to select qualified teacher educators but physical infrastructure and other facilities are not in government priority.

Subject 3: Though Government of India is giving adequate attention to teacher education through NCTE, more attention is needed in research.

vii) Attraction towards teaching profession

Subject 1: Teaching profession is not considered as lucrative job. This profession is neither challenging, nor proper incentive is given. Neither talented male nor female prefer teaching profession. No one is coming in teaching by choice. (Laughing) Many of the teachers consider teaching as side job; they are either shopkeeper or agent of Life Insurance Company or others.

Subject 2: Attraction towards teaching during last 5 to 10 years is decreasing. At present, it is seen that females have comparatively more attraction towards teaching.

Subject 3: Teaching is respectable and attractive profession in India. It gives the peace of mind that anybody loves. Its stress free nature is considered as the most rewarding profession and gives teachers enough time to live a full life.

viii) Salary and other facilities of the schoolteachers

Subject 1: Salary of schoolteachers is comparatively less and there is low earning in teaching profession.

Subject 2: Salary is good either of government schoolteachers and degree college teachers but teachers/teacher educators at private institutes are provided very low salary.

Subject 3: Salary and other facilities given to schoolteachers are sufficient.

ix) Social prestige and national protocol of schoolteachers

Subject 1: Social prestige of schoolteachers in India is comparatively low and the teachers are not given appropriate rank in national protocol.

Subject 2: Social respect of teachers is still high in India but government does not give importance to teachers. This is clear by a current incident happened in India. A snake bit a person in quarantine at quarantine center (school) and the teacher who was engaged as supervisor was fired from his service. However, only teacher was not responsible for this incident, it was due to poor management, and administration (Gram Pradhan, Patawari and others) was responsible for it.

Subject 3: Teaching is respectable profession in India.

x) State of professional responsibility of teachers

Subject 1: Teachers are not fully dedicated to their profession. Only government should not be accused of giving low importance to teaching profession. One of the causes of weak social respect of teachers is lack of their professional responsibility.

Subject 2: Teachers of India are not highly dedicated to their jobs, but they are doing well. Schoolteachers are also frequently used in non-academic activities by the Government and this sort of engagement disturbs teachers to do their professional activities smoothly.

Subject 3: In India, highly talented manpower is not involved in teaching profession. Ability of schoolteachers is average but teachers are serious about their professional responsibility.

xi) Relation of education and national development

Subject 1: Education has an important role in national development but India is unable to pay adequate attention on quality of education.

Subject 2: One of the most important factors for national development is undoubtedly quality education. India was unable to do expected progress in the past few years but current education system includes science and technology sufficiently and India will do progress rapidly in coming years.

Subject 3: More efforts are needed to enhance the quality of education in India. Quality education is backbone for national development and still India is unable to make easy access to quality education.

xii) Factors responsible for quality of education

Subject 1: Lack of high achievers in teaching profession, professionally less dedicated teachers and low priority of government in education are the factors that cause low quality of education in India.

Subject 2: Enrollment of poor students in teacher education programme, insufficient budget allocated in education and lack of effective implementation of educational policies are causing low quality education.

Subject 3: Lack of passion for the profession is responsible for quality of education.

xiii) Budget allocated in education

Subject 1: In India, budget allocated for education is not sufficient.

Subject 2: Budget allocation in education is low. Generally, 6% of the Gross Domestic Product of the nation should be allocated for education but only 4% of the GDP has been allocated in education in fiscal year 2020/21.

Subject 3: Budgetary provisions for education in India are low, and it should be increased.

After in-depth review of literature related to teacher education in India and on obtaining information through semi-structured interview, the researcher identified some strengths and weaknesses of teacher education in India. As teacher education and teaching profession are affected by each other, some of these strengths and weaknesses are also based on teaching profession. Identified strengths and weaknesses of teacher education in India are mentioned below:

4.2.2.1 Strengths of teacher education programme in India

- i. Teacher education in India is well regulated and controlled by NCTE, a statutory body of the Government of India.
- ii. Curriculum is based on local, national and international context.
- iii. Updated curriculum is based on international practice.
- iv. Sufficiently long period is available for teaching practice.
- v. It provides comparatively safe profession to females.
- vi. Government awareness is found in the selection of qualified teacher educators.
- vii. Teaching is considered as prestigious profession.
- viii. It has sufficient pedagogical/professional content.

4.2.2.2 Weaknesses of teacher education programme in India

- i. Some of the universities lack department of education.
- ii. There is lack of national unanimous enrollment criteria in teacher education.
- iii. Enrollment criteria in teacher education are weak.
- iv. High achievers are less attracted to teacher education
- v. There is lack of job guarantee after completion of teacher education programme.
- vi. Teacher education is given low priority for career development.

- vii. There is lack of strict implementation of enrollment criteria.
- viii. Top-bottom approach is used for the development of curriculum.
- ix. Teacher education lacks orientation and curriculum dissemination programme.
- x. It consists of more theoretical curriculum.
- xi. Technological content is lacking in teacher education programme.
- xii. Physical infrastructures and equipments are insufficient to implement advanced pedagogy.
- xiii. Pupil and teachers are detached during practice teaching.
- xiv. Assessment system is less reliable, which is unable to represent the actual ability of the student.
- xv. Teacher education is not given adequate attention by the government.
- xvi. Teaching is considered as less lucrative profession; earning in teaching is comparatively low.
- xvii. Social prestige in teaching profession is comparatively lower.
- xviii. There is low attraction of highly talented manpower in teacher education programme.
- xix. Allocation of budget in education is insufficient.

In India and Nepal, attraction towards teacher education and teaching profession is low in comparison to other government professions. One of the causes for low attraction may be demand based approach in teacher education. High demand of teachers made the teaching profession less popular in Japan (Kimura and Iwata, 2007, p. 21). Another cause for low attraction in teaching profession (especially in the case of Nepal) is low salary and fewer earnings. Teachers' salaries in Japan are approximately 4% higher than civil servants (Yamaski, 2016, p. 27). The attractiveness of a teaching career is now decreasing due to weak salary compared to other occupations (Kim and Han, 2002, p. xi). Some of the countries like China (OECD, 2016, p. 21) have provisions for teachers' salaries based on performance. But in India and Nepal, teachers' salary is not based on their performance, teachers are provided equal salary on the basis of their level/rank.

4.3 Comparison of Academic Achievement of Students of Nepal and India Enrolling in Teacher Education Programme

To identify and compare the achievement level of students enrolling in teacher education (B. Ed.) programme, their scores/grades in grade 12 were collected by making a visit to the

selected institutions and related students. Proposed sample for analysis of achievement was 200 from India and 200 from Nepal. Researcher successfully collected the required sample from India but in the case of Nepal when researcher had collected the data from 50 subjects, government of Nepal set the lockdown from March 24, 2020 due to pandemic COVID-19 and the researcher was unable to collect the data from rest of the subjects.

In India, currently there is two-year B. Ed. programme based on pedagogical contents in most of the states/institutions but Nepal is practicing mostly four-years (it was three-years course before few years) integrated B. Ed. programme for a long time. Students in India can enroll in B. Ed. after graduate or post graduate but in Nepal, there is provision of enrolling in B. Ed. after completion of grade 12. To make uniformity in scores and make it more comparable, the researcher collected the achievement scores (percentages) of final examination of intermediate or 10+2 level.

4.3.1 Academic achievement of students of Nepal enrolling in teacher education programme

At present, there is assessment system based on letter grading in Nepal in school education. Researcher collected the grade point average (GPA) awarded to the students. As the assessment system in India is still in numerical grading system, GPAs of students were converted to their respective percentages to make it comparable. There is no any reliable method to convert GPAs to their actual raw scores or percentages. Letter grading in Nepal is based on four-point grading and each class interval generally consists of class difference of 10 except first class interval. Letter grade B is assigned to class interval 60 to below 70. Here, average of 60 and 70 (i.e., 65) is given for grade B and so on.

There are so many criteria or norms that can be developed to interpret the results. One of the important norms out of these is based on z-score norm, but to use this norm the data should be normally distributed. To construct z-score norm, 200 scores of subjects of both the countries were used. To analyze the data, its descriptive statistic was obtained (Table 4.18) by using SPSS version 21.

Table 4.18

Descriptive Statistics of Achievement Scores for Interpretation Criteria

		Statistic	Std. Error
Achievement scores	Mean	62.0455	.64562
	Median	61.2500	
	Variance	83.366	
	Std. Deviation	9.13051	
	Minimum	40.00	
	Maximum	87.80	
	Skewness	.321	.172
	Kurtosis	.044	.342

Normality of the distribution was assured by the values of skewness and kurtosis, and Kolmogorov-Smirnov test of normality (Table 4.19). All values showed that the data is normally distributed. As the data collected here was normally distributed, the z-score norm was developed to interpret the results.

Table 4.19

Test of Normality of Achievement Scores for Interpretation Criteria

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Achievement scores	.048	200	.200	.990	200	.170

To develop the z-score norms, z-scores of all 200 scores were calculated by using the following formula:

$$z\text{-score} = \frac{X - \bar{X}}{\sigma} \dots\dots\dots 4.1$$

Where, X = Achievement score of individual

\bar{X} = Mean of the achievement scores

σ = Standard deviation of achievement scores

Mean of the achievement scores is 62.045 and SD is 9.130. Highest and lowest z-scores were found +2.733 and -2.414 respectively.

Seven level interpretation criteria based on z-scores is presented in table 4.20.

Table 4.20

Interpretation Criteria for Achievement Scores

S. No.	Range of z-scores	Levels of interpretation
1	+1.997 and above	Extremely high achiever
2	+1.262 to below +1.997	Very high achiever
3	+0.526 to below +1.262	High achiever
4	-0.208 to below +0.526	Average achiever
5	-0.943 to below -0.208	Low achiever
6	-1.678 to below -0.943	Very low achiever
7	Below -1.678	Extremely low achiever

Academic achievement is defined as the degree of learning which a learner gained from instructions in a given area of academic programmes (i. e., achievement) is reflected by the extent to which skill and knowledge has been imparted to the learner (Crow and Crow as cited in Lawrence and Deepa, 2013). Students' GPA is used as one of the important criterion for admission in most of the teacher education programme (Mikotovics & Crehan, 2002; Riggs & Riggs, 1990, 1991).

In this study, academic achievement of the students was taken as the percentage of scores gained by students in intermediate or 10+2 level examinations. Collected achievement scores were converted into z-scores by using the mean 62.045 and SD 9.130. Gender-wise interpretation on the basis of levels of academic achievement is shown in table 4.21.

Table 4.21

Academic Achievement Levels of Students enrolling in teacher education program in Nepal

Respondents						Interpretation
Male		Female		Total		
Number	Percent	Number	Percent	Number	Percent	
0	0.00	0	0.00	0	0.00	Extremely high achiever
0	0.00	0	0.00	0	0.00	Very high achiever
0	0.00	2	6.90	2	4.00	High achiever
6	28.57	5	17.24	11	22.00	Average achiever
10	47.62	4	13.79	14	28.00	Low achiever
5	23.81	15	51.72	20	40.00	Very low achiever
0	0.00	3	10.35	3	6.00	Extremely low achiever
21	100	29	100	50	100	Total

Source: Field Survey 2019/20

Results show that there are no any extremely high achiever and very high achiever students enrolling in teacher education programme in Nepal. Percentage of high achievers enrolling in teacher education programme is 4%, average achievers is 22%, low achievers is 28%, very

low achievers is 40% and extremely low achievers is 6%. Most of the students (40%) enrolling in teacher education programme in Nepal are very low achievers. Only 4% students are high achievers and 96% students are either average achievers or low achievers. No any high achiever male student is seen enrolling in teacher education programme while 6.90% (out of female) high achiever female students are seen enrolling in teacher education programme. Similarly, no any extremely low achiever male student is enrolling in teacher education programme, but 10.35% extremely low achiever female students are enrolling in teacher education programme. This result shows that almost none of the high achiever students in Nepal are enrolling in teacher education programme.

4.3.2 Academic achievement of students of India enrolling in teacher education programme

To analyze the current trend of students enrolling in teacher education programme in India, achievement score of 200 students were collected from 9 departments/colleges of two universities of 5 districts in two states Uttarakhand and Uttar Pradesh. Scores are analyzed and interpreted on the basis of z-score norms presented in table 4.20. Number/percentage of students with their level of academic achievement is given in table 4.22.

Table 4.22

Academic Achievement Levels of Students Enrolling in Teacher Education Programme in India

Respondents						Interpretation
Male		Female		Total		
Number	Percent	Number	Percent	Number	Percent	
8	11.43	8	6.15	16	8.00	Extremely high achiever
12	17.14	24	18.46	36	18.00	Very high achiever
11	15.71	30	23.08	41	20.50	High achiever
21	30.00	29	22.31	50	25.00	Average achiever
16	22.86	28	21.54	44	22.00	Low achiever
2	2.86	9	6.92	11	5.50	Very low achiever
0	0.00	2	1.54	2	1.00	Extremely low achiever
70	100	130	100	200	100	Total

Source: Field Survey 2019/20

In Indian context, 16% extremely high achiever students are enrolling in teacher education programme. This percentage is 18% for very high achiever, 20% for high achiever, 25% for average achiever, 22% for low achiever, 5.5% for very low achiever and 1% for extremely

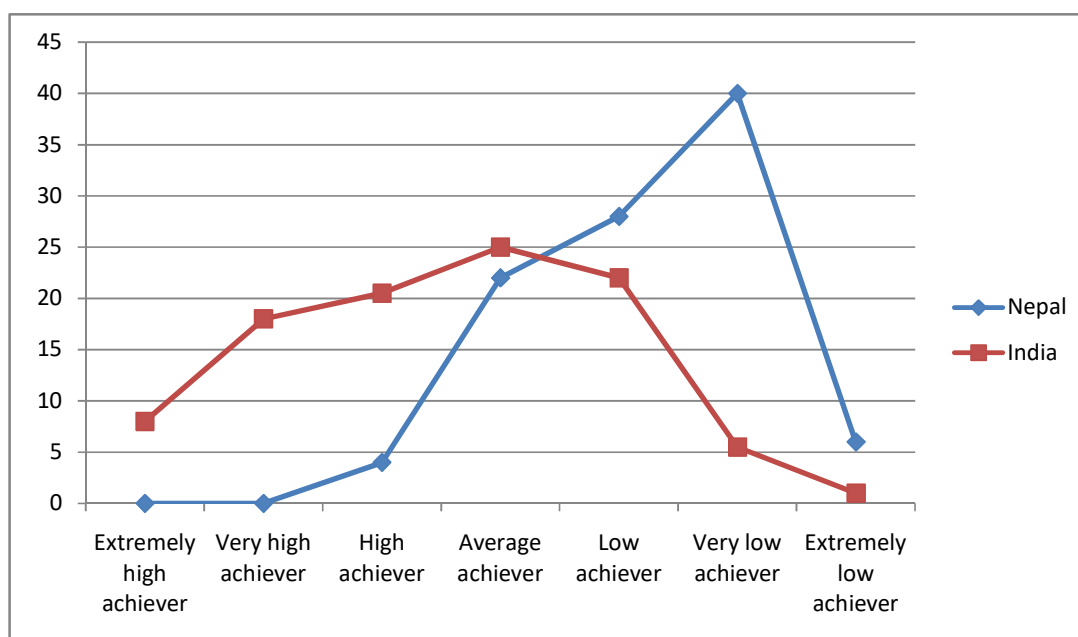
low achievers. If we classify this result in three categories high, average and low; 46.50% high achiever students, 25% average achievers and 28.5% low achiever students are enrolling in teacher education programme. Percentage of extremely high achiever male students (11.43%) is higher than percentage of extremely low achiever female (6.15%). Percentage enrollment of low achiever male and female students is almost equal. None of the extremely low achiever male students is enrolling in teacher education programme.

4.3.3 Comparison of academic achievement of students of teacher education programme in Nepal and India

Levels of academic achievement of students of Nepal and India enrolling in teacher education programme are given in tables 4.21 and 4.22. From these tables, it is clear that academic achievement of students of India enrolling in teacher education programme is higher than students of Nepal enrolling in teacher education programme. Academic achievement level wise number of students of Nepal and India enrolling in teacher education programme are presented in figure 4.1.

Figure 4.1

Achievement Level Wise Percentage of Students of Nepal and India Enrolling in Teacher Education Programme



There are no extremely high achiever and very high achiever Nepalese students enrolling in teacher education programme while in India, 8% extremely high achiever and 18% very high achiever students are enrolling in teacher education programme. Only 4% high achievers are enrolling in teacher education in Nepal but this percentage is 20.50% in India. Percentage of average achievers in India is slightly above and low achievers is slightly below than that of Nepal. However, there is vast difference between the percentage of very low achievers in Nepal and India. In Nepal, 40% very low achievers are enrolling in teacher education, but in Indian context, this percentage is 5.50% only. Similarly, percentage of extremely low achiever students enrolling in teacher education programme in Nepal is higher than in India.

Tables 4.21, 4.22 and figure 4.1 are clearly showing the achievement level of students enrolling in teacher education in India is higher than the achievement level of students of Nepal. However, t-test was used to check the significance of difference between mean achievement scores. Following null hypothesis was formulated to test this significance:

H₀: There is no significant difference between the mean achievement scores of students of teacher education programme of Nepal and India.

In this study, there is one independent variable (country) having two groups (Nepal and India) and one dependent variable (achievement) so independent t-test is suitable to test significance of differences. Again, there are following assumptions of independent t-test, which should be fulfilled to use this test (Tyagi, 2019 b, pp. 2-3).

- i) Random sampling
- ii) Independence of groups
- iii) Interval scale variable
- iv) Normality of dependent variable on both levels of independent variables
- v) Equality of variances of scores of both groups
- vi) Appropriate sample size (not too small)

There are two independent groups of students: one from Nepal and the other from India. Selection of students from one country is not affected by selection of students from the other country. Students for this study were selected by random sampling. Again, these are achievement scores and lie under interval scale. To test the normality of the scores, concepts of skewness, kurtosis and test of normality can be used from tables 4.23 and 4.24.

Table 4.23*Descriptive Statistics of Achievement Scores of Students of Nepal and India*

	Country		Statistic	Std. Error
Achievement scores	Nepal	Mean	55.1396	.87923
		Median	54.8750	
		Variance	38.652	
		Std. Deviation	6.21707	
		Minimum	43.60	
		Maximum	73.00	
		Skewness	.520	.337
	Kurtosis	.147	.662	
	India	Mean	66.6605	.70151
		Median	65.2550	
		Variance	98.424	
		Std. Deviation	9.92090	
		Minimum	40.00	
		Maximum	92.20	
Skewness		.203	.172	
Kurtosis	-.193	.342		

For achievement scores of students of Nepal, value of skewness and kurtosis are 0.520 and 0.147, which indicate the slight positive skewness and platykurtic nature of the scores. We can check the normality of the scores by inspection of skewness, kurtosis and their respective standard errors. If the absolute values of skewness and kurtosis of scores are less than two (1.96) times of their respective standard errors then distribution can be taken as normally distributed (Field, 2016). From table 4.23, it is clear that the absolute values of skewness and kurtosis of achievement scores of Nepal and India are less than twice the values of their respective standard errors, which show that the achievement scores of students of Nepal and India enrolling in teacher education programme are normally distributed.

Table 4.24*Test of Normality of Achievement Scores*

	country	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Achievement scores	Nepal	.084	50	.200	.974	50	.349
	India	.061	200	.064	.988	200	.082

Normality of the scores can also be checked by Kolmogorov-Smirnov test and Shapiro-Wilk test. If the sample size is less than 50, Shapiro-Wilk test is used and if it is equal or more than 50, Kolmogorov-Smirnov test is used. In this study, sample size for Nepal is 50 and it is 200

for India, so Kolmogorov-Smirnov test was used to check the normality of the scores. Results of normality test are given in the table 4.24.

Here for achievement scores of students of Nepal, test statistic is 0.084 for df 50 while value of significance is 0.200. Similarly, for students of India, test statistic is 0.061 for df 200 and value of significance is 0.064. As the p-values in either cases are greater than 0.05, the difference is not significant. That is to say, the null hypothesis for normality "The distribution of given scores is not significantly different than normal distribution" is accepted. Thus, given distributions are normal.

Another assumption for independent t-test is homogeneity of variances. Homogeneity can be checked by inspection and statistical test. If larger of the variances is less than 4 times of smaller variance, then both the distributions are supposed to have statistically equal variances (Tyagi, 2019 b, p. 3). Here, variance (98.424) of scores of Indian students is $98.424/38.652 = 2.546$ times of variance (38.652) of scores of Nepalese students. Since this value is less than 4, the assumption of equal variances or homogeneity of variances is supposed to be satisfied.

Appropriateness of sample size is also one of the assumptions for t-test. Sample size should not be too small. Number of subjects should not be less than 15-20 in either of the groups (Tyagi, 2019 b, p. 3). In this test, number of students of Nepal and India are 50 and 200 respectively. Although inspection of variances of scores of both groups indicated the equal variances of both distributions, Levene's test is showing that the variances of achievement scores is not equal (Table 4.25).

Table 4.25

Levene's Test for Equality of Variances of Achievement Scores

		Levene's Test for Equality of Variances				
		F	Sig.	t	df	Sig. (2-tailed)
Achievement scores	Equal variances assumed	12.631	.000	-7.829	248	.000
	Equal variances not assumed			-10.243	119.337	.000

From table 4.25, Levene's test statistic is 12.631 for df 248 and p-value is 0.000 which is less than 0.01 indicating that the difference is significant at 0.01 level of significance. Thus, the null hypothesis for equality of variances "There is no significant difference between the

variances of achievement scores of students of Nepal and India" rejected at 0.01 level of significance and assumption of equal variances is not satisfied. Generally, assumptions of normality of distributions and homogeneity of variances should be satisfied to apply t-test. This test can be used in spite of violation of homogeneity of variances with some corrections in t-value, df and p-value. But, if sample size and variances of both groups are unequal then p-value is not reliable and this may cause invalid conclusions. In this case, sample size should be made equal by random selection of scores from larger group (Tyagi, 2019 b, p. 6).

In this case, there is significant difference between sample size of both groups, and variances are not equal, so researcher randomly selected the 50 scores out of 200 by using the following SPSS path:

*Data → Select Cases → Select the variable **country** in the left pane of the dialogue box → Select 'Random sample of cases' → Click sample → Click 'exactly' → Enter 50 cases out of first 200 cases → Continue → Click 'Delete unselected cases' → Ok*

Descriptive statistics obtained after equalizing the sample size is given in the table 4.26.

Table 4.26

Descriptive Statistics of Achievement Scores after Equalizing Sample Size

		country	Statistic	Std. Error
Achievement scores	Nepal	Mean	55.1396	.87923
		Median	54.8750	
		Variance	38.652	
		Std. Deviation	6.21707	
		Minimum	43.60	
		Maximum	73.00	
		Skewness	.520	.337
	Kurtosis	.147	.662	
	India	Mean	66.9386	1.40011
		Median	65.5000	
		Variance	98.015	
		Std. Deviation	9.90026	
		Minimum	47.25	
		Maximum	88.80	
Skewness		.487	.337	
Kurtosis	-.241	.662		

Mean, variance and SD of achievement scores of students of India for sample size 50 (table 4.26) are almost equal to mean, variance and SD of original scores given in table 4.23. Absolute values of skewness and kurtosis for 50 scores are still less than twice the values of their respective standard errors.

Table 4.27

Test of Normality of Achievement Scores after Equalizing Sample Size

	country	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Achievement scores	Nepal	.084	50	.200*	.974	50	.349
	India	.106	50	.200*	.962	50	.105

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

After equalizing the sample size, test statistic and p-value for df 50 for the achievement scores of students of India show that the distribution is still normally distributed (table 4.27). Thus, after checking all the assumptions t-test was applied to test the significance of differences of mean achievement scores of students of Nepal and India enrolling in teacher education programme and results are presented in table 4.28.

Table 4.28

Independent Samples t-test for Achievement Scores

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Achievement scores	Equal variances assumed	10.582	.002	-7.137	98	.000	-11.799	1.653
	Equal variances not assumed			-7.137	82.44	.000	-11.799	1.653

Here, Leven's test statistic is 10.582 and p-value is 0.002 which is less than 0.01, and indicates that the result is significant at $\alpha = 1\%$. Hence, the null hypothesis for variances "There is no significant difference between the variances of both distributions" is rejected at A Comparative Study of Teacher Education and Teaching Profession in Nepal and India

significance level 0.01. This rejection of null hypothesis implies that the assumption of homogeneity of variances is violated, that is variances of both distributions are not equal.

In this situation, to interpret the results of t-test, we use the values, which are given for "Equal variances not assumed". Value of t is -7.137 with df 82.445 and value of significance (2-tailed) is 0.000 which is less than 0.01, and indicates that the difference is significant. Thus, the null hypothesis "There is no significant difference between the mean achievement scores of students of teacher education programme of Nepal and India" is rejected. Again, negative value of t shows that mean achievement score of students of India enrolling in teacher education programme is significantly higher than the mean achievement score of students of Nepal.

Effect size of test statistic: Effect size is a statistical technique, which describes the importance of significance/non-significance of differences. Significance of differences does not always mean it is important also. Importance or effect of significance is described by effect size. Three types of effect size Cohen 'd', Glass ' Δ ' and Hedge's 'g' are used for independent t-test. Cohen 'd' is used for equal samples and equal variances; Glass ' Δ ' is used for equal samples and unequal variances, and Hedge's 'g' is used if samples are unequal, but variances are equal (Tyagi, 2019 c, p. 9). In this case, samples are equal but variances are not equal so Glass ' Δ ' is suitable to find the effect size of the t-test. Formula for Glass delta is given below:

$$\text{Glass } \Delta' = (M_1 - M_2)/\sigma_c \quad \dots\dots\dots 4.2$$

Where, M_1 = Mean of scores of first group

M_2 = Mean of scores of second group

σ_c = SD of control group

However, in this study, groups are not formed on the basis of treatment and control so value of SD of either of the groups can be used in place of σ_c and we get two types measure of Glass ' Δ '.

From table 4.26, $M_1 = 55.139$

$M_2 = 66.938$

For students of Nepal,

$\sigma_c = 6.217$

Therefore,

$$\Delta_1 = (55.139 - 66.938)/6.217 = -1.897$$

For students of India,

$$\sigma_c = 9.900$$

Now,

$$\Delta_2 = (55.139 - 66.938)/9.900 = -1.191$$

Value of effect size for t-test is interpreted as below (Cohen, 1988):

Table 4.29

Interpretation of Effect Size

S. No.	Absolute value of Cohen 'd'	Interpretation
1	0.0 to 0.2	Negligible effect
2	0.2 to 0.5	Low effect
3	0.5 to 0.8	Average effect
4	0.8 to 1.2	High effect
5	1.2 and above	Very high effect

Interpretation criteria given in table 4.29 can be used to interpret all types of effect size for independent t-test. Since absolute value of Δ_1 is greater than 1.2 and absolute value of Δ_2 is very near to 1.2, effect of country on achievement is very high.

4.4 Comparison of Intelligence of Students of Nepal and India Enrolling in Teacher Education Programme

There is no unanimous opinion on the definition of intelligence but intelligence is taken as the indicator of performing the task superiorly. According to Freeman (1955, pp. 60-61), intelligence is "adjustment of adaptation of the individual to his total environment", "the ability to learn" and "the ability to carry on abstract thinking". Teacher education is a programme to produce qualified teachers, so the students enrolling in teacher education programme should be intelligent so that they can well adjust in school/educational environment and impart quality education after getting recruited as teachers.

The researcher visited all the selected departments/colleges and administered the intelligence test by taking consent of related authorities. All the instructions given in the manual of the test were carefully followed. After the administration of intelligence test, answer sheets were collected and scored carefully using the scoring stencil provided with GGTI. A maximum mark of this test was 135 out of which 9 marks were allocated for the sub-test *Following Directions*. This sub-test was additional warm up test and according to the instruction given in the manual of GGTI, marks obtained by students in this sub-test were not included in their total scores.

GGTI is constructed by including test items based on contents of general school subjects like vocabulary, arithmetic reasoning, classification, analogies, comprehension, series and best answers. These items are free from geographical, cultural and other factors so researcher selected this test to collect the intelligence of students of teacher education programme in Indo-Nepalese context. Wide age range is covered by this test. Test is designed for persons aging from 13 to 17+ years. This test covers the age of all students of Nepal and India enrolling in teacher education programme.

GGTI manual provides guidelines for interpretation of intelligence scores on the basis of Deviation Intelligence Quotients (DIQs). Intelligence levels are classified by using the terminologies like *Borderline Defective*, *Mentally Defective*, etc. that are not suitable to use for students enrolling in teacher education programme. Again, in this study, interpretation criteria developed for other tests are based on z-score norms so researcher developed the fresh criteria for interpretation of results of this test based on z-scores to make uniformity in all tests. Intelligence scores of 200 students from Nepal and India were used to construct z-score norms. Descriptive statistics is presented in table 4.30.

Table 4.30

Descriptive Statistics of Intelligence Scores for Interpretation Criteria

		Statistic	Std. Error
Intelligence scores	Mean	60.7900	1.32437
	Median	61.0000	
	Variance	350.790	
	Std. Deviation	18.72938	
	Minimum	15.00	
	Maximum	106.00	
	Skewness	-.038	.172
	Kurtosis	-.331	.342

Absolute values of skewness and kurtosis are less than twice the values of their respective standard errors, which indicate that the distribution of intelligence scores is normal. Again, Kolmogorov-Smirnov test of normality (table 4.31) is also showing that distribution is normally distributed.

Table 4.31*Test of Normality of Intelligence Scores for Interpretation Criteria*

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Intelligence scores	.050	200	.200*	.989	200	.145

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Value of statistic of this test is 0.050 with df 200 and p-value is 0.200 (table 4.31). Value of significance is greater than 0.05 and indicates that the result is not significant. Thus, all the results show that intelligence scores used for interpretation criteria are normally distributed.

After assuring the normal distribution of intelligence scores, z-scores for all raw scores were computed by using mean 60.790 and SD 18.729 (table 4.30). Seven level interpretation criteria was developed (table 4.32) by using highest z-score +2.414 and lowest z-score -2.444.

Table 4.32*Interpretation Criteria for Intelligence Scores*

S. No.	Range of z-scores	Levels of interpretation
1	+1.720 and above	Extremely high intelligent
2	+1.026 to below +1.720	Very high intelligent
3	+0.332 to below +1.026	High intelligent
4	-0.362 to below +0.332	Average intelligent
5	-1.056 to below -0.362	Low intelligent
6	-1.750 to below -1.056	Very low intelligent
7	Below -1.750	Extremely low intelligent

4.4.1 Intelligence of students of Nepal enrolling in teacher education programme

Proposed sample size to collect intelligence scores from Nepal was 200 from 8 departments/colleges of two universities but, Government of Nepal set the lockdown due to epidemic COVID-19 from March 24, 2020. The researcher could not administer this test online because of its design and nature of test items, and unavailability of the Internet access and other facilities to the students. Due to these reasons, the researcher collected data from only 50 subjects. Number and percentage of students enrolling in teacher education programme with their intelligence level is presented in the table 4.33.

Table 4.33

Intelligence Levels of Students Enrolling in Teacher Education Program in Nepal

Respondents						Interpretation
Male		Female		Total		
Number	Percent	Number	Percent	Number	Percent	
0	0.00	1	3.45	1	2.00	Extremely high intelligent
0	0.00	0	0.00	0	0.00	Very high intelligent
2	9.52	1	3.45	3	6.00	High intelligent
7	33.33	4	13.79	11	22.00	Average intelligent
7	33.33	3	10.34	10	20.00	Low intelligent
4	19.05	14	48.28	18	36.00	Very low intelligent
1	4.76	6	20.69	7	14.00	Extremely low intelligent
21	100	29	100	50	100	Total

Source: Field Survey 2019/20

From table 4.33, only 2% extremely high intelligent students are enrolling in teacher education programme. There are no very high intelligent students, while 6% high intelligent are enrolling in teacher education. Most of the students (36%) enrolling in teacher education in Nepal fall under the category of very low intelligent. Similarly, percentage of extremely low intelligent students is 14%. This result also shows that only 8% students above average intelligent are enrolling in B. Ed. programme while 92% students enrolling in B. Ed. are either average or below average intelligent. Percentage of male students above average intelligent is 9.52% and this percent for female students is 6.90%. Similarly, 57.14% male students and 79.31% female students, below average intelligent are enrolling in teacher education programme. Result is indicating that negligible percentage of high intelligent students is enrolling in teacher education programme in Nepal.

4.4.2 Intelligence of students of India enrolling in teacher education programme

To identify and compare the intelligence level of students of India enrolling in teacher education programme, 200 students were selected from 9 departments/colleges of two universities of 5 districts in two states Uttarakhand and Uttar Pradesh. Intelligence scores are categorized on the basis of z-score norms (table 4.32), and number and percentage of students with their intelligence level are presented in table 4.34.

Table 4.34*Intelligence Levels of Students Enrolling in Teacher Education Program in India*

Respondents						Interpretation
Male		Female		Total		
Number	Percent	Number	Percent	Number	Percent	
8	11.43	9	6.92	17	8.50	Extremely high intelligent
13	18.57	20	15.38	33	16.50	Very high intelligent
14	20.00	21	16.15	35	17.50	High intelligent
22	31.43	40	30.77	62	31.00	Average intelligent
11	15.71	15	11.54	26	13.00	Low intelligent
2	2.86	16	12.31	18	9.00	Very low intelligent
0	0.00	9	6.92	9	4.50	Extremely low intelligent
70	100	130	100	200	100	Total

Source: Field Survey 2019/20

In India, most of the students (31%) enrolling in teacher education programme fall under the category of average intelligent (table 4.34). Percentage of extremely high intelligent students enrolling in teacher education is 8.50%, and 4.50% extremely low intelligent students are enrolling in this programme. More than half (57.50%) of the students having either average or below average intelligence are enrolling in teacher education program. However, percentage of above average intelligent students (42.50%) is higher than percentage of below average students (26.50%). Comparatively, the percentage of extremely high intelligent, very high intelligent and high intelligent male students is more than that of female students enrolling in teacher education programme. Greater percentage of very low intelligent and extremely low intelligent female students is enrolling in teacher education than male students.

4.4.3 Comparison of intelligence of students of teacher education programme in Nepal and India

Table 4.33 and 4.34 are clearly indicating the intelligence levels of students enrolling in teacher education programme in Nepal and India. These tables show that in comparison to Nepal, intelligent students enrolling in teacher education in India are more in percentage. To make it more comparable and clear, results are presented in figure 4.2.

Figure 4.2

Intelligence Level Wise Percentage of Students of Nepal and India Enrolling in Teacher Education Programme

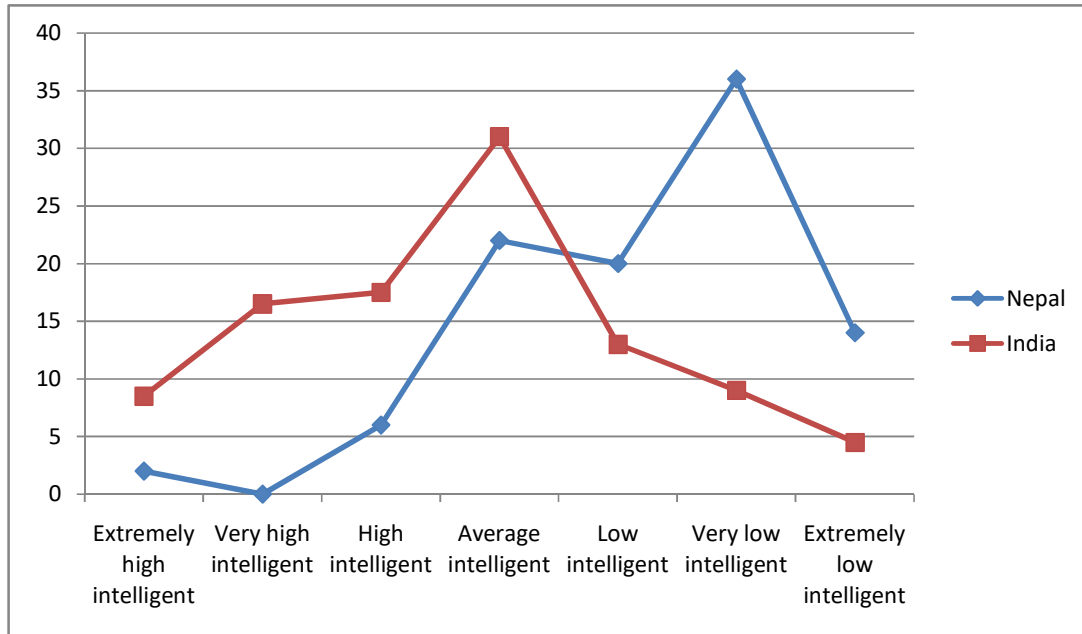


Figure 4.2 shows that only 2% extremely high intelligent and no very high intelligent students are enrolling in teacher education programme in Nepal. These percentages are 8.50% and 16.50% respectively for Indian students. Percentage of high intelligent students in India is significantly higher than in Nepal. More average intelligent and less low intelligent students in India are enrolling in teacher education than in Nepal. However, in comparison to India, large numbers of very low intelligent and extremely low intelligent students in Nepal are found enrolling in teacher education programme.

All these results are clearly showing that there is difference between the intelligence level of students enrolling in teacher education in Nepal and India. Again, to check whether this difference is significant or not, a null hypothesis was formulated and t-test was used to test this hypothesis.

H₀: There is no significant difference between the mean intelligence scores of students of teacher education programmes of Nepal and India.

Effect of age on intelligence: In India, most of the institutions of education are currently running two-year B. Ed. programmes in which students get enrolled after their under

graduation or post graduation. On the other hand, at present, four-year integrated B. Ed. is in practice in Nepal and interested students can join the B. Ed. programme after completion of grade 12 or other equivalent academic programmes. Due to this difference in the nature of B. Ed. programmes in Nepal and India, there is a slight difference between the age groups of students enrolling in B. Ed. in Nepal and India. Students enrolling in B. Ed. in Nepal were found to have their age between 17 to 23 years and centered around 18 to 20 years while this age group in India ranges from 19 to 38 years and most of them centered around 21 to 26 years.

According to developmental psychology, about 90% of development of brain (intelligence capacity) takes place during early childhood (2-6 years) and rest is completed during adolescent period (13-18 years). Intelligence test used in this study is designed for age group 13 to 17+ so it is suitable to all the B. Ed. students of Nepal and India. However, before checking the assumptions and applying the t-test, researcher had analyzed the effect of age on intelligence using Pearson correlation. MS Excel results of Pearson's r are presented in the table 4.35.

Table 4.35

Correlation between Age and Intelligence Scores

Country	Sample size	Pearson r	Critical values of Pearson r for significance level 0.05
Nepal	50	-0.269	0.279
India	200	0.095	0.139
Both	250	0.273	0.124

In table 4.35, country-wise coefficients of correlation between age and intelligence scores, and critical values of Pearson r for significance level 0.05 on the basis of sample size (not on the basis of df) are given. Here, absolute values of Pearson r for students of Nepal and India (0.269 and 0.095) are less than their respective critical values at significance level 0.05. This indicates that the linear correlations between age and intelligence scores of either of the countries are not significant. Again, correlation coefficient of age of students of both countries and their combined intelligence scores (0.273) is greater than critical value 0.124. This result shows that age has positive correlation on intelligence and intelligence is affected by age of the person. Nevertheless, here in the case of both countries, actually this positive correlation is not due to the difference in the age; this correlation is the impact of country. In this study, age has no effect on intelligence and this can be seen in the cases of India and Nepal separately.

In this test, there is one independent variable (country) with two categories (Nepal and India) and one dependent variable (intelligence) so independent t-test can be used. Assumptions like random sampling, independence of the groups, interval scale variable and appropriateness of the size are already fulfilled. To check the normality and homogeneity, descriptive statistics was inspected, and normality test and homogeneity test were applied using SPSS.

Table 4.36

Descriptive Statistics of Intelligence Scores of Students of Nepal and India

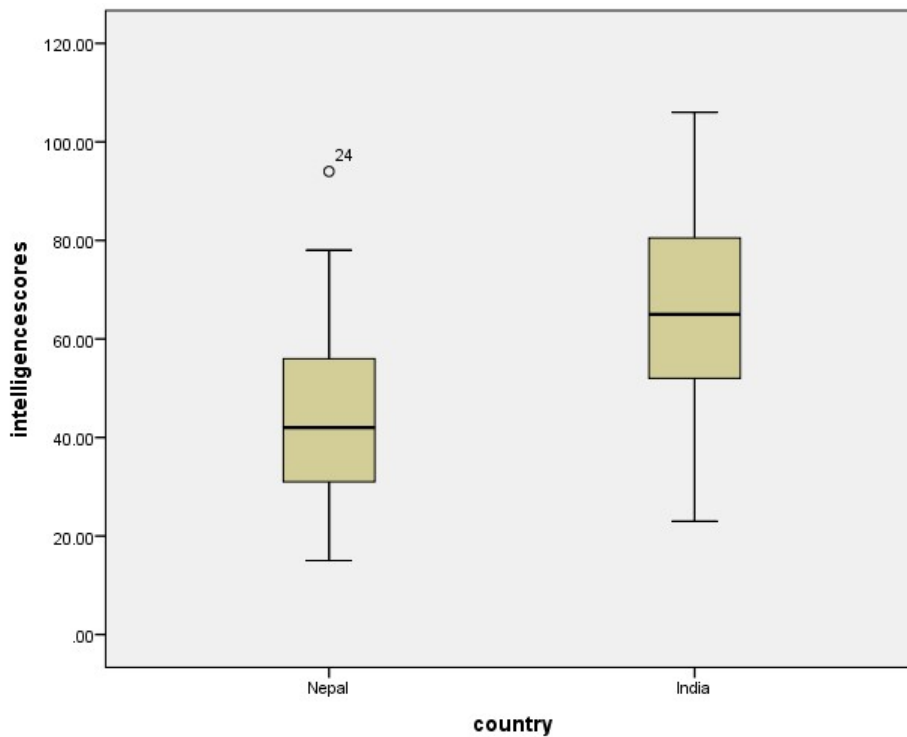
	Country	Statistic	Std. Error	
Intelligence scores	Nepal	Mean	44.3400	2.30927
		Median	42.0000	
		Variance	266.637	
		Std. Deviation	16.32903	
		Minimum	15.00	
		Maximum	94.00	
		Skewness	.624	
	Kurtosis	.378	.662	
	India	Mean	64.9400	1.39408
		Median	65.0000	
		Variance	388.690	
		Std. Deviation	19.71522	
		Minimum	23.00	
		Maximum	106.00	
Skewness		-.111	.172	
Kurtosis	-.612	.342		

Values of skewness and kurtosis of intelligence scores of students of Nepal are 0.624 and 0.378 respectively (table 4.36). These values indicate the positively skewed and leptokurtic nature of the distribution. However, their absolute values are less than twice the values of their respective standard errors, which indicate that the distribution is normal. Similarly, values of skewness and kurtosis of intelligence scores of students of India are -0.111 and -0.612 respectively. These values show that the distribution is negatively skewed and platykurtic in nature. But, absolute values of skewness and kurtosis are less than double of their standard errors, which indicate that the distribution is normal.

There were no outliers found in the box plot (figure 4.3) for intelligence scores of students of India, but there is an outlier in the order 24 (score 94) in the scores of students of Nepal lying outside of the higher scores. This single outlier did not violate the normality of scores, so this outlier was not eliminated.

Figure 4.3

Box Plot for Intelligence Scores of Students of Nepal and India



Results of test of normality are presented in table 4.37.

Table 4.37

Test of Normality of Intelligence Scores

	country	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Intelligence scores	Nepal	.111	50	.169	.963	50	.124
	India	.048	200	.200*	.984	200	.022

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

From table 4.37, test statistic for Kolmogorov-Smirnov test of normality for students of Nepal is 0.111 for df 50 and value of significance is 0.169. Again, test statistic and value of significance for students of India are 0.048 for df 200 and 0.200 respectively. In both cases, p-values are greater than 0.05 so the differences are not significant. The null hypothesis for normality "The distribution of given scores is not significantly different than normal distribution" is not rejected for both distributions. Hence, intelligence scores of students of Nepal and India are normally distributed.

Variances of intelligence scores of students of Nepal and India are 266.637 and 388.690 respectively (table 4.36). Here, $388.690/266.637 = 1.457$. Thus, variance of scores of students of India is 1.457 times (less than four times) the variance of scores of students of Nepal. This shows that the variances of both distributions are not statistically different. Again, value of Levene's test statistic is $F = 1.692$ and value of significance is $p = 0.195$ (table 4.38) which is greater than 0.05 and it indicates that the difference is not significant. Thus, the null hypothesis for equality of variances "There is no significant difference between the variances of intelligence scores of students of Nepal and India" is not rejected. Hence, the assumption of equal variances is satisfied.

Table 4.38*Independent Samples t-test for Intelligence Scores*

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Intelligence scores	Equal variances assumed	1.692	.195	-6.823	248	.000	-20.60000	3.01900
	Equal variances not assumed			-7.637	88.334	.000	-20.60000	2.69744

Despite the unequal sample size, assumption of homogeneity of variances is satisfied, so we need not to equalize the sample size like in the case of achievement scores and hence, t-test was applied to the scores of original sample size. Results of t-test are presented in the table 4.38. Value of t (for equal variances assumed) is -6.823 with df 248 and significance value (2-tailed) is $0.000 < 0.01$. This result indicates that the difference is significant at 0.01 level of significance and rejects the null hypothesis "There is no significant difference between the mean intelligence scores of students of teacher education programme in Nepal and India". Thus, there is significant difference between the mean intelligence scores of students of Nepal and India enrolling in teacher education programme. Again, negative value of t is showing that the mean intelligence score of students of India is significantly higher than the mean intelligence score of students of Nepal.

Effect size of test statistic: This is the case of unequal sample size (one of the sample sizes is thrice of the other) but equal variances, so Hedge's 'g' was used to compute the effect size using the following formula:

$$\text{Hedge's 'g'} = \frac{M_1 - M_2}{\sqrt{MSS_{\text{within}}}} \dots\dots\dots 4.3$$

Where, M_1 = Mean of scores of first group

M_2 = Mean of scores of second group

MSS_{within} = Mean of sum of squares within group obtained from one-way ANOVA

Value of MSS_{within} can be obtained by using following SPSS path:

Analyze → *Compare means* → *One way ANOVA* → *Shift **intelligence** in Dependent List and **country** in Factor* → *Ok*

SPSS results for one-way ANOVA are given in the table 4.39

Table 4.39
ANOVA Results for Intelligence Scores

		Intelligence			
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16974.400	1	16974.400	46.559	.000
Within Groups	90414.500	248	364.575		
Total	107388.900	249			

Now, from tables 4.36 and 4.39

$$M_1 = 44.340$$

$$M_2 = 64.940$$

$$MSS_{\text{within}} = 364.575$$

Putting these values in formula 4.3,

$$\begin{aligned} \text{Hedge's 'g'} &= (44.340 - 64.940)/\sqrt{364.575} \\ &= -20.60/19.09 \\ &= -1.08 \end{aligned}$$

Absolute value of Hedge's 'g' is lying between 0.8 and 1.2 so there is high effect of country on intelligence of students enrolling in teacher education programme.

4.5 Comparison of Attitudes of Teachers towards Teaching Profession in Nepal and India

For effective teaching and quality education, teachers must have positive attitude towards their profession. Attitude creates a directive or dynamic influence upon the individual's response to all the objects and situation with which it is related (Allport, 1935). In the teaching profession, attitude is an important factor because the activeness and passion of the teachers in teaching depend upon their attitude towards profession. Researcher collected sample of 200 government schoolteachers from each country to identify the attitude towards teaching profession and hence made a country wise comparison.

To measure the attitude of schoolteachers of Nepal and India, the researcher himself developed a Likert type 5-point attitude scale on the sample of 374 from Nepal and India (section 3.6.3). This scale constitutes 32 items out of which 19 are positive and 13 are negative statements. Interpretation criteria were developed on the basis of z-score norms and percentile norms (tables 3.8 and 3.9) but for uniformity, z-score norms were used in this study.

For India, the researcher collected all required data by visiting the selected government schools of five districts of Uttarakhand and Uttar Pradesh. But in the case of Nepal, researcher visited four districts of Sudurpashchim Pradesh and Bagmati Pradesh of Nepal, and required information was collected from 25 subjects of Dadeldhura district of Sudurpashchim Pradesh via email and telephone due to pandemic COVID-19.

4.5.1 Attitude of schoolteachers of Nepal towards teaching profession

After collection of filled attitude scales, the researcher scored all the response sheets carefully, converted raw scores in to z-scores on the basis of mean (99.302) and SD (15.984) obtained in standardization process (table 3.4). Number and percentage of students lying on various level of attitude are presented in the table 4.40. From table 4.40, negligible (0.50%) government schoolteachers are extremely favorable to their profession. Most of the teachers are either neutral (33.50%) or unfavorable (33.50%) to teaching profession. Ten percent teachers are highly unfavorable and 2.50% teachers are extremely unfavorable to teaching profession. Only 20.50% teachers are favorable/highly favorable towards teaching profession while 79.50% teachers are either neutral or not favorable to their profession.

Table 4.40
Attitude Levels of Schoolteachers towards Teaching Profession in Nepal

Respondents						Interpretation
Male		Female		Total		
Number	Percent	Number	Percent	Number	Percent	
0	0.00	1	1.28	1	0.50	Extremely favorable
4	3.28	4	5.13	8	4.00	Highly favorable
11	9.02	21	26.92	32	16.00	Favorable
42	34.43	25	32.05	67	33.50	Neutral
46	37.70	21	26.92	67	33.50	Unfavorable
16	13.11	4	5.13	20	10.00	Highly unfavorable
3	2.46	2	2.56	5	2.50	Extremely unfavorable
122	100	78	100	200	100	Total

Source: Field Survey 2019/20

Four-fifth of schoolteachers do not have positive attitude towards teaching profession. More female teachers (33.33%) have positive attitude towards teaching profession than male teachers (12.30%). Percentage of male teachers having neutral attitude is slightly higher than that of female teachers, but percentage of male teachers who are unfavorable and highly unfavorable is very higher than that of female teachers.

4.5.2 Attitude of schoolteachers of India towards teaching profession

Number and percentage of schoolteachers of India with their level of attitude towards teaching profession is given in the table 4.41.

Table 4.41
Attitude Levels of Schoolteachers towards Teaching Profession in India

Respondents						Interpretation
Male		Female		Total		
Number	Percent	Number	Percent	Number	Percent	
3	2.34	3	4.17	6	3.00	Extremely favorable
22	17.19	17	23.61	39	19.50	Highly favorable
56	43.75	28	38.89	84	42.00	Favorable
32	25.00	19	26.39	51	25.50	Neutral
15	11.72	5	6.94	20	10.00	Unfavorable
0	0.00	0	0.00	0	0.00	Highly unfavorable
0	0.00	0	0.00	0	0.00	Extremely unfavorable
128	100	72	100	200	100	Total

Source: Field Survey 2019/20

In India, teachers having extremely favorable attitude towards teaching are comparatively low (3%), but significant number of teachers are highly favorable (19.50%) and favorable (42%) towards their profession. There are no teachers, who are highly unfavorable and extremely unfavorable towards teaching profession. Attitude of only 10% teachers in India was found unfavorable towards teaching. Although most of the teachers were found to have positive attitude towards teaching, still one-third of the teachers in India are either neutral or unfavorable to their profession. Percentage of female teachers who are neutral to their profession is slightly higher than percentage of neutral male teachers but percentage of unfavorable male teachers is almost twice the percentage of female teachers. Despite the variations in categories, percentages of male (63.28%) and female (66.67%) teachers having positive attitude are almost equal.

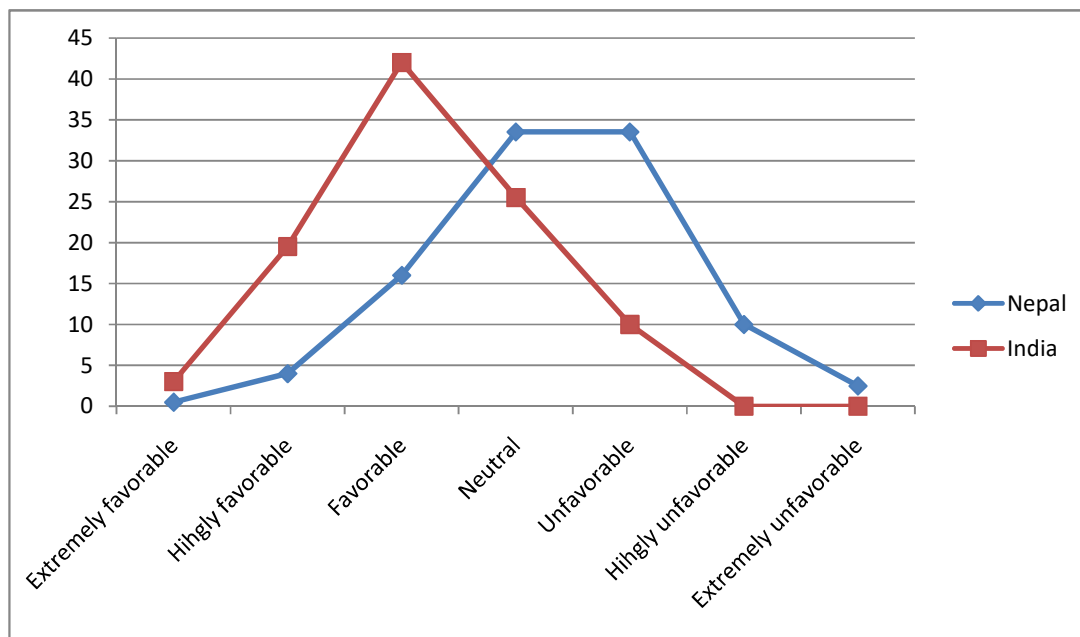
A study in Mizoram done by Renthlei and Malsawmi (2015, p. 34) found that the percentages of teachers having favorable, neutral and unfavorable attitude towards teaching were 20.53%, 62.03% and 17.44% respectively. However, this study showed different results than in Mizoram; percentages of teachers of Uttarakhand and Uttar Pradesh having favorable, neutral and unfavorable attitude were found respectively 64.50%, 25.50% and 10%. This implies that more teachers in Uttarakhand and Uttar Pradesh have favorable attitude towards teaching profession in comparison to Mizoram.

4.5.3 Comparison of attitude of schoolteachers of Nepal and India

Attitude of schoolteachers of India towards teaching profession is far high than the attitude of schoolteachers of Nepal (table 4.40 and 4.41). However, to make it more comparable, attitude level wise percentage of teachers of Nepal and India is presented in the figure 4.4.

Figure 4.4

Attitude Level Wise Percentage of Schoolteachers of Nepal and India



Percentage of extremely favorable teachers of India is slightly above than the percentage of extremely favorable teachers of Nepal while, percentages of highly favorable and favorable teachers of India are significantly higher than percentages of teachers of Nepal. Line graph is showing that the percentage of neutral and unfavorable teachers in Nepal is consistent at 33.50%, but this percent is rapidly decreasing from 25.50% to 10% in the context of India. Again, percentage of highly unfavorable and extremely unfavorable teachers in India is zero but 10% Nepalese teachers were found to be highly unfavorable and 2.50% were found extremely unfavorable towards teaching profession.

However, tables 4.40, 4.41 and figure 4.4 are clearly showing that the attitude of schoolteachers of India towards teaching profession is higher than the attitude of teachers of Nepal, but to clarify whether this difference is significant or not, it should be tested statistically. In this case, there is one independent variable *country* with two categories (Nepal and India) and one dependent variable *attitude* so t-test is suitable in case all the assumptions for independent t-test are satisfied.

By inspection, assumptions like random sampling, independence of the groups, interval scale variable and appropriateness of the sample size are satisfied. To check the normality and homogeneity, descriptive statistics was obtained and presented in the table 4.42.

Table 4.42

Descriptive Statistics of Attitude Scores of Teachers of Nepal and India

		country	Statistic	Std. Error
Attitude scores	Nepal	Mean	98.4850	.88209
		Median	98.0000	
		Variance	155.618	
		Std. Deviation	12.47469	
		Minimum	66.00	
		Maximum	134.00	
		Skewness	-.005	.172
	Kurtosis	.040	.342	
	India	Mean	112.7450	.81076
		Median	113.0000	
		Variance	131.467	
		Std. Deviation	11.46592	
		Minimum	87.00	
		Maximum	137.00	
Skewness		-.067	.172	
Kurtosis	-.478	.342		

Here, absolute values of skewness and kurtosis of attitude scores of Nepal and India are less than double of their respective standard errors. This indicates that both of the distributions are normally distributed. Again, to confirm the normality of the scores, test of normality was done and results are presented in the table 4.43.

Table 4.43

Test of Normality of Attitude Scores

	country	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Attitude scores	Nepal	.057	200	.200*	.996	200	.837
	India	.060	200	.073	.986	200	.051

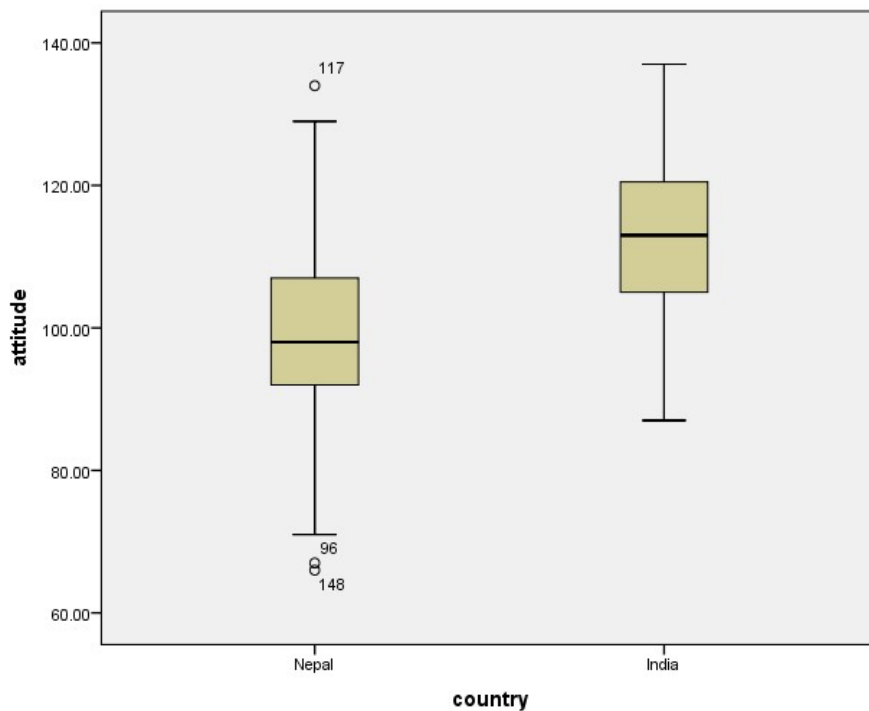
*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

In both cases, sample size is greater than 50, so Kolmogorov-Smirnov test was used to check the normality of the distributions. For Nepal, test statistic is 0.057 with df 200 and value of significance is 0.200, which is greater than 0.05 so, the difference is not significant. Thus, the null hypothesis for normality "The distribution of given scores is not significantly different than normal distribution" is not rejected, that is, the attitude scores of teachers of Nepal are normally distributed. Similarly, test statistic, df and value of significance for attitude scores of teachers of India are 0.060, 200 and 0.073 respectively. As the p-value is greater than 0.05, the difference is not significant. Hence, the null hypothesis for normality is accepted and scores are assumed to be normally distributed.

Figure 4.5 shows that there are no any outliers for attitude scores of teachers of India, but three outliers, one is among higher scores and two are among lower scores are shown in the box plot for attitude scores of Nepal. These outliers are situated at 96th, 117th and 148th positions. Despite these outliers, normality of the scores is not violated so, these outliers are not eliminated from the scores.

Figure 4.5

Box Plot for Attitude Scores of Teachers of Nepal and India



Variances of attitude scores of teachers of Nepal and India are 155.618 and 131.467 respectively (table 4.42). Here, greater variance is less than 4 times of smaller variance, so we

can conclude that both the distributions have equal variances. Again, from table 4.44, Levene's statistic $F = 1.134$ and value of significance, $p\text{-value} = 0.288$, which is greater than 0.05. These results indicate that the difference is not significant. Hence, the null hypothesis for equality of variances "There is no significant difference between the variances of attitude scores of teachers of Nepal and India" is not rejected. Thus, we can conclude that the homogeneity of variances of the attitude scores of teachers of Nepal and India is satisfied. Now all the assumptions required for independent t-test are satisfied, so we can apply the t-test to test the following hypothesis:

H_0 : There is no significant difference between the mean attitude scores of teachers of Nepal and India towards teaching profession.

Table 4.44

Independent Samples t-test for Attitude Scores

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Attitude scores	Equal variances assumed	1.134	.288	-11.902	398	.000	-14.26000	1.19809
	Equal variances not assumed			-11.902	395.20	.000	-14.26000	1.19809

Since the variances were equal, result was analyzed by using the statistics based on "equal variances assumed". Here, value of t is -11.902 with df 398 and value of significance (2-tailed) is 0.000 which is less than 0.01. This shows that the difference is significant at significance level of 0.01. Thus, the null hypothesis "There is no significant difference between the mean attitude scores of teachers of Nepal and India towards teaching profession" is rejected at significance level of 0.01 and we can conclude that there is significant difference between the mean attitude scores of teachers of Nepal and India. Further, negative sign of t-value is indicating that the mean attitude score of teachers of India is higher than mean attitude score of teachers of Nepal.

Using t-test, we can identify that whether the difference is significant or not, but this test does not tell us about the importance or size of the effect of independent variable on dependent variable. To know the importance or actual effect of the independent variable on dependent variable, **effect size** should be analyzed.

Effect size of test statistic: This was the case of equal samples and equal variances, so **Cohen's 'd'** was used to measure the effect size. Formula for Cohen's 'd' is given below:

$$\text{Cohen's 'd'} = (M_1 - M_2)/\sigma_{\text{pooled}} \quad \dots\dots\dots 4.4$$

Where, M_1 = Mean of scores of first group

M_2 = Mean of scores of second group

and, σ_{pooled} = Mean of SDs of both groups = $(\sigma_1 + \sigma_2)/2$

Here, from table 4.42,

$$M_1 = 98.485$$

$$M_2 = 112.745$$

and, $\sigma_{\text{pooled}} = (\sigma_1 + \sigma_2)/2 = (12.474 + 11.465)/2 = 11.969$

$$\begin{aligned} \text{Thus, Cohen's 'd'} &= (M_1 - M_2)/\sigma_{\text{pooled}} = (98.485 - 112.745)/11.969 \\ &= -1.191 \end{aligned}$$

Absolute value of Cohen's 'd' is lying between 0.8 and 1.2 (very near to 1.2) so there is high effect of country on attitude of teachers towards teaching profession.

Although percentage of teachers in India having favorable (64.50%) attitude towards teaching profession is higher than percentage of teachers having favorable (20.50%) attitude in Nepal, this percentage is lower than the percentage of prospective teachers in Qatar having favorable (82.90%) attitude towards teaching profession.

4.6 Comparison of Job Satisfaction Levels of Teachers in Nepal and India

Job satisfaction of the employee is another important factor required for effective performance in every profession. Teachers' dedication and motivation in their profession is determined by the level of job satisfaction. Job satisfaction indicates the extent to which one's needs can be satisfied (Glimmer, 1966).

To identify the level of job satisfaction of teachers of Nepal and India, the researcher used the *Job Satisfaction Scale JSST-DM* (Detail in section 3.6.4) developed by *Dr. Meera Dixit, Department of Education, National Degree College, Lucknow (U. P.)* and published by *National Psychological Corporation, Agra, India*. This was a 5-point Likert type scale comprising 52 statements within eight dimensions/factors (table 3.10). For this test, interpretation criteria were developed on the basis of z-scores (table 3.11).

Proposed sample size to analyze the job satisfaction was 200 for each country, but due to pandemic COVID-19, researcher was unable to collect the data from all proposed subjects. Researcher collected required data from 180 subjects of five districts of Uttarakhand and Uttar Pradesh of India, and 100 subjects of three districts of Sudurpashchim Pradesh of Nepal. Researcher himself visited all the selected schools and after taking the consent from authorities, he distributed the job satisfaction scale to the selected teachers. Some of the subjects returned the scale on the same day and others returned the filled scale within 2 to 5 days.

4.6.1 Job satisfaction level of schoolteachers of Nepal

Researcher scored all the collected scales carefully and obtained raw scores. Those raw scores were converted into z-scores by using the mean 172.25 and SD 17.38 provided in manual for *Job Satisfaction Scale JSST-DM*. Number and percentage of teachers under various categories are presented in the table 4.45.

Table 4.45

Job Satisfaction Levels of Schoolteachers of Nepal

Respondents						Interpretation
Male		Female		Total		
Number	Percent	Number	Percent	Number	Percent	
9	12.50	0	0.00	9	9.00	Extremely satisfied
9	12.50	1	3.57	10	10.00	Highly satisfied
13	18.06	5	17.86	18	18.00	Above average satisfied
11	15.28	12	42.86	23	23.00	Average satisfied
12	16.66	3	10.71	15	15.00	Below average dissatisfied
8	11.11	4	14.29	12	12.00	Highly dissatisfied
10	13.89	3	10.71	13	13.00	Extremely dissatisfied
72	100	28	100	100	100	Total

Source: Field Survey 2019/20

In Nepal, percentage of extremely dissatisfied teachers (13%) is higher than extremely satisfied teachers (9%). Out of seven categories, most of the teachers are average satisfied (23%), while 37% schoolteachers in Nepal are satisfied on their job to some extent and 40% teachers were found not satisfied. Job satisfaction level of almost two-third of the teachers (63%) were found either average satisfied or below this level. Percentage of extremely satisfied male teachers is 12.50%, but no extremely satisfied female teacher was found. Similarly, percentage of highly satisfied male teachers was found significantly higher than percentage of highly satisfied female teachers. Most of the female teachers (42.86%) are average satisfied while this percent for male teachers is 15.28%. Aggregate percentage of dissatisfied male teachers (41.66%) is higher than the percentage of female teachers (35.71%).

4.6.2 Job satisfaction level of schoolteachers of India

Total 180 job satisfaction scales were collected from selected teachers of India. Response sheets were scored and obtained raw scores were converted into their respective z-scores. Finally, subjects/scores were categorized on the various level of interpretation developed for the test used and results are presented in the table 4.46.

Table 4.46

Job Satisfaction Levels of Schoolteachers of India

Respondents						Interpretation
Male		Female		Total		
Number	Percent	Number	Percent	Number	Percent	
45	39.47	33	50.00	78	43.33	Extremely satisfied
34	29.82	14	21.21	48	26.67	Highly satisfied
10	8.77	11	16.67	21	11.67	Above average satisfied
15	13.16	4	6.06	19	10.55	Average satisfied
8	7.02	3	4.54	11	6.11	Below average dissatisfied
2	1.76	1	1.52	3	1.67	Highly dissatisfied
0	0.00	0	0.00	0	0.00	Extremely dissatisfied
114	100	66	100	180	100	Total

Source: Field Survey 2019/20

Most of the schoolteachers (43.33%) are extremely satisfied in India. There are no teachers who are extremely dissatisfied. Negligible percent of teachers (1.67%) were found highly dissatisfied. Percentage of average satisfied and below average satisfied teachers are 10.55% and 6.11% respectively. Aggregate percentage of satisfied teachers in India is 92.22% while

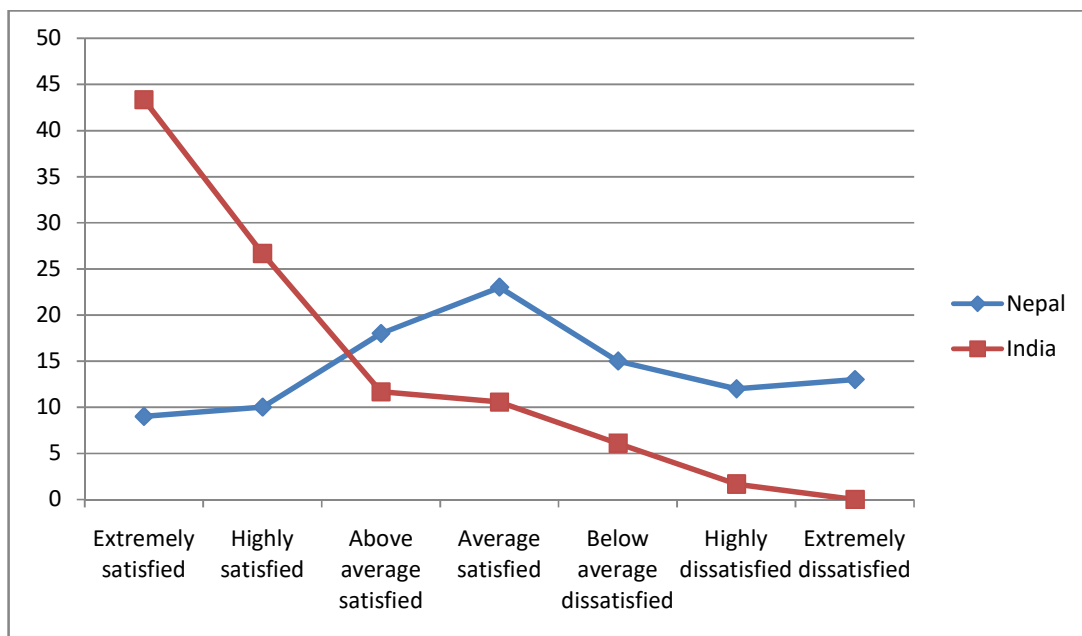
dissatisfied teachers are 7.78%. Thus, more than nine-tenth of schoolteachers in India are satisfied on their job, which is one of the good indicators for effective school education system. Percentage of extremely satisfied female teachers (50%) in India is higher than percentage of extremely satisfied male teachers (39.47%), but percentage of highly satisfied male teachers (29.82%) is higher by 8.61% than percentage of female teachers. Percentage of satisfied female teachers (93.94%) is slightly higher than percentage of satisfied male teachers (91.22).

4.6.3 Comparison of job satisfaction of schoolteachers of Nepal and India

From tables 4.45 and 4.46, it is clear that the job satisfaction level of schoolteachers of India is higher than job satisfaction level of teachers of Nepal. Again, level wise comparison of job satisfaction of schoolteachers of Nepal and India is made by using line graph in figure 4.6.

Figure 4.6

Job Satisfaction Level Wise Percentage of Schoolteachers of Nepal and India



Nature of line for India is clearly showing that percentage of extremely satisfied teachers in India is very high (43.33%) and it rapidly decreased to 11.67% for above average satisfied teachers and then gradually decreased to 0% for extremely dissatisfied teachers. But, nature of line graph for Nepal is quite different than India. This line is showing that percentage of extremely satisfied teachers in Nepal is comparatively very low (9%) than percentage of extremely satisfied teachers in India. It gradually increases to 23% for average satisfied

teachers and then slowly decreases to 13% for extremely dissatisfied teachers. From these results, we can conclude that the job satisfaction level of schoolteachers in India is higher than job satisfaction level of teachers of Nepal.

From these discussions, it is clear that the job satisfaction level of teachers of India is higher than job satisfaction level of teachers of Nepal, but we are still unable to say whether this difference in job satisfaction is significant or not. For this, we have to use statistical technique. As before, one independent variable *country* with two categories (Nepal and India) and one dependent variable *job satisfaction* have been used. That is why t-test is suitable to check the significance of difference.

Assumptions that are required for independent t-test like random sampling, independence of the groups, interval scale variable and appropriateness of the sample size are obviously satisfied. Normality and homogeneity were checked by inspection of descriptive statistics, and by tests of normality and homogeneity using SPSS.

Table 4.47

Descriptive Statistics of Job Satisfaction Scores of Teachers of Nepal and India

		country	Statistic	Std. Error
Job satisfaction scores	Nepal	Mean	172.1300	2.32282
		Median	174.0000	
		Variance	539.549	
		Std. Deviation	23.22819	
		Minimum	125.00	
		Maximum	233.00	
		Skewness	.006	.241
		Kurtosis	-.398	.478
	India	Mean	199.4278	1.57098
		Median	200.0000	
		Variance	444.235	
		Std. Deviation	21.07688	
		Minimum	154.00	
		Maximum	246.00	
		Skewness	-.054	.181
		Kurtosis	-.273	.360

From table 4.47, values of skewness and kurtosis of job satisfaction scores of teachers of Nepal are 0.006 and -0.398 respectively. Absolute values of skewness and kurtosis are less than twice the values of their respective standard errors 0.241 and 0.478, which indicate that

the scores are normally distributed. We have similar conclusion for job satisfaction scores of teachers of India because absolute values of skewness and kurtosis of job satisfaction scores are less than double of their corresponding standard errors. Again, to ensure the normality and homogeneity of both the distributions, results of normality and homogeneity are presented in the tables 4.48 and 4.49.

Table 4.48

Test of Normality of Job Satisfaction Scores

	country	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Job satisfaction scores	Nepal	.065	100	.200*	.989	100	.563
	India	.062	180	.086	.982	180	.023

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

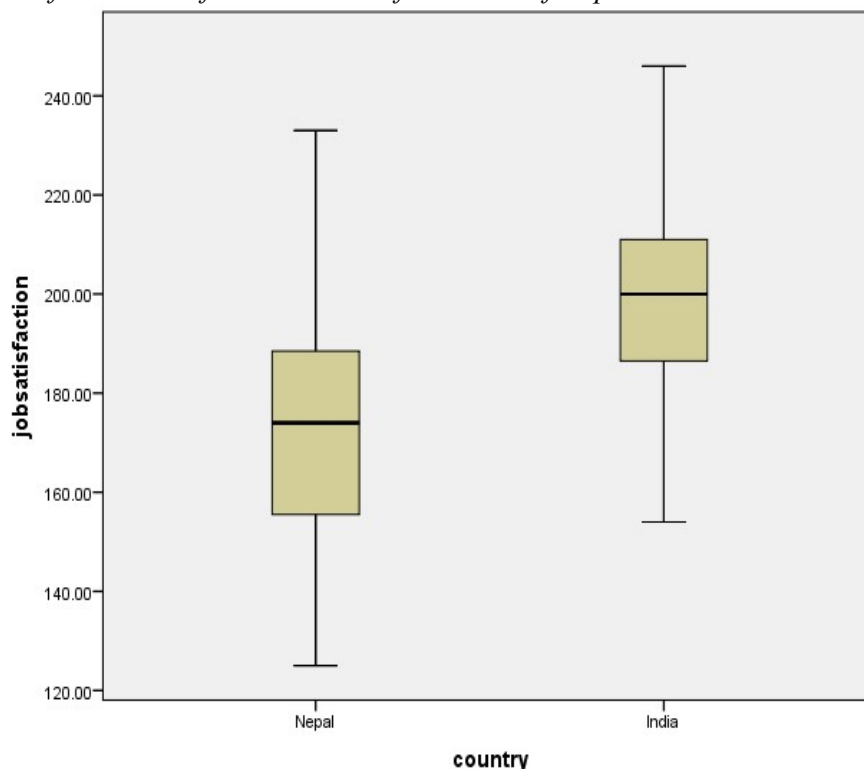
Sample size for both groups is greater than 50, so we use Kolmogorov-Smirnov test to check the normality. For Nepal, value of test statistic is 0.065 with df 100 and value of significance is 0.200. The p-value is greater than 0.05, which indicates that the difference is not significant and null hypothesis "The distribution of given scores is not significantly different than normal distribution" is not rejected. Thus, scores are assumed to be normally distributed. Similarly for India, Kolmogorov-Smirnov test statistic is 0.062 for df 180 and p-value is 0.086 > 0.05. Hence, the difference is not significant, which indicates that the distribution is normal.

Variances of job satisfaction scores of Nepal and India are 539.549 and 444.235 (table 4.47) respectively. Here, larger variance (variance of Nepal) is $539.549/444.235 = 1.214$ times of smaller variance (variance of India), which shows that the assumption of homogeneity of variances is satisfied (larger variance is less than four times of smaller one). Again, from table 4.49, Levene's statistic for equality of variances is 2.156 and value of significance is 0.143, which is greater than 0.05 and indicates that the difference is not significant. Thus, the null hypothesis for equality of variances "There is no significant difference between the variances of job satisfaction scores of teachers of Nepal and India" is not rejected. That is to say, the variances of job satisfaction scores of both groups are not significantly different.

Box plot of job satisfaction scores of teachers of Nepal and India given in the figure 4.7 are showing that there are no outliers for scores of both the groups. However, job satisfaction scores of teachers of India are higher than scores of teachers of Nepal.

Figure 4.7

Box Plot for Job Satisfaction Scores of Teachers of Nepal and India



All the assumptions required for independent t-test are satisfied, so we can apply t-test. SPSS results of t-test are presented in the table 4.49.

Table 4.49

Independent Samples t-test for Job Satisfaction Scores

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Job satisfaction scores	Equal variances assumed	2.156	.143	-10.009	278	.000	-27.297	2.727
	Equal variances not assumed			-9.735	188.47	.000	-27.297	2.804

Now, we have to test the pre formulated following null hypothesis:

H_0 : There is no significant difference between the mean job satisfaction scores of teachers of Nepal and India.

In this case, assumption of homogeneity is satisfied, so results based on "equal variances assumed" were used. Value of t is -10.009 with df 278 and value of significance (2-tailed) is 0.000. Since the p-value is less than 0.01, difference is significant. Thus, the null hypothesis "There is no significant difference between the mean job satisfaction scores of teachers of Nepal and India" is rejected at 0.01 level ($\alpha = 1\%$) of significance. This result shows that the mean scores of job satisfaction of teachers of Nepal and India are significantly different. Again, negative sign of value of t is indicating that the mean job satisfaction score of teachers of India is higher than mean job satisfaction score of teachers of Nepal.

Effect size of test statistic: In this case, variance is equal, but sample size is unequal so Hedge's 'g' is suitable to compute size of the effect (Formula 4.3).

$$\text{Hedge's 'g'} = \frac{M_1 - M_2}{\sqrt{MSS_{\text{within}}}}$$

Value of MSS_{within} was obtained from result of one-way ANOVA given in table 4.50.

Table 4.50

ANOVA Results for Job Satisfaction Scores

	Job satisfaction				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	47903.700	1	47903.700	100.180	.000
Within Groups	132933.371	278	478.178		
Total	180837.071	279			

Here, $M_1 = 172.130$

$M_2 = 199.427$

$MSS_{\text{within}} = 478.178$

$$\text{Now, 'g'} = \frac{172.130 - 199.427}{\sqrt{478.178}} = \frac{172.130 - 199.427}{\sqrt{478.178}} = \frac{-27.297}{21.867} = -1.248$$

Here, absolute value of Hedge's 'g' is greater than 1.2 so it can be concluded that there is very high effect of country on the job satisfaction of schoolteachers.

4.7 Gender Involvement in Teaching and Teacher Education

One most interesting thing found during the study was gender involvement in teacher education and teaching profession in both the countries. Although gender was not included as a variable in this study, the researcher analyzed the gender participation because it was indicating one of the paradigm shifts in teaching profession and teacher education in Indo-Nepalese context. Data was not based on official records of the selected institutions, but random selection used in this study is almost representing the gender participation of schoolteachers in teaching profession and students in teacher education (i.e., in B. Ed.) programme.

4.7.1 Gender involvement in teaching and teacher education in Nepal

In Nepal, total 200 schoolteachers were randomly/accidentally selected to identify the attitude and job satisfaction level out of which 122 (61%) were male and 78 (39%) were female teachers. Similarly, out of 100 students enrolled in teacher education, 31 (31%) were male and 69 (69%) were female students. Here, to analyze the gender involvement, 50 students studying in grade 11 specializing in education were included to increase the sample size and rest of the 50 were those who were selected to identify the level of academic achievement and intelligence in this study. Percentage of gender involvement in teaching profession and teacher education is presented in the figures 4.8 and 4.9.

Figure 4.8
Gender Wise Involvement in Teaching Profession in Nepal

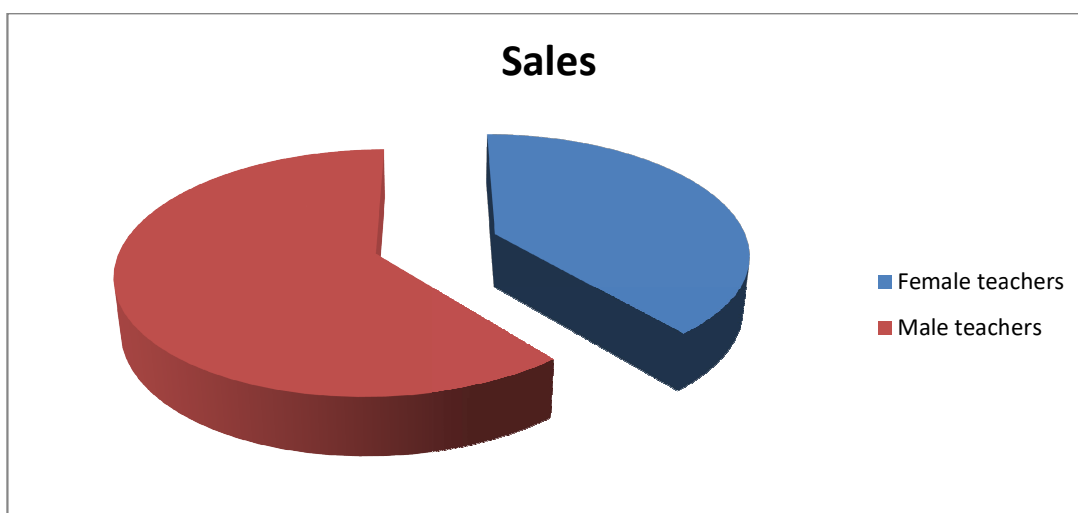
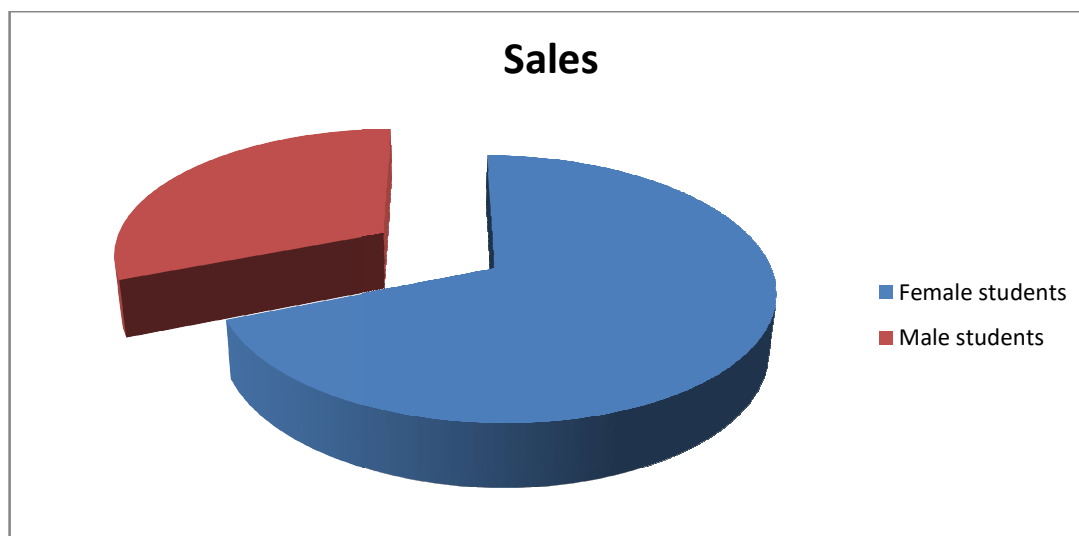


Figure 4.8 is clearly indicating the low involvement of female teachers in teaching profession in Nepal. Percentage of male teachers (61%) is slightly higher than one and half times the percentage of female teachers (39%).

Figure 4.9

Gender Wise Involvement in Teacher Education in Nepal



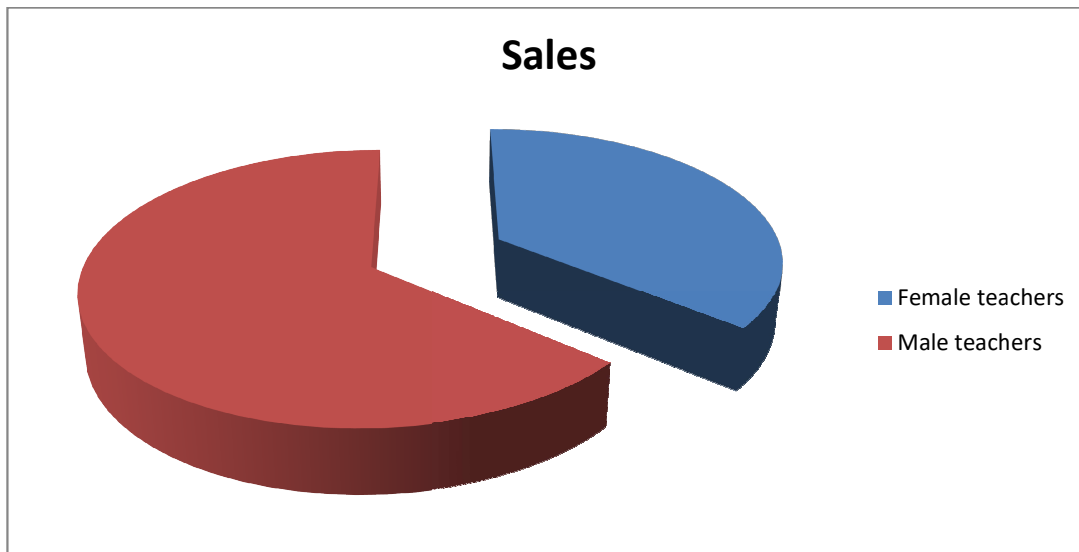
From figure 4.9, percentage of female students (69%) in teacher education in Nepal is significantly higher than percentage of male students (31%). Both figures are indicating the reversed proportion of gender involvement in teaching profession and teacher education.

4.7.2 Gender involvement in teaching and teacher education in India

A total of 200 schoolteachers were selected in India to measure the level of attitude and job satisfaction, out which 128 (64%) were male and 72 (36%) were female. Again, 70 (35%) male students and 130 (65%) female students of B. Ed. first year/semester were selected to identify their level of academic achievement and intelligence. To make comparison more clear, data regarding male and female involved in teaching profession and teacher education is presented in figures 4.10 and 4.11.

Figure 4.10

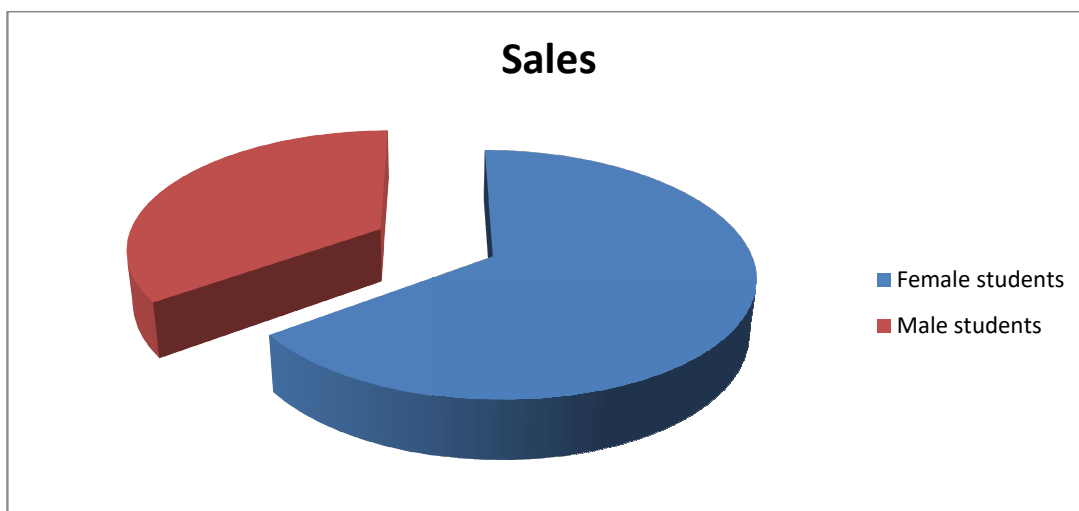
Gender Wise Involvement in Teaching Profession in India



Parts of pie chart (Figure 4.10) representing female and male teachers in India are clearly indicating that the percentage of male teachers is almost two-third of the female teachers.

Figure 4.11

Gender Wise Involvement in Teacher Education in India



Pie chart (Figure 4.11) is unveiling that the proportion of male and female in teacher education is just opposite to that in teaching profession. Percentages of male and female students enrolling in teacher education are 35% and 65%, which show that two-third of students currently enrolled in teacher education are female.

So many paradigm shifts were seen in the field of education like liberal arts to technical/vocational courses, teacher centered to learner centered pedagogy, formal to non-formal approach, traditional methods to the use of multimedia in classroom, real classroom learning to virtual/network centered knowing. Gender is one of the factors causing discrimination in male and female. Its effect can be seen in the field of education. Females were excluded from the access of education since ancient time, but universal declaration of human rights in 1948 included education as a basic human right (UNO, 1948, p. 54) and now most of the nations have constitutional provisions for right to education. India and Nepal also have clear constitutional provisions for right to education (The Constitution of India, 1949, p. 11; Nepal's Constitution of 2015 with Amendments through 2016, pp. 21-22). Constitutional provisions and public awareness has increased the access of female in education in the Indo-Nepalese context, which can be seen in the enrollment in teacher education. However, in both the countries, gender ratio is not equal in teacher education. Enrollment of female students is significantly higher than enrollment of male students.

It is the matter of research that why the proportion of male and female in teaching profession is now just reversed in teacher education. This scenario of enrollment in teacher education is either indicating the feminine nature of teaching profession or a type of paradigm shift from male to female. Research should be done to identify the cause of high enrollment of female students, low enrollment of male students and its impact on teaching profession, social status of teaching profession and hence in whole education system. In China, teachers' social status is declining due to two factors; first involvement of high proportion of women in teaching profession and second is low income in this profession (Gao, 2009, p. 13).

Chapter - 5

Summary and Conclusions

5.1 Summary

One of the planets in this universe is earth. Whatever be the cause, and how long the duration of existence of earth is, gradually living beings came into existence. One of the most important living being among these is human being. After millions of years, concepts of community, society, education, nation and many more related to human civilization were developed. Among those concepts developed within human civilization, education is the most important one not only required for livelihood of individual, but also necessary for all round development of people and progress of the nation. Development of every nation depends upon quality of education imparted by the educational system of that nation. Again, quality of education is directly related to effective teaching, effectiveness of teaching depends on competency of teachers and competent teachers are produced by effective teacher education programme. Thus, in-service teachers and prospective teachers are two important aspects of quality education and hence the progress of the nation.

In broad sense, teacher education is an educational programme developed to produce qualified teachers. It refers to the policies and the procedures designed to equip prospective teachers with the knowledge, attitude, behaviors and skills they require to accomplish their tasks effectively in the classroom, school and society. Formal concept of the teacher education in most of the countries across the world was developed from 19th century onwards. In India, concept of teacher education was formally developed from 1800 to 1822 in the form of pupil-teacher system. Similarly in Nepal, formal teacher education was started

after the downfall of Rana oligarchy in 1951 by establishing a normal school in 1954 and college of education in 1956 at Kathmandu. In ancient time, teacher was taken as a highly reputed person, but at present, reputation of teaching profession is declining even in USA, Japan and Korea.

There are more than 200 nations across the globe. Some are developed, while some are developing and even others are categorized below this. Most of the nations like America, Japan, China, Korea, Luxemburg, Switzerland, Qatar, Norway, Australia and Sri Lanka were either established or became independent within 50 to 250 years and made significant progress in short time. This all was possible due to quality education imparted by dedicated and competent teachers. On the other hand, India and Nepal being ancient countries, the indices for development like per capita income, literacy rates, life expectancy and human development index show their rate of low development. However, from past few years, India is comparatively making progress in the field of economy, industry, education, agriculture, scientific innovation and information communication technology than Nepal, but the rate of progress is very low and insufficient.

In this context, researcher comprehensively reviewed the related literature and concluded that one of the most important factors for development of the nation is quality education. Quality of education depends upon effective teaching and effectiveness of teaching depends upon ability, attitude and professional satisfaction of teachers. Quality teachers can be produced by effective teacher education programme and effectiveness of teacher education programme depends upon the relevant curriculum and its implementation, enrollment of high achievers, and intelligent students in teacher education programme. In this context, researcher identified the problem as teacher education and teaching profession.

Purpose of this study was to analyze the teacher education programme (B.Ed.) with its strengths and weaknesses, to identify the academic achievement and intelligence level of students enrolling in teacher education programme, to identify the attitude and job satisfaction levels of government schoolteachers in the Indo-Nepalese context and to compare them. The research questions were prepared for objectives related to qualitative part and four hypotheses were formulated for objectives related to quantitative part of the study. In ancient time, teacher was taken as a highly reputed person, but at present, reputation of teaching profession is declining in many countries, and Nepal and India are also facing the same situation. Due to impact of globalization on education, the use of international comparative

studies emerged as one of the latest approaches in the field of research and has become a major feature in policy making, and related process characterized by increased technological, information and pedagogical transfer. This study is significant to analyze the various aspects of teacher education programme and teaching profession like curriculum, enrollment trend in B.Ed. based on achievement and intelligence, attitude and job satisfaction of in-service teachers. This will lead to provide suggestions to formulate appropriate teacher education policies to corresponding authorities and will help to improve the teacher education programme, enhance the capability of teachers, improve the quality of education and hence help in the development of the nation. Researcher categorized the related literature in four parts. In first part, review of literature on teacher education abroad (USA, UK, China, Japan and Korea) was made. Second part included the review of literature on teacher education in India and Nepal. Similarly, review of literature on comparative studies was included in part three and comprehensive review of literature (local and global) based on main variables of this study that is achievement, intelligence, attitude and job satisfaction were kept in fourth part.

In USA, concept of teacher education was developed in around mid of 19th century when first normal school for teacher education was opened in Massachusetts in 1839. In UK, the pupil-teacher system was introduced in England in 1846. Formal concept of teacher education in China was developed in 1949 after establishment of *Shifan schools* and *Shifan colleges/universities*. Similarly, concept of teacher education in Japan was founded in the 9th decade of 19th century and Korea established normal schools in 1950s.

Education of India and Nepal is found to be influenced by education system of Britain and America respectively. Concept of teacher education in India was developed in the beginning of 19th century after establishment of a pupil-teacher system while in Nepal, normal school and college of education were established around the middle of the 20th century. There are so many researches on teacher education, and comparative studies on teacher education of the various countries are also frequently made by the researchers. Previous studies revealed that South Korea made significant development in the field of teacher education and education within a period of six decades. Researcher also found that teaching profession held high social status in some countries like Korea, Japan, China and UK in past days and slightly declining at present. Teaching profession is comparatively less prestigious in USA and it has low social status in India and Nepal. There is attractive salary in teaching profession in some

countries like Korea, Japan, China, UK, Germany, Finland and USA, but teacher's salary is comparatively low in India and very low in Nepal.

Most of the studies show that student's learning is highly affected by abilities of the teacher, while some revealed that the correlation between teacher quality and student achievement is not significant. Previous studies mostly focused on artificial and emotional intelligence. Researches based on attitude towards teaching profession showed mixed results. Some teachers/prospective teachers are favorable to teaching profession while others are either neutral or unfavorable. Classroom success, acknowledgement, participation in decision making, autonomy, compensation, recognition and human relations were found to have positive effect on job satisfaction. Lack of job satisfaction causes absenteeism, irregularity, lack of commitments, aggressive behavior, early exit from the profession and psychological withdrawal from the work. So many previous studies related to this study were found in Indian context and abroad, but such studies were rarely found in the case of Nepal.

Conceptual framework of the study was developed on the basis of the idea that education is one of the most important factors for national development and quality education is directly related to in-service and prospective teachers. Hence, teacher education and teaching profession are two crucial factors of effective education system. Similarly, theoretical framework was developed by using the concept of two theories *Maslow's theory of Motivation based on the needs hierarchy system* and *Brain drain Theory of Migration*.

Research design used for this study was exploratory sequential mixed method under mixed design. Normative survey method is used for quantitative data and phenomenological approach for qualitative information. Government schoolteachers, students of B.Ed. first semester/year and teacher educators were population for this study. Uttarakhand and Uttar Pradesh of India and Bagmati Pradesh and Sudurpashchim Pradesh of Nepal were determined as study area. Total sample of 657 (400 schoolteachers, 250 B.Ed. students and 7 Educators) was selected from 78 schools and 11 departments/colleges of education by random/accidental and purposive sampling.

Required data was collected by using four tools. Attitude scale and semi-structured interview schedule were constructed by the researcher himself and two readymade tools: intelligence test and job satisfaction scale published by *National Psychological Corporation* Agra were used. Attitude scale was standardized on the sample of 374 selected from three districts of

Nepal and two districts of India. Experts' judgments and item analysis were used to select the final statements. Three types of reliabilities – test-retest, split-half and Cronbach alpha – were computed. Eight factors of all 32 statements were extracted by factor analysis. All the tools used in this study were highly reliable. Analysis and interpretation was made on the basis of z-score norms. Some of the qualitative information was obtained by interview and review of the related documents. Independent variable for this study was country, and dependent variables were academic achievement, intelligence, attitude and job satisfaction. Findings of this study are mentioned below.

5.1.1 Teacher education

Information on teacher education was collected by document study, interview and quantitative tools. Country wise findings are given below:

5.1.1.1 Teacher Education in Nepal

In Nepal, most of the faculty of Universities run four-year integrated B.Ed. programme, however, there is provision of one-year pedagogical/ professional B.Ed. in some of the universities. Objective of teacher education (B.Ed.) is to produce competent, well developed and skilled school teachers. Whole course is divided into four categories: general, professional, major and minor. Number of professional courses is insufficient. Educator's opinion indicates that the main weakness of integrated teacher education programme is deficient in both academic and professional content.

Pedagogy includes both teacher-centered and learner-centered teaching methods. Lecture, seminar, exercises, guided study, tutorial, independent study, project works and practical work are used as instructional modes. Assessment procedure is divided into two major types: continuous assessment (internal) and periodic assessment (external). Both numerical grading and letter grading system are in practice. Some of the universities are running B.Ed. programme in semester system while others in annual. Educators accepted that teacher education in Nepal is in low priority for career development. Low achievers are enrolling in teacher education frequently. After grade 12, students having grade D+ (30 to 40 marks) are eligible for B.Ed. Teacher education in Nepal is demand based and not need based. Enrollment criteria are very poor and not implemented strictly. Easy access on teacher education programme, large employment area, same salary on teaching profession as in other

government services, and gradual practice of advanced pedagogy, assessment system and letter grading system are strengths of teacher education in Nepal. On the other hand, there are a number of weaknesses like residual approach and deficiency model, based on mass approach, poor enrollment criteria, last options for career development, unbalanced curriculum, mushrooming of B.Ed. colleges, enrollment of low achievers, traditional curriculum and lack of government attention in teacher education.

Quantitative part of this study revealed that almost none of very high achievers and only 4% high achievers are enrolling in teacher education programme. Ninety six percent either average or below average achievers are enrolling in teacher education programme. Similarly, 8% above average intelligent and 92% either average or below average intelligent are enrolling in teacher education programme. Academic achievement was categorized in seven categories: extremely high achiever, very high achiever, high achiever, average achiever, low achiever, very low achiever and extremely low achiever. Similarly, intelligence was also categorized in seven categories: extremely high intelligent, very high intelligent, high intelligent, average intelligent, low intelligent, very low intelligent and extremely low intelligent.

5.1.1.2 Teacher Education in India

In India, most of the universities are running professional/pedagogical B.Ed. after completion of general academic degree. However, Regional Institute of Education and some other universities are offering four-year integrated teacher education programme after completion of grade 12. Objective of teacher education programme is to produce passionate, motivated, highly qualified, professionally trained and well-equipped teachers. Since the current practice of B.Ed. in India is to offer professional/pedagogical courses after academic degree, courses of study contain all professional/pedagogical courses only. Courses are diverse and sufficient to provide professional knowledge and skills. Out of duration of two years pupil-teacher remains engaged in internship/field/community for about half an year.

Teaching-learning methods include both learner-centered and teacher-centered methods like lecture, field visit, project work, problem solving methods, discussion, seminar, stage show, observation, workshop, book review, debate, etc. Evaluation of learner's achievement is based on internal and external assessments. Internal assessment is continuous in nature while external assessment is periodic and includes written examination, practical and oral test.

However, university wise variation is found in the weightage given to internal and external assessment. Practice of both annual and semester system can be seen in teacher education programme. Most of the universities use numerical grading system for placement of the students.

Eligibility criteria for two-year B.Ed. are undergraduate or above with at least 50% score. Educators accepted that eligibility and enrollment criteria are not enough to assure the enrollment of high achievers. Low achievers are frequently enrolling in teacher education programme. Teacher education programme in India is comparatively less attractive. It is not taken as first choice by high achievers. Enrollment criteria are not unanimous across the country. Curriculum development process is centralized and stakeholders are not involved in the development of curriculum. Although Government of India is paying attention on teacher education programme through NCTE, statutory body of government of India, more attention is needed in research. Regional Institute of Education, NCTE, balanced and updated curriculum, long field engagement of pupil-teacher, internal and external assessment and sufficient professional/pedagogical content are strengths of teacher education programme in India. Similarly, poor enrollment criteria, low attraction of high achievers, lack of job guarantee, lack of strict implementation of enrollment criteria, lack of orientation and curriculum dissemination programmes, more theoretical curriculum, lack of technical content, insufficient physical infrastructures and detachment of pupil and teacher from each other during practice teaching are weaknesses of Indian teacher education programme.

Results of this study show that 46.50% above average (extremely high, very high and high) achievers are enrolling in teacher education programme, while 25% average achievers and 28.50% below average achievers are enrolling in teacher education programme. Quantitative analysis of intelligence scores unveil that 8.50% percent extremely high intelligent and 4.50% extremely low intelligent students are enrolling in teacher education programme. Most of the students (31%) enrolling in teacher education programme are average intelligent.

5.1.1.3 Comparison of teacher education in Nepal and India

Teacher education in Nepal and India is generally provided by faculty/department of education in universities and their affiliated colleges. Currently, most of the institutes in India are running two-year professional B.Ed. programme, but in Nepal four-year integrated B.Ed. is in practice. However, future planning of both the countries regarding the nature and

duration of B.Ed. is just opposite. Draft National Education Policy 2019 of India has recommended for four-year integrated B.Ed. after grade 12 while National Education Policy 2019 of Nepal has mentioned in its report that current teacher education in Nepal will be reviewed and professional degree in teacher education will be provided after the completion of academic degree.

Both the countries have weak criteria for enrollment in B.Ed. However, India has comparatively strong eligibility criteria for teacher education. Some of the teacher education institutes in both the countries are practicing semester system and others are annual. In Nepal, numerical grading is rapidly shifting into letter grading, but in India, still most of the institutes are using numerical grading. Number of professional courses in Indian teacher education is higher than in Nepal. Both the countries have mixed pedagogy (traditional and advanced) and both are practicing internal and external assessment procedures for evaluation of student achievement. Duration of practicum/field engagement in India is far longer than in Nepal. Both the countries have some common strengths of teacher education like easy access, large employment area, opportunities for promotion, gradual practice of advanced pedagogy and assessment procedures. Similarly, demand based approach, weak enrollment criteria, low attraction of high achievers, lack of job guarantee, centralized curriculum, lack of dissemination of curriculum, lack of practical and insufficient allocation of budget are common weaknesses of teacher education programme in Nepal and India.

Comparatively, more high achievers are enrolling in teacher education in India than in Nepal. None of the extremely high achievers and very high achievers are enrolling in teacher education in Nepal, while in India, percentage of extremely highly achievers and very high achievers enrolling in teacher education are 8% and 18% respectively. Percentage of very low achievers (40%) in Nepal is significantly higher than the percentage of very low achievers (5.50%) in India. Results of test of significance (t-test) show that the mean achievement score of students enrolling in teacher education in India is significantly higher (at significance level 0.01) than mean achievement score of students of B.Ed. in Nepal. Glass delta effect ($|\Delta|=1.89$) of independent variable (i.e., country) was seen very high in academic achievement.

The results in the case of intelligence are also almost similar to the results of academic achievement. More intelligent students are enrolling in teacher education programme in India in comparison to Nepal. Percentages of extremely high intelligent, very high intelligent and

high intelligent students enrolling in teacher education in India are 8.50%, 16.50% and 17.50% respectively, but these percentages in context of Nepal are 2%, 0% and 6%. Percentages of low intelligent, very low intelligent and extremely low intelligent students of B.Ed. programme in Nepal are far higher than in India. Significance of difference between mean intelligence scores was tested using t-test. Difference was found significant at 0.01 level of significance. Results further indicated that mean intelligence score of B.Ed. students of India is significantly higher than mean intelligence score of B.Ed. students of Nepal. Effect of independent variable was computed using Hedge's 'g' formula and absolute value of effect size was found 1.08, which indicates that the effect of country in intelligence of students enrolling in teacher education programme is high.

5.1.2 Teaching profession

Both qualitative and quantitative type of information was collected related to teaching profession. Qualitative information was collected by document study and interview, while quantitative tools like attitude scale and job satisfaction scale were used to collect quantitative information. Information was separately analyzed and interpreted for each country and then compared.

5.1.2.1 Teaching profession in Nepal

In Nepal, salary and some of the other allowances are equally provided in teaching profession as in other government services. However, the salary is insufficient for livelihood and to fulfill other needs. Teaching is considered as less prestigious profession in Nepal. There are lack of opportunities for career development in teaching profession. Teachers are not given appropriate rank in national protocol. Parents and even teachers recommend poor students to get enrolled in teacher education programme because it is comparatively easier to pass. These all things make high achievers and intelligent persons less attracted to teaching profession. High achievers and their parents give less priority to teaching profession.

Teachers themselves are also responsible for their low social prestige in Nepal. Significant number of teachers are reluctant to their profession. They show themselves more as right holders and less duty bearers. One of the major causes for making teacher less responsible is political inference in teaching profession. Teacher appointment, promotion and rewards are not fair in Nepal. However, Teacher Service Commission is trying to fairly recruit teachers at

present. Outdated curriculum, incompetent teacher, lack of dedication of teachers, less attraction towards teaching, low investment in education, indirect involvement of teacher in politics are responsible for low quality of education in Nepal.

Quantitative analysis was made in this study to identify the attitude towards teaching profession and job satisfaction level of teachers. For interpretation, attitude was categorized into seven categories: extremely favorable, highly favorable, favorable, neutral, unfavorable, highly unfavorable and extremely unfavorable. Job satisfaction is also categorized into seven categories extremely satisfied to extremely dissatisfied. Percentage of teachers having extremely favorable attitude towards teaching is negligible (0.50%) while 4% are highly favorable and 16 % are just favorable. Two-third of the teachers (67%) is either neutral or unfavorable towards their profession. Similarly, 10% teachers are highly unfavorable and 2.50% are extremely unfavorable towards teaching profession. Percentages of teachers for various levels of job satisfaction are somewhat different from percentages of teachers lying on different levels of attitude. Nine percent teachers were found extremely satisfied in their job, while 13% are extremely dissatisfied. Altogether, approximately one-third of the teachers (37%) are above average satisfied, rest are either average satisfied or below average satisfied.

5.1.2.2 Teaching profession in India

Teacher was a highly reputed person in India in ancient time. Along with passage of the time, teaching became a profession and prestige of this profession gradually decreased. Although teachers in India are enjoying attractive salary, this profession is considered comparatively less lucrative. Teaching does not come under higher priority of high achievers and intelligent persons. Some of the teachers are not dedicated to their profession; they consider teaching as a side job and remain engaged in other activities. Low attraction of high achievers in teacher education programme and teaching profession, lack of dedication, use of teachers by government on non-academic works, insufficient budget and lack of effective implementation of educational policies are the factors negatively affecting the quality of education in India.

Besides this qualitative information, attitude and job satisfaction level of schoolteachers were identified by using quantitative tools and techniques. Three percent teachers were found extremely favorable towards teaching profession, 19.50% were highly favorable and 42% were found favorable. Percentage of neutral teachers towards teaching profession is 25.50% and unfavorable teachers were found 10%. This shows that almost two-third (64.50%) of the

teachers in India have positive attitude towards teaching profession. None of the teachers was found to have highly unfavorable and extremely unfavorable attitude towards teaching profession. Results also revealed that most of the teachers (81.67%) in India are satisfied with their job. Out of which, 43.33% were found extremely satisfied, 26.67% were highly satisfied and 11.67% were above average satisfied. Similarly, percentages of average satisfied, below average satisfied and highly dissatisfied were found 10.55%, 6.11% and 1.67% respectively. No teacher was found extremely dissatisfied.

5.1.2.3 Comparison of teaching profession in Nepal and India

Teacher was considered as highly reputed person in both countries in ancient time. After professionalization of teaching, its reputation is gradually declining though teaching is still considered as reputed profession in some of the countries. Regulations for government school teachers in India is mapped in section 9.2 of National Policy on Education, 1986 and modified in 1992 to attract talent to the profession . Teachers were also considered to play a crucial role in the formulation and implementation of educational progress (Government of India, 1986, p. 32). But regarding teacher recruitment in India, National Policy on Education 2016 has mentioned in section 6.2.7 that "teacher recruitment and transfer have become a major source of corruption in many parts of the country. Some of states are trying to address the problem by introducing transparent and merit-based process, but elsewhere this remains a blot on the school education system." (Government of India, 2016 b, p.66). In Nepal, teachers are selected by Teacher Service Commission (TSC) and recruited by Education Development and Coordination Unit established in each district. Currently, most of the rights related to education are given to local bodies in Nepal.

Corruption in recruitment and transfer of teachers is a common problem in Nepal and India. Comparatively, there is more political interference and involvement of teachers in non-academic activities found in Nepal. Teaching is taken as less lucrative job in both the countries, but salary of teachers in India is significantly higher than that of teachers in Nepal. Teachers of both the countries are blamed to be reluctant to their profession. Outdated curriculum, incompetent and less dedicated teachers, insufficient salary, lack of fair promotion, involvement of teachers in non-academic activities, lack of physical infrastructures and proper equipments are considered as weaknesses of teaching profession in both the countries.

In this study, attitude and job satisfaction were quantitative part of teaching profession. Comparison of attitude and job satisfaction was made between teachers of Nepal and India. Percentage of extremely favorable teachers in Nepal and India are low (0.50% and 3%) however, slightly higher in India. Again, percentage of highly favorable and favorable teachers towards teaching profession in India is significantly higher than in Nepal. Percentage of teachers who were either favorable or neutral was found 67% in Nepal while this percent was 35.50% in India. None of the teachers were found in India having highly unfavorable and extremely unfavorable attitude towards teaching profession, but 10% and 2.50% of teachers in Nepal were found to have respectively unfavorable and extremely unfavorable attitude towards teaching. Mean attitude scores of teachers of Nepal and India were compared to test the significance of difference and result was found significant at 0.01 level of significance. Mean attitude score of teachers of India was significantly higher than mean attitude score of teachers of Nepal. As the case was equal samples and equal variances, Cohen 'd' was computed to check the effect size of test statistic. Absolute value of Cohen 'd' was found 1.191, which indicated the high effect of independent variable country on attitude.

Like in attitude, great variations in percentages were seen in various levels of job satisfaction in Nepal and India. Percentage of extremely satisfied teachers (43.33%) in India was far high than percentage of extremely satisfied teachers (9%) in Nepal. This percentage is again significantly higher (26.67% for India and 10% for Nepal) for highly satisfied teachers in India. Percentages of above average satisfied, average satisfied, below average dissatisfied, highly dissatisfied and extremely dissatisfied teachers of Nepal were higher than the percentages of teachers in India. These percentages of teachers of Nepal were respectively 18%, 23%, 15%, 12% and 13%, while for India, percentages of teachers of same levels of job satisfaction were 11.67%, 10.55%, 6.11%, 1.67% and 0% respectively. Significance of differences was tested by using t-test. Value of t was found -10.009 for df 278 and value of significance for 2-tailed test was $0.000 < 0.01$. Difference was found significant at 0.01 level of significance. Negative sign of t-value indicated that the mean job satisfaction score of teachers of India is significantly higher than mean job satisfaction score of teachers of Nepal.

5.2 Conclusions

This is a comparative study on various aspects of teacher education and teaching profession in Nepal and India. Qualitative information related to structure of B. Ed. programme,

curriculum and its major components, strengths and weaknesses of teacher education, and present status of teaching profession was obtained by document analysis and semi-structured interview. Similarly, quantitative information on enrollment trend in teacher education based on academic achievement and intelligence level, attitude of schoolteachers towards teaching profession and their level of job satisfaction was collected using quantitative tools. Information was analyzed and interpreted using qualitative and quantitative techniques. Conclusions drawn from this study are presented below:

5.2.1 Conclusions of the study

- i. Currently, most of the universities in India are practicing two-year professional B. Ed. while in Nepal, four-year integrated B. Ed. is in practice.
- ii. Draft National Education Policy 2019 of India has made a provision to replace the two-year professional B. Ed. programme by four-year integrated B. Ed., but National Education Policy 2019 of Nepal mentioned in its report that current integrated B. Ed. programme will be replaced by professional B. Ed. in near future.
- iii. Teacher education is provided by faculty/department of education of universities and their affiliated colleges in both countries, but in India, Regional Institutes of Education are playing crucial role in teacher education.
- iv. In both the countries, some institutes of education are running B. Ed. in semester system while the rest are in annual system. Practice of both numerical and letter grading was found in teacher education of both the countries.
- v. Eligibility criteria for B. Ed. in India is undergraduate or above with at least 50% scores, and in Nepal, students after completion of grade 12 or above with at least grade D+ (30 to 40 marks) are eligible for B. Ed.
- vi. Some of the universities in India have provision for improvement chance in limited subjects and similar practice was found in Nepal.
- vii. Objective of teacher education programme in both countries is more or less to produce passionate, motivated, highly qualified, professionally trained and well-equipped teachers to buttress, nation-wide, the edifice of education through their able and willing cooperation.
- viii. Number of professional/pedagogical courses in teacher education in India was found almost double of number of professional courses in Nepal.

- ix. Practice of mixed pedagogy (traditional and advanced, learner-centered and teacher-centered) was found in both countries.
- x. In both countries, evaluation of learners' achievement is based on internal and external assessment, however variations were found in weightage given to internal and external assessments.
- xi. Uniformity was not found in minimum passing marks in both countries.
- xii. Duration of practicum/field/community engagement in India is far higher than in Nepal.
- xiii. Easy access, large employment area, equal salary of teachers to other government employees, practice of semester system and letter grading assessment, opportunities of promotion, study leaves, grades and pension, gradual practice of advance pedagogy are strengths of teacher education in Nepal.
- xiv. Residual approach, deficiency model, demand based programme, mushrooming of B. Ed. colleges, poor enrollment criteria, frequent enrollment of low achievers, last option for career development, low importance and respect given by the society, out dated curriculum, centralized curriculum, lack of proper government attention, insufficient salary and earnings in the teaching profession are weaknesses of teacher education in Nepal.
- xv. Regulation under NCTE, curriculum based on local, national and global context, long practice teaching/field engagement period, government awareness on selection of qualified teacher educators, sufficient professional/pedagogical content are strengths of teacher education in India.
- xvi. Lack of department of education in some of universities, poor enrollment criteria, low attraction of high achievers, lack of job guarantee, centralized curriculum, lack of orientation and curriculum dissemination programme, more theoretical curriculum, insufficient physical infrastructures, detachment of pupil and teacher during practice teaching, comparatively low social prestige of teaching profession and insufficient allocation of budget are weaknesses of teacher education in India.
- xvii. Percentages of extremely high achiever, very high achiever, high achiever, average achiever, low achiever, very low achiever and extremely low achiever students enrolling in teacher education in Nepal were respectively found 0%, 0%, 4%, 22%, 28%, 40%, and 6%. Ninety-six percent students enrolling in teacher education programme in Nepal are either average or below average achievers.

- xviii. Percentages of extremely high achiever, very high achiever, high achiever, average achiever, low achiever, very low achiever and extremely low achiever students enrolling in teacher education in India were respectively found 8%, 18%, 20.50%, 25%, 22%, 5.50%, and 1%. More than half (53.50%) students, either average achiever or below average achiever, are enrolling in teacher education programme.
- xix. Percentages of extremely high achiever, very high achiever, high achiever and average achiever students enrolling in teacher education in India are higher than in Nepal.
- xx. Result of t-test (2-tailed) to check the significance of difference of mean achievement scores for independent groups was found significant at 0.01 level of significance. Further, t-value indicated that the mean achievement score of students of India enrolling in teacher education programme is significantly higher than mean achievement score of students of Nepal enrolling in teacher education programme.
- xxi. Effect of independent variable (country) on academic achievement was found very high (Absolute value of Glass ' Δ ' = 1.891).
- xxii. In Nepal, percentages of extremely high intelligent, very high intelligent, high intelligent, average intelligent, low intelligent, very low intelligent and extremely low intelligent students enrolling in teacher education programme were respectively found 2%, 0%, 6%, 22%, 20%, 36% and 14%. Like academic achievement, percentage of extremely high intelligent and very high intelligent students enrolling in teacher education programme is very low. More than nine-tenth (92%) students enrolling in teacher education programme in Nepal are either average intelligent or below average intelligent.
- xxiii. In India, percentages of extremely high intelligent, very high intelligent, high intelligent, average intelligent, low intelligent, very low intelligent and extremely low intelligent students enrolling in teacher education programme were respectively found 8.50%, 16.50%, 17.50%, 31%, 13%, 9% and 4.50%. A significant part (57.50%) of the students in India enrolling in teacher education programme is either average intelligent or below average intelligent.
- xxiv. Percentages of extremely high intelligent, very high intelligent, high intelligent and average intelligent students enrolling in teacher education in India are significantly higher than in Nepal.
- xxv. Value of t of independent samples t-test for intelligence scores was found -6.823 with df 248 and value of significance (2-tailed) was $0.000 < 0.01$, which indicated that the

difference was significant at 0.01 level of significance. Results further showed that the mean intelligence score of students of India enrolling in teacher education is significantly higher than the mean intelligence score of students of Nepal enrolling in teacher education programme.

- xxvi. Effect size of independent variable (country) on dependent variable (intelligence) was computed by using Hedge's 'g' formula and found high ($|g| = 1.08$).
- xxvii. Percentages of schoolteachers in Nepal having extremely favorable, highly favorable, favorable, neutral, unfavorable, highly unfavorable and extremely unfavorable attitude towards teaching profession were found 0.50%, 4%, 16%, 33.50%, 33.50%, 10%, and 2.50% respectively. Approximately four-fifth (79.50%) of schoolteachers in Nepal was found to have either neutral or negative attitude towards teaching profession.
- xxviii. Percentages of schoolteachers in India having extremely favorable, highly favorable, favorable, neutral and unfavorable attitude towards teaching profession were found 3%, 19.50%, 42%, 25.50% and 10% respectively. None of the teachers were found having highly unfavorable and extremely unfavorable attitude towards their profession. Almost two-third (64.50%) of schoolteachers in India was found to have positive attitude towards teaching profession.
- xxix. Percentages of teachers having extremely favorable, highly favorable and favorable attitude towards teaching profession in India were found higher than in Nepal, while percentages of teachers having neutral, unfavorable, highly unfavorable and extremely unfavorable attitude towards teaching profession in Nepal were found higher than in India.
- xxx. Difference of mean attitude scores of schoolteachers of India and Nepal was found significant at 0.01 level of significance. Results of t-test revealed that mean attitude score of schoolteachers of India was significantly higher than mean attitude score of schoolteachers of Nepal.
- xxxi. Effect size in this test was identified by using the Cohen's formula. Absolute value of Cohen's 'd' was found 1.191 and it has been concluded that the effect of independent variable (country) in attitude of schoolteachers was high.
- xxxii. Percentages of extremely satisfied, highly satisfied, above average satisfied, average satisfied, below average dissatisfied, highly dissatisfied and extremely dissatisfied schoolteachers in Nepal were found respectively 9%, 10%, 18%, 23%, 15%, 12% and

- 13%. Results show that 37% schoolteachers in Nepal are satisfied, 23% are average satisfied and 40% teachers are dissatisfied.
- xxxiii. In India, 43.33%, 26.67%, 11.67%, 10.55%, 6.11% and 1.67% schoolteachers were respectively found extremely satisfied, highly satisfied, above average satisfied, average satisfied, below average dissatisfied and highly dissatisfied. No teacher was found extremely dissatisfied. Only 7.78% teachers were found dissatisfied.
- xxxiv. Percentages of extremely satisfied and highly satisfied teachers in India were found significantly higher than in Nepal.
- xxxv. Result of independent samples t-test for job satisfaction scores unveil that the difference was significant at 0.01 level of significance. Again, test results showed that the mean job satisfaction score of schoolteachers of India was significantly higher than the mean job satisfaction score of schoolteachers of Nepal.
- xxxvi. Hedge's 'g' was computed to identify the effect size of independent variable (country) on dependent variable (job satisfaction) and was found very high ($|g| = 1.248$).
- xxxvii. Nature of gender ratio in teaching profession and teacher education in both the countries was found similar. Currently, one-third of female teachers were found in teaching profession, but gender ratio in teacher education was found just in reversed order that is almost two-third of female students were found enrolled in teacher education programme.

Thus, results of this study unveil that teacher education in Nepal and India are less attractive. Eligibility and enrollment criteria are not strong and low achievers are frequently enrolling in teacher education programme. Low attraction of high achievers in teacher education programme results recruitment of less competent persons in teaching profession. Due to lack of earnings, low social prestige and lack of opportunities for career development, high achievers and intelligent persons give less priority to teaching profession in comparison to other government services. However, achievement and intelligence level of students enrolling in teacher education in India are significantly higher than in Nepal. Similarly, attitude and job satisfaction levels of teachers in India were found significantly higher than in Nepal. This significance in difference is due to higher salary, prestige and other facilities of teachers in India than in Nepal.

According to theory of brain drain, high-skilled people of developing countries naturally flow to developed countries in search of job and other facilities which suite their skill and

intelligence. This tendency does not exist only in one to other country, but excellent brains flow less lucrative and prestigious to more lucrative and prestigious jobs/professions within country. In this study, results show that teaching profession is considered as less attractive profession due to less earning, low prestige and lack of opportunities for career development. Therefore, high achievers and intelligent persons are either migrating to developed countries or to other professions within the country in search for better opportunities.

Again, 35.50% teachers in India and 79.50% teachers in Nepal were found to have either neutral or unfavorable attitude towards teaching profession. Attitude represents a mental status/opinion of a person towards a particular object/event/situation and is mostly determined by level of satisfaction with that object/event/situation. Similarly, 18.33% teachers in India and 63% teachers in Nepal are either average satisfied or dissatisfied with their job.

Motivation is an important factor required to increase work productivity and satisfaction is one of the main sources of motivation. According to Maslow's theory of motivation based on the needs hierarchy system, there are five major types of levels of needs: physiological needs, safety needs, social needs, ego needs and self-actualization needs. People remain engaged in various professions to fulfill their needs. Results of this study show that approximately one-fifth of teachers in India and three-fifth of teachers in Nepal are either average satisfied or dissatisfied with their job. Again, after fulfillment of basic needs, level of needs gradually increases to protection against uncertainty with respect to continued employment, favoritism or discrimination (safety needs) love, association, acceptance (social needs), recognition, appreciation, prestige (ego needs) and need to realize one's potentialities for continued self-development (self-actualization needs). But teaching profession, partially in India and mostly in Nepal is unable to fulfill so many needs like assurance against favoritism and discrimination, social affection, prestige and opportunity to develop one's potentialities.

Results of this study are clearly following the brain drain theory of migration and Maslow's theory of hierarchy of needs. Very high achievers and intelligent persons are rarely enrolling in teacher education programme. They are either migrating to developed countries or getting attracted towards other professions within the country in search of better opportunities. Similarly, a significant portion of the teachers is unfavorable to teaching profession and is not satisfied with their job. These all circumstances have negative impact on quality education and without quality education nation cannot achieve the expected progress in each sector. So

either of the countries (Nepal and India) should be aware of current status of teacher education programme, eligibility and enrollment criteria for teacher education, enrolment trend in teacher education regarding academic achievement and intelligence, attitude of teachers towards teaching profession and their level of job satisfaction. Concerned authorities should pay proper attention to identify causes of aforementioned problems and reformulate their policies on teacher education and teaching profession to address these problems.

5.2.2 Implications of the study

This study was based on various aspects of teacher education and teaching profession in Indo-Nepalese context. Teacher education programme and teaching profession both are very important aspects of education. Education is inseparable part of human civilization and a matter of equal concern for individual, community, society, nation and international context. Some implications of this study are mentioned below:

5.2.2.1 Implications of the study in policy level

- i. Eligibility and enrollment criteria for teacher education in Nepal and India were found poor. Government of both countries should review their policies regarding eligibility and enrollment criteria of teacher education programme.
- ii. Government of Nepal should increase the salary and other facilities of schoolteachers so that the teaching profession and hence teacher education can be made attractive for high achievers.
- iii. Schoolteachers should be properly addressed in national protocol and should be given proper importance to make teacher education and teaching profession prestigious.
- iv. Fair recruitment, transfer, promotion and reward of schoolteachers should be ensured.
- v. Government of Nepal should establish a separate statutory body like NCTE in India to regulate and control teacher education.
- vi. In present teacher education programme of Nepal, sufficiency of academic and professional content should be ensured.
- vii. Sufficient opportunities for career development in teaching profession should be given.
- viii. The concerned authority in India should stop the schoolteachers to engage in non-academic works.

- ix. Mushrooming of B. Ed. colleges should be stopped to maintain quality of teacher education.
- x. Curriculum of teacher education should be developed by active participation of all stakeholders.
- xi. Sufficient budget should be allocated for teacher education and teaching profession.
- xii. Duration and actual practice of practice teaching/field engagement in B. Ed. should be reviewed.

5.2.2.2 Implications of the study in practice level

- i. Department/colleges of education should strictly implement the enrollment criteria in teacher education.
- ii. Teacher should be recruited on the basis of aptitude required for teaching and attitude towards teaching profession.
- iii. Teachers should be accountable to their profession.
- iv. Teacher should not involve directly/indirectly in politics and other non-academic works considering teaching as their side job.
- v. Concerned authorities should organize orientation and curriculum dissemination programme.
- vi. Institutes should ensure the enrollment of high achievers in teacher education.
- vii. Pupil-teacher involved in teaching practice should be in direct supervision of related institution.
- viii. Advanced pedagogy should be used in teaching.
- ix. Assessment system should be more reliable.
- x. All stakeholders of teacher education and teaching profession should follow the principles of educational integrity.

5.2.3 Suggestions for further research

Education is a broad concept. There are so many problems and researchable aspects in education. Some of the aspects like curriculum of teacher education, its present status, enrollment trend in teacher education on the basis of academic achievement and intelligence level, present status of teaching profession, attitude of schoolteachers towards teaching profession and their level of job satisfaction were included in this study. Education itself is changeable concept and research is a continuous process. There are so many other problems

in the field of education that needed further research. No work/knowledge is final and no research is complete in itself, further research should be done in this area. Scope for future work related to this study is mentioned below:

- i. This study was limited to curriculum and enrollment trend based on academic achievement and intelligence of students in teacher education. Further research is needed in aptitude, socialization, interest, verbal fluency, etc. of students enrolling in teacher education programme.
- ii. Further research can be made on curriculum development procedure of teacher education and its relevancy.
- iii. Fairness of teacher recruitment, their transfer, promotion and reward can be further researched.
- iv. Further study can be made on relation between quality of education and development of the nation.
- v. An effective study can be made on the causes of enrollment of low achievers in teacher education, negative attitude of schoolteacher towards teaching profession and low level of job satisfaction.
- vi. This study was a comparison between India and Nepal; further studies can be carried out to make comparison between other countries.

5.3 Limitations of the Study

Researcher put all his efforts in effective and reliable study, but research is a complex task in itself and researcher has to face many different constraints during the research process. In this study, researcher had to face some unfavorable conditions, which may affect the findings of this research. As the area of this study was broad, it was not possible to construct the sampling frame of total population to use simple random sampling method. Therefore, researcher selected the sample by using systematic sampling method within the selected units/institutions. Even in some cases, this technique also could not be used because of unavailability of sufficient subjects in some colleges/schools or their unwillingness to give response.

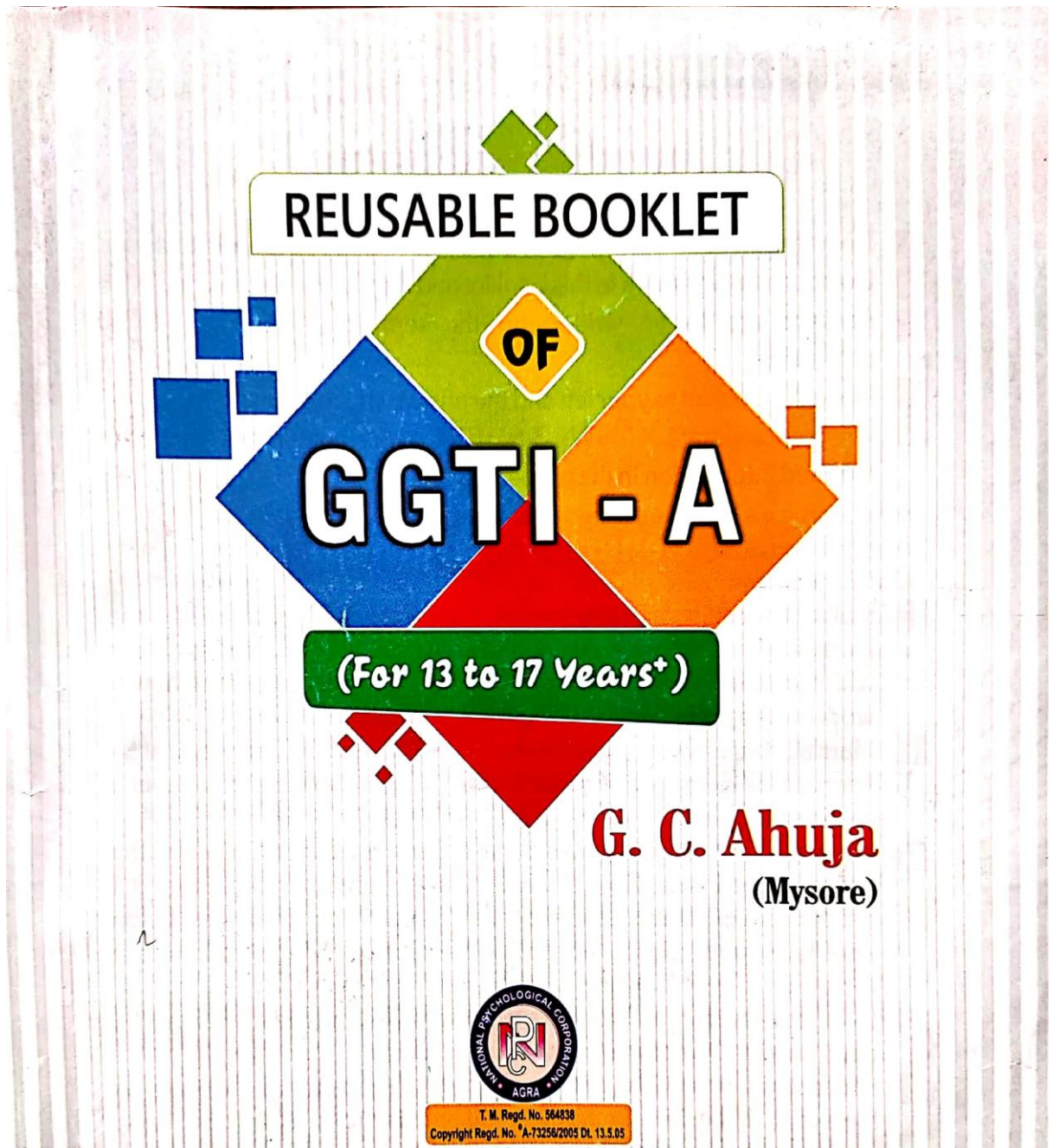
The proposed sample size for B. Ed. students and schoolteachers was 800 (400 from each country, 200 students and 200 teachers), but due to pandemic COVID-19, both the countries set lockdown from March 24, 2020 and researcher was unable to collect data from all

subjects. In the case of India, information related to achievement and intelligence was collected from all 200 students, information related to attitude was also collected from all 200 teachers, but information related to job satisfaction was collected from 180 teachers. Similarly, in the case of Nepal, responses on attitude were collected from all 200 teachers, but responses on job satisfaction were collected from 100 teachers. Due to lockdown, sample size of students was badly affected. Researcher was able to collect responses of only 50 students in Nepal.

All the statements of attitude scale and job satisfaction scale were included in eight factors in each scale, but researcher analyzed the result on the basis of total scores obtained by each subject on all statements. Analysis based on factors was not made in this study.


Appendix-I

Group Test of Intelligence (GGTI-A)



Estd. 1971

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 : (0562) 2601080

NATIONAL PSYCHOLOGICAL CORPORATION

UG-1, Nirmal Heights, Near Mental Hospital, Agra-282007

ISO 9001 : 2008 CERTIFIED COMPANY

Main Directions

- 1- Do not open or turn any page of this booklet until you are told to do so.
- 2- Do not make any mark in this booklet and handle it with care.
- 3- Answers are to be written on the separate **ANSWER-SHEET** provided.
- 4- Place this booklet to your left and the answer sheet to your right.
- 5- On your separate **ANSWER-SHEET**, write your name and other required information in the proper space.

General Instructions

- 1- There are eight tests in this booklet. Each test will be taken one by one. Necessary instructions for marking the answers are given and explained with the aid of practice examples. Be sure that you understand how to work out the problems.
- 2- Mark all your answers on the make **ANSWER-SHEET** only, and at the appropriate space meant for each test against the same serial number of each test-problem.
- 3- Work quickly, but try not make mistake. Each test is to be finished within the prescribed time. Do not waste time on any one problem, if it is difficult for you; leave it and proceed further. If you finish a test before time, revise your answers but do not turn the page till you are instructed to do so.
- 4- If you have at any time marked a wrong answer, encircle it and mark the other answer. Do not waste time in using rubber.
- 5- For each test you will be instructed when to begin and when to stop. At the expiry of the time-limit, when you are instructed to stop, put down your pencil or pen immediately and turn over the page.
- 6- Get your doubts cleared before the start of each test, but once the test starts, you are not allowed to ask anything.
- 7- Do not make any mark in this **BOOKLET**
- 8- All these instructions are to be very strickly observed.

(Now Look at page number 3.)

TEST - I**PRACTICE EXAMPLES****EXAMPLES :****1. I-F-E-V.**

A. Wife B. Few C. If We D. Five E. Fine

2. I-G-T-H-L.

A. Sight B. Flight C. Light D. Tight E. Right

EXPLANATION :

- Here four letter are given, which are to be arranged in such a way that every letter should be used. The letters are : **I-F-E-V**. Now observe the given answers which are marked A,B,C,D, and E. The correct answer in '**FIVE**'. From the letters **I-F-E-V**, only '**FIVE**' can be formed, which is at 'D'. Look at the **ANSWER SHEET** for **TEST I** (Practice Examples in the first column at the space means for page 3 of the Booklet) against Serial Number 1, a cross mark (Like the Multiplication Sign) is made on D.
- The correct answer is at 'C' Mark it yourself. In the **ANSWER SHEET** against Serial Number 2, make a cross on C.

HOW TO MARK THE TEST PROBLEMS :

You have to make a cross on any of the five answers which are : A,B,C,D, and E, where you make a cross that would be considered your answer. Put one cross mark only, otherwise, you would not be given any credit. Make a cross against the same Serial Number of the Test Problem on the **ANSWER-SHEET** only.

FOR TEST 1, WHERE TO MARK :

You have to mark on the **ANSWER SHEET** at the space meant for TEST I Problems at **BOOKLET** Page 4.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 9 Test Problems in **FOUR** Minutes :

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - I

TEST PROBLEMS

1. **H-I-E-S-M-I-F-C**

A. Semicircle B. Mischief C. Knife D. Scientific E. Handkerchief

2. **A-T-L-E-C-B-S-O-N**

A. Stable B. Table C. Subtraction D. Capable E. Constable

3. **T-U-A-C-P-U-N-T-I-O-N**

A. Station B. Recapitulation C. Punctuation D. Repetition E. Television

4. **H-G-T-I-H-E**

A. Eight B. Highest C. Tiger D. Height E. Tight

5. **G-E-N-A-L-A-G-U**

A. Gauge B. Luggage C. Old Age D. Language E. Longitude

6. **C-T-A-D-I-N-O-O-M-M-O-A-C**

A. Commodity B. Recommendation C. Accommodation
D. Declaration E. Communication

7. **N-O-P-I-S-R**

A. Piston B. Prime C. Prisoner D. Pioneer E. Prison

8. **R-E-N-A-T-S-I-G-U**

A. Singer B. Signature C. Singular D. Restaurant E. Resignation

9. **E-D-E-I-N-D-E-N-P-T-N**

A. Dependent B. Development C. Independent D. Implement E. Introduction

STOP HERE

TEST - II**PRACTICE EXAMPLES****EXAMPLES :**

1. A. Blade B. Razor C. Axe D. Knife E. Crow
2. A. Iron B. Silver C. Vegetable D. Gold E. Copper
3. A. Monday B. July C. Tuesday D. Friday E. Sunday

EXPLANATION :

1. In the first example, look at all the five words. Out of these five, four words are related to each other in some way, but there is one such word which is absurd and has nothing to do with the other four words. As you know that : Blade, Razor, Axe and Knife are instruments, but the word Crow which is at 'E' has nothing to do with these, Now look at the **ANSWER SHEET** for **TEST II** (Practice Examples in the first column at the space meant for pages 5 of the **BOOKLET**) against Serial Number 1, a cross mark is made on E.
2. Similarly, the word Vegetable at 'C' is not related to the remaining four words. Mark it yourself. Against Serial Number 2, make a cross on C.
3. Mark it yourself. Against Serial Number 3, make a cross on B.

FOR TEST II WHERE TO MARK

You have to make on the **ANSWER SHEET** at the space meant for **TEST II** Problems at **BOOKLET** Page 6.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 20 Test Problems in **FOUR** Minutes.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - II**TEST PROBLEMS**

1. A. Cow B. Horse C. Donkey D. Pigeon E. Buffalo
2. A. Delhi B. Mumbai C. Calcutta D. New York E. Chennai
3. A. Brother B. Uncle C. Grand Mother D. Niece E. Servant
4. A. Labourer B. Lawyer C. Doctor D. Professor E. Engineer
5. A. Scholarship B. Prize C. Freeship D. Needy E. Award
6. A. Discussion B. Lecture C. Debate D. Speech E. Soliloquy
7. A. Indian B. Japanese C. Russian D. American E. Bengali
8. A. Century B. Gross C. Enough D. Score E. Dozen
9. A. Building B. Mansion C. Residence D. Bungalow E. Den
10. A. India B. Pakistan C. England D. Goa E. China
11. A. English B. Mathematics C. Hindi D. French E. Latin
12. A. Photo B. Snap C. Reflection D. Portrait E. Picture
13. A. Explain B. Relate C. Speak D. Sing E. Reveal
14. A. Leg B. Knee C. Toe D. Ankle E. Palm
15. A. Classfellow B. Colleague C. Companion D. Co-worker E. Neighbour
16. A. Article B. Kind C. Category D. Grade E. Class
17. A. Knife B. Sword C. Dagger D. Gun E. Razor
18. A. Godown B. Stable C. Meadow D. Garage E. Store
19. A. Sailor B. Passenger C. Mahout D. Driver E. Pilot
20. A. Favour B. Affection C. Love D. Linking E. Regards

STOP HERE

TEST - III**PRACTICE EXAMPLES****EXAMPLES :**

1. Shoe is to Foot, as Cap is to :

- A. Hand B. Head C. Hat D. Cloth E. Uniform

2. To be Rich one must have :

- A. Wealth B. Goodluck C. Friends D. Business E. Locker

3. Train is to Passengers as School is to :

- A. Teachers B. Parents C. Students D. Players E. Naughty

EXPLANATION :

1. As Shoe is meant for the foot, similarly, Cap is for the head. The word Head is at 'B' Now look at the **ANSWER SHEET** for **TEST III** (Practice Examples in the first column at the space meant for page 7 of the **BOOKLET**) against Serial Number 1, a cross mark is made on B.
2. To be Rich, one must have 'Wealth' because, without it no one can be said to be Rich. Mark it yourself. Against Serial Number 2, make a cross on A.
3. The correct answer is at 'C'. Mark it yourself. Against Serial Number 3, make a cross on C.

FOR TEST III WHERE TO MARK

You have to mark on the **ANSWER SHEET** at the space for **TEST III** Problems at **BOOKLET** Page 8.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 20 Test Problems in **FOUR** Minutes.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - III**TEST PROBLEMS**

1. **Train is to Wheels, as Bird is to :**
A. Air B. Wings C. Flesh D. Bones E. Beak
2. **Failure is to Sadness, as Victory is to :**
A. Work B. Happiness C. Player D. Soldier E. Enemy
3. **Coal is Black, as Grass is to :**
A. Animal B. Green C. Meadow D. Nature E. Graze
4. **Dog is to Nose, as Elephant is to :**
A. Trunk B. Circus C. Emperor D. Ears E. Teeth
5. **Water is to sea, as Sand is to :**
A. Camel B. Desert C. Stone D. Building Material E. Heat
6. **Iron is to Heavy, as Cotton is to :**
A. Weight B. Cloth C. Light D. Mill E. Farmer
7. **Lock is to Key, as Bottle is to :**
A. Fill B. Label C. Cork D. Shape E. Screw
8. **Foot is to Socks, as Hand is to :**
A. Gloves B. Finger C. Ring D. Arm E. Cripple
9. **To be a Scholar, one must have :**
A. Health B. Library C. Monkey D. Spectacles E. Ability
10. **Camera is to Photo, as Tap is to :**
A. Pipe B. Metal C. Height D. Water E. Children
11. **Alive is to Awake, as Dead is to :**
A. Conscious B. Unconscious C. Brave D. Coward E. Asleep
12. **Former is to Later, as Elder is to :**
A. Older B. Aged C. Younger D. Next E. Tailor
13. **Taxi is to Hire, as House is to :**
A. Occupant B. House Tax C. Homeless D. Rent E. Owner
14. **Principal is to Vice Principal, as Monitor is to :**
A. Teacher B. Head Master C. Second Monitor D. Student E. Class
15. **Friendship always involves :**
A. Courtesy B. Enthusiasm C. Contention D. Agreement E. Co-operation
16. **Theater is to Spectators, as Police Station is to :**
A. Constable B. Inspector C. Gentleman D. Court E. Accused
17. **Blood is to Veins, as Pencil is to :**
A. Lead B. Write C. Rubber D. Pen E. Eye
18. **Copying in the Examination Hall is an act of :**
A. Kindness B. Bravery C. Foolishness D. Entertainment E. Indiscipline
19. **Beautiful is to Ugly, as Love is to :**
A. Handsome B. Parents C. Enjoy D. Hate E. Soul
20. **Hair is to Head, as Finger is to :**
A. Hand B. Body C. Palm D. Thumb E. Point

STOP HERE

TEST - IV**PRACTICE EXAMPLES****EXAMPLES :**

1. How many pencils can be bought for Rs. 3, in each pencil costs 30 Ps. ?
A. 20 B. 15 C. 1 D. 25 E. 10
2. There are three packets of biscuits. Each packet contains one biscuit more than the other in order. In the first packet, there are 22 biscuits. How many biscuits are there in the third packet ?
A. 28 B. 24 C. 23 D. 20 E. 21

EXPLANATION :

1. Each pencil costs 30 Ps. and there are three rupees, or we may say 300 Ps. Thus, 10 pencils can be bought. The correct answer is at 'E'. Look at the **ANSWER SHEET** for **TEST IV** (Practice Examples in the first column at the space meant for page 9 of the Booklet) against Serial Number 1, a cross mark is made on E.
2. Each biscuit packet contains one biscuit more than the other, and the first packet, contains 22 biscuits. Thus the second packet would contain 23. Similarly, the third packet would contain 24. The correct answer is at 'B'. Mark it yourself. Against Serial Number 2, make a cross on B.

FOR TEST IV, WHERE TO MARK

You have to make on the **ANSWER SHEET** at the space for **TEST IV** Problems at **BOOKLET** Page 10.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 6 Test Problems in **FOUR** Minutes.

Note : For Test IV, no calculations are to be shown anywhere.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - IV**TEST PROBLEMS**

1 In an Arithmetic test, a student attempted 6 questions and secured 60 percent marks. How many questions did he miss?

- A. 6 B. 8 C. 4 D. 12 E. 2

2 If a piece of cloth 10 meters long will shrink to 7 meters when washed how many meters long will a 40 meters long cloth be after shrinking?

- A. 21 B. 20 C. 24 D. 28 E. 35

3 In which of the following ways could 192 pens packed?

- A. 17 boxes with 16 pens each
B. 14 boxes with 13 pens each
C. 28 boxes with 19 pens each
D. 16 boxes with 12 pens each
E. 12 boxes with 11 pens each

4 A boy sold his pen and with that amount purchased 4 pencils for 19 Ps. each. He had a balance of 24 Ps. with him. For how many Rs. & Ps. did he shell his pen?

- A. 1.50 B. 1.00 C. 0.90 D. 2.20 E. 2.00

5 Three students utter a whole number each. Each speaks the square of the other in order, but the number remains the same. What was such number.

- A. 3 B. 16 C. 27 D. 0.1 E. 1

6 How many oranges can be bought for Rs. 5, at the rate of 2 for 25 Ps.?

- A. 20 B. 100 C. 40 D. 10 E. 5

STOP HERE

TEST - V**PRACTICE EXAMPLES**

EXAMPLES	SAME	OPPOSITE	NEITHER
1. Sit.....Stand	S	O	N
2. Lock.....See	?	?	?
3. Yes.....No.	?	?	?
4. Go.....Sorry	?	?	?
5. Fast.....Quick	?	?	?

EXPLANATION :

1. Sit means the opposite of stand. Look at the **ANSWER SHEET** for **TEST V** (Practice Examples in the first column at the space meant for page 11 of the **BOOKLET** against Serial Number 1, a cross is made on O (Meaning Opposite).
2. Look means the same as See. Therefore, against Serial Number 2, a cross is made on S (Meaning Same).
3. Yes means the opposite of No. Mark it yourself. Against Serial Number 3, make a cross on O (Meaning Opposite).
4. Go means neither the Same, nor the Opposite of Sorry. Mark it yourself. Make a cross against Serial Number 4, on N (Meaning that the pair of words is neither the Same nor the Opposite, that is, it is Neither).
5. Mark it yourself. You have to make a cross against Serial Number 5 on S (Meaning Same).

FOR TEST V, WHERE TO MARK

You have to mark on the **ANSWER SHEET** at the space meant for **TEST V** Problems at **BOOKLET** Page 12.

NUMBER OF PROBLEMS AND TIME-LIMIT

You are to answer 40 Test Problems in **FOUR** Minutes.

Note : Remember that if pair of words is Same, you have to make a cross on S. If it is Opposite, then on O. If it is neither Same, nor Opposite, then on N.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - V**TEST PROBLEMS**

- | | |
|---------------------------|-----------------------------|
| 1. Broad.....Narrow | 21. Satisfied.....Contended |
| 2. Victory.....Defeat | 22. Fresh.....Stale |
| 3. Net.....Neck | 23. Confess.....Oral |
| 4. Vanish.....Disappear | 24. Diminish.....Lesson |
| 5. Quality.....Stretch | 25. Lend.....Borrow |
| 6. Excellent.....Splendid | 26. Maximum.....Mature |
| 7. Ancient.....Modern | 27. Relate.....Narrate |
| 8. Recite.....Ring | 28. Retain.....Keep |
| 9. Confused.....Puzzled | 29. Frank.....Filthy |
| 10. Declare.....Announce | 30. Permit.....Prohibit |
| 11. Organ.....Ounce | 31. Harsh.....Severe |
| 12. Spy.....Invert | 32. Perplex.....Puzzle |
| 13. Pardon.....Forgive | 33. Dejected.....Depressed |
| 14. Pyre.....Petrol | 34. Generous.....Liberal |
| 15. Clarity.....Military | 35. Exile.....Banish |
| 16. Mingle.....Mix | 36. Prestige.....Reputation |
| 17. Queer.....Strange | 37. Breadth.....Wide |
| 18. Mend.....Repair | 38. Humble.....Meek |
| 19. Danger.....Risk | 39. Obvious.....Evident |
| 20. Vanquish.....Root | 40. Omit.....Exit |

STOP HERE

TEST - VI**PRACTICE EXAMPLES****PASSAGES :**

- A.** Character consists in little acts honourably done. We should build up by doing well our daily duties and forming good habits.
- B.** Through newspaper we come to know what is happening not only in our country, but all over the world. In short, it brings the picture of the whole world before our eyes.
- C.** Socrates resolved never to make a show of this temper. He believed that an angry man was just like a beast.

PRACTICE EXAMPLES : (Questions based on the above passages.)

- The word 'Temper's here means :
A. Ship **B.** Fever **C.** Voice **D.** Anger **E.** Tongue.
- The most suitable title for the first Passage 'A' is :
A. Good habits **B.** Character **C.** Honor **D.** Duty **E.** Little Acts.
- To what does Socrates compare an angry man ?
A. Beast **B.** Human being **C.** Tree **D.** Shadow **E.** An empty show.

EXPLANATION :

- Here you have to answer question which are based on the above passages. This question has been taken from passage 'C'. According to it, the meaning of the word 'Temper' is 'Anger', which is at 'D'. Look at the **ANSWER SHEET** for **TEST-VI** (Practice Examples in the first column at the space meant for page 13 of the Booklet) against Serial Number 1, a cross **X** is made on D.
- The correct answer is at 'B'. Mark it yourself. Against Serial Number 2, make a cross on B.
- Mark it yourself. The correct answer is at 'A'. You have to make a cross on A.

FOR TEST VI, WHERE TO MARK :

You have to mark on the **ANSWER SHEET** at the space meant for **TEST VI** Problems at **BOOKLET** Page 14.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 8 Test Problems in **FOUR** Minutes.

Note : For Test VI, in the beginning you are given four passages, then eight questions follow. The Questions are based on the given passages. First of all read all the four passages and then take questions one by one and go on marking. Work quickly.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - VI

TEST PROBLEMS

PASSAGES :

- A.** The real life of India is not in the cities; it is in the homes of the ordinary people; it is in the villages. The cities present only, one side of the picture, but the majority of the people of India live almost on the borderline of starvation.
- B.** Once a poor widow who had lost her only son came to Buddha and prayer to him to bring her dead child back to life. The holy man, touched by the great sorrow of the poor woman said, "There is only one medicine that can restore your son to life. Bring me a handful of rice from a house where death has never taken place."
- C.** Cheerfulness and health go hand in hand. The healthy are cheerful and those who are cheerful are also found healthy. The singing birds fill us with pleasure. Object of nature like fountains, lakes and rivers, also produce pleasing ideas in our minds. Therefore, everything in the universe is a source of joy.
- D.** Our ancestors had great difficulty in obtaining books. Ours is what to select. We must be careful what be read. There are indeed, books and books, and there are books which Lamp said, are not book at all. Bacon remarked to an unfortunate author, "I will lose no time in reading your book." Others are more than useless, and poison the mind suggestions of evil. Few perhaps realise how much the happiness of life, and the formation of character depend on a wise selection of books we read.

TEST PROBLEMS : (QUESTIONS BASED ON THE ABOVE PASSAGES)

- What did Buddha ask the woman to bring?
A. Wood **B.** Child **C.** Rice **D.** Gold **E.** Death.
- What request did she make a Buddha?
A. To bless her with a child **B.** To kill her also **C.** To give her plenty of wealth
D. To make her son alive again **E.** To give life to her husband.
- The statement, "There are book which are not book at all" means :
A. These are useful books **B.** The authors of these books are dead
C. These are not books **D.** These are holy books
E. These books contain filthy matter.
- Where do we find the real picture of the Indian people ?
A. In the films **B.** In the nature **C.** In the hospital
D. In the villages **E.** In the cities.
- The word 'Restore' means :
A. Birth **B.** Alive **C.** Store **D.** Chemist **E.** Bring back
- Our fore-fathers faced difficulty in :
A. Reading books **B.** Writing Books **C.** Getting Books
D. Selling books **E.** Selecting books
- 'The cities represent only an incomplete picture' Which word or words have been used to express an incomplete picture ?
A. Narrow **B.** Full **C.** One side of **D.** Half **E.** Ordinary people
- The most suitable little for the forth passage 'D' is :
A. Reading of books **B.** Character and books **C.** Selection of books
D. Abundance of books **E.** An unfortunate author

STOP HERE

TEST - VII**PRACTICE EXAMPLES****EXAMPLES**

1.	2	4	(?)	8	10	
2.	P	(?)	R	S	T	
3.	10	11	13	16	(?)	25

EXPLANATION :

1. You have to write in the bracket on the **ANSWER SHEET** the number that has been omitted from the series. Here the number that has been omitted is 6. Look at the **ANSWER SHEET** for **TEST VII** (Practice Examples in the first column at the space meant for page 15 of the Booklet) against Serial Number 1, 6 is written in the bracket.

2. Mark it yourself. Against Serial Number 2, write Q in the bracket "(Q)".

3. You would observe that there is a certain order or arrangement. The increase or decrease is in a systematic manner. Look at the following :

The first number is	:	10
The second number is	:	10 plus 1 (11)
The third number is	:	11 plus 2 (13)
The fourth number is	:	13 plus 3 (16)
The fifth number is	:	16 plus 4 (20)

Mark it yourself. Against Serial Number 3, write 20 in the bracket.

FOR TEST VII, WHERE TO MARK

You have to write in the bracket on the **ANSWER SHEET** the number that has been omitted from the series at the space meant for **TEST VII** Problems at **BOOKLET** Page 16.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 12 Test Problems in **FOUR** Minutes.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - VII**TEST PROBLEMS**

1. 101 (?) 121 131 141
2. 63 56 49 (?) 35 28
3. 1 7 13 19 (?)
4. 2 9 (?) 23 30
5. 11.9 10.8 9.7 8.6 (?)
6. Z-A Y-B X-C W-D (?)
7. D H (?) P T
8. P R T V (?)
9. 119 102 85 68 (?)
10. 3 4 5 10 11 12 17 18 19 (?)
11. 1 4 2 8 3 (?) 4 16
12. 25 35 44 (?) 59

STOP HERE

TEST - VIII**PRACTICE EXAMPLES****EXAMPLES :**

1. He who teaches in a school is called :
A. Student B. Teacher C. Officer D. Scholar E. Professor
2. The saying, "Think before you speak" means :
A. Silence is golden.
B. Don't speak and be quiet.
C. Slow and steady wins the race.
D. Think over it, after you have spoken.
E. Before starting to speak, think over it.
3. He who steals is called :
A. Fool B. Poor C. Clever D. Thief E. Beggar

EXPLANATION :

1. Here you have to select the best out of the five given answers. In a School, it is the Teacher who teaches. The correct answer is at 'B' Look at the **ANSWER SHEET** for **TEST VIII** (Practice Examples in the first column at the space meant for page 17 of the Booklet) against Serial Number 1, a cross is made on B.
2. The correct answer is at 'E'. Mark it yourself. Against Serial Number 2, make a cross on E.
3. Mark it yourself. You have to make a cross on D.

FOR TEST VIII, WHERE TO MARK

You have to mark on the **ANSWER SHEET** at the space meant for **TEST VIII** Problems at **BOOKLET** Page 18 and 19.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 20 Test Problems in **FOUR** Minutes.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - VIII**TEST PROBLEMS**

1. **He who tells a lie is called :**
A. Lawyer B. Disobedient C. Honest D. Liar E. Naughty
2. **He who writes book is called :**
A. Teacher B. Publisher C. Scholar D. Author E. Steno
3. **He who is always in time is called :**
A. Punctual B. Optimist C. Lazy D. Serious E. Good
4. **He who is new to a certain place is called :**
A. Stranger B. Hawker C. Minister D. Poet E. Philosopher
5. **One who is locked up in jail is called :**
A. Constable B. Thief C. Robber D. Prisoner E. Foreigner
6. **That which remains unaffected by water is called :c**
A. Water Proof B. Umbrella C. Raincoat D. Plastic E. Leather
7. **A woman whose husband is not alive is called :**
A. Widower B. Unfortunate C. Married D. Window E. Maidan
8. **He who slaughters animals is called :**
A. Cruel B. Animal C. Non-vegetarian D. Customer E. Butcher
9. **The saying 'A word for the wise and rod for the foolish' means :**
A. All men are wise
B. Give desirable treatment to all
C. For a wise man only a hint would do, but not for the fool who is subject to punishment
D. It is no use to cry over spilt milk.
E. Fools are wiser than the wise.
10. **He who does not believe in God is called :**
A. Thiest B. Preacher C. Athiest D. Worried E. Prophet

GO ON TO THE NEXT PAGE

11. When we think, we

- A. Dream B. Sing C. Concentrate D. Sit E. Sleep

12. He who serves in a hotel is called :

- A. Cook B. Waiter C. Manager D. Servent E. Tray

13. He who ploughs the land is called :

- A. Worker B. Landlord C. Labourer D. Villager E. Peasant

14. The saying 'Nip the evil in the bud' means :

- A. Honesty is the best policy
B. We should avoid doing bad acts
C. Evil is in the bud
D. Nip the bud in the evil
E. To stop bad actions at the initial stage.

15. A gentleman is one who does not :

- A. Go to see pictures B. Like others C. Inflict pain on others
D. Marry E. Steal

16. The saying 'A rolling stone gathers no moss' means :

- A. We should not shirk work.
B. Moss cannot be collected by the stones.
C. We should move from place to place
D. If we keep shifting, we cannot achieve much
E. Change is the law of nature

17. The voice that can be heard is called :

- A. Audible B. Clear C. Loud D. Visible E. Low

18. A child born after the death of his father is called :

- A. Innocent B. Poor C. Unfortunate D. Postman E. Orphan

19. He who compiles words in the printing press is called :

- A. Pressman B. Compositor C. Manager D. Client E. Builder

20. That which is hated is called :

- A. Injurious B. Painful C. Disfigured
D. Contemptible E. Disastrous.

STOP HERE

Appendix-II

Attitude scale for schoolteachers of Nepal

शिक्षण पेसाप्रति शिक्षकहरुको धारणा

Attitude of Teachers towards Teaching Profession

स्थायी शिक्षकहरुको लागि मात्र (*Only for Permanent Teachers*)

नाम (Name) : पद (Designation) :
तह (Level) : उमेर (Age) :
शैक्षिक योग्यता (Academic qualification) : लिंग (Sex) :
शिक्षण अनुभव (Teaching experience) : हस्ताक्षर (Signature) :
अध्यापन गर्ने मुख्य विषय (Main teaching subject) : सम्पर्क नं. (Contact No.):
विद्यालयको नाम (Name of the school) : ठेगाना (Address) :

यस परीक्षणको उद्देश्य विद्यालय तहका शिक्षकहरुको शिक्षण पेसाप्रतिको वास्तविक धारणा पत्ता लगाउनका लागि आवश्यक पर्ने सूचनाहरु प्राप्त गर्नु हो । तल दिईएका ३२ वटा कथनहरुलाई गहन रूपमा अध्ययन गरी नेपालको सन्दर्भमा, आफूले गरेको वास्तविक अनुभूतिका आधारमा उपयुक्त विकल्पमा (√) चिन्ह लगाई आफ्नो धारणा व्यक्त गरी सहयोग गरि दिन अनुरोध गर्दछु । यहाँका प्रतिक्रियाहरु पूर्णरूपमा गोप्य राखिने छन् र शोधकार्यका लागि मात्र प्रयोग गरिने छन् ।

(The purpose of this test is to obtain the information required to find out the actual attitude of school level teachers towards teaching profession. Please read the following 32 statements deeply and express your opinion by marking (√) the appropriate alternate **on the context of Nepal and your own actual realization.** Your responses will be **fully confidential** and will be used only for research purpose.)

Researcher:

Madan Singh Deupa, M.Sc., M.Ed.

Ph. D. Scholar (Education)

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: +919068131297

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S. No.	कथनहरू (Statements)	प्रतिक्रियाहरू (Responses)				
		पूर्णसहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्ण असहमत (Strongly Disagree)
1	नेपालमा शिक्षण पेसामा बुद्धिमान् व्यक्तिहरू संलग्न रहेका छन् । (Intelligent persons are involved in teaching profession in Nepal)					
2	शिक्षण सामान्य व्यक्ति संलग्न हुने पेसा हो । (Teaching is a profession chosen by ordinary people.)					
3	शिक्षक शिक्षा कार्यक्रम प्रति उच्च उपलब्धि भएका व्यक्तिहरू आकर्षित भईरहेका छन् । (High achievers are attracted towards joining teacher education programme.)					
4	नेपालमा शिक्षणलाई उच्च सम्मानयुक्त पेसा का रूपमा लिईन्छ । (Teaching is taken as a highly prestigious profession in Nepal.)					
5	शिक्षणमा जटिल सीपहरूको आवश्यकता पर्दछ । (Complex skills are needed in teaching.)					
6	नेपालमा शिक्षकलाई राष्ट्रिय वरियता क्रममा उपयुक्त स्थान प्रदान गरिएको छ । (Teachers are provided appropriate rank in the protocol list of Nepal.)					
7	शिक्षण पेसा प्रतिको आकर्षण घट्दो रहेको छ । (Attraction towards teaching is declining.)					
8	शिक्षण पेसाले विद्यार्थीलाई अनुशासित बनाउन सकिरहेको छैन । (Teaching profession does not command student-discipline.)					

क्रमशः (Continue)...

S. No	कथनहरू (Statements)	प्रतिक्रियाहरू (Responses)				
		पूर्णसहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्ण असहमत (Strongly Disagree)
9	अभिभावकहरू शिक्षण पेसाले उनीहरूका नानीहरूको भविष्य निर्माण गर्दछ भन्ने विश्वास गर्दछन् । (Guardians believe that teaching shapes future of their children.)					
10	नेपालमा भविष्यमा शिक्षण सम्मानित पेसा हुनेछ। (Teaching will be prestigious profession in Nepal in future.)					
11	अभिभावकहरू आफ्नो सन्तान शिक्षक होस् भन्ने चाहन्छन् । (Guardians want their children to be teacher.)					
12	म मेरो तलबबाट सन्तुष्ट छु । (I am satisfied with my salary.)					
13	शिक्षण पेसामा वृत्ति विकासका अवसरहरूको अभाव छ । (Teaching profession lacks opportunities for career development.)					
14	शिक्षकहरूको बढुवा उनीहरूको निष्पक्ष पेसागत मूल्याङ्कनका आधारमा हुन्छ । (Promotion of teachers is based on their fair professional evaluation.)					
15	शिक्षण पेसामा संलग्न व्यक्तिहरू अन्य कार्यहरूमा व्यस्त हुन्छन् । (Teaching professionals remain engaged in other tasks.)					
16	नेपालमा भविष्यमा शिक्षकहरूको तलबमा उल्लेखनीय रूपमा वृद्धि हुनेछ । (There will be significant increase in the salary of teachers of Nepal in future.)					

क्रमशः (Continue)...

S. No.	कथनहरू (Statements)	प्रतिक्रियाहरू (Responses)				
		पूर्णसहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्ण असहमत (Strongly Disagree)
17	शिक्षण पेसाले गर्वको अनुभूति गराउँदछ। (Teaching profession evokes feeling of proudness.)					
18	शिक्षण दिक्क लाग्दो पेसा हो। (Teaching is a boring profession.)					
19	शिक्षण एउटा कठिन पेसा हो। (Teaching is a difficult profession.)					
20	नेपालमा शिक्षकहरू राजनीतिमा संलग्न रहेका छन्। (In Nepal, teachers are involved in politics.)					
21	शिक्षण पेसा विद्यार्थी-सिकाईप्रति केन्द्रित रहेको छ। (Teaching profession remains directed towards students-learning.)					
22	शिक्षण पेसाले आत्म सन्तुष्टि प्रदान गर्दछ। (Teaching profession provides self satisfaction.)					
23	म शिक्षण पेसा मन पराउँछु। (I like teaching profession.)					
24	शिक्षण पेसा जीवन निर्वाहका लागि मात्र हो। (Teaching profession is just for livelihood.)					
25	शिक्षण तिरष्कृत पेसा हो। (Teaching is a hated profession.)					
26	म मेरो सन्तान पनि शिक्षक होस् भन्ने चाहन्छु। (I want my child to be a teacher.)					

क्रमशः (Continue)...

S. No.	कथनहरू (Statements)	प्रतिक्रियाहरू (Responses)				
		पूर्णसहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्ण असहमत (Strongly Disagree)
27	नेपालमा शिक्षण पेसालाई उपेक्षित पेसाका रूपमा लिइन्छ । (Teaching is taken as a contemptuous profession in Nepal.)					
28	शिक्षण पेसाभित्र प्रसस्त राजनीति हुन्छ । (There is much politics within teaching profession.)					
29	मानिसहरू शिक्षण पेसा अपनाउन मन पराउँछन् । (People like to be in teaching profession.)					
30	शिक्षण पेसामा सिर्जनशीलता हुँदैन । (There is no creativity in teaching profession.)					
31	नेपालमा शिक्षकहरूको नियुक्तिमा राजनैतिक हस्तक्षेप हुन्छ । (There is political interference in appointment of teachers in Nepal.)					
32	शिक्षकहरू उनीहरूको कार्यदक्षताको आधारमा निष्पक्ष रूपमा पुरस्कृत गरिन्छन् । (Teachers are fairly awarded on the basis of their performance.)					

Appendix-III

Attitude scale for schoolteachers of India

शिक्षण व्यवसाय के प्रति अध्यापकों की धारणा

Attitude of Teachers towards Teaching Profession

केवल स्थायी अध्यापकों के लिए (Only for Permanent Teachers)

नाम (Name) :	पद (Designation) :
तह (Level) : Primary/Junior secondary/Secondary	उम्र (Age) :
शैक्षिक योग्यता (Academic qualification) :	लिङ्ग (Sex) :
शिक्षण अनुभव (Teaching experience) :	हस्ताक्षर (Signature) :
अध्यापन का मुख्य विषय (Main teaching subject) :	सम्पर्क नं. (Contact
No.):विद्यालयका नाम (Name of the school) :	पता (Address) :

इस परीक्षणका उद्देश्य विद्यालय के अध्यापकों की शिक्षण व्यवसाय के प्रति वास्तविक धारणा की पहिचान हेतु आवश्यक सूचनाओं की प्राप्ति करना है। निम्नाङ्कित ३२ कथनों का गहनता पूर्वक अध्ययन कर भारत के सन्दर्भ में, स्वयं की वास्तविक अनुभूति के आधार पर उपयुक्त विकल्प में (√) चिन्ह के द्वारा अपनी अनुक्रिया व्यक्त कर के सहयोग के लिए अनुरोध है। आप के द्वारा प्रदत्त सूचनाओं को पूर्ण रूप से गोपनीय रखा जाएगा तथा मात्र शोधकार्य हेतु ही प्रयोग किया जाएगा।

(The purpose of this test is to obtain the information required to find out the actual attitude of school level teachers towards teaching profession. Please read the following 32 statements deeply and express your opinion by marking (√) the appropriate alternate **on the context of India and your own actual realization.** Your responses will be **fully confidential** and will be used only for research purpose.)

Researcher:

Madan Singh Deupa, M.Sc., M.Ed.
Ph. D. Scholar (Education)
SSJ Campus, Almora
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: +9779848881262
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S. No.	कथन (Statements)	प्रतिक्रियाएँ (Responses)				
		पूर्णतः सहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्णतः असहमत (Strongly Disagree)
1	भारत में शिक्षण व्यवसाय में बुद्धिमान व्यक्तियों की संलग्नता है। (Intelligent persons are involved in teaching profession in India.)					
2	शिक्षण व्यवसाय में सामान्य व्यक्तियों की संलग्नता रहती है। (Teaching is a profession chosen by ordinary people.)					
3	शिक्षक शिक्षा कार्यक्रम में उच्च उपलब्धि युक्त व्यक्ति आकर्षित हो रहे हैं। (High achievers are attracted towards joining teacher education programme.)					
4	भारत में शिक्षणको उच्च सम्मानित व्यवसाय के रूप में लिया जाता है। (Teaching is taken as a highly prestigious profession in India.)					
5	शिक्षणमें जटिल कला की आवश्यकता होती है। (Complex skills are needed in teaching.)					
6	भारत में राष्ट्रीय बरियता क्रम में अध्यापक वर्ग को समुचित स्थान प्राप्त है। (Teachers are provided appropriate rank in the protocol list of India.)					
7	शिक्षण व्यवसाय के प्रति आकर्षण कम हो रहा है। (Attraction towards teaching is declining.)					
8	शिक्षण व्यवसाय विद्यार्थियों को अनुशासित बनाने में कामयाब नहीं है। (Teaching profession does not command student-discipline.)					

क्रमशः (Continue)...

S. No	कथन (Statements)	प्रतिक्रियाएँ (Responses)				
		पूर्णतः सहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्णतः असहमत (Strongly Disagree)
9	अभिभावकों का विश्वास है की शिक्षण व्यवसाय के द्वारा उनके बच्चों का भविष्य निर्माण होता है । (Guardians believe that teaching shapes future of their children.)					
10	भारत में भविष्य में शिक्षण सम्मानित व्यवसाय होगा । (Teaching will be prestigious profession in India in future.)					
11	अभिभावक चाहते हैं की उनकी सन्तान अध्यापक बने । (Guardians want their children to be teacher.)					
12	मैं मेरे वेतन से सन्तुष्ट हूँ । (I am satisfied with my salary.)					
13	शिक्षण व्यवसाय में जीविका विकास के अवसरों का अभाव है । (Teaching profession lacks opportunities for career development.)					
14	अध्यापकों की पदोन्नति उनके वास्तविक व्यवसायिक मूल्याङ्कन के आधार पर होती है । (Promotion of teachers is based on their fair professional evaluation.)					
15	शिक्षण व्यवसाय में संलग्न व्यक्ति अन्य कार्यों में व्यस्त रहते है । (Teaching professionals remain engaged in other tasks.)					
16	भारत में भविष्य में अध्यापकों के वेतन सुविधाओं में उल्लेखनीय रूप में वृद्धि होगी । (There will be significant increase in the salary of teachers of India in future.)					

क्रमशः (Continue)...

S. No	कथन (Statements)	प्रतिक्रियाएँ (Responses)				
		पूर्णतः सहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्णतः असहमत (Strongly Disagree)
17	शिक्षण व्यवसाय में गर्व की अनुभूति होती है। (Teaching profession evokes feeling of proudness.)					
18	शिक्षण नीरस व्यवसाय है। (Teaching is a boring profession.)					
19	शिक्षण एक कठिन व्यवसाय है। (Teaching is a difficult profession.)					
20	भारत में अध्यापक राजनीति में संलग्न होते हैं। (In India, teachers are involved in politics.)					
21	शिक्षण व्यवसाय विद्यार्थी-अधिगम पर केन्द्रित है। (Teaching profession remains directed towards students-learning.)					
22	शिक्षण व्यवसाय आत्म सन्तुष्टि प्रदान करता है। (Teaching profession provides self satisfaction.)					
23	मैं शिक्षण व्यवसाय को पसन्द करता हूँ। (I like teaching profession.)					
24	शिक्षण व्यवसाय केवल जीविकोपार्जन के लिए है। (Teaching profession is just for livelihood.)					
25	शिक्षण तिरस्कृत व्यवसाय है। (Teaching is a hated profession.)					
26	मैं चाहता/चाहती हूँ कि मेरी सन्तान भी अध्यापक बनें। (I want my child to be a teacher.)					

क्रमशः (Continue)...

S. No.	कथन (Statements)	प्रतिक्रियाएँ (Responses)				
		पूर्णतः सहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्णतः असहमत (Strongly Disagree)
27	भारत में शिक्षण व्यवसाय को उपेक्षित व्यवसाय के रूपमें लिया जाता है । (Teaching is taken as a contemptuous profession in India.)					
28	शिक्षण व्यवसाय में अत्यधिक राजनीति होती है । (There is much politics within teaching profession.)					
29	व्यक्ति शिक्षण व्यवसाय अपनाना चाहते है । (People like to be in teaching profession.)					
30	शिक्षण व्यवसाय में सृजनशीलता नहीं होती है । (There is no creativity in teaching profession.)					
31	भारत में अध्यापकों की नियुक्ति में राजनैतिक हस्तक्षेप होता है (There is political interference in appointment of teachers in India.)					
32	अध्यापकों को उनकी कार्यदक्षता के आधार पर निष्पक्ष रूप में पुरस्कृत किया जाता है । (Teachers are fairly awarded on the basis of their performance.)					

Appendix-IV

Job satisfaction scale (JSST-DM)



T. M. Regd. No. 564838
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Dr. (Mrs.) Meera Dixit (Lucknow)

Consumable Booklet
of
JSST-DM
(Hindi Version)

कृपया निम्न सूचनाएँ भरिए—

दिनांक

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नाम

शैक्षणिक योग्यताएँ

पिता का नाम

अध्यापन अनुभव

संस्थान का नाम

लिंग : पुरुष

स्त्री

निर्देशन का माध्यम

निर्देश

इस मापनी के द्वारा इस बात का पता लगाने का प्रयास किया जायेगा कि आप अपने वर्तमान व्यवसाय से कितने संतुष्ट हैं। प्रत्येक कथन के पाँच विकल्प हैं—पूर्णतः सहमत, सहमत, अनिश्चित, असहमत तथा पूर्णतः असहमत। आप पाँच में से जिस विकल्प पर सर्वाधिक संतुष्ट हों, उसके वाले खाने पर सही का निशान लगाइये। सभी कथनों के उत्तर निःसंकोच होकर स्वतन्त्र रूप से दीजिए। आपके उत्तर पूर्णतः गोपनीय रखे जायेंगे।

फलांकन तालिका

कार्य कारक	A	B	C	D	E	F	G	H
प्राप्तांक								

कुल योग

Z-फलांक

ग्रेड

कार्य सन्तुष्टि स्तर

स्कोर

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UG-1, Nirmal Heights, Near Mental Hospital, Agra-282 007

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क्रमांक	कथन	पूर्णतः सहमत	सहमत	अनिश्चित	असहमत	पूर्णतः असहमत	प्राप्तांक
39.	आप अपने छात्रों के चरित्र-निर्माण व अध्ययन की अच्छी आदतें विकसित करने में सहायक सिद्ध होते हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
40.	पढ़ाई के साथ-साथ आपके विद्यालय में खेलकूद में भाग लेने के लिए आपको उचित अवसर मिलता है।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
41.	आप अपनी संस्था के प्रधान के द्वारा दूसरों की शिकायतें सुनने व उन पर निर्णय लेने के तरीकों को पसन्द करते हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
42.	आपके सहयोगी आपको अपने समान समझते हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
43.	आपकी कक्षाएँ आवश्यकतानुसार सुसज्जित हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
44.	आपके सहयोगी आपको विद्यालय के महत्वपूर्ण कार्यों का उत्तरदायित्व देना पसन्द करते हैं जिससे आप गौरव का अनुभव कर सकें।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
45.	यह अच्छा है कि आपके व्यवसाय में अक्सर स्थानान्तरण नहीं होते हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
46.	आपको अपनी व्यवसायिक योग्यता बढ़ाने के उचित अवसर प्रदान किये जाते हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
47.	खेलकूद के अतिरिक्त अन्य पाठ्य-सहगामी क्रियाओं में भी आपको भाग लेने के उचित अवसर मिलते हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
48.	श्रव्य-दृश्य उपकरण आपके प्रयोग के लिए सदैव उपलब्ध हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
49.	आपका विद्यालय आपके निवास के निकट है।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
50.	आपको अवकाश प्राप्ति के पश्चात् मिलने वाली सुविधाएँ उपलब्ध हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
51.	आपकी संस्था की कक्षाओं में छात्रों की संख्या के अनुसार उपयुक्त जगह है।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
52.	आप अपने व्यवसाय में गरिमा का अनुभव करते हैं।	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

FACTORS	A		B		C			D	E	F	G	H			
ITEM	46	52	45	50	43	48	49	51	40	47	41	-	39	42	44
SCORE															

Appendix-V

Job satisfaction scale (JSST-DM)

National Psychological Corporation, Agra

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of

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(Translated Nepali Version)

कृपया निम्न सूचनाहरू भर्नुहोस् -

मिति

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नाम

शैक्षिक योग्यता

बुवाको नाम

अध्यापन अनुभव

संस्थाको नाम

लिंग : पुरुष महिला

शिक्षणको माध्यम

निर्देशन

यस परीक्षणद्वारा तपाईं आफ्नो वर्तमान पेसामा कति संतुष्ट हुनुहुन्छ भन्ने कुराको पहिचान गर्ने प्रयास गरिने छ । प्रत्येक कथनका पूर्ण सहमत, सहमत, अनिश्चित, असहमत तथा पूर्ण असहमत गरी पाँच वटा विकल्पहरू छन् । पाँचवटामध्ये तपाईं जुन विकल्पमा सर्वाधिक संतुष्ट हुनुहुन्छ त्यस विकल्पमा सही (V) को चिन्ह लगाई निःसंकोच रूपमा स्वतन्त्रतापूर्वक प्रतिक्रिया दिन हुन अनुरोध गरिन्छ । यहाँका प्रतिक्रियाहरू पूर्ण रूपमा गोप्य रहने छन् ।

प्राप्ताङ्क तालिका

कार्य तत्वहरू	A	B	C	D	E	F	G	H
प्राप्ताङ्क								

जम्मा कोरा प्राप्ताङ्क z-अङ्क ग्रेड

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Translated by: Madan Singh Deupa

क्रम संख्या	कथनहरू (Statements)	प्रतिक्रियाहरू (Responses)				
		पूर्ण सहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्ण असहमत (Strongly Disagree)
1	तपाईं स्वभाविक रूपले महसुस गर्नु हुन्छ कि तपाईं अध्यापनका लागि उपयुक्त हुनुहुन्छ ।					
2	तपाईंको विद्यालय यसको कार्य अनुसार उपयुक्त स्थानमा छ ।					
3	तपाईंको तलब तपाईंको कार्य अनुसार उचित छ ।					
4	तपाईंको विद्यालय शिक्षक केन्द्रित छ ।					
5	तपाईं तपाईंको विद्यालयका प्रधानाध्यापक आफ्नो पदका लागि पूर्ण रूपले उपयुक्त हुनुहुन्छ भन्ने अनुभव गर्नुहुन्छ ।					
6	तपाईंको विद्यालयमा सबै शिक्षक वा शिक्षिकाहरू आपसमा सहयोगको भावनाले कार्य गर्नुहुन्छ ।					
7	विद्यार्थी तपाईंको आदर गर्दछन् ।					
8	यस पेशामा भएको कारणले समाजमा तपाईंको समुचित स्थान छ भन्ने महसुस गर्नुहुन्छ ।					
9	तपाईंको पेसा तपाईंका सन्तान वा आश्रितहरूलाई उपयुक्त शिक्षा दिलाउनमा सहायक छ ।					
10	तपाईंको विद्यालय एउटा सफा ठाँउ हो, जहाँ कोही पनि कार्य गर्न चाहन्छ ।					
11	तपाईं शिक्षणमा आनन्दको अनुभव गर्नुहुन्छ ।					
12	तपाईंको पेशामा बहुवाका अवसरहरू छन् ।					
13	तपाईंलाई आफ्नो विद्यालयका योजनाहरूमा सल्लाह दिने अवसर दिइन्छ ।					
14	तपाईंको विद्यालयका प्रधानाध्यापक एउटा निष्पक्ष व्यक्ति हुनुहुन्छ ।					
15	तपाईंको कक्षामा पठन-पाठनको कार्यक्रम सुचारु रूपले चल्दछ ।					

क्रमशः (Continue)...

क्रम संख्या	कथनहरू (Statements)	प्रतिक्रियाहरू (Responses)				
		पूर्ण सहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्ण असहमत (Strongly Disagree)
16	तपाईं आफ्ना सहकर्मीहरूसँग मधुर सम्बन्ध स्थापित गर्न सक्षम हुनुहुन्छ र उनीहरूसँग सुखद सामञ्जस्यको अनुभव गर्नुहुन्छ ।					
17	तपाईंका मित्र तथा आफन्तहरू तपाईंको पेसालाई सम्मान दिन्छन् ।					
18	तपाईंलाई आफ्नो परिवारको हेरचाह तथा मनोरंजन गर्ने पुरा समय तथा अवसर प्राप्त हुन्छ ।					
19	तपाईंको पेसामा नियमित अध्यापन कार्य बाहेक अतिरिक्त कार्य गरेमा अतिरिक्त पारिश्रमिक पाइने व्यवस्था छ ।					
20	तपाईंको विद्यालयको कार्य अवधि तपाईंका लागि उपयुक्त छ ।					
21	तपाईंको विद्यालयका प्रधानाध्यापक तपाईं तथा अन्य सहकर्मीहरूको भलाइमा रुचि राख्नुहुन्छ ।					
22	एउटा शिक्षकको रूपमा तपाईंका विद्यार्थीहरू तपाईंलाई मन पराउँदछन् ।					
23	तपाईं आफ्नो आम्दानीले जुन जीवनस्तर बनाउन सक्षम हुनुभएको छ, त्यो तपाईंलाई सुविधाजनक लाग्छ।					
24	तपाईंको कक्षमा प्रकाश र हावाको पर्याप्त व्यवस्था छ ।					
25	तपाईं विदाको समयभन्दा बढी आफ्नो कार्यमा आनन्दको अनुभूति गर्नुहुन्छ ।					
26	तपाईंको पेसामा आफ्नो कार्यको योजना बनाउने पूर्ण स्वतन्त्रता छ ।					
27	तपाईं आफ्नो विद्यालयका प्रधानाध्यापकले अन्य शिक्षकहरूसँग गरेको व्यवहार मन पराउनु हुन्छ ।					
28	तपाईंको विद्यालयमा शिक्षक तथा विद्यार्थीहरूका बीचमा असल सम्बन्ध छ ।					

क्रमशः (Continue)...

क्रम संख्या	कथनहरू (Statements)	प्रतिक्रियाहरू (Responses)				
		पूर्ण सहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्ण असहमत (Strongly Disagree)
29	तपाईंको विद्यालयको प्रयोगशालामा उपयुक्त उपकरणहरू उपलब्ध छन् ।					
30	अवसर मिल्यो भने तपाईं यस्तै तलबमा अर्को पेसामा जान चाहनुहुन्छ।					
31	जबसम्म तपाईं राम्ररी कार्य गर्नुहुन्छ, तपाईंको पेसा सुरक्षित छ ।					
32	तपाईंलाई आफ्ना असल कार्यहरूका लागि वरिष्ठहरूबाट प्रशंसा पाइन्छ ।					
33	तपाईंलाई आफ्ना विद्यार्थिका अभिभावकहरूसँग सम्पर्क स्थापित गर्न उपयुक्त अवसरहरू प्राप्त हुन्छन् ।					
34	तपाईंको कक्षामा विद्यार्थी-शिक्षक अनुपात तपाईंलाई अत्यधिक कार्यबोझ नपर्ने गरी मिलाइएको छ ।					
35	अध्यापन पेसाको भविष्य उज्ज्वल छ ।					
36	तपाईंको विद्यालयको पुस्तकालयमा तपाईंका लागि पुस्तकहरू सधैं उपलब्ध हुन्छन् ।					
37	तपाईंका सहकर्मीहरू आवश्यकता परुन्जेल तपाईंलाई सहयोग गर्न सधैं तत्पर रहन्छन् ।					
38	तपाईंको विद्यालय अरूका लागि अनुशासन तथा शैक्षिक उपलब्धिको एउटा उदाहरण हो ।					
39	तपाईं आफ्ना विद्यार्थीहरूको चरित्र-निर्माण तथा अध्ययनको असल बानी विकास गर्न सक्षम हुनुहुन्छ ।					
40	शिक्षणका साथ साथै तपाईंको विद्यालयमा तपाईंलाई खेलकूदमा भाग लिने उचित अवसर प्राप्त छ ।					
41	तपाईं आफ्नो विद्यालयको प्रधानाध्यापकद्वारा अरूका गुनासा सुन्ने तथा सो सम्बन्धी निर्णय लिने तरिका मन पराउनुहुन्छ ।					
42	तपाईंका सहकर्मीहरू तपाईंलाई आफूसरह नै संभन्छन् ।					

क्रमशः (Continue)...

क्रम संख्या	कथनहरू (Statements)	प्रतिक्रियाहरू (Responses)				
		पूर्ण सहमत (Strongly Agree)	सहमत (Agree)	अनिश्चित (Undecided)	असहमत (Disagree)	पूर्ण असहमत (Strongly Disagree)
43	तपाईंका कक्षाहरू आवश्यकतानुसार सुसज्जित छन् ।					
44	तपाईंका सहकर्मीहरू तपाईंलाई गौरवान्वित हुने गरी विद्यालयको महत्वपूर्ण कार्यको जिम्मेवारी दिन चाहन्छन् ।					
45	यो राम्रो छ कि तपाईंको पेसामा अक्सर सरुवा हुँदैन ।					
46	तपाईंलाई आफ्नो पेसागत योग्यता वृद्धि गर्ने उचित अवसर प्रदान गरिन्छ ।					
47	खेलकूदका अतिरिक्त तपाईंलाई अन्य सह-पाठ्य क्रियाकलापहरूमा भाग लिने उचित अवसर मिल्दछ ।					
48	तपाईंको प्रयोगका लागि श्रव्य-दृष्य उपकरणहरू सधैं उपलब्ध हुन्छन् ।					
49	तपाईंको विद्यालय तपाईंको निवासस्थानबाट नजिक छ ।					
50	तपाईंलाई सेवा निवृत्तिपश्चात प्राप्त हुनुपर्ने सुविधाहरू उपलब्ध छन् ।					
51	तपाईंको विद्यालयका कक्षाहरूमा विद्यार्थीको संख्या अनुसार उपयुक्त स्थान उपलब्ध छ ।					
52	तपाईं आफ्नो पेसामा सम्मानको अनुभव गर्नुहुन्छ ।					

सहयोगको लागि धन्यवाद (Thank you for cooperation)

Appendix-VI

Interview schedule for India

Interview Schedule for Educators

This is a semi-structured interview schedule developed for educators of various universities, colleges, educational institutions and schools. Purpose of this interview schedule is to obtain information related to various aspects of teacher education programme and teaching profession in the context of India for fulfillment of one of the objectives of the study entitled **A Comparative Study of Teacher Education and Teaching Profession in Nepal and India**. You are humbly requested to express your feelings/ideas/views fairly so that the study can be made more effective and reliable.

(Before entering in actual interview on related subject matter, introduction will be made and rapport will be build. Introductory part will include name, address, affiliation, designation and experience of the interviewee.)

1. भारत में अध्यापक शिक्षा प्रदान करने हेतु संस्थागत प्रावधान के संबन्ध में आप के विचार क्या है? What is your view on the institutional provisions to provide teacher education in India?
 - क्या यह प्रावधान/संस्थाए अध्यापक शिक्षा प्रदान करने हेतु उपयुक्त एवं पर्याप्त है ? Are these provisions/institutions appropriate and sufficient to provide teacher education?
 - अध्यापक शिक्षा के लिए वैकल्पिक संस्थाओं की आवश्यकता संबन्धि आप के विचार क्या है ? What is your opinion on need of alternative institutions for teacher education?
 - वैकल्पिक संस्थाए/तरिके क्या हो सकते हैं ? What can be alternative institutions/methods?
2. आप की नजर में उच्च उपलब्धि वाले विद्यार्थि अध्यापक शिक्षा/शिक्षाशास्त्र संकाय में प्रवेश लेने में कितनी रूचि रखते हैं? How have you found the interest of high achiever students to be enrolled in teacher education/faculty of education?
 - आप की राय में अध्यापक शिक्षा में छात्रों के प्रवेश के आधार क्या क्या होने चाहिए ? What you think should be the criteria for student enrollment in teacher education programme?
 - क्या प्रवेश के आधारों का कठोरता के साथ कार्यान्वयन किया जाता है ? Are the enrollment criteria implemented strictly?
 - क्या यह आधार छात्रों के प्रवेश के लिए उपयुक्त हैं ? Are these criteria appropriate for student enrollment?

- यदि नहीं है तो किन आधारों पर शिक्षक शिक्षा कार्यक्रम में विद्यार्थियों का चयन होना चाहिए ? If not, by which criteria student selection for teacher education should be done?
3. शिक्षक शिक्षा में किस तरह की योग्यता, अभिक्षमता एवं बौद्धिकता वाले विद्यार्थि प्रवेश ले रहे हैं ? Students with what ability, aptitude and intelligence are entering in teacher education?
- यदि पर्याप्त योग्य जनशक्ति अध्यापक शिक्षा में आकर्षित नहीं हो रही है तो इसकी क्या वजह हो सकती है ? If the capable manpower is not being attracted towards teacher education, what is the reason behind it?
 - अध्यापक शिक्षा को आकर्षक बनाने के लिए क्या किया जाना चाहिए ? What should be done to make the teacher education tempting?
4. भारत में शिक्षक शिक्षा (वि. एड.) की पाठ्यचर्या निर्माण प्रक्रिया के संबन्ध में आप के विचार क्या हैं ? What are your views regarding the procedure for development of curriculum of teacher education (B. Ed.) in India?
- क्या यह प्रक्रिया उपयुक्त है ? Is this procedure appropriate?
 - कैसे सुधार किया जा सकता है ? How can it be improved?
 - क्या पाठ्यचर्या स्थानीय, राष्ट्रीय एवं अन्तरराष्ट्रीय परिवेश के अनुरूप निर्मित है ? Is curriculum constructed according to the local, national and international context?
 - पाठ्यचर्या के सबल पक्ष क्या हैं ? What are the strengths of curriculum?
 - कमजोरीयाँ ? Weaknesses?
5. भारत में अध्यापक शिक्षा (वि. एड. कार्यक्रम) के शैक्षिक उद्देश्यों के सम्बन्ध में आप के विचार क्या हैं ? What is your opinion on educational objective of teacher education (B. Ed. programme) in India?
- क्या यह उद्देश्य वैयक्तिक एवं राष्ट्रिय लक्ष्य के अनुरूप उपयुक्त है ? Are these objectives suitable according to the individual and national goals?
 - अध्यापक शिक्षा के उद्देश्य किस तरह के होने चाहिए ? What should be the objectives of teacher education?
 - यह उद्देश्य योग्य अध्यापक के उत्पादन के लिए कितने पर्याप्त है ? How sufficient are these objectives to produce capable teachers?
6. अध्यापक शिक्षा कार्यक्रम के पाठ्यवस्तु की उपयुक्तता एवं पर्याप्तता कैसी है ? What's the relevancy and sufficiency of the content of teacher education programme?
- स्थानीय परिवेश/विषयवस्तु के आधार पर ? On the basis of local context/subject matter?

- राष्ट्रीय/अन्तरराष्ट्रीय परिवेश के आधार पर ? On the basis of national/international context?
7. आप ने अध्यापक शिक्षा कार्यक्रम के अन्तर्गत किस तरह के शिक्षण-अधिगम विधि/रणनीतियों का प्रयोग होते हुए पाया है ? What teaching-learning methods/strategies you have found in teacher education programme?
- शिक्षण विधियाँ शिक्षक केन्द्रित है या विद्यार्थि केन्द्रित ? Are the teaching methods teacher-centered or student-centered?
 - शैक्षिक तकनीकी/मल्टिमिडिया के प्रयोग की स्थिति क्या है ? What is the position of use of educational technology/multimedia?
8. विद्यार्थि-अधिगम के समष्टिगत मूल्याङ्कन के आधार/तरिके कितने प्रभावकारी हैं ? How effective are the criteria/methods for assessment of student-learning?
- क्या यह तरिके मूल्याङ्कनके क्षेत्र में हुए नवप्रवर्तन पर आधारित है ? Are these methods based on innovations in the field of assessment?
 - अक्षरात्मक ग्रेडिङ्ग या संख्यात्मक ग्रेडिङ्ग मूल्याङ्कन प्रणालियों में से आप किस को उपयुक्त समझते हैं ? Which one you consider more appropriate among letter grading and numerical grading?
 - क्यों ? Why?
 - वर्तमान अभ्यास में मुल्याङ्कन प्रणालि कितनी प्रभावकारी एवं विश्वसनीय है ? How effective and reliable is the evaluation system in practice at present?
9. अध्यापक शिक्षा कार्यक्रम वार्षिक/अर्धवार्षिक/तिमाही में से किस आधार पर सञ्चालन करना उपयुक्त है ? Among annual, semester or trimester system, which is suitable to conduct the teacher education programme?
- क्यों ? Why?
10. क्या अध्यापक शिक्षा कार्यक्रम में सरकार का पर्याप्त ध्यान है ? Has the government paid adequate attention on teacher education programme?
- इस के अतिरिक्त और क्या करना चाहिए ? What more seems to be done?
 - आर्थिक ? Financial?
 - भौतिक ? Physical?
 - आजिवीका विकास ? Career development?
 - अनुसन्धान ? Research?

11. भारत में अध्यापक शिक्षा के सबल पक्ष क्या क्या हैं ? What are the strengths of teacher education in India?
 - दुर्बल पक्ष ? Weaknesses?
 - समस्यायें ? Problems?
12. भारत में शिक्षण व्यवसाय के प्रति आकर्षण कैसा रहा है ? How is the attraction towards teaching profession in India?
13. वेतन एवं अन्य सुविधाओं की अवस्था क्या है ? How is the salary and other facilities?
 - कैसी होनी चाहिए ? How should it be?
14. अध्यापक के सम्मान की स्थिति क्या है ? How is the prestige of teacher?
 - भारत के राष्ट्रीय वरियता क्रम में अध्यापकों के स्थान संबन्धि आप का क्या मत है ? What is your opinion about the ranking of teacher on national protocol of India?
 - शिक्षण को सम्मानित व्यवसाय बनाने हेतु क्या करना चाहिए ? What should be done to make teaching a prestigious profession?
15. भारत में अध्यापकों की योग्यता के संबन्ध में आप के विचार क्या हैं ? What is your views on the ability of teachers in India?
 - व्यवसायिक जिम्मेवारिबोध की अवस्था क्या है ? What is the position of professional responsibility?
16. आप भारत के समष्टिगत विकास को यहाँ की शैक्षिक अवस्था के साथ कैसे जोड़ते हैं ? How you relate the overall development of India to its state of education?
 - भारत की वर्तमान अवस्था के लीए यहाँ की शिक्षा प्रणालि को आप कितना जिम्मेवार मानते हैं ? How responsible you consider the education system of India for its present status?
17. भारत में शैक्षिक गुणवत्ता के लिए आप किन पक्षों को जिम्मेवार मानते हैं ? Which factors you consider to be responsible for educational quality of India?
 - कैसे ? How?
 - शिक्षा के गुणस्तर को बढ़ाने के लिए क्या करना चाहिए ? What should be done to elevate the quality of education?
18. भारत में शिक्षा के लिए विनियोजित बजेट की पर्याप्तता संबन्धि आप की राय क्या है ? What is your opinion on sufficiency of budget allocated for education in India?

- पर्याप्त है या बढ़ाने/घटाने की आवश्यकता है ? Is it sufficient or should be increased/decreased?
19. समष्टिगत रूप में भारत में अध्यापक शिक्षा के सबल पक्ष क्या क्या हैं ? As a whole, what are the strengths of teacher education in India?
- दुर्बल पक्ष ? Weaknesses?
20. भारत में शिक्षण व्यवशाय के सबल पक्ष क्या क्या हैं ? What are the strengths of teaching profession in India?
- दुर्बल पक्ष ? Weaknesses?
21. भारत की शिक्षा व्यवस्था के सुधार के लिए आप के सुझाव क्या हैं ? Any suggestions for improvement of education system of India?
- अध्यापक शिक्षा कार्यक्रम के सुधार हेतु ? For improvement of teacher education programme?
- शिक्षण व्यवशाय के सुधार के लिए ? For improvement of teaching profession?

आप के अमूल्य समय एवं सुझावों के लिए धन्यवाद (Thank you for your valuable time and suggestions)

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Appendix-VII

Interview schedule for Nepal

Interview Schedule for Educators

This is a semi-structured interview schedule developed for educators of various universities, colleges, educational institutions and schools. Purpose of this interview schedule is to obtain information related to various aspects of teacher education programme and teaching profession in the context of India for fulfillment of one of the objectives of the study entitled "A Comparative Study of Teacher Education and Teaching Profession in India and Nepal". you are humbly requested to express your feelings/ideas/views fairly so that the study can be made more effective and reliable.

(Before entering in actual interview on related subject matter, introduction will be made and rapport will be build. Introductory part will include name, address, affiliation, designation and experience of the interviewee.)

१. नेपालमा शिक्षक शिक्षा प्रदान गर्ने संस्थागत प्रावधान संबन्धि यहाँको विचार के छ ? What is your view on the institutional provisions to provide teacher education in Nepal?
 - के यी प्रावधानहरु/संस्थाहरु शिक्षक शिक्षा प्रदान गर्नकालागि उपयुक्त तथा पर्याप्त छन ? Are these provisions/institutions appropriate and sufficient to provide teacher education?
 - शिक्षक शिक्षाकोलागि वैकल्पिक संस्थाहरुको आवश्यकता संबन्धि यहाँको के विचार छ ? What is your opinion on need of alternative institutions for teacher education?
 - वैकल्पिक संस्था/तरिका के हुन सक्छन ? What can be alternative institutions/methods?
२. शिक्षक शिक्षा/शिक्षा शास्त्र संकायमा भर्नाप्रति उच्च उपलब्धियुक्त विद्यार्थिहरुको रुचि के कस्तो रहेको पाउनु भएको छ ? How have you found the interest of high achiever students to be enrolled in teacher education/faculty of education?
 - तपाईंको विचारमा शिक्षक शिक्षा कार्यक्रममा विद्यार्थि भर्नाका आधारहरु के के हुनुपर्छन् ? What you think should be the criteria for student enrollment in teacher education programme?
 - के भर्नाका आधारहरुको कडाईका साथ कार्यान्वयन गरिन्छ ? Are the enrollment criteria implemented strictly?
 - के यी आधारहरु विद्यार्थि भर्नाका लागि उपयुक्त छन ? Are these criteria appropriate for student enrollment?

- छैन भने कुन आधारमा शिक्षक शिक्षा कार्यक्रममा विद्यार्थीहरू छनोट गर्नु पर्ने देखिन्छ ? If not, by which criteria student selection for teacher education should be made?
३. शिक्षक शिक्षा अन्तर्गत के कस्तो योग्यता, कौशल तथा बौद्धिकता भएका विद्यार्थीहरू प्रवेश गरिरहेका छन् ?
Students with what ability, aptitude and intelligence are entering in teacher education?
- यदि पर्याप्त योग्य जनशक्ति शिक्षक शिक्षामा आकर्षित भईरहेको छैन भने यसको कारण के होला ? If the capable manpower is not being attracted towards teacher education, what is the reason behind it?
- शिक्षक शिक्षालाई आकर्षक बनाउन के गर्नु पर्ला ? What should be done to make the teacher education tempting?
४. नेपालमा शिक्षक शिक्षा (वि. एड.) कार्यक्रमको पाठ्यक्रम निर्माणको प्रक्रिया संबन्धि यहाँको विचार के छ ?
What are your views regarding the procedure for development of curriculum of teacher education (B. Ed.) in Nepal?
- यो प्रक्रिया उपयुक्त छ ? Is this procedure appropriate?
- पाठ्यक्रम स्थानीय, राष्ट्रीय तथा अन्तरराष्ट्रीय परिवेश अनुरूप निर्मित छ ? Is curriculum constructed according to the local, national and international context?
- के कसरि सुधार गर्न सकिन्छ ? How can it be improved?
- पाठ्यक्रमका सबल पक्षहरू के के छन् ? What are the strengths of curriculum?
- दुर्बल पक्षहरू ? Weaknesses?
५. नेपालमा शिक्षक शिक्षा (वि. एड. कार्यक्रम) को शैक्षिक उद्देश्य सम्बन्धि यहाँको विचार के छ ? What is your opinion on educational objective of teacher education (B. Ed. programme) in Nepal?
- के यी उद्देश्यहरू वैयक्तिक तथा राष्ट्रिय लक्ष्य अनुरूप उपयुक्त छन् ? Are these objectives suitable according to the individual and national goals?
- शिक्षक शिक्षाका उद्देश्यहरू के कस्ता हुनु पर्दछ ? What should be the objectives of teacher education?
- यी उद्देश्यहरू दक्ष शिक्षकहरूको उत्पादन गर्न कतिको पर्याप्त छन् ? How sufficient are these objectives to produce capable teachers?
६. शिक्षक शिक्षा कार्यक्रमको पाठ्यवस्तुको उपयुक्तता र पर्याप्तता के कस्तो रहेको छ ? What is the relevancy and sufficiency of the content of teacher education programme?
- स्थानीय परिवेश/विषयवस्तुको आधारमा ? On the basis of local context/subject matter?
- राष्ट्रीय/अन्तरराष्ट्रीय परिवेशका आधारमा ? On the basis of national/international context?

७. तपाईंले शिक्षक शिक्षा कार्यक्रम अन्तर्गत के कस्ता शिक्षण-सिकाई विधि/रणनीतिहरूको प्रयोग भईरहेको पाउनुभएको छ ? What teaching-learning methods/strategies you have found in teacher education programme?
- शिक्षण विधिहरू शिक्षक केन्द्रित रहेका छन् वा विद्यार्थि केन्द्रित ? Are the teaching methods teacher-centered or student-centered?
 - शैक्षिक प्रविधि/मल्टिमिडियाको प्रयोग को अवस्था के कस्तो छ ? What is the position of use of educational technology/multimedia?
८. विद्यार्थि-सिकाईको समष्टिगत मूल्याङ्कनका आधार/विधिहरू के कति प्रभावकारी रहेका छन् ? How effective are the criteria/methods for assessment of student-learning?
- के यी विधिहरू मूल्याङ्कनको क्षेत्रमा भएका नव प्रवर्तनमा आधारित छन् ? Are these methods based on innovations in the field of assessment?
 - अक्षरात्मक ग्रेडिङ वा संख्यात्मक ग्रेडिङ मूल्याङ्कन प्रणालि मध्ये कसलाई उपयुक्त ठान्नु हुन्छ ? Which one you consider more appropriate among letter grading and numerical grading?
 - किन ? Why?
 - वर्तमान अभ्यासमा मुल्याङ्कन प्रणालि कति प्रभावकारी तथा विश्वसनीय रहेको छ ? How effective and reliable is the evaluation system in practice at present?
९. शिक्षक शिक्षा कार्यक्रम वार्षिक/अर्धवार्षिक/त्रैमासिक कुन आधारमा सञ्चालन गरिनु उपयुक्त हुन्छ ? Among annual, semester or trimester system, which one is suitable to conduct the teacher education programme?
- किन ? Why?
१०. शिक्षक शिक्षा कार्यक्रममा सरकारले पर्याप्त ध्यान दिएको छ ? Has the government paid adequate attention on teacher education programme?
- थप के गर्नु पर्ने देखिन्छ ? What more seems to be done?
 - आर्थिक ? Financial?
 - भौतिक ? Physical?
 - वृत्ति विकास ? Career development?
 - अनुसन्धान ? Research?
११. नेपालमा शिक्षक शिक्षाका सबल पक्षहरू के के छन् ? What are the strengths of teacher education in Nepal?
- दुर्बल पक्षहरू ? Weaknesses?

➤ समस्याहरू ? Problems?

१२. नेपालमा शिक्षण पेशा प्रतिको आकर्षण के कस्तो रहेको छ ? How is the attraction towards teaching profession in Nepal?

१३. तलब तथा अन्य सुविधाहरूको अवस्था के छ ? How is the salary and other facilities?

➤ के कस्तो हुनु पर्दछ ? How should it be?

१४. शिक्षकको मान सम्मान के कस्तो छ ? How is the prestige of teacher?

➤ नेपालको राष्ट्रीय वरियता क्रममा शिक्षकको स्थान संबन्धि यहाँको विचार के छ ? What is your opinion about the ranking of teacher on national protocol of Nepal?

➤ शिक्षणलाई सम्मानित पेशा बनाउन के गर्नु पर्ला ? What should be done to make teaching a prestigious profession?

१५. नेपालमा शिक्षकहरूको योग्यता संबन्धि यहाँको विचार के छ ? What is your views on the ability of teachers in Nepal?

➤ पेशागत जिम्मेवारिबोधको अवस्था के कस्तो छ ? What is the position of professional responsibility?

१६. नेपालको समष्टिगत विकासलाई यहाँको शैक्षिक अवस्थासंग कसरि जोड्नु हुन्छ ? How you relate the overall development of Nepal to its state of education?

➤ नेपालको वर्तमान अवस्थाका लागि यहाँको शिक्षा प्रणालिलाई कतिको जिम्मेवार मान्नु हुन्छ ? How responsible you consider the education system of Nepal for its present status?

१७. नेपालमा शैक्षिक गुणस्तरका लागि कुन कुन पक्षलाई जिम्मेवार मान्नु हुन्छ ? Which factors you consider to be responsible for educational quality of Nepal?

➤ कसरी ? How?

➤ शिक्षाको गुणस्तर उकास्न के गर्नु पर्ला ? What should be done to elevate the quality of education?

१८. नेपालमा शिक्षाकालागि विनियोजन गरिने बजेटको पर्याप्तता संबन्धि यहाँको धारणा के छ ? What is your opinion on sufficiency of budget allocated for education in Nepal?

➤ पर्याप्त छ की थप/घट गर्नु पर्ने देखिन्छ ? Is it sufficient or should be increased/decreased?

१९. समष्टिगत रूपमा नेपालमा शिक्षक शिक्षाका सबल पक्षहरू कुन कुन रहेका छन ? As a whole, what are the strengths of teacher education in Nepal?

➤ दुर्बल पक्षहरू ? Weaknesses?

२०. नेपालमा शिक्षण पेशाका सबल पक्षहरु के के छन ? What are the strengths of teaching profession in Nepal?

➤ दुर्बल पक्षहरु ? Weaknesses?

२१. नेपालको शिक्षा प्रणाली सुधारका लागि के सुझावहरु दिनु हुन्छ ? Any suggestions for improvement of education system of Nepal?

➤ शिक्षक शिक्षा कार्यक्रमको सुधारका लागि ? For improvement of teacher education programme?

➤ शिक्षण पेशाको सुधारका लागि ? For improvement of teaching profession?

यहाँको अमूल्य समय तथा सुझावहरुका लागि धन्यवाद (Thank you for your valuable time and suggestions)

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Appendix-VIII

Description of selected departments/campuses/colleges to administer intelligence test

S. No.	Department/campus/college	University	Address of Institution
1.	Soban Singh Jeena (SSJ) Campus	Kumaun	Almora, India
2.	Motiram Baburam Government Post Graduate (MBGPG) College	Kumaun	Haldwani, Nainital, India
3.	Mariyam Institute	Kumaun	Haldwani, Nainital, India
4.	Guru Nanak Dev Post Graduate College	Kumaun	Nanakmatta, Udham Singh Nagar, India
5.	Pushp Institute of Applied Sciences and Higher Studies	Mahatma Jyotiba Phule Rohilkhand	Pilibhit, India
6.	Jyoti College of Management, Science and Technology	Mahatma Jyotiba Phule Rohilkhand	Bareilly, India
7.	Bareilly College	Mahatma Jyotiba Phule Rohilkhand	Bareilly, India
8.	Department of Education	Mahatma Jyotiba Phule Rohilkhand	Bareilly, India
9.	Khandelwal College of Management, Science and Technology	Mahatma Jyotiba Phule Rohilkhand	Bareilly, India
10.	Central Campus	Far western	Kanchanpur, Nepal
11.	Durga Laxmi Multiple Campus	Far western	Kailali, Nepal

Appendix-IX

Description of selected schools of India

S. No.	Name of the school	Address
Almora, Uttarakhand		
1.	Government Inter College	Almora
2.	Raja Anand Singh Government Girls Inter College	Almora
3.	Government Primary School	Panchdhara
4.	Government Junior Secondary School	Gopaldhara
5.	Government Primary School	Gopaldhara
Champawat, Uttarakhand		
1.	Thakur Shyam Singh Rawat Jagat Singh Rawat Radha Hari Government Inter College	Tanakpur
2.	Government Girls Inter College	Tanakpur
3.	Government Primary School	Aambag, Tanakpur
4.	Government Girls Inter College	Banabasa
5.	Purnagiri Inter College	Banabasa
6.	Government Inter College	Sailani Goth, Tanakpur
7.	Janata Higher Secondary School	Chandani, Tanakpur
8.	Government Primary School	Chandani, Tanakpur
9.	Government Upper Primary School	Sailani Goth, Tanakpur
10.	Government Primary School	Sailani Goth, Tanakpur
11.	Government Primary School	Manihar Goth, Tanakpur
Udham Singh Nagar, Uttarakhand		
1.	Government Primary School	Sisaiya, Khatima
2.	Government Secondary School	Sisaiya, Khatima
3.	Government Primary School	Badi Baguliya, Khatima
4.	Government Primary School	Unchi Mahuwat, Khatima
5.	Government Junior Secondary School	Santana, Khatima
6.	Government Secondary School	Santana, Khatima
7.	Government Primary School	Santana, Khatima
8.	Government Primary School	Mundeli, Khatima
9.	Government Primary School	Charubeta
10.	Government Inter College	Bandiya, Khatima
11.	Govind Ballav Pant Inter College	Chakarpur, Khatima
12.	Tharu Government Inter College	Khatima
13.	Rajeev Gandhi Navodaya Vidyalaya	Khatima
Pilibhit, Uttar Pradesh		
1.	Government Junior Secondary School	Amariya, Bhindara
2.	Model Primary School	Pakadiya, Bhindara

3.	Primary School	Gidhaur,
4.	Junior Secondary School	Gidhaur
5.	Junior Secondary School	Amariya, Tonderpur
6.	Primary School	Amariya, Tonderpur
7.	Primary School	Tonderpur
8.	Junior Secondary School	Dhankuna, Amariya
9.	Junior Secondary School	Nagariya, Sehagwan, Amariya
10.	Junior Secondary School	Tonderpur
11.	Primary School	Sirla
Lakhimpur Khiri, Uttar Pradesh		
1.	Primary School	Sedha medha, Singhaiya, Paliya
2.	Upper Primary School	Bankatti, Paliya
3.	Primary School	Bhuda, Paliya
4.	Upper Primary School	Bankatti, Paliya
5.	Primary School	Sariyapara, Paliya
6.	Primary School, Chhediya Pashchim	Chhediya Poorab, Paliya
7.	Primary School, Chhediya Poorab	Chhediya Pashchim, Paliya
8.	Primary School	Sunda, Paliya
9.	Primary School	Biriya, Paliya
10.	Primary School	Dhakiya, Paliya

Appendix-X

Description of selected schools of Nepal

S. No.	Name of the school	Address
Kathmandu, Bagamati Pradesh		
1.	Nepal Adarsh Secondary School	Kathmandu Metropolitan-22, Ganabahal
2.	Mahankal Secondary School	Kathmandu Metropolitan-27, Mahabauddha
3.	Shaheed Shukra Secondary School	Kathmandu Metropolitan-28, Bag bazaar
Bhaktapur, Bagamati Pradesh		
1.	Adarsh Secondary School	Madhyapur Thimi-4, Layaku
2.	Janak Siddikali Secondary School	Madhyapur Thimi-6,
3.	Adarsh Secondary School	Madhyapur Thimi- , Sanothimi
Kanchanpur, Sudurpashchim		
1.	Tribhuvan Seconndary School	Bheemdatt-8, Tilachaur
2.	Baijnath Siddhanath Secondary School	Bheemdatt- , Matena
3.	Yuva Barsh Secondary School	Bheemdatt-10, Tilkeni
4.	Malikarjun Primary School	Bheemdatt-
5.	Purna Secondary School	Bheemdatt-12, Airy
6.	Janasewa Secondary School	Bheemdatt7, Haldukhal
7.	Baijnath Vidya Niketan Basic School	Bheemdatt-13, Piparaiya
8.	Siddhanath Secondary School	Bheemdatt-13, Badaipur
9.	Gauri Shankar Basic School	Bheemdatt-3, Tilakpur
10.	Siddhanath Amar Secondary School	Bheemdatt- 11, Gaddachauki
11.	Siddhanath Secondary School	Bheemdatt-10, Jimuwa
Kailali, Sudurpashchim Pradesh		
1.	Sudurpashchim Secondary School	Godawari Municipality, Bankhet
2.	Guhyeshwari Secindary School	Godawari Municipality, Basantpur
3.	Rashtriya Secondary School	Godawari Municipality, Baskota
4.	Durga Laxmi Model Secondary School	Godawari Municipality, Attariya
5.	Navjyoti Basic School	Godawari Municipality-3, Malakheti
6.	Gwasi Secondary School	Godawari Municipality-3, Malakheti
7.	Krishna Basic School	Godawari Municipality-2, Teghari
Dadeldhura, Sudurpashchim Pradesh		
1.	Dewal Secondary School	Ajaymeru- , Dewal
2.	Shahastraling Secondary School	Amargadhi- , Rai
3.	Ghatal Secondary School	Amargadhi-3, Nuwakot
4.	Ugratara Secondary School	Amargadhi- , Pokhara

Appendix-XI

Some glimpses of data collection













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**A STUDY OF ACHIEVEMENT AND INTELLIGENCE LEVEL OF STUDENTS IN
SECONDARY EDUCATION IN NEPAL WITH REGARD TO EDUCATION
STREAM**

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ABSTRACT: *The purpose of this study was to compare the academic achievement and intelligence level of Secondary School students of science, management, and education streams to identify the enrollment trend of students in teacher education in Nepal. Mean score of grade point averages and intelligence test of science stream students was greater than management stream students and average scores of management stream students were greater than education stream students. F-test revealed that there was significant difference among the mean scores of science, management, and education stream students at significance level $\alpha = .01$. Results show that the students with higher academic achievement and intelligence level are enrolling in science stream, average are in management stream and with low academic achievement and intelligence are in education stream, i.e., teacher education. Review of previous studies and reports revealed that intelligent person are not attracting towards teaching profession and the condition is same till now.*

KEYWORDS: Academic Achievement, Intelligence, Educational Stream, Teacher Education, F-test

INTRODUCTION

One of the most important concerns all over the world is no doubt "Education". No matter who we are, or what profession we perform, we have things to say about this important issue. The impact of globalization make us to know about the newly developed concept and aspects of education and we criticize the existing educational system in the countries we live in, comment on the new systems around the world or suggest new ways of teaching and learning. The impact of education is most crucial for human being. The effectiveness of any educational system depends upon the teachers or the educational leaders who actually perform this profession. The lives of all learners are shaped by the teachers (Doyran, 2012). The quality of basic education provided to our children is largely influenced by the quality of our teachers in the schools that's why a strong system of quality teacher education should be developed so that the nation's education system can be improved through quality teacher education (Mallison as cited in Menon and Rama, 2006).

Purpose of this study was to compare the academic achievement and intelligence level of students of secondary education in Nepal enrolling in science, management and education streams, and hence to identify enrollment trend of students towards teacher education with regard to their academic achievement and intelligence level. Teaching is an art and science as well. Each person cannot be a capable teacher. In Nepal, a teacher training centre has been established in 1949 in Kathmandu to develop basic education and was closed in 1953. In report of Nepal National Education Planning Commission (NNEPC) "Education in Nepal-1954" four principles were developed by focusing primary teachers. The first principle is teacher should

be capable for teaching; second is teacher should be responsible and having general education; third is teacher should be skilled and must have ability to develop skills on learners, and fourth is teacher should be individually well developed (NNEPC, 1954).

As per recommendation of the report of NNEPC-1954, Normal School was established in Nepal to provide trainings for primary and lower secondary level teachers and produced 3000 school teachers but 50% of those quit this profession either due to lack of their interest in teaching profession or due to being delay on appointing them as teachers (All Round National Education Committee [ARNEC], 1961). After dissolution of first elected government of Nepal in 1960, another educational committee named as All Round National Education Committee was formed in 1961 which mentioned in its report, " it seems that after passing School Leaving Certificate Examination, students goes to other livelihoods as such as possible and adopt teaching profession only after discarded from other professions" (ARNEC, 1961).

In Nepalese educational history, National Education System Plan (1971-1975) is taken as one of the most important effort for development of education. This plan has been made the provision of salary and other allowances of teachers equal to the other government employees (National Education System Plan [NESP], 1975). College of Education was established in 1956 to produce high school teachers. But this College of Education has been made constituent institute of Tribhuvan University after its establishment in 1959 and four years B. Ed. Program run by College of Education was broken down in two year I. Ed. and two year B. Ed. program. The importance of teacher education was reduce after avoidance of compulsory teacher training to be permanent teacher by His Majesty's Government of Nepal with third amendment in education act on 1980 (National Education Commission [NEC], 1992).

LITERATURE

As teacher is an important aspect of educational programme and hence responsible for learning of students, quality of education, and effectiveness of overall educational program, that's why teacher should be intelligent, creative and bearing high educational achievement. Educational objectives determined by curriculum assure the educational achievement for particular grade and level. Academic achievement is defined as the extent to which a learner is profiting from instructions in a given area of learning i. e. achievement is reflected by the extent to which skill and knowledge has been imparted to him (Crow and Crow as cited in Lawrence and Deepa, 2013). Despite a long history of research and debate, there is still no standard definition of intelligence. This has lead to some to believe that intelligence may be approximately described, but cannot be fully defined. Indeed, a formal definition of intelligence, called universal intelligence was developed (Legg and Hutter, 2006), which has strong connections to the theory of optimal learning agents (Hutter, 2005).

Examination of teacher quality focuses on four categories of teacher quality indicators- teacher qualifications, teacher characteristics, teacher practices, and teacher effectiveness. A stronger correlation exists between the achievements of secondary school students and their teachers' subject area expertise (Goe, 2007). It implies that teacher's qualification and ability are crucial factors for effective teaching/learning. In developed countries comparatively more attention is paid towards teacher education and its impact can be seen in the achievement of students of those countries. The High School Transcript Studies was conducted periodically in America to explore the relationship between course taking patterns and student achievement, as measured

by the National Assessment of Educational Progress. Overall GPAs on the years 1990, 1994, 1998, 2000, 2005, and 2009 were observed increased as 2.68, 2.79, 2.90, 2.94, 2.98, and 3.00. (National Center for Education Statistics, 2009).

Previous studies show so many aspects, which are either directly related to academic achievement of students or affect it. Two domains (self-emotion appraisal and understanding of emotion) of the emotional intelligence are significantly and positively associated with the respondents' academic achievement (Mohzan, Hassan and Halif, 2013). The result related with academic achievement revealed that when students put more effort in to studying research methods and statistics, they were likely to indicate an increase in knowledge and confidence in dealing with subject (Li, 2012).

There exists a significant positive relationship between academic achievement and intelligence (Agarwal, 2002; Deary, Strand, Smith and Fernandes, 2007) while there exist a mild positive relationship between social intelligence and academic achievement (Baggiyam and Pankajam, 2017). In another study, significant difference was found among high, average, and low IQ category of secondary school students on academic achievement (Chandra and Azimmudin, 2013). Findings of this study revealed that significant relationship exists between self-confidence and academic achievement of elementary school students. Similarly, no significant difference was found in the self-confidence of male and female elementary school students (Verma and Kumari, 2016). There was a significant positive correlation between perceived verbal-linguistic, body-kinesthetic, logical-mathematical, musical intelligence and academic achievement of the students and it shows moderate correlation (Ahvan and Pour, 2016).

Policy related to teacher education and eligibility criteria for enrollment also play vital role in teacher education. In India, the eligibility condition for entry in existing B. Ed. courses is 50% marks in graduation (Ministry of Human Resource and Development [MHRD], 2016) but in Nepal, the eligibility criteria for admission in grade-11 is minimum GPA 2 for science stream including minimum C+ in science and mathematics, and D+ in English, Social Studies and Nepali. Minimum GPA for other streams/subjects is 1.6, and for education stream, minimum GPA is 1.6 including grade D+ in HPE (Health Population and Environment), English, Nepali, and Science (Ministry of Education [MOE], 2016).

As is the school, so is society. And as is the teacher, so is the school (Mallison as cited in Menon and Rama, 2006). This shows how teacher is responsible for development of society. In present, despite much criticism and development of alternative approaches of education, formal education is broadly used in global context. Teacher is an important aspect of educational process that creates the appropriate environment and delivers knowledge, skill and attitude to the learner. Without a capable teacher, the educational process cannot be run smoothly and to produce capable teacher, there should be made the provisions of enrollment of creative, intelligent, and high educational achievement achiever students in education stream or teacher education.

METHODOLOGY

As information collected for this study was quantitative in nature, the research design was quantitative. In this study, descriptive survey method was used to collect necessary data. Altogether eight schools of Bheemdatt municipality, Knachanpur, Nepal were selected using

disproportionate stratified random sampling method, four from each government and institutional sectors. To collect required data, total 150 students of grade 11, 50 from each stream science, management and education were selected by using simple random sampling method.

GPA's of previous grade (grade-10) were taken from school records as academic achievement (See appendix-1) and GGTI (G.C. Ahuja's Group Test of Intelligence); a standardized intelligence test was used to measure intelligence (See appendix-2) of the students. This intelligence test was published by National Psychological Corporation Agra (India). Gardner classifies intelligence in seven categories as Verbal/linguistic, Body/kinesthetic, Musical/rhythmic, Logic/mathematic, Visual spatial, Interpersonal, and Intrapersonal (Carter, 2005). But total 8 sub-tests: Following Directions (Additional test), Classification, Analogies, Arithmetic Reasoning, Vocabulary, Comprehension, Series and Best Answers are included in GGTI. Maximum marks are 126 (excluding the 9 marks of additional test which is used to just motivate students); total time provided for test is 32 minutes (4 minutes per sub-test) and for instructions and practice is 35 minutes.

Reliability of this test has been calculated by two methods. The coefficient of reliability obtained by test retest method was found to be $.84 \pm .021$ and reliability coefficient by split-half method (correlation between scores on odd and even items) was $.951 \pm .004$ and reliability of the full test obtained by Spearman- Brown Prophecy formula was $.974 \pm .003$. The validity of the battery of seven tests was calculated by five methods namely: Symond's method (11.187), 27% upper and lower groups (39.80), Lawshe's Nomo graph (1.59), Flanagan's product-moment 'r' coefficient (.543), and Kelley's method (1.555) and were found fairly high (Ahuja, 2009).

To obtain the data related to intelligence of the selected students, researcher visited to the all selected schools and administered standardized intelligent test. During the administration of Ahuja's Group Test of Intelligence, all the instructions related to total test (eight sub-tests) mentioned in the manual, are carefully given to participated students. Test was strictly conducted within provided time (four minutes per test) and answer sheets were collected. After administering the test in all selected eight schools, scoring was done carefully by the help of scoring stencils provided with the test to obtain scores.

The test is standardized on the basis of students studying in English medium schools and language used in the test is English. The selected students of Government schools for this study were belonging to Nepali medium. But in Nepal, English language is a compulsory part of the curriculum from grade up to secondary education; even undergraduate level and the English language used in this test is very simple, questions included in the test are common that's why researcher assumed that the reliability, validity, and measurement of the intelligence of students (even the students of Nepali medium) won't affected by the medium of the test. However, the questions given in the test IV (arithmetic) are translated in Nepali language by researcher for students of Nepali medium to minimize the effect of the medium of the test. Some print mistakes found in practice examples of test V and test VIII were also corrected by researcher during the administration of the test.

As the data collected for this study was numerical in nature and research design was quantitative, statistical procedures were used in this study. Mean, correlation, variance and ANOVA were used to analyze the collected data.

RESULTS AND DISCUSSION

Results and discussion related to GPAs

To analyze the collected data (Appendix-A), arithmetic means, and variances were calculated by using MS Excel. From table 1, means of the GPAs of students in science, management and education streams were found as 3.235, 2.518 and 1.846, and variances as 0.145, 0.153 and 0.031 respectively. Mean GPA of students in science stream is greater than mean GPA of management stream and mean GPA of management stream is greater than mean GPA of education stream. Values of variances of management, science and education streams are in descending order. It means GPAs of the students in management stream has greater variability than GPAs of the students in science and education streams i.e. students with variable GPAs enrolled in management stream while, GPAs of students in science and education streams are comparatively consistent.

Table 1: Stream wise means and variances of GPAs

Stream	Mean	Variance
Science	3.235	0.145
Management	2.518	0.153
Education	1.864	0.031

In America, a study conducted by HSTS in high school graduates revealed that their average GPA on four point scale is 3.00 (National Center for Education Statistics, 2009) but this study shows that the stream wise average GPAs of students of science, management, and education streams are 3.24, 2.52, and 1.86. Average GPA of students of all streams (science, management, and education) is 2.54. Here, although average GPA of students of science stream is slightly exceeding the national average GPA of America but average GPA of students of management stream is less than; and average GPA of students of education stream is approximately half of average GPA of America's high school graduates. Overall average GPA of Nepalese students is less than American students.

Although, mean GPA of students in science stream is highest and students in education stream have least mean GPA, it could not said whether this difference is due to the tendency of students enrollment in science, management and education streams or due to sampling error. To determine the significance of mean difference of GPAs researcher apply the statistical technique ANOVA. As there were three groups and difference of mean GPA was analyzed on the basis of stream only (single independent variable), one-way ANOVA was applied. Calculations are performed on MS Excel.

From table 2, sum of squares and degrees of freedom for between groups are 47.03 and 2 respectively. Similarly, sum of squares and degrees of freedom for with in groups are 16.19 and 147 respectively. Mean squares, that is variance for between groups is 23.515 and variance for within groups is 0.110. Here, variance for between groups represents the influence of independent variable educational streams and variance for within groups represents the influence of sampling error (Best and Kahn, 2010). The ratio of these two variances is the value of F which is 213.41. Tabulated or critical values for degrees of freedom for greater variance

2 and smaller variance 147 that is, (2, 147) at the significance levels 5% ($\alpha = .05$) and 1% ($\alpha = .01$) are 3.057 and 4.752 respectively.

Here, calculated value of F is highly greater than both critical values at significance levels 5% as well as 1%. Hence, the null hypothesis (H_0) "There is no significant difference among the achievements of the students of science, management and education streams" is rejected. This result shows that there is highly significant difference among the mean GPAs of students of science, management, and education streams.

Table 2: Summary of ANOVA for GPAs

Source of Variation	SS	Df	MS = $\frac{SS}{df}$	F = $\frac{MS_b}{MS_w}$	p-value	Critical Values	
						0.05	0.01
Between Groups	47.03	3-1=2	23.515	213.41	3.37E-44	3.057	4.752
Within Groups	16.19	150-3=147	0.11014				
Total	63.22	150-1=149					

Significance of the difference can also be tested by comparing the p -value with the level of significance. The p -value is probability of getting the observed value of the test statistic to support null hypothesis. In other words, p -value is the probability for null hypothesis to be true at particular significance level. For 5% significance level ($\alpha = .05$), H_0 will be true if p -value > 0.05 and will be false (rejected) if p -value ≤ 0.05 . Here, from table 2, p -value is calculated as 3.37E-44 that is, 3.37×10^{-44} which is negligible or very near to zero and less than both the significance levels 5% and 1% that is .05 and .01. Thus, the null hypothesis is rejected and it can be concluded that there is significant difference among the mean GPAs of the students of science, management, and education streams. Generally, significance is interpreted on the basis of p -value as in table 3.

Table 3: Interpretation criteria of significance on the basis of p -value

p -value	Interpretation
< 0.01	Very strong evidence against H_0
$0.01 < p\text{-value} < 0.05$	Strong evidence against H_0
$0.05 < p\text{-value} < 0.10$	Some weak evidence against H_0
$p\text{-value} > 0.10$	Little or no evidence against H_0

In this study, p -value $\ll .01$, therefore from table 3, it can be concluded that there is very strong evidence against H_0 that is there is very highly significant difference among the mean GPAs of students of science, management, and education streams.

ANOVA only determines that whether there is significant difference among the means of three or more groups or not but it doesn't tell us that this significant difference is between all possible pairs of given groups or only some particular pairs. If the result of ANOVA or F -test concludes

that there is no significant difference among the means of given groups, then it can be said that there is no significant difference between all possible pairs of given groups. But if the conclusion is that there is significant difference among the means, it can't be said that the significant difference is between all the possible pairs of given groups. The difference may be significant between all possible groups or between some particular groups only. In this study, although difference was found to be highly significant according as analysis of covariance, however it can't be said that the difference is significant between all three groups/streams or it is significant between any of the two groups only. To identify the significance of differences pair wise, Scheffe test was conducted as post hoc analysis.

Scheffe (1957) has introduced a test for post hoc analysis, which reduces the probability of making a type I error (Singh, 2012). Scheffe's following formula was used to calculate the pair wise F ratio:

$$F = \frac{(M_1 - M_2)^2}{SD_w^2(N_1 + N_2)/N_1 N_2}$$

Where, M_1 and M_2 are respective means of two groups, N_1 and N_2 are number of subjects, and SD_w^2 is mean square or variance of within groups. F -values of science stream vs. management stream, management stream vs. education stream, and science stream vs. education stream are presented in table 4.

Actually, F test gives the average of F -values of separate pair wise groups and by post hoc analysis, pair wise F -values are calculated. Now, to compare these F -values, firstly critical values obtained by ANOVA according as the df (2, 147) for significance levels 5% and 1% should be multiplied by $K-1$ that is number of groups minus one (Singh, 2012). Here, number of total groups is 3; therefore critical values are multiplied by 2 and gives 9.173 for significance level 5% and 14.258 for significance level 1%.

As all F -values of science vs. management, management vs. education, and science vs. education streams are greater than both the critical values at significance levels 5% and 1%, it can be concluded that there is significant difference between the mean GPAs of science and management streams, management and education streams, and science and education streams separately at the significance level of 1%. Relatively, there is low significant difference between the mean GPAs of science and management streams and management and education streams, and high significant difference between the GPAs of science and education streams but absolutely, there is very high significant difference among the GPAs of all three streams science, management, and education.

Table 4: Description of pair wise F -values for GPAs

Streams	F-values
Science vs. management	116.669
Management vs. education	97.081
Science vs. education	426.648

This statistical analysis of GPAs of students of science, management, and education streams clearly justify that the students of same GPAs are not equally enrolling in science, management, and education streams. After passing SEE (grade-10), students with higher GPAs are enrolling in science stream; with average GPAs are enrolling in management stream, and students with lower GPAs are enrolling in education stream.

Estimation of validity of data collection tool (GGTI)

Validity can be defined as the agreement between a test score or measure and the quality it is believed to measure. Validity of a test represents the extent of accurate measurement what it is supposed to measure (Kaplan and Saccuzzo, 2011). Accuracy of the measurement is determined by the validity of the test. It is one of the most important characteristics of standardized test. Although, GGTI is standardized test and standardized tests are generally valid, however, criterion related validity of G. C. Ahuja's Group Test of Intelligence was established by researcher correlating scores obtained by the test with stream wise as well as whole GPAs of the students. Pearson's correlation coefficients, thus obtained, are tabulated in table 5.

Table 5: Coefficients of correlation between GPAs and GGTI scores

Streams	Science	Management	Education	Total scores
Pearson's (r)	.03	.70	.29	.85

Correlation coefficients of GGTI scores and GPAs of students in science, management, and education streams are .03, .07, and .29 respectively. Here, correlation between the intelligence scores and GPAs of science stream students is negligible, correlation between scores and GPAs of management stream students is high, and correlation between scores and GPAs of education stream students is low. Clearly, correlation coefficient (.70) between scores and GPAs of management stream is indicating high validity of GGTI and correlation coefficients (.03 and .29) between scores and GPAs of science and education streams are although negligible and low but these correlation coefficients are low not due to the low validity of the GGTI. These coefficients are low due to the homogeneity of the GPAs in education and science streams which is also justified by the low variances of GPAs and scores of science and management streams (Table 1 and 6). However, these negligible and low correlation coefficients are also supporting high validity of the test. Correlation coefficient between total scores and GPAs of all selected students is .85 which is clearly indicating that GGTI is highly valid tool.

Results and discussion related to intelligence scores

Using MS Excel, arithmetic means and variances were calculated to analyze the collected data (Appendix-B) and were tabulated in table 6. Mean scores of students enrolled in science, management, and education streams were found as 79.76, 42.74, and 22.52 respectively. Mean score of education stream students is least. Students of management stream have mean score greater than mean score of students of education stream while mean score of science stream students was found highest. Similarly, variances of scores of science, management and education streams were found as 120.2628, 334.1555 and 49.39755. The ascending variance of scores of education, science, and management streams show that the students with variable intelligence are enrolling in management stream, comparatively the students with less variable intelligence level are enrolling in science stream and least variable intelligence that is students with consistent intelligence are enrolling in education stream.

Table 6 : Stream wise means and variances of scores

Stream	Means	Variances
Science	79.76	120.2678
Management	42.74	334.1555
Education	22.52	49.39755

Here, mean scores of students in science, management and education streams are different, it could not said whether this difference is due to the tendency of students enrollment in science, management and education streams or due to sampling error. To determine the significance of mean difference of scores, researcher applies the statistical technique ANOVA. As there were three groups and difference of mean scores was analyzed on the basis of stream only (single independent variable), one-way ANOVA was applied. The summary of ANOVA is arranged in table 7.

From table 7, sum of squares of between groups and within groups are 84262.44 and 24687.22, and their degrees of freedom are 2 and 147 respectively. Dividing sum of squares by their respective degrees of freedom, mean squares or variances of between groups and within groups were obtained as 42131.22 and 167.9403 respectively. F -value is the quotient of variances of between groups and within groups and was found as 250.87. Now significance of the mean scores can be determined by comparing F -value with tabulated or critical values at proper significance levels. In this study, for df (2, 147) and at 5% ($\alpha = .05$) and 1% ($\alpha = .01$) levels of significance, critical values are 3.057 and 4.752.

Table 7: Summary of ANOVA for scores

Source of Variation	SS	Df	MS = $\frac{SS}{df}$	F = $\frac{MS_b}{MS_w}$	p-value	Critical Values	
						0.05	0.01
Between Groups	84262.44	2	42131.22	250.8703	4.08E-48	3.057	4.75
Within Groups	24687.22	147	167.9403				2
Total	108949.66	149					

As F -value is highly greater than both the critical values 3.057 at $\alpha = .05$ and 4.752 at $\alpha = .01$, null hypothesis (H_0), "There is no significant difference among the intelligence level of students of science, management and education streams" is rejected strongly, and it can be concluded that there is highly significant difference among the scores of students of science, management, and education streams at significance level of 1%. In this study, p -value (probability for supporting H_0) was found 4.08E-48 or 4.08×10^{-48} which is less than both the significance levels 5% and 1% that is .05 and .01. If p -value is less than any particular significance level, the null hypothesis is rejected. Thus, on the basis of p -value also, null hypothesis is rejected. In this study, p -value is less than .01 even very close to zero, from table 3; F -test provided very strong evidence against null hypothesis, and it can be said that there is very high significant difference among the mean scores of students of science, management, and education streams.

Here, result of F -test is just telling about the overall significant difference of mean scores and is unable to determine the pair wise significance of difference. To identify the pair wise significance of differences, Scheffe's test was used as post hoc analysis. Pair wise F -values of science vs. management streams, management vs. education streams, and science vs. education streams were tabulated in table 8.

Pair wise F -values of science vs. management streams, management vs. education streams, and science vs. education streams are 204.013, 60.862, and 487.735 respectively. Here, critical values should be multiplied by number of total groups minus one to compare with pair wise F -values, and these multiplied critical values at the significance levels 5% ($\alpha = .05$) and 1% ($\alpha = .01$) are respectively 9.173 and 14.258. All the pair wise F -values are obviously greater than critical values at significance levels 5% and 1% that's why it can be concluded that there is significant difference between the mean scores of students of science and management streams, management and education streams, and science and education streams.

Table 8: Description of pair wise F -values for scores

Streams	F-values
Science vs. management	204.013
Management vs. education	60.862
Science vs. education	487.735

Comparatively, the difference of mean scores between management and education streams is less significant than the mean scores of science and management streams, and the difference of mean scores between science and management streams is less significant than science and education streams, but absolutely, there is very high significant difference in mean scores of students of science and management streams, management and education streams, and science and education streams.

In this study, results of analysis of variance of GPAs and intelligence scores of science, management, and education stream students are supporting each other. Means of both GPAs and scores were found to be significantly different for science, management, and education stream students. The nature of significance for GPAs and scores was also found similar. In both analyses, means of students of management and education streams are less significantly different than means of students of science and management streams, and means of students of science and management streams are less significantly different than the means of students of science and education streams. Pair wise mean differences of both GPAs and scores were found very highly significant for science and management streams, management and education streams, and science and education streams. Nature of variances of intelligence scores also found as similar to variances of GPAs. Intelligence scores were found comparatively consistent for students of education stream, less consistent for students of science stream, and highly dispersive for students of management stream.

GGTI manual provides guidelines for interpretation of intelligence scores on the basis of Deviation Intelligence Quotients (DIQs). Test scores; age wise DIQs, and classification only

related to average scores of students of science, management, and education streams are given in table 9.

Average scores of students of science, management, and education streams are 79.76, 42.74, and 22.52 respectively. By rounding off, these scores can be converted in to 80, 43 and 23. In this study, most of the students were belonging to the ages 15, 16 and 17 years. Here, the average score of students of science stream lies in the test score interval 80-84. For this interval, age wise DIQs for both girls and boys are ranging from 102 to 105 and lie in DIQ interval 90-109. It means, on the basis of average scores, normal or average students are enrolling in science stream. Interpreting in the same way, from table 9 borderline defective students are enrolling in management stream while, the students enrolled in education stream were found mentally defected (according to GGTI manual). Although, this interpretation is based on average test scores of students, however most of the individual scores are also supporting this interpretation.

Table 9: Description of test scores, DIQs and classification

Streams	Test score s	Age wise DIQs						DIQs	Classification
		15 yrs		16 yrs		17 yrs			
		Boys	Girls	Boys	Girls	Boys	Girls		
Science	80-84	103	105	102	105	102	103	90-109	Normal or Average
Managemen t	40-44	79	79	75	79	77	79	70-79	Borderline Defective
Education	20-24	62	59	59	62	56	62	Below 70	Mentally Defective

Source: GGTI (2009)

Implication to research and practice

The results are pointing towards the enrollment trend of students in teacher education. Students of high and average achievement and intelligence level are enrolling in other than education streams. Enrollment of students of low achievement and intelligence level in education stream may have serious and negative long term impact in teacher education and hence on the entire education system of Nepal. To make the learning-teaching effective and improve the quality of education, the criteria for enrollment in teacher education should be immediately reviewed and teaching profession should be made attractive so that the students with high academic achievement and intelligence level may be enrolled in teacher education.

CONCLUSIONS

Mean of GPAs of students of science stream is highest while students in education stream bearing the least mean. Stream wise variances of GPAs indicating that, the students of consistent GPAs are enrolling in education stream. Similarly, students of less variability in GPAs are enrolling in science stream, and students with higher variability are enrolling in management stream.

Result of *F*- test showed that the difference among mean GPAs of students of science, management, and education streams is highly significant. Post hoc analysis (Scheffe's test) further determined that the difference is significant not only overall, the pair wise mean

difference of GPAs of science and management streams, management and education streams, and science and education streams were also highly significant.

To compare intelligence of students, scores were obtained by using the intelligence test GGTL. Here also the students with high mean intelligence score were found to be enrolled in science stream, average mean score in management stream and the students with low mean score were enrolled in education stream. ANOVA showed that there was highly significant difference among the mean scores of students of science, management, and education streams overall as well as pair wise separately.

As found in previous studies, that academic achievement and intelligence have positive significant correlation; in this study also researcher found that there is very high correlation (.85) between the intelligence level and achievement of the students.

All Round National Education Committee has mentioned in its report that after passing high school education, students goes to other livelihoods as such as possible and adopt teaching profession only after discarded from other professions (ARNEC, 1961) and after more than 5 decades it seems that the situation regarding teacher profession isn't changed, till now students with high achievement and intelligence level are attracted towards other professions/streams and students with low achievement and intelligence level are frequently enrolling in education stream which is directly related to the teacher education.

The difference in intelligence level of students of science, management, and education streams is also clearly seen by converting test scores in DIQs. Classification of DIQs shows that students of average, borderline defective and mentally defective are respectively enrolling in science, management, and education streams.

It is said that if a doctor is not qualified, lives of some patients are in danger, if an engineer is not qualified, some buildings may destroyed, but if a teacher is not qualified, then the whole society may destroyed. The view, " As is the school, so is society. And as is the teacher, so is the school" also supporting the thing that not only the future of the students but wellness of the society is also directly related to qualified teacher. Quality, ability and skill of the teacher directly or indirectly depends upon his/her educational achievement and intelligence level. In Nepal, so many previous educational commissions/committees realized that intellectual man power is not attracted towards teacher profession/teacher education on past days. This study also revealed that till now, the situations are unaltered and high educational achievement achievers and intelligent students are not being attracted towards the education stream/teacher education.

In India, minimum 50% marks in graduation are recommended for entry in existing B.Ed. courses (MHRD, 2016), but in Nepal the criteria for admission in grade-11 are determined such that the student with GPA 1.6 (in four point grading system) can enroll in education stream (MOE, 2016). Even in B. Ed. Program, there are provisions for enrollment of students with minimum marks (passing marks) in corresponding previous grades. These weak provisions and policies regarding enrollment in teacher education and least attraction towards teaching profession are making the students with low achievement and intelligence level to enroll in teacher education.

Future research

This study was based on very limited area and sample. To make it more reliable and generalizable, another study should be conducted by taking broad area and large sample. Additional research is needed to explore the job satisfaction of teachers in teaching profession.

Conflict of Interest

No conflict of interest.

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ABBREVIATIONS

ANOVA	:	Analysis of Variance
ARNEC	:	All Round National Education Committee
DIQ	:	Deviation Intelligence Quotient
GGTI	:	G. C. Ahuja Group Test of Intelligence
GPA	:	Grade Point Average
HSTS	:	High School Transcript Studies
NEC	:	National Education Commission
NESP	:	National Education System Plan
NNEPC	:	Nepal National Educational Planning Commission

APPENDIX-A

Description of GPAs of science, management and education streams

Science	Management	Education
3.70, 3.65, 3.55, 3.45, 3.55, 3.55, 3.75, 3.60, 3.45, 3.55, 3.40, 3.10, 3.75, 3.60, 3.80, 3.55, 3.55, 3.10, 3.55, 3.60, 3.55, 3.60, 3.45, 3.65, 3.45, 2.65, 3.15, 3.05, 3.05, 2.80, 3.35, 2.95, 3.00, 3.05, 2.85, 2.65, 3.20, 3.00, 3.60, 2.75, 2.50, 2.65, 2.75, 2.95, 2.75, 2.95, 3.65, 2.55, 2.80, 2.80	2.55, 2.35, 2.65, 3.50, 2.60, 2.50, 2.80, 2.65, 2.65, 2.80, 2.05, 2.90, 2.80, 2.75, 2.80, 2.05, 2.90, 3.15, 3.10, 3.30, 2.30, 2.65, 3.55, 2.70, 2.65, 2.05, 1.90, 2.20, 2.30, 2.35, 2.60, 2.15, 2.15, 2.05, 2.15, 2.35, 2.45, 2.25, 2.40, 2.80, 2.95, 1.90, 2.25, 2.20, 2.25, 2.40, 2.55, 2.30, 2.00, 2.25	1.80, 1.90, 2.00, 2.45, 1.80, 1.75, 2.05, 1.85, 2.15, 1.70, 1.80, 1.75, 1.65, 2.05, 1.70, 1.95, 1.95, 1.90, 2.00, 1.90, 1.60, 1.90, 1.75, 1.85, 1.80, 1.75, 2.10, 1.90, 1.75, 1.90, 1.70, 1.75, 1.70, 1.75, 1.80, 2.20, 1.60, 1.75, 1.85, 2.20, 1.95, 1.80, 2.10, 2.05, 1.55, 1.80, 1.75, 1.65, 1.95, 1.95

Appendix-B

Description of intelligence scores of science, management and education streams

Science	Management	Education
72, 90, 68, 84, 72, 83, 83, 81, 79, 89, 94, 52, 81, 68, 88, 87, 86, 66, 91, 94, 71, 97, 56, 94, 79, 30, 55, 36, 45, 33, 81, 64, 65, 45, 61, 75, 50, 72, 92, 40, 36, 50, 37, 47, 65, 47, 75, 50, 69, 48	74, 36, 50, 67, 65, 65, 49, 46, 52, 51, 31, 38, 57, 52, 59, 32, 38, 69, 54, 88, 40, 65, 90, 43, 62, 18, 42, 33, 21, 18, 23, 25, 19, 44, 42, 33, 22, 24, 45, 29, 41, 14, 37, 35, 20, 31, 57, 17, 32, 42	20, 13, 12, 21, 25, 17, 14, 21, 40, 21, 26, 16, 22, 28, 19, 27, 35, 20, 21, 19, 16, 14, 19, 9, 26, 19, 33, 25, 25, 21, 25, 21, 21, 33, 22, 29, 17, 17, 29, 33, 30, 18, 26, 41, 32, 16, 20, 20, 17, 15



महात्मा गांधी अंतरराष्ट्रीय हिंदी विश्वविद्यालय, वर्धा, महाराष्ट्र
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पंडित मदन मोहन मालवीय राष्ट्रीय शिक्षक एवं शिक्षण मिशन (PMMMNMTT)
मानव संसाधन विकास मंत्रालय, भारत सरकार के अंतर्गत आयोजित

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“अध्यापक शिक्षा में नवीन प्रवृत्तियाँ, नवाचार तथा बदलता परिदृश्य”
"Changing Scenario, New Trends and Innovation in Teacher Education"

प्रमाणपत्र / Certificate

प्रमाणित किया जाता है कि / This is to certify that

Dr./Mr./Ms./Mrs. **MADAN SINGH DEUPA**, *Research Scholar*
SS J Campus, Almora, Kumaun University

ने शिक्षा विद्यापीठ, महात्मा गांधी अंतरराष्ट्रीय हिंदी विश्वविद्यालय, वर्धा, महाराष्ट्र द्वारा पंडित मदन मोहन मालवीय राष्ट्रीय शिक्षक एवं शिक्षण मिशन, मानव संसाधन विकास मंत्रालय, भारत सरकार के अंतर्गत “अध्यापक शिक्षा में नवीन प्रवृत्तियाँ, नवाचार तथा बदलता परिदृश्य” विषय पर 20-21 फरवरी, 2020 की अवधि में आयोजित ‘राष्ट्रीय संगोष्ठी’ में सहभागिता की।
उन्होंने

..... विषय पर शोध पत्र/
आलेख प्रस्तुत किया/सत्र की अध्यक्षता की/सह-अध्यक्षता की/सत्र-समन्वयन किया/सत्र-प्रतिवेदक का कार्य किया।

has participated in National Seminar on "Changing Scenario, New Trends and Innovation in Teacher Education" organized by School of Education, MGAHV, Wardha, Maharashtra under the scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), MHRD, Govt. of India, held during 20-21 February, 2020. He / She presented a research paper /

article / Chaired / Co-chaired / Coordinated / acted as Rapporteur for / the session / on *Current trends in teaching and teacher Education in India*

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नेपाल शिक्षा संजाल Scholars' Association of Nepal

Mahendrangar, Kanchanpur

CERTIFICATE

This is to certify that

Mr. Madan Singh Dewpa, FWS, Kanchanpur

Presented a Paper on

Study of Achievement and Intelligence level of Students of Secondary level Education.
at the Dissemination Programme held on 24th Nov, 2018.

Arjun Singh Negi
General Secretary

Banshidhar Joshi
President

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