INTELLIGENT BEHAVIOURS OF PRIMARY SCHOOL AGE CHILDREN

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RECOMMENDATION LETTER

This dissertation entitled Intelligent Behaviours of Primary School Age Children has been completed under my guidance & supervision. This dissertation is the out- come of his own intensive and independent research work and had been prepared in the forms as required by the faculty.

I recommend it for approval to the Evaluation Committee.

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APPROVAL LETTER

This thesis entitled Intelligent Behaviours of Primary School Age Children submitted by Mr. Santiram Dahal for the partial fulfillment of the requirement for the master degree in Education has been approved.

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The present study entitled Intelligent Behaviours of Primary School Age Children has been made attempt to identify intelligent behaviours of primary school age children.

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ABSTRACT

The study entitled Intelligent Behaviours of Primary School Age Children was carried out in Kathmandu district. The main objective of the study was to explore the intelligent behaviours of primary school age children. Moreover, the existing elements in entrance test of selecting children for admission in primary level was also identified.

Five schools (Three communities and two institutional) and three campuses (one medical and two education campuses) were selected as study sight. Psychologists, educationists, head teachers, teachers, parents and students were taken as key respondents and as source of information for the study.

In order to collect information, interview schedules were developed for teachers, head teachers, educationists, psychologists, and parents. FGD guideline was developed foe children. Likewise, documents were also taken as important sources of data collection. The nature of this research is qualitative, so that a descriptive analysis strategy was applied for analysis and interpretation through triangulation.

As reported by teachers, head teachers, educationists, psychologists, parents, and children, six areas of intelligent behaviours of children are identified. They are related with play activities, problem solving activities, mathematics, comprehensive of physical world, comprehensive of social world, and discipline.

Under the play activities, mastery of table games with rules; such as checker, lundo, and chess have been reported as indoor intellectual activities. Regarding outdoor activities plays involving different rules mastery of football, spontaneous plays are reported under intelligent behaviours by respondents.

Under problem solving activities like pre-planning, on familiar tasks such as drawing and building hypothesis when they are not confirmed, can give several meaning of the words are reported as intelligent behaviours.

Under the mathematical activities knowledge and skills in number problems such as addition, subtraction, multiplication and division were identified as intelligent behaviours. Beside these, understanding geometrical figures, ability to solve mathematical analogies, mathematical puzzles, understand equalities and inequalities fall under this category.

Comprehension of physical world in early age is the intelligent behaviours as reported by psychologists. For example, intelligent children of younger age can distinguishes magic and present form what is real and understands that pouring water into a container of different shape doesn't change the amount.

Comprehensive of social world, under this category, intelligent children are able to use Kinship terms such as sister and uncle accurately, understand social rules, such as those governing marriage; emphasize factors such as fairness in explaining right and wrong; shows increased ability to understand others motives and intentions were identified as comprehensive of social world.

Parents and children reported that intelligent children, Follow rules and regulations of school, keep own material in proper place, follow time table, do their home assignment properly, help others, be obedient etc.

The practices of selecting intelligent children for admission were not same in the sample schools. In some schools children were selected on the basis of their achievement in the previous grade. In some schools children are selected on the basis of entrance test result which includes items related to linguistic intelligence, logical mathematical, comprehension, general knowledge, problem solving skills, computational skills. Basically the items were selected from the courses of previous grades. School administration claimed that they were using intelligence test for taking admission. But the nature of items included in the test was found content loaded.

Head teachers and teachers were relatively satisfied with the existing practices selecting children, but wanted revision of test items. Educationists and psychologists were dissatisfied with the test items included in entrance test. According to educationist and psychologists grade wise standardized test should be developed based on children intellectual level. Parents demand entrance test in the form of intelligence test according age grade level of children. In conclusion we can say that intelligent children can perform development tasks in early age. They can show good performance in school activities. They have good talent in language learning, mathematics, learning games and they have high reasoning power and vocabulary etc.

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CHAPTER ONE

INTRODUCTION

1.1 Background

From the beginning of human existence, intelligence was an important field of the study. Many educationists and psychologists have been devoted their life on the study of intelligence (see Annex-A for details on the historical foundations of study of intelligence). The complexity of intelligence has not been minimized yet. Day by day new prospective, new horizons and new concepts have been developed in this field. In 19^{th} century, academic psychologists began to explore such isolated human capacities as sensory discrimination, consciousness and intelligence. In early 20^{th} century the practitioners of new science of psychoanalysis evolved a theory of structure of mind and its subsystems such as id, ego and super ego.

The measurement of intelligence has been an important research topic for nearly 100 years. Intelligence Quotient is a complex concept and researchers in this field argue with each other about various theories that have been developed. There is no clear argument as to what constitutes IQ and how to measure it. There is extensive and continually growing collection of research papers on this topic. Howard Gardner (1983, 1993), Robert Sternberg (1988, 1997) and David Perkins (1995) have written widely sold books that summarize the literature and present their own specific points of view. For the last several decades, the psychologists have been emphasizing that it is one's intelligence that makes a difference in schools, meaning that people are born with unequal intelligence and who have more intelligence able to learn in comparison to those who have less intelligence (ESAT, 2006).

Racial, ethnic and class differences in IQ test scores were believed to have occurred due to differences in genetic endowment, differences in home environment and parental childrearing practices and cultural differences. These differences in intelligence are in part due to the cultural bias of IQ test questions, the condition under which they are administered, and cultural and family differences (Bowles and Gintis, 1976).

According to ESAT (2006), the schools recognize the elite tests consumption patterns, skills, manners and actions as 'intelligence'. The structures and processes that constitute the curriculum, methods of instruction, exam, disciplinary procedures etc for the school favor those who possess the 'intelligence' that schools recognize as legitimate and genuine. One who is of lower social standing are believed to lack cultural capital and hence, are without the intelligence that the school calls for (ibid).

1.1.1 Some definitions of intelligence

Intelligence is as the psychologists' concept, a complex affair. Scientists always try to isolate a thing or an attribute. Intelligence is required to do well at the school, to become a good and efficient officer executive. Most of the people would agree that something opposite to intelligence is shown by mental defectiveness and by those people who could not master even low level jobs, in spite of present efforts and training. Intelligence is a major factor in success in any field (Asthana, 1993: 172). Contrary to scientists who always try to isolate a thing or attribute, psychologists try to measure intelligence.

"A number of definitions have been proposed. They can be divided into several groups. According to one group of definition, intelligence is the ability to learn. According to another group, it means an individual's capacity for adaptation or to adjustment to his/ her environment. Another group defines, intelligence as the ability to carry on abstract thinking" (Asthana, 1993: 173).

a In the word of Binet, "Intelligence is to judge well, to comprehend well and to reason well." Binet believes that intelligence projects itself in several activities.

b According to Spearman, Intelligence is rational thinking. Which include (a) apprehension of experience, (b) education of relations (c) education of co-relates. He developed two factory theory of intelligence.

c According to Stern, Intelligence is the ability to adjust one self to a new situation.

d According to Terman, an individual is intelligent in proportion as he/ she is able to carry out an abstract thinking.

e Stoddard has given a very comprehensive definition of intelligence. According to him, Intelligence is the ability to undertake activities that are characterized by (i) difficulty, (ii) complexity, (iii) abstractness, (iv) economy, (v) adoptiveness to a goal, (vi) social value, and (vii) the emergence of originals and to maintain such activities under conditions that demand a concentration of energy an a resistance to emotional forces."

f Wechsler says that, "Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with his environment."

g Many experimental psychologists and cyberneticists would agree that Intelligence is a clock for our ignorance of the mechanics of thinking and little else.

h A major point to bear in mind is that intelligence is not a single, unitary ability, but a composite of several functions. The term commonly used to cover that combination of abilities required for several and advancement within a particular culture. (Anastasi, 1986)

i The following definition is the composite from various authors. Intelligence is a combination of the ability to: (http:/ librarythinkquest.org)

- Learn: This includes all kinds of informal and formal learning via any combination of experience, education and training.
- Pose problem: This includes recognizing problem situations and transforming them into more clearly defined problem.
- Solve problems: This includes solving problem, accomplishing tasks, fashioning products, and doing complex project.

From the above definitions we conclude that, intelligence refers to the capacity to solve problems, to cope with new situations, to acquire skills through learning and experiences, to establish logical deductions and to form abstract concepts. Several specific abilities such as ability to calculate, comprehension of verbal meanings, memory, verbal fluency, reasoning, perceptual speed, to produce spatial relations have been isolated as mutually isolated components of intelligence. Some authors have suggested that, in addition to these specific abilities there is a unitary general factor of intelligence, on which the capacity to recognize and establish meaningful concepts is based.

1.1.2 Components of Intelligence

There is no universally approved concept regarding the components of intelligence. Different researchers have identified different component of intelligence. Sternberg (1958, 1997) focuses on just three main components.

a. Practical intelligence: The ability to do well in formal and informal educational settings; adapting to and shaping one's environment; street smarts.
b. Experimental intelligence: The ability to deal with novel situations; the ability to effectively automate ways of dealing with novel situations so they are easily handled in the future; the ability to think in novel ways.

c. Componential intelligence: The ability to process information effectively. This includes meta cognitive, executive, performance and knowledge acquisition components that help to steer cognitive process.

David Perkins is another psychologist who has analyzed a number of different educational theories and approaches in education. His analysis is strongly supportive of Gardner theory of multiple intelligences. Perkins (1995) examines a large numbers of research studies both on the measurement of IQ and of programs of study designed to increase IQ. He presents detailed arguments that IQ has three major components or dimensions.

a. Neural intelligence: This refers to efficiency and precision of one's neurological system.
b. Experimental intelligence: This refers to one's accumulated knowledge and experience in different areas. It can be thought of as the accumulation of all of one's expertise.
c. Reflective intelligence: This refers to one broad based strategy for attacking problems for learning, and for approaching intellectually challenging tasks. It includes attitudes and support persistence, systemization, and imagination It includes self monitoring and self management.(Source: http:/ librarythinkquest.org)

Howard Gardener (1943) who is the great psychologist in modern era, he viewed intelligence as the capacity to solve problems or to fashion products that are valued in one or more cultural setting. He initially formulated a list of seven intelligences. His listing was provisional. The first two are ones that have been typically valued in scools ; the next three are usually associated with the arts and final two are what Howard Gardner called ‘personal intelligence’. In his recently revised theory, ten different components or areas of intelligences has been identified, which are listed as follows:

a Linguistic intelligence: Involve sensitivity to spoken and written language, the ability to learn languages, and the capacity to use language to accomplish certain goals.

b Logical mathematical: It consists of the capacity to analyze problems logically, carried out mathematical operations, and investigates issues scientifically. In Gardner’s word, it entails the ability to detect patterns, reason deductively and think logically.

c Musical intelligence: It involves skills in the performance, composition and appreciation of musical patterns. It encompasses the capacity to recognize and compose musical pitch, tones and rhythms.

d Bodily kinesthetic intelligence: It entitles the potential of using ones whole body or patterns of the body or part of body to solve problems. It is the ability to use mental abilities to coordinate bodily movements.

e Spatial intelligence: It is the ability to think in three dimensions. Core capacities include mental imagery, spatial reasoning, image manipulation, graphic, and artistic skill and active imagination.

f Interpersonal intelligence: It is the ability to understand and interact effectively with others. It involves effective verbal and non-verbal communications.

g Intrapersonal intelligence: It is the capacity to understand own self and ones thoughts and feelings, and to use such knowledge in planning and directing one's life.

h Extential intelligence: It involves the sensitivity and ability to tackle deep questions about human existence, such as the meaning of life.

i Naturalistic intelligence: It is the ability to discriminate among living (plants and animals) as well as sensitivity to other features of natural words (clouds, rocks configurations etc).

j Spiritual intelligence: It is concerned with cosmic and spiritual issues in ones development.

1.2 Statement of Problem

In Nepal a few number of psychological institutions are in existence. In central department of psychology T.U. Kirtipur there has been carried out very few studies in intelligence and has not conducted any research related to intelligence within last fifteen years. Nepali psychological institutions have not defined intelligence and have not yet developed any intelligence test. The study was conducted to seek to answer the following research questions:

a. What kinds of behaviours of primary age children are known as intelligent and why?
b. How do different people perceive intelligent behaviour's of primary age group children?

c. What are the existing practices of selecting primary age children in school?
d. How do the schools measure the ability of primary age children?

1.3 Objectives of the Study

The overall objective of the study was to identify intelligent behaviou's of primary age children in Nepalese context. The specific objectives of the study were as follows:

a. To identify the views of different people regarding the concept of intelligence,
b. To identify the views of different people regarding intelligent behaviour's of primary age children,
c. To find out the existing components of intelligence in the entrance test of primary grades.

1.4 Rationale of the Study

Each research work must be valuable and significant in themselves. Intelligence is one of the broadest and widely used terms in psychology. By measuring the intelligence, we can determine future possibilities and potentialities of children in different professional and educational fields. This research aims to define intelligent behaviours of primary age children in Nepalese context. This may contribute to further research and develop intelligence test. It is significant to the researchers, psychologists, psychological institutions and people who are interested in psychology in general and intelligence in particular. Thus the significance of the study is as follows

1. This study helps to define intelligent behaviours of primary age children in Nepalese context. As there is a few numbers of studies in intelligence. This study may increase volume of literature of knowledge in literature.
2. It may contribute to develop intelligence test for primary age children.
3. This research is useful for researchers, students, teachers and institutions who involve in the research regarding intelligence.

1.5 Delimitations of the Study

Because of the limited time and resources of the student researcher, the study was limited as follows:

a. The study was limited in Kathmandu Valley.
b. The study was limited in Nepali speaking students who enrolled in primary grades respective to their age.

c. The study was limited in five schools (Two institutional and three public/ community) and three campuses (University Campus T.U., Mahendra Ratna Campus Tahachal, Maharajgunj Medical Campus) of Tribhuvan University in Kathmandu district.

1.6 Definitions of the terms used:

Educationist: Educationists are those university teachers, who are involved in teaching for more than five years.

Psychologists: Psychologists are those who are involved in teaching in Central Department of Psychology in T.U., Trichandra Campus, and Mahariangjung Medical campus.

Guardians: parents of students of the primary schools.

Students: Are those who are studying in primary Level.

CHAPTER TWO
LITERATURE REVIEW

This chapter deals with theories of intelligence, which include Psychometric Theories, Cognitive Theories, Cognitive-contextual Theories, Biological Theories, Thematic literature which include research studies on intelligence and researchers perspectives based on the objectives of the study. Intelligence theories have evolved through a succession of paradigms which have tried to explain and define intelligence.

2.1 Theories of Intelligence

As the development of science and technology, the volume of the literature of knowledge has been increased extensively. In the field of psychology, there are extensive amount of researches have been carried out in the world. Now a day's extensively new theories have evolved. A detailed description of some theories is given below.

2.1.1 Psychometric Theories

Psychometric theories have sought to understand the structure of intelligence: the form it takes, its categories, and its composition. Underlying psychometric intelligence theory is a psychological model according to which intelligence is a combination of abilities that can be measured by mental testing. These tests often include analogies, classification/ identification, and series completion. Each test score is equally weighted according to the evidence of underlying ability in each category.

British psychologist Charles E. Spearman published the first psychometric theory in 1904. His theory noted that people who excelled on one mental ability test often did well on the others, and people who did poorly on one of them tended to do poorly on the others. Using this concept, Spearman devised a technique of statistical analysis that examined patterns of individual differences in test scores. This analysis helped him discover what he believed to be in the two sources of these individual differences: the "general factor" which is our general intellectual ability, and "IQ test-specific factor".

American psychologist L.L. Thurstone disagreed with Spearman's theory and his isolation of the "general factor" of intelligence. Thurstone believed that the "general factor" resulted from Spearman's method of analysis, and that if analysis were more thorough, seven factors would emerge. These seven factors were collectively called the "primary mental abilities" and included verbal comprehension, verbal fluency, numbers, spatial visualization, inductive reasoning, memory, and perceptual speed.

To further complicate matters, a third theory was introduced by American Raymond Cattell and Canadian Philip Vernon. They combined ideas from Spearman and Thurstone's theories, stating that abilities are hierarchical. At the top of the hierarchy is our "general factor" of intellectual ability, and below are successive levels of narrowing abilities, ending with Spearman's "primary mental abilities".

Most psychologists agree that a broader subdivision of abilities than Spearman's classification is necessary, but only some agree with the hierarchical subdivision. It quickly became apparent to many psychologists that there were problems that could not be addressed by psychometric theories. The number of abilities could not be positively identified, and the differences between them could not be clearly defined due to the limitations of testing and analysis. However, the most significant problem extended beyond the number of abilities: what happens in someone's mind when they are using the ability in question? Psychometric theories had no means of addressing this issue, and cognitive theories began to fill this gap.

Some psychometric theories which are very important in the field of intelligence are presented as follows:

It is apparent from the definitions of intelligence that psychologists have different ideas about intelligence. Hence, in order to understand the nature of intelligence one has to go through the different theories of intelligence. But the question arises, what is the difference between the nature and theory of intelligence? Theory tells us about the structure of intelligence, while nature tells us about the function of intelligence. Hence, psychologists started concentrating on two questions: i) what is the structure of intelligence? And ii) what are the elements involved in intelligence? In order to answer these questions, intelligence is defined on the basis of different factors. Alfred Binet in France, Spearman in Britain and Thruston, Throndike, Thomac, Vornon etc, in America propounded different theories of intelligence. These theories are:

i) Uni-factor Theory	Alfred Binet
ii) Two- Factor Theory	Spearman
iii) Multi-factor Theory	Thorndike
iv) Primary Mental Theory	Thruston
v) Hierarchical Theory	Vernon and Burt's
vi) Three Dimension Theory	Guilford

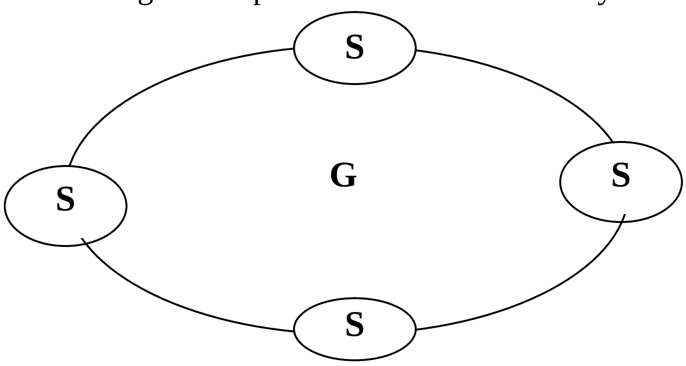
a) Uni-Factor Theory

The theory was originally developed by Binet. The theory takes intelligence as a faculty which affects all the mental activities. According to this theory, if a person is proficient in one area, he should be proficient in other areas as well. Hence Alfred Binet try to prove that intelligence can be defined as uni-factor.

b) Two -Factory Theory

Charles Spearman is the profounder of this theory. He didn't believe in the traditional concept of faculty psychology that mental powers are independent of one another. According to Spearman, there are two types of abilities - general & specific, his theory has been termed as Two-Factor Theory.

Figure 1: Spearman's two-factor theory



Source: Asthana (1994).

According to him, there are three elements:

- 'g' or general factor, which on entail in doing all activities.
- 's' or specific factor, which is different in each activity
- is group factor, which is in between these two factors 'g' and 's'. Spearman's theory can be understood easily by observing the above figure.

c) Group Factor Theory

Thorndike is profounder of this theory. According to him, there is nothing like intelligence, but there are several intelligences, which overlap each other. The correlation in different tests are obtained because some characteristics of one are found in other tests, i.e. both the activities involve in some common factor. Throndike regarded intelligence as knowledge. This fact can be shown through diagram.

Figure 2: Throndike's group-factor theory

P1= verbal ability

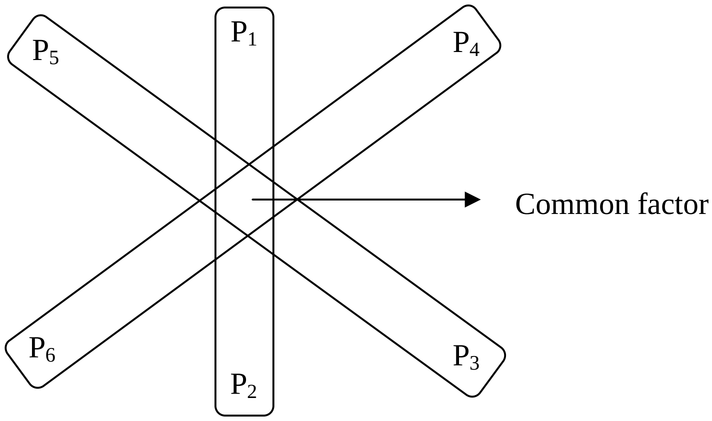
P2= Numerical ability

P3= Reasoning ability

P4= Memory

P5 Spatial ability

P6= world fluency



Source: Asthana (1994).

d) Primary Mental Ability:

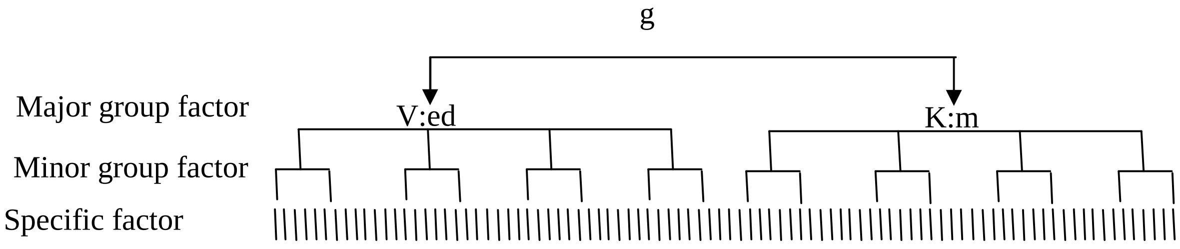
Thruston is profounder of this theory. This theory is a matter of fact mid way between Spearman's two factor theory and Throndike's group factor theory. Thruston is famous for his factor analytic approach. According to him, intelligence is neither the projection of general ability nor of specific factor. He does not recognize the existence of 'g' & 's' factor. He talked about primary abilities in mental activities. Main factors of intelligence identified by Thruston are as follows:

- Verbal Ability (R)
- Word Fluency (W)
- Number Ability (N)
- Spatial Ability (S)
- Memory (M)
- Perceptual Speed (P)
- Reasoning Ability (R) and
- Ability to Solve Problem.

e) Hierarchical Theory

Profounder of this theory are Vernon and Burt. This is very important theory in the field of psychometric theory. Vernon and Burt have given a new dimension for factor arrangement. In this system a hierarchical importance is given to mental abilities. According to this theory 'g' is the single factor at the top of the hierarchy that included two major group factors labeled verbal-educational (V:ed) and practical- mathematical-spatial-physical (K:m). This theory is propounded on the basis of factor analysis approach.

Figure 3: Vernon's hierarchical group-factor theory



Source: Gregary (2005).

f) Three Dimensional Theory

After World War II J.P. Guilford (1967, 1985) continued the research for the factors of intelligence that had been initiated by Thrustone. Guilford soon concluded that the number of described mental abilities was far in excess of the seven proposed by Thruston. During the research Guilford noticed that some of new factors recurring similarities with respect to the kind of information featured, or the form that the items of information took. As a result of these recurring similarities in the newly discovered factors of intellect he became convinced that these multi dimensions factor could be grouped along a small number of main dimensions. Guilford (1967) purposed an elegant structure of intellect model to summarize his findings. Visually conceived Guilfords SOI model classifies intellectual abilities along three dimensions called operations, content and product.

- Operation: Which includes cognition, memory, divergent production, convergent production and evaluation.
- Contents: The information about the nature on which operations are to be done which include visual, auditory, symbolic, semantic, behavioural.
- Product: The third dimension of Guildford's model, product, refers to the different kinds of mental structure that the brain must produce to derive a correct answer.

2.1.2 Cognitive Theories

During the era of psychometric theories, people's test scores dominated the study of intelligence. In 1957, American psychologist Lee Cronbach criticized how some psychologists studied individual differences and other studied commonalities in human behavior, but the two methods never met. Cronbach voiced the need for the two methods to be united, which led to the development of cognitive theories of intelligence.

Without understanding the process underlying intelligence, we cannot come to accurate conclusions when analyzing tests scores or assessing someone's performance. Cognitive analysis helps the interpretation of test scores by determining to what degree the score reflects reasoning ability and the degree to which it is a result of not understanding the questions or vocabulary. Psychometric theories did not differentiate between these two factors, which have a significant effect on the determination of intelligence. Many people are excellent reasoner but have modest vocabularies, and vice versa.

Underlying the cognitive approach to intelligence is the assumption that intelligence is comprised of a set of mental representations of information, and a set of processes that operate the mental representations. It is assumed that a more intelligent person represents information better, and operates more quickly on these representations than does a less intelligent person.

Several different cognitive theories of intelligence have emerged over the years. One was introduced by Earl Hunt, Nancy Frost, and Clifford Lunneberg, who in 1973 showed one way in which psychometric and cognitive modeling could be combined. Instead of using conventional psychometric tests, they used tasks that allowed them to study the basis of cognition - perception, learning, and memory. Individual differences in the tasks became apparent, which they related to differing patterns of forming and operating mental representations.

Several years later, Robert Sternberg suggested an alternative approach to studying cognitive processes. He argued, based on evidence he had gathered, that there was only a weak relationship between basic cognitive tasks and psychometric test scores because the tasks being used were too simple. Although simple tasks involve cognitive processes, they are peripheral rather than central.

Although opposing cognitive theories exist, they are all based on the serial processing of information, which means that cognitive processes are executed one after another in a series. The assumption is that we proceed chunks of information one at a time, trying to combine the processes into an overall problem-solving strategy. Other psychologists have challenged this idea, arguing that cognitive processing is parallel, meaning that we proceed large amounts of information simultaneously. However, it has proved difficult to distinguish between serial and parallel models of information processing.

Despite evidence and support for cognitive intelligence theories, a major problem remains regarding the nature of intelligence. Cognitive theories do not take into account that the description of intelligence may differ from one culture group to another. Even within mainstream cultures, it is well known that conventional tests do not reliably predict performance. Therefore in addition to cognition, the context in which the cognition operates also needs to be accounted for.

2.1.3 Cognitive-Contextual Theories

Cognitive-contextual theories address the way cognitive processes operate. The two major cognitive-contextual theories are of Howard Gardner and Sternberg.

In 1983, Gardner proposed a theory of "multiple intelligences", arguing that there is no single intelligence. He identified what he believed to be the seven minimal intelligences, some of which are similar to the abilities proposed by psychometric theorists, but others not. Gardner devised his list of intelligences from a variety of sources, including studies of cognitive processing, brain damage, exceptional individuals, and cognition between cultures. He suggested that whereas most concepts of intelligence had been ethnocentric and culturally biased, his was universal.

Sternberg's "triarchic" theory of intelligence agreed with Gardner in terms of the conventional notions of intelligence being too narrow. However, he disagreed as to how to go beyond traditional notions. Sternberg suggested that some abilities are talents rather than intelligences, since they are specific and are not prerequisites for adaptation to a cultural environment. He proposed that intelligence has three aspects - not multiple intelligences, but independent aspects that relate intelligence to what goes on internally within someone, what goes on in the external world, and what mediates between the internal and external worlds.

2.1.4 Biological Theories

Biological theories are radically different approaches to intelligence, seeking to understand intelligence in terms of its biological basis instead of hypothetical factors or abilities. These theorists, called reductionists, believe that a full understanding of intelligence will only result from the identification of its biological substrates.

Those that oppose biological theories argue that they only seek to describe the fundamental behavior behind intelligence, not explain it. However, those in favor of these theories believe that the understanding of the biological basis of intelligence will compliment other investigations into intelligence, and will help unlock the mystery. (Sources: http:/ otce.uregon.edu/ intelligence)

2.2 Thematic Literature

Nepal is still lagging behind in the research and development of psychology and intelligence. In Nepal, negligible researches have been carried out which are not sufficient for the development of intelligence test. However, at international level, a numerous researches have been carried out regarding intelligence and mental ability. Some of the research abstracts which may be useful to draw idea about intelligence and intelligent behaviours, which are given below: (the following thematic literatures are available in http://www.eirl.edu.org.)

Johnson, et.al (2007) has done a recent work regarding "Sex differences and mental ability" with the 42 mental ability tests administered to participants of the Minnesota Study of Twins Reared Apart (MISTRA) has suggested that there are important dimensions of mental ability that function independently of "g". Two of these dimensions, rotation-verbal and focus-diffusion, appear to involve trade-offs: greater residual rotation ability implies less residual verbal ability and vice-versa, and the focus-diffusion dimension functions similarly. These two uncorrelated dimensions also show strong sex differences. Individuals lying at different positions along these dimensions may have brains that differ structurally and/or functionally, leading to differences in the ways they approach mental ability tasks. If so, we should expect a lack of factorial invariance in test scores across groups of individuals lying at different positions on the two dimensions, indicating that the tests do not measure the same constructs in the same ways in the different groups. This study demonstrated such a lack of factorial invariance in each of the three mental ability batteries included in the MISTRA assessment. The Wechsler Adult Intelligence Scale can be scored to correlate 0.7 with each of the two dimensions. We propose that use of these scores may help to clarify brain-mapping studies relating brain structure and function and to facilitate understanding of sex differences in mental abilities.

Annelies et.al (2007) recently has done a research regarding "Score gains on 'g'-loaded tests. According to the research; IQ scores provide the best general predictor of success in education, job training, and work. However, there are many ways in which IQ scores can be increased, for instance by means of retesting or participation in learning potential training programs. What is the nature of these score gains? Jensen [Jensen, A. R. (1998a). "The g factor: The science of mental ability". London: Praeger] argued that the effects of cognitive interventions on abilities can be explained in terms of Carroll's three-stratum hierarchical factor model. We tested his hypothesis using test-retest data from various Dutch, British, and American IQ test batteries combined into a meta-analysis and learning potential data from South Africa using Raven's Progressive Matrices. The meta-analysis of 64 test-retest studies using IQ batteries (total N=26,990) yielded a correlation between "g" loadings and score gains of -1.00, meaning there is no "g" saturation in score gains. The learning potential study showed that: (1) the correlation between score gains and the "g" loadedness of item scores is -0.39, (2) the "g" loadedness of item scores decreases after mediated intervention training, and (3) low-"g" participants increased their scores more than high-"g" participants. So, our results support Jensen's hypothesis. The generalizability of test scores resides predominantly in the "g" component, while the test-specific ability component and the narrow ability component are virtually non-generalizable. As the score gains are not related to "g", the generalizable "g" component decreases and, as it is not unlikely that the training itself is not "g"-loaded, it is easy to understand why the score gains did not generalize to scores on other cognitive tests and to "g"-loaded external criteria.

Lee, (2007) has written an article related to "A 'g' beyond Homo sapiens". This article proposes that a complete account of cognitive evolution may have to accommodate a domain-general source of variance in mental abilities accounting for differences among primate taxa. Deaner, van Schaik, and Johnson [Deaner, R.O., van Schaik, C.P. and Johnson, V.E. (2006). Do some taxa have better domain-general cognition than others? A Meta - analysis. "Evolutionary Psychology, 4," 149-196.], in a meta-analysis of experiments testing the performance of different primate genera on various cognitive tasks, found a good fit to a model where the different genera differ along a single dimension of domain-general mental ability. Moreover, the examination of the literature undertaken in this article shows that the rank of a genus on this dimension predicts its brain size, regency of common ancestry with man, and life history strategy. The molecular evolution within the primate order of genes implicated in brain size coincides with this pattern and thus provides some support for the psychogenetic inference that there has been directional selection for general cognitive ability in the lineage leading to

"Homo sapiens." Taken as a whole, these data suggest a generality of "g" (or something like it) even wider than has been supposed.

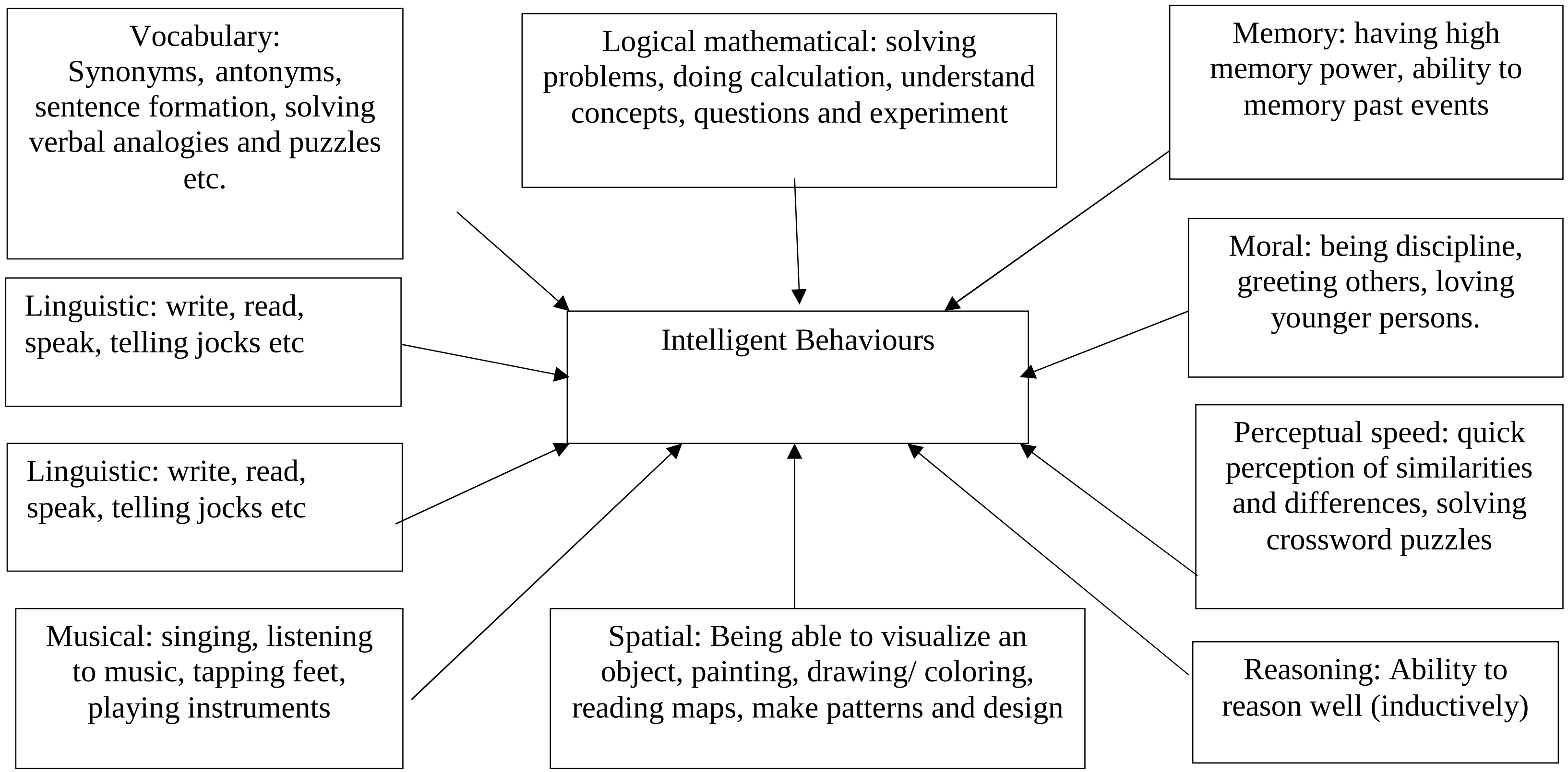
Baker, Jason K et.al (2007) have carried out an research related to "Parenting Children with Borderline Intellectual Functioning" the research shows that Parenting was examined among families of children with borderline intelligence in comparison to families of typically developing children and children with developmental delays. Parenting data were obtained at child age 5 via naturalistic home observation. Mothers of children with borderline intelligence exhibited less positive and less sensitive parenting behaviors than did other mothers and were least likely to display a style of positive engagement. Children with borderline intelligence were not observed to be more behaviorally problematic than other children; however, their mothers perceived more externalizing symptoms than did mothers of typically developing children. Findings suggest the importance of mothers' explanatory models for child difficulties and highlight children with borderline intelligence as uniquely at risk for poor parenting.

Delong, Robert (2007) has written an article related to "GABA(A) Receptor Alpha5 Subunit as a Candidate Gene for Autism and Bipolar Disorder" our earlier family history studies of individuals with autism found a high incidence of major affective disorder, especially bipolar disorder, and unusual talents or intellectual abilities among family members. We now describe a subgroup of such families, selected from a large clinical experience, illustrating specific features of major effective disorder, special talents or intellectual ability, and familial patterns of trait transmission, with the additional feature of oculocutaneous albinism in some cases. These observations, suggesting parent-of-origin and gain-of-function effects, considered together with recent genetic findings in the literature, suggest a genetic hypothesis possibly unifying disparate observations found in families of individuals with autism.

2.3 Researcher perspectives

On the basis of available literature an attempt has been made to develop a conceptual framework to find out intelligent behaviours. The framework has been presented in the form of a flow chart in diagram.

Figure No. 2.3: Conceptual Framework.



On the basis of the above framework the study was taken forward.

CHAPTER THREE
RESEARCH METHODOLOGY

The following methodology was adapted to the carry out the study.

3.1 Population of the Study

Primary age group children (that is 5-9 age group) were the population of the study.

3.2 Sources of Data

Primary and secondary sources of data were taken as the major sources of data.

3.2.1 Primary Sources of Data

Primary sources constitute first hand knowledge, such as eyewitness reports and original documents (Gay, 1990). For this purpose, the researcher collected first hand data from the study area. Interview schedule and FGD guidelines were used to collect primary data.

3.2.2. Secondary Sources of Data

Secondary sources constitute second hand information, such as a description of an event by other than eyewitness (Gray, 1990). For this purpose, the researcher consulted various sources of secondary data such as different printed papers; internet website, intelligence tests, published documents, etc.

3.3 Sampling Procedures

Sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they are selected (Gray, 1990). The samples of the study were selected as follows:

a. Selection of district**:** Kathmandu the capital city of Nepal was purposively selected as the sample district of the study.

b. Selection of schools**:** Schools were the unit of analysis in this study. Five secondary, were selected purposively. (Budanilakantha, LRI, Kanya, Nandi, Kanya secondary schools)

   i. Selection of community schools: Three public schools including Budanilakantha Secondary School were selected purposively from the list available from District education office, in Kathmandu. (Budainlakantha, kanya, and Nandi Secondary School).

   ii. Selection of institutional schools: Two institutional schools were selected purposively from the list of institutional schools available from the list of District education office, Kathmandu.(LRI, Kanya Secondary Boarding Schools)

c. Selection of respondents and sample**:** Selection of respondents was as follows:

- Five psychologists were selected purposively from the Central Department of Psychology, T.U., Maharajgung Medical Campus for interviews.
- Five educationists (Three from university campus T.U, two from Mahendra Ratna Campus) were selected purposively for interviews.
- Ten guardians (whose residence is the nearest from the sample school) were selected for interviews. The number of guardians from each sample school was two.
- Forty students' eight from each sample school were selected purposively for FGDs. While selecting children, equal number of boys and girls were taken as the sample of the study
- Five teachers (one from each school) were purposively selected from the sample schools for interviews.
- Five Head teachers (one from each school) were purposively selected from the sample schools for interviews.

The sample of the study was as follows:

Table 3.3: Sample of the study

	Sample	Where From(study area)	How?
a.	District's (n = 1)	Kathmandu	Purposively
b.	School's (n = 5)	Three public and three private schools	Purposively
c.	Respondent's(n=30) Psychologists n = 5	Central Department of Psychology, T.U. and Maharajgunj Medical Campus	Purposively (two clinical and three counseling)
	Educationists (n = 5)	Central Department of Psychology, T.U., and M.R. Campus, Tahachal	Purposively
	iv) Teachers/Head teachers (n = 10)	Primary teachers from sample school/Head teachers	Purposively
	v) Guardians Community People (n= 10)	Two from each sample school	Conveniently
	vi) Students n = 40	From sample school (students of primary level)	Purposively

3.4 Tools of the Study:

The following tools were developed and used for data collection in the study

a) Interview schedule
b) Focus group discussion guidelines.
c) Document analysis form

a. Interview schedules

Interview is face to face interaction between two or more people. An interview is essentially the oral, in personal administration of a questionnaire to each member of sample (Gay, 1990). Interview was taken as an important tool for data collection in this study. Interview schedules which were developed for psychologists, educationist guardians, teachers and head teachers included guardians in area such as Intelligent and non-intelligent behaviour's, process of determining intelligence definition of intelligence, component of intelligence, practices of selecting children for admission in primary level, etc.

b. FGD guidelines:

Focus group is not just getting bunch of people together to talk. A focus group is a special type of group in terms of purpose, size, composition and procedures. The purpose of FGD is to listen and gather information. It is a way to better understand how people feel or think about an issue, product or service. Ideal size of FGD is 6-8.

FGD was conducted wirh students of primary levels by using a series of topic guides. This was conducted to collect their view regarding intelligent behaviours of primary age group children. The guidelines for the FGD with students were based on the contents such as: Intelligent and non intelligent behaviours, process of determining intelligence, Practice of selecting children in primary level, Comment about the practices etc.

c. Document analysis forms

A document as an original or official printed or written paper furnishing information or used as proof of something else. Document analysis forms were the important tools for the study. The documents were related to:

- Entrance tests prepared in different schools
- Literature from different sources

3.5 Validation of tools

Based on the objectives of the study, the tools interview schedule, Focus Group Discussion guidelines were developed after reviewing literature and in consultation with the thesis guide and subject experts. After developing the tools, pre testing was done and necessary revision in them was made. Thus the tools of the study were finalized.

3.6 Data Collection Procedures:

The researcher himself visited every sample school and college and collected data all necessary for the study. Interview was conducted according to the convenience of the respondents. In some cases the researcher went to the residence of the respondents, especially for interviews with parents. Likewise, interviews with teachers and head teachers were taken in schools. Interviews with educationists and psychologists were taken in their residence and in colleges premises. The data collection procedure was very tough, especially it was difficult to conduct interview with psychologists because of their busy schedule. Similarly, the school administration did not provide data in time. In each school, the researcher had to go more than five times for data collection. At many times the researcher had to return with empty hands without taking information. The researcher returned many times from the outside of the gate of the school because of the negative responses of the school administration. But when the researcher went frequently and clarify the purpose of the study, then school administration helped the researcher to collect data from different respondents as per the sample of the study.

However, data collection in Budhanilkantha School was very much easy. Principal and vice-principal were friendly to the research study. They were interested about the study and quickly managed time schedule for the interviews and for the FGD. Similarly, the researcher felt relatively easy in Kanya Secondary School, Dillibazar and Nandi Night School, Naksal. But in Kanya Secondary Boarding School, Lainchaur and LRI School, Kalanki, it was tough to collect data for the researcher as; the researcher had to go six times in each school for data collection.

3.7. Data Analysis Strategies

This research is basically a qualitative in nature. So the descriptive analyses strategies were applied. Through triangulation, validation of the collected data was verified.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data collected by researcher. The main concern of the present work is to identify intelligent behaviours of primary school age group children. To identify intelligent behaviours of primary school age children based on the responses of different respondents data are presented as follows:

4.2 Concept of intelligence

Intelligence is an abstract concept and as there is no complete agreement among psychologists about the definition of intelligent behaviours, it is difficult to provide its concrete definition. There is no uniformity in this research, responses from respondents were collected regarding the concepts and components of intelligence as well as intelligent behaviours of primary school age children and are analyzed as follows:

Table 4.1: Concept of intelligence by different respondents

	Definitions of intelligent	Psychologists (n=5)	Educationists (n=5)	Teacher (n=5)	H. teacher (n=5)	Guardians (n=10)	Total (n=30)
Intelligent is the ability to	Learn, understand, and react in time.	4	4	4	3	6	21
	Adjust in new environment and solve the practical problem.	5	5	4	3	10	27
	Perceive situation quickly and react in time.	4	4	3	4	7	22
	Reason well communication well and judge well	2	2	2	2	-	8
	Adaptation and imitation.	4	4	-	-	4	12
	tackling problem	2	2	3	3	-	10
Intelligence is global capacity	of an individual to act purposefully, think logically, and to deal effectively with his	3	2	-	-	-	5

	environment.						
Intelligence is the capacity	in each and every aspect of life			2			2
Intelligence	is the god gifted capacity from the birth			2			2

Source: Field survey 2064

The above table shows the concept of intelligence of different respondents. Analyzing the responses twenty seven out of thirty respondents stated intelligence as the ability to adjust in new environment and solve the practical problem. Twenty out of thirty stated that it as the ability to perceive situation quickly and react in time. According to them more intelligent children can perceive situation quickly than less intelligent one. Likewise, twenty one out of thirty respondents took intelligence as the ability to learn, understand, and react in time. Two out of five teachers stated that, intelligence is the God gifted capacity from birth. The detailed discretion of the responses are analyzed below.

For the purpose of understanding the concept of intelligence, ten parents (especially mother), five educationists, five head teachers, five teachers, and five psychologists were asked questions by the researcher. There were no exclusively different views regarding concept of intelligence among specialists and lay men (teacher, head teacher, and parents).

By analyzing their views regarding the concept of intelligence, it was found that six parents among ten and three head teachers among five perceived intelligence as the capacity to learn and understand. Four psychologists, four educationists, and four teachers out of five stated that a child can learn and understand verbal and numerical through experience, contact with and perception of object, qualities and relationships from which the symbols stand.

Five educationists and psychologists defined intelligence as the ability to adjust in new situation or environment and solve practical problem. According to their definition, intelligence is general mental adoptability to new problem and situation. Based on the responses of head teachers, teachers and parents, it was found that more intelligent person is one who can more easily and more extensively vary his behaviours as the conditions of the external environment of his or her changes.

Four psychologists, educationists, and head teachers took ‘intelligence is the ability to perceive situation quickly and react in time’. According to them more intelligent person can perceive situation quickly and react faster than less intelligent person. Three teacher and eight parents agreed with this concept. Two teachers, head teachers, educationists and psychologists have taken ‘intelligence is the ability to reason well, communicate well and judge well’. This means more intelligent children can reason well, communicate well and judge well. Four psychologists and educationists took ‘intelligence is adaptation and imitation’. Four parents agreed with them.

Likewise, three psychologists and two educationists define intelligence as the aggregate or global capacity of children to act purposefully, think rationally and to deal effectively with environment. This definition is exactly same with Wechsler’s definition. One teacher stated intelligence as the god gifted capacity from birth. This implies that a child is born with a fixed or predetermined level of intelligence. But if appropriate environment and training are provided level of intelligence may be extended slightly.

From the above description we conclude that there is no vast disagreement among respondents regarding the concept of intelligence. All respondents took intelligence as the capacity or ability to understand, adjustment, perception of the situation, adaptation, reasoning, memory, well communication etc. the following table shows the definitions of intelligence given by different respondents.

4.1.1 Components of intelligence

Almost psychologists and educationists were found to have been guided by different theories of intelligence, such as unifactor theory, two factor theory, group factor theory, primary mental ability theory etc. But most of the respondents (90%) agreed with the ‘multiple intelligence theory’ of Howard Gardner. This theory has given new dimension in the field of intelligence. Components or area proposed by Gardner are Linguistic intelligence, Logical mathematical intelligence, Musical intelligence, bodily kinesthetic intelligence, spatial intelligence, Interpersonal intelligence, Intra personal intelligence, extensile intelligence, Naturalistic intelligence, Spiritual intelligence. Besides these components, proposed by different respondents has been presented and interpreted as follows:

Table 4.1.2: Components of Intelligence

Components	Parents (N=10)	Teachers (N=5)	Head Teachers (N=5)	Psychologists (N=5)	Educationists (N=5)
Problem solving skill, abstract thinking, reasoning, adjustment, verbal, numerical, logical ability, ability to understand, linguistic	10	5	5	5	5
Art, memory, computational skill	4	5	3		
Social, political, intellectual	1				
Physical, intellectual, emotional	2			1	1
Verbal & non verbal		1			
Developmental tasks according to age, adjustment according to age, intellectual development and use				1	

Analyzing the above table most of the respondents proposed problem solving skill, abstract thinking, reasoning, adjustment capacity, verbal, numerical, logical, ability to comprehension, and understanding as the components of intelligence. Five teachers, three head teachers, four parents accept the components as art, memory, computational skills. Two psychologists, educationists, and parents took physical, intellectual, emotional aspect as component. Two psychologists took components of intelligence as;

- Developmental tasks according to age
- Adjustment according to age
- Intellectual development and use

From the above description, it was found that some educationists and psychologists proposed their views on the basis of different intelligence theories, while proposed their views on the basis of their experience.

4.2 Intelligent Behaviours of Primary School Age Children

4.2.1 Views of respondents

Generally speaking, those behaviours expected to perform by children in different age level are known as intelligence behaviours. It is said that children with the high intelligence are more responsive and creative whereas less intelligence children has fewer responsive and less creative. To identify intelligence behaviours of primary school age children views from different respondents are presented as follows: (the detail list of the intelligent behaviours proposed by different respondents are presented in annex)

4.2.1.2 Views of parents

To identify views regarding intelligent behaviours from parents, interview was conducted respectively in their residence. Parents provided their views regarding intelligence on the basis of personal experience. Most of the house mothers were found to have been stated that they could identify intelligent behaviours performed by their children.

Nine out of ten parents took intelligent behaviours as discipline, knowledge and sensivity about social and cultural events, and participating in school activities. Under discipline; obedient, placing own thing (books, exercise books, pen, pencil etc.) in proper place, follow time table has been taken as intelligent behaviours. According to parents more intelligent children have more knowledge and sensitivity about social and cultural events and activities and they perform good participation there. Likewise, more intelligent children show good performance in curriculum and extra curricular activities. Seven parents took intelligent beehaviours as understanding, degree of adjustment, decision making capacity, problem solving capacity. Parents think that intelligent children are more understanding; they know owns feelings and precipitations as well as others. More intelligent children can make appropriate decision as well as they can solve personal problems easily.

Four parents took sportive, restless, and creativity as intelligent behaviours. Likewise three parents have taken intelligent behaviours as personal and social activities in environment such as to be careful, being self smart, selection of T.V. channels, composing short poems and stories etc. Likewise logical quarreling, sensitive in sanitation may be taken as intelligent behaviours of primary school age children.

4.2.1.2 Views of educationists and psychologists

Facing with many difficulties to conduct interview with respondents, the researcher collected their views on intelligent behaviours and their views are as follows:

Most of the specialists favored with the cognitive development theory of Jean Piaget. All of the educationists and psychologists stated their views on the basis of cognitive development theory. Besides this theory, specialists view that the point's intelligent behaviours are the ability to well reasoning, adjustment in new situation. Parents as well as teachers and head teachers also agreed with them.

Likewise three psychologists, four educationists took good performance in curricular and extra curricular activities, ability to learn, understand and solve practical problems as intelligent behaviours. Nine parents also agreed with them. Ability to make plan and implement it, ability to serve daily basic work oneself; this means using toilet, care about self sanitation, placing own's materials in proper place and being obedient. These behaviours have been taken under discipline. Responsive and creativity may be intelligent behaviour. According to specialists more intelligent children are more disciplined, more responsive and more creative than less intelligent children.

During the study two of educationists and psychologists took well communication skills, commanding power, thinking logically and classify several dimensions, understanding mathematical concepts, vocabulary as the intelligence. Under communication skills; response phone effectively, able to express on's feeling, perceptions, knowledge effectively and make understand others. Computational skill, understand and use mathematical signs and symbols, able to solve mathematical problem falls under understanding mathematical concept. Capacity to behave appropriately in new situations may be known as intelligent behaviours. Generally speaking more intelligent children can do appropriate behaviuors among different age level persons even a in new situation.

Form the above description the researcher conclude that intelligent behaviours are judged based on those developmental tasks performed by a child of a certain age level as expected by the society. More intelligent person is able to perform developmental tasks easily than less intelligent person.

4.2.1.3 Views of Head teachers and teachers:

The role of head teachers and teacher is great in child development. To identify views regarding intelligent behabiours of children obtain through interview with HTs and Ts presented as follows:

Most of four teachers and four head teachers out of five took intelligent behaviours on the basis of participation of children in curricular and extracurricular activities; in class room activities, and in following rules and regulations of schools, etc.

Likewise, ability to learn, ability to cope with problems, self discipline, degree of responsive and creative, degree of hesitation in presentation, adjustment in new situation are taken as intelligent behaviours related to school activities.

Similarly, three head teachers and teachers took intelligent behaviours as discipline under which category self discipline, self confident, helping others, in following rules and regulations of school, obedient fall. Accepting social values, caring oneself and others, kind and loving, curious, well communication skill, becoming leader in group are also taken as intelligent behaviours. Doing arts, composing short stories and poems might be intelligent behabiours.

Three head teachers and two teachers had taken some games as intelligent games; such as playing puzzles, puzzles boxes, cross words puzzles etc. Some specialists, parents and even some students agreed with teachers' view. According to them intelligent children interested in playing quiz, cross word puzzles etc. and their performances were better than less intelligent children.

4.3.1.4 Views of Children

To collect views regarding intelligent behaviours of primary school age children, five FGDs were conducted in their respective schools in natural setting. For this purpose, five groups of containing eight children were formed from each school including girls as well as boys. Views regarding intelligent behaviours of primary school age children has been presented and analyzed as follows:

Students have been taken as important key informants of the study. By observing views significant amount of data has been collected which made this study significant in the field of psychology. Views of children were not exclusively different from other respondents. In this context, children's views were based on practical behaviours which are related at homes and in schools activities.

Thirty two out of forty children stated that intelligent behaviours on the basis of activities of their schooling. Active participation in curricular activities; ability to answer quickly, questioning, ability to understand, ability to learn, good performance in curricular and extra curricular activities has been taken as intelligent behaviours. According to students, more intelligent children could actively participate in classroom activities, do more question with teacher, able to learn and understand quickly, always achieve good performance in exam, more participation and achievement in extra activities, than less intelligent children. The above behaviours are not different from others' response. Likewise, more intelligent children listen attentively while teaching, don’t disturb others, and be curious and careful in study. Similarly, significant number of students took discipline as intelligent behaviour. This means more intelligent children always maintain their discipline, follow time table, follow rules and regulations of schools, do their homework properly, helping others etc are also taken as intelligent behaviours.

Twenty eight children took intelligent behaviours as keeping ones materials (books, exercise books, pencils, clothes etc) in proper place. Greeting others, helping parents in daily works, loving young ones, being confident and speak without hesitation as intelligent behaviours. According to children more intelligent children always keeps own materials in proper place, s/he would like to greeting others, use to love young ones, more confident and able to speak without hesitation than less intelligent children.

Beside these behaviours, twenty four children stated intelligent behaviours as the good performance and mastery in rules of some table games, such as checker, lundo etc. According to them intelligent children always like hanging with intellectual games, such as building box, solving puzzles, playing chess, telling jocks, playing dramatic games, etc. Likewise they are interested in listening stories, poems, curious about natural and mysterious events as well as science and technology. Besides these, doing arts, listening news, be aware about social and national events, try to face problems are taken as intelligent behaviours.

From the above description, the researcher concludes that more intelligent children actively participate in school activities whereas less intelligent do not participate actively. Intelligent children try to be disciplined than less intelligent children. More intelligent children have high memory power and problem solving skill. Proper utilization of leisure time and being leader in group may be the signs of intelligent behaviours.

4.4 Components of Intelligence in Entrance test

To find out the existing components in the entrance test, extensive document analysis was done. For this purpose, entrance test papers were collected from the sampled schools. Particularly, it was found that entrance test was administrated in Budhanilakantha, LRI, and Kanya secondary Boarding Schools. Due to the private policy of Budhanilakantha, school administration didn't provide entrance test paper. However, they used two set of test papers, one is Nepali and another is English, in which Nepali medium test is used for scholarship. In Nepali medium test, test items were selected from course of Nepali and Mathematics. This attempts to measure vocabulary, grammar, analogies, memory, knowledge, sealing etc. in Nepali and fundamental mathematical concepts, such as add, and subtract, multiplication, division and problem solving skills in grad in each grade.

Analyzing the items included in the entrance exam, the following components of intelligence were found.

Vocabulary: It is taken as important component of intelligence by Thurston. While analyzing the test items of entrance examination, items from vocabulary were included from grade one in both schools. In this category, word meaning, synonyms, sentence formation and sentence completion were included. For example,

- a person who make chairs is .... (give a single word)
- clever........................, false................(synonyms)
- doctor, teacher, (sentence formation)
- My father is ....(sentence completion)

Grammar: According to Gardner, grammar is one of the part of the linguistic intelligence. Analyzing the items, grammatical questions were also included in the exam for all grades. In this category, article, auxiliary verbs, sounds(vowel and consonant) were found. For example

- Put 'a' or 'an' in the blanks
  There is................. Umbrella.
- Use 'is ' or 'are' in the blanks
  This .... apple
- Choose the correct words and fill in the blanks
  I saw a movie about the drawing of a.............. (Ship/ seep)
- Pot the silent letters from these words
  Knitting............., wrong.............

Comprehension: It is one of the important aspects of linguistic intelligence. In the entrance test of primary level comprehension items were included. Likewise, paragraph writings, letter writings were also included. For example,

- Read the following passage and answer the questions.
- Write paragraph explaining what you think you will do top the next class?
- Write a letter to your friend in Pokhara inviting him/ her on your sisters wedding.

Logical- mathematical: It is important component of intelligence proposed by Howard Gardner. In the entrance test logical mathematical types of items were also included. This includes computational skills of fundamental mathematical aspects such as addition, subtraction, multiplication and division according to the grade. Likewise, IQ types and problem solving items also included. For example,

- If you sleep 8 hours out of 24 hours, what fraction of time do you sleep?
- What comes before and after?

a. 19............ b. 27

Besides the above components of intelligence, the test items were constructed to test the mastery of knowledge in the content of previous grade.

Comparing the test items of LRI and Kanya secondary school, some aspect of test were common. In LRI entrance test items were selected from four different areas. They are English, Nepali, Mathematics, and General. Likewise, English, Nepali, and Mathematics courses were covered in Kanya secondary school. In Kanya , items were presented in simplest form than in LRI. In grad one test, items were selected from math, English, and Nepali in both and general area was more in LRI.

In each grad test items from Nepali and English were selected to measure vocabulary, spelling, grammar, IQ, etc in both school. Items in mathematics were designed to test the knowledge about fundamental mathematical concept and computational skills, such as addition, subtraction, multiplication, division, analogies, and IQs. Likewise in general area, items were selected to test IQ, vocabulary, memory etc. in the following grad, the amount of complexity was found more deep than preceding grad. The entrance test paper is attached in Appendix.

4.3.1 Practices of Selecting Children for Admission

To find out the existing practices of selecting children in primary level, three community (including budhanilakantha) schools and two intuitional schools were studied for this purpose. Interviews were conducted with teachers and head teachers and FGDs with students. By analyzing data available from the field, student selection

Procedure for admission was found as follows:

Table 4.3.1: Student selection procedure

Selection Procedure	Number of schools (n= 5)
Entrance test	3
interview	3
Certificate	2
Political forces	3

Source: Field survey 2064

In the above table, existing practices has been listed. Generally speaking entrance test, interview, certificate are basic criteria's for selecting children in sample school. But there was no uniformity in selection process among them as well as there was no unifortimity in construction of entrance test items. According to head teachers and teachers (who are directly participating in selection) entrance test and interview have been conducted for admission in Budhanilakantha secondary school. Certificate and entrance tests are the basic criteria for admission in L.R.I. school and Kanya secondary school. Certificate is essential criteria for admission in Kanya secondary school, Dellibazar and Nandi Night School. In these schools interview has been taken to identify the mastery of previous course. In Budhanilakantha School, political forces were found to have influenced admission procedure to some extent.

While constructing entrance paper, the items from Nepali, English, Math and general Knowledge are being included according to the grade level.

Admission process in institutional schools

In institutional schools, there is relatively uniformity in construction and administration of entrance test. The admission process of different institutional schools has been analyzed separately as follows:

a. Kanya Secondary School, Lainchour, kathmandu**.**

According to vice-principal and assistant teacher and students, entrance test and certificates are basic criteria for admission. An entrance test has been prepared and taken based on the preceding grade curriculum when the students come for admission. If s/he cannot pass the test s/he is not allowed to admit.

b. Learning Realm International School, Kalanki.

This school seemed to have adequate facilities and is the most famous in the area. If any student came for admission in primary level, an entrance test is taken from previous courses. The test items are constructed by selecting from the contents of Nepali, English, Maths, and General Knowledge. Sometimes political forces affected the admission process, especially during the period of Maoist insurgency. The test items in Nepali and English has been selected to test comprehension, memory, writing skills, vocabulary and verbal analogies. Likewise; mathematical computation mathematical reasoning, problem solving skills in general courses. Vocabulary, puzzles, etc. have been included. Based on the responses of Vice-Principal and class teacher and the documents i.e. entrance test paper for each grade of primary section available in the school, student selection procedure is as follows: (The entrance paper is attached in Appendix).

Admission process in community schools

There is relatively uniformity among the community school in admission process except Budanilakantha School. Community schools which are situated at Kathmandu valley have relatively high facilities than other places of Nepal, though their academic status is not good enough. Many infrastructures and physical facilities are going to be damaged due to uselessness. There is not more than formal process in adopting selecting children in primary level. The admission process of community school has been presented separately as follows:

a. Budhanilakantha Secondary School, Budhanilakantha.

It was found that in Budhanilakantha School, ninety-nine students were selected per year in grade four. Among them, thirty-three students were selected from various districts of Nepal. According to the principal and a class teacher, especially those students; deprived/ lagging behind from socio economic status but intelligent is given priority in selection. Those selected (n= 33/ year) were granted full scholarship from the Government of Nepal.

Likewise, sixty-six students were selected by conducting entrance tests in different places of Kathmandu Valley. In these processes two types of tests were prepared separately. One is in Nepali and the other in English. The scholarship is provided only to those students who were selected from Nepali medium tests.

In Nepali medium set of test basically items are selected from Nepali and Math and In English medium tests from English and mathematics. The `area covered by the tests is vocabulary, memory, reasoning etc. from Nepali and English; problem solving skills mathematical computation etc from mathematics.

b. Kanya Secondary School, Dellibazar.

Only Girls were enrolled in this school. Around one thousand girl were studying in this school in 2064 B.S. According to assistant head teacher; student selection is done based on the certificate of preceding class. If any student comes with her certificate for admission, she is admitted. Besides this certificate, interview with student is also conducted. The interview is based on the previous course of Nepali, English and Mathematics. Assistant teacher Ganga Nepal also agreed with the view of assistant head teacher Radha Sharma. If the girl student can't show her certificate, she is not allowed to take admission in Kanya Secondary School.

c. Nandi Night School, Naksal, Kathmandu.

It is one of the well organized, well structured and well facilitated night schools. Around one thousand students are studying from one to ten in this school in B.S 2064. The admission process of Nandi School in primary level is same as in Kanya secondary school. According to the head teacher certificate is essential criteria for admission. Without certificate, noone can get admission in Nandi Night School. Class teachers and students also agreed with the views of the head teacher.

Besides the certificate interviews were also conducted to test the proficiency in Nepali, English and Math's for the admission of students in primary level.

4.3.2 Assessment of Student Selection Practices:

For the purpose of assessing student selection practices, views of different respondents were collected through interviews and FGDs .Interviews were conducted with teachers, head teachers, educationists and psychologists and FGDs including with students of primary level. The data collected from the field is analyzed as follows:

During the study, it was found that there was no uniformity in selecting children for admission in primary level. In institutional schools, it was found that performance in entrance exam was the essential criteria of selecting children. Likewise, in public school, certificate was essential criteria. So, there was no uniformity in the student selection practices.

Most of the respondents were not satisfied with the selection procedure in both institutional and community schools. Two educationists and psychologists were found to have been dissatisfied with the procedure as they stated that the selecting practices were as drama. The student selecting practices were not based on the theory of cognitive development and learning as they could not follow the criteria of physical, mental and intellectual development of children.

Children selecting practices for admission in primary level in Budhanilkantha School, Learning Realm International School and Kanya Secondary Boarding School was found them same. But the practices of construction of tests which are not based on the age and intellectual development level of children were not appropriate. According to the principal of Budhanilkantha School, the school was found to have been interested to invest for revising their entrance test items. If anybody could make an intelligence test they will support academically and financially in test construction procedures. However, the Students of Budhanilkantha schools were found to have been satisfied with the admission process. According to them, test items were appropriate to measure intelligence of children. However, they were found of the opinion that improvement in entrance items is necessary to meet the new horizons of knowledge. Likewise, students of L.R.I and Kanya secondary boarding schools also partially agreed with the selection process for admission. But they also demand for improvement and revision of the tests. According to them, test items were very difficult. They were of the opinion that it would be better to take the test of IQ types.

In Kanya Secondary School and Nandi secondary school basic criteria of selecting children for admission was to show the certificate of preceding grade by students. Head teachers and class teachers were not satisfied with the process. According to them, certificate was necessary criteria for admission but not it was sufficient. Entrance test should be made including the items related to I.Q. Students of these community schools were partially agreed with the admission process. They were interested to take entrance exam for the purpose of admission in the school.

In LRI and Kanya Secondary Boarding Schools, entrance tests were prepared according to grade. According to principal and class teacher of the school their tests were for testing proficiency of students. They tried to select appropriate children by administering the test. They claimed that because of their admission process, appropriate students were selected since their students got good opportunity for employment with job satisfaction.

The respondents were asked how the existing practices could be improved. Six, out of ten parents stated to prepare entrance test with appropriate items in each level, four psychologists, four educationists and four parents prefered intelligence test according to the age of the students. One educationists and psychologist prefer aptitude test for admission in primary level. Three educationists and three psychologists favored to take intelligence test by age of children in each year. Two of them stated that intelligence test should be taken in initial and final stage of each level.

Most of the respondents agreed that it was difficult to construct appropriate test for each age group children, but it was not impossible in the context of Nepal.

Five educationist's /psychologists and three teachers claimed that it was very difficult to construct a culture-free intelligence test because of geographical, cultural and religious diversities in Nepal. (If we construct performance type test, that may be culture free).

Another question "Why the intelligence tests should be taken?" was asked. In this question, educationists' and teachers' views were that the intelligence test was needed for making decision about curriculum, teaching materials, teaching strategies according to the ability of children. Likewise, psychologists stated that, it would be taken to identify potentialities and intelligence area of children so that student selection practices for admission could be improved.

From the above description the researcher found out that psychologists and educationists were dissatisfied with the selection procedure and the test items selected for entrance test. Teacher and head teachers were favor with selection procedure in Budhanilkantha, LRI and Kanya Secondary Boarding Schools as they claimed that, they had selected appropriate students from their tests. Because of their students' good performance in curricular and extra-curricular activities, their job satisfaction, and of their good status in their professional life. In the context of community schools except Budhanilkantha School, teachers and parents partially agreed with the existing admission process in primary level. Due to the lack of economic resources, school administration was not able to develop any type of test for admission process in primary level. According to them certificate was necessary but not sufficient criteria for selecting children in primary level.

CHAPTER FIVE
FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter deals with the major findings, conclusions and recommendations of the study, which are presented below under their respective headings.

5.1. Major Findings

The major findings derived from the analysis and interpretations of data, based on the objective of the study are as follows:

1. Most of the respondents define intelligence as capacity to understand, ability to adjustment in new situation and environment, to perceive situation quickly and react in time, ability to reason well, communicate well and judge well, and adaptation and imitation. Three psychologists out of five and two educationists out of five took intelligence as the aggregate or global capacity of children to act purposefully, think rationally, and deal effectively with the environment. However, few respondents took intelligence as god gifted capacity of children form the birth.

2. Most of the respondents were agreed with the areas of intelligence identified by Howard Gardner which included bodily kinesthetic, logical mathematical, existential, musical, interpersonal, naturalistic, intra- personal, spatial, linguistic, and spiritual. Besides these, most of the respondents preferred the various aspects of intelligence such as problem solving skills, abstract thinking, reasoning, adjustment capacity, verbal, numerical, logical, vocabulary, comprehension, memory, computational skills, etc. However, two psychologists out of five stated that components of intelligence should include adjustment/ intellectual activities of children based on the developmental tasks by age.

3. According to the parents, being disciplined, knowledgeable and sensitive about social and cultural events; participating in school activities, degree of adjustment, decision making capacity, and problem solving skills were taken as intelligent behaviours. Likewise, some parents took, sportive, restless and creativity, being self

smart, proper utilization of time, composing short stories/poems etc, logical quarreling and sensitive about sanitation were taken as intelligent behaviours.

4. Specialists stated that, by using concrete objects, intelligent children are able to solve problems and give reasons on the basis of concrete objects, discriminate the things on the basis of similarities and dissimilarities, knowledge of mass conservation, knowledge of object permanence etc. were taken as intelligent behaviours. Further more they stated that, adjustment in new situations, active participation in curricular and extra curricular activities, understanding and solving practical problems, making plans and implement them, being able to complete their basic tasks such as use of bed room, toilet etc, obedient and responsive, mastery of games with rules and playing with rules are intelligent behaviours.

5. Most of head teachers and teachers took intelligent behaviours of children as their participation in curricular and extra-curricular activities. Besides them, discipline, degree of hesitation in presentation, quick adjustment, accepting social values, kind and loving, curious, well communication, leading their group, doing arts, playing quiz, solving puzzles etc were intelligent behaviours.

6. According to children, participating in classroom activities, ability to understand, ability to quick answer, ability to learn and questioning habits were expressed as intelligent behaviours. Likewise, discipline following a time table and rules and regulations of schools, doing their work properly, keeping own materials in proper place, greeting elder person, loving younger persons were taken as intelligent behaviours. Confident and able to speak without hesitation, some games such as; building box, solving puzzles, playing chess, telling stories, playing dramatic games and mastery of games were taken as intelligent behaviours. Likewise, doing arts, listening news, utilization of leisure, being aware about social and national events and facing problems were also taken as intelligent behaviours.

7. In Buddhanilkantha School, entrance tests and interviews were essential criteria for admission in grade four. Entrance tests were conducted for two different purposes. One was for admission of students with scholarship and the other was for admission of students without scholarship. Interviews were taken only with the

successful candidates in the entrance test. In some cases, political forces affected admission procedure though the degree of political pressure was very low.

8. In LRI, and Kanya Secondary Boarding School, entrance test was essential criteria for all. In LRI, tests items were from Nepali, Math, English and general area, and in Kanya, from Nepali, Math and English only.

9. In community schools such as Kanya Secondary School Dillibazar and Nandi Night School, admission process was based on passed certificate of proceeding classes for all children to get admission in any grades except in grades one. However sometimes interviews were also taken for admission in these schools

10. Analyzing the items included in the entrance tests were found content loaded. However, some of them were based on vocabulary, comprehension, problem solving skills, numerical reasoning and analogies etc.

11. The items of all entrance tests in all schools were found not to have based on general theories of intelligence.

12. Educationists and psychologists were found not to have favoured the existing selection process in the schools. According to them, what was happening in student selection process were all like dramas. Entrance tests were not constructed based on the intellectual level of children. To them, intelligence test should be developed and followed to select students for the admission in the early primary grades.

13. Head teachers and teachers of Budhanilkantha, LRI and Kanya Secondary Boarding Schools were in favour of their existing selection procedure though they were not fully satisfied with the tests by grade for admission of the students in their schools.

14. Students who were studying in the school and their parents were found. Students and parents of all schools wanted entrance tests containing IQ types of items.

5.2 Conclusion

Based on the findings of the study, conclusions are derived as follows:

Teachers, head teachers, educationists, psychologists' children and parent reported that there were six areas of intelligent behaviours of children play activities, problem solving activities, mathematics, comprehension of physical world, comprehension of social world and discipline. Brief description of each behaviours is presented as follows:

a Play: Mastery of table games with rules; such as checker, lundo, and chess. Mastery of outdoor games with rules; football, spontaneous plays involving different rules are falls under intelligent behaviours.

b Problem solving: Plans ahead on familiar tasks such as drawing and building abandons hypothesis when they are not confirmed, can explain what words such as bicycle mean is less susceptible to perceptual illusions.

c Mathematics: under the mathematical activities; can learn to add, subtract, multiply and divide, understand equalities and inequalities.

d Comprehensive of physical world: Distinguishes magic and present form what is real, understands that pouring water into a container of different shape doesn't change the amount.

e Comprehensive of social world : Use Kinship terms such as sister and uncle accurately, understand social rules, such as those governing marriage; emphasize factors such as fairness in explaining right and wrong; shows increased ability to understand others motives and intentions.

f Discipline: Follow rules and regulations of school, keeping own material in proper place, follow time table, do their assignment properly, helping others, being obedient etc.

In Budhanilakantha, LRI and Kanya Secondary boarding School, entrance tests were essential criteria for admission in primary level, the test items were selected from courses of preceding class. However, in community schools like Nandi and Kanya Secondary Schools certificate of preceding class was an essential criterion for admission even in primary grades except in one. The items of all entrance tests for the admission of students in primary level in all sample schools were not based on the general theory of intelligence. The natures of items were content loaded. However, some general aspects of intelligence were included, such as vocabulary, comprehension, problem solving skills, computational skills, numerical reasoning and completion of verbal analogies, etc.

Particularly, educationists and psychologists were dissatisfied with the items included in entrance test due to the complexity. Educationists and psychologists claimed that entrance test items were not according to the intellectual level of children though parents and the students who were studying in the schools were found satisfied in Budhanilakantha, Kanya, and LRI Secondary School.

5.3. Educational Implication

Based on the findings and conclusion, the education implication of the study is as follows:

1. The items by age group of children for admission in primary grades should be constructed based on the multiple intelligence theory of Howard Gardner.
2. Intelligent Quotient test for the selection of children should be conducted in all primary schools including community schools.
3. Curriculum for primary grades should be reformed on the basis of children intelligence.
4. Further research to construct IQ tests for 8-10 age group children should be conducted with the consultation with Budhanilakantha Secondary School.

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ANNEX A

Historical development of intelligence test

The historical foundations of study of intelligence

The historical periods of the study of intelligence may be divided into six time periods which are as follows:

a. Historical Foundations

The nature of the human intellect has fascinated scholars for centuries. The earliest work, ranging from Plato and Aristotle to Itard and Esquirol, formed the foundation for modern explorations of intelligence (i.e., the theories developed over the past 200 years).

Plato	(ca.428/42-348/347BCE)	Huarte	(ca.1530-1592)	Kant	(1724-1804)
Aristotle	(384-323BCE)	Hobbes	(1588-1679)	Duff	(1732-1815)
Augustine	(354-430AD)	Pascal	(1623-1662)	Esquirol	(1772-1840)
Aquinas	(ca. 1225-1274)	Thomasius	(1655-1728)	Itard	(1775-1838)
		Smith	(1723-1790)		

b. Modern Foundations

During this time period, psychology began to emerge as a discipline separate from philosophy, mathematics, and biology. However, individuals from these diverse fields continued to influence psychological discourse and the study of intelligence.

Locke	(1632-1704)	Gauss	(1777-1855)	Galton	(1822-1911)
LaPlace	(1749-1827)	Mill	(1806-1873)	Charcot	(1825-1893)
		Darwin	(1809-1882)		

c. The Great Schools

This period in history witnessed the advent of several prominent European schools of psychology. Some of the American psychologists profiled on our site studied overseas, then returned home to establish influential psychology programs in the United States. The study of intelligence gained popularity during this era, bolstered by the work of Wilhelm Wundt, James McKeen Cattell, G. S. Hall, and Hermann Ebbinghaus.

Wundt (1832-1920) James (1842-1910) Hall (1844-1924)	Ebbinghaus (1850-1909) Freud (1856-1939) J M.Cattell (1860-1944)	Wissler (1870-1947) Edison (1847-1931)

d. The Great Schools' Influence

As the students of the Great Schools began to form their own programs, the number of theoretical and empirical investigations of intelligence increased.. A milestone during this time period was the development of the United States' Army Alpha and Beta testing program, established under the direction of Robert Mearns Yerkes. This massive project gave rise to the first group intelligence tests and provided a fertile training ground for many psychologists who would become influential in the ensuing decades.

E. L. Thorndike (1874-1949) Binet (1857-1911) Pearson (1857-1936) Spearman (1863-1945) Goddard (1866-1957)	Stern (1871-1938) Simon (1873-1961) Yerkes (1876-1956) Terman (1877-1956) H. Hollingworth (1880-1957)	L. Hollingworth (1886-1939) Goodenough (1886-1959) Vygotsky (1896-1934) Piaget (1896-1980)

e. Contemporary Explorations

The enthusiasm generated by the formation of the Great Schools and the Army Alpha and Beta testing program laid the foundation for the work done during this period. New statistical techniques and modern experimental designs helped to make standardized testing of intelligence and achievement a way of life in most Western countries. Although g-centric theories dominated, theories of "multiple intelligences" began to appear in the work of Thurstone and Guilford.

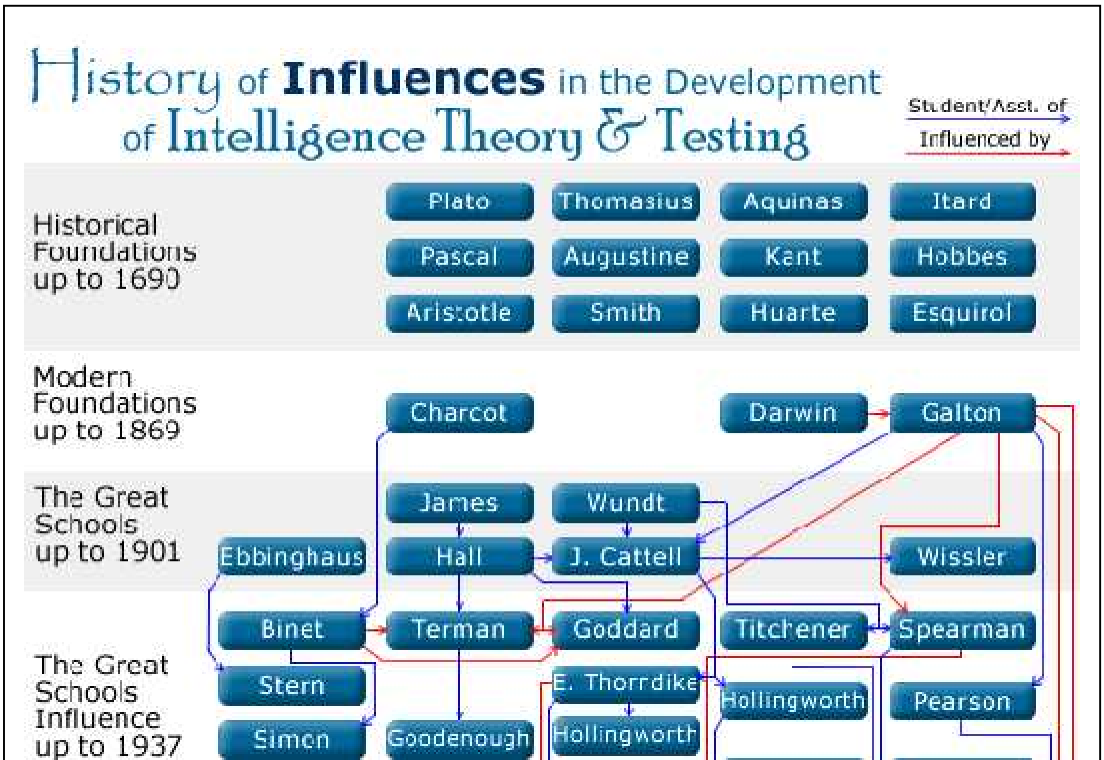
Burt (1883-1971)	Guilford (1897-1988)	R. Thorndike (1910-1990)
L L Thurstone (1887-1955)	T. Thurstone (1897-1993)	Inhelder (1913 - 1997)
P. Cattell (1893-1989)	Vernon (1905-1987)	Taylor (1915-2000)
Wechsler (1896-1981)	Hunt (1906-1991)	Eysenck (1916-1997)
	Anastasi (1908-2001)	

f. Current Efforts

Current trends in intelligence theory and research involve the formation of more complex multiple intelligence theories and a de-emphasis on the use of standardized testing to measure intelligence. At the same time, the availability of relatively cheap computers has promoted advances in statistical analysis, providing new perspectives on the measurement of intelligence. The emergence of reliable genetic and neurological research methodologies is creating a new area of study in which environmental, biological, and psychological aspects of intelligence are studied simultaneously.

R.Cattell (1905-1998)	Jensen (1923-)	Gardner (1943-)
Carroll (1916-)	Kamin (1924-)	Sternberg (1949-)
	Renzulli (1936 -)	A.Kaufman (1944-)
		Carol S. Dweck (1946-)

The summarization of above description is given below



ANNEX B

Site of Study Area

a. Name and address of the sampled school

S.N.	Name of school	Address
01	Budhanilakantha Secondary School	Budhanilakantha, Kathmandu
02	Kanya Secondary School	Dillibazar, Kathmandu
03	Nandi Night School	Naksal, Kathmandu
04	LRI School	Kalanki, Kathmandu
05	Kanya Secondary School	Lainchour, Kathmandu

b. Name and address of sampled colleges

S.N.	Name of College	Address
01	University Campus, Kirtipur	Kirtipur, Kathmandu
02	Mahendra Ratna Campus, Tahachal	Tahachal, Kathmandu
03	Maharajgung Medical Campus	Maharajgung, Kathmandu

ANNEX- C
Interview schedules for different respondents

1. Interview Schedule for Head Teachers and Teachers

नामः	विद्यालयः		लिंगः
जिल्लाः	योग्यताः	तालिमः	ठेगानाः

१. नेपालमा प्राथमिक तहका बालबालिका छनौट गर्ने प्रक्रिया के कस्तो छ ?
२. के के आधार/पक्ष राखिएको छ ?
३. ती आधार राख्नको कारण के होला ?
४. कस्ता कस्ता व्यवहारहरु मापन गर्न खोजिएको छ ?
५. के निर्धारित आधारहरुबाट उपयुक्त विद्यार्थी छनौट गर्न सकिएको छ ?
छ भने त्यसलाई पुष्टि गर्ने आधारहरु के के छन् ?
यदि उपयुक्त छैन भने किन ?
६. के समावेश गरिएका कुराहरुबाट विद्यार्थीको बुद्धि मापन गर्न सकिएको जस्तो लाग्छ ?
७. कुन उद्देश्यको लागि यस्ता परीक्षा संचालन गर्ने गरिएको छ ?
८. तपाईलाई विद्यार्थी छनौट प्रक्रिया कस्तो लाग्छ ? सुधार गर्नु आवश्यक छ/छैन ?
९. बुद्धिमत्ता (चलाखिपन) भन्नाले के बुझिन्छ ?
१०. तपाईको विचारमा बुद्धिमत्ताका पक्षहरु के के हुन सक्छन् ?
११. बालक बुद्धिमानि छ/छैन भनि कसरी पत्ता लगाउन सकिन्छ ?
१२. प्राथमिक विद्यालय उमेरका विद्यार्थीहरुको कुन कुन व्यवहारलाई वुद्धिमान व्यवहार भन्न सकिन्छ ? कस्ता व्यवहारलाई सुस्त व्यवहार मान्न सकिन्छ ?

2. Interview Schedule for Educationists/Sociologists/Psychologists

नामः	कार्यरत संस्थाः		लिंगः
ठेगानाः	योग्यताः	तालिमः	पदः

१. नेपालमा प्राथमिक तहमा विद्यालय भर्नाको निमित्त बालबालिका छनौट गर्ने अभ्यासहरु के कस्ता छन् ?

२. अहिले भइरहेका अभ्यासहरु तपाईलाई कस्तो लाग्छ ? के ती अभ्यासहरु पूर्ण छन् ?छैनन् भने के गर्नुपर्छ ?

३. बुद्धिमत्ता केलाई मान्न सकिन्छ ?

४. तपाईको विचारमा बुद्धिमत्ताका तत्वहरु के के हुन सक्छन् ?

५. प्राथमिक तहमा बालबालिका छनौट गर्दा (Intelligence Test) लिनु आवश्यक छ/छैन ?

६. कुन समयमा के उद्देश्यका लागि Intelligence Test लिनु पर्दछ र कत्तिको गाह्रो हुन्छ ?

७. बालक बुद्धिमान वा सुस्त छ भनि कसरी पत्ता लगाउन सकिन्छ ?

८. (५-९) प्राथमिक विद्यालय उमेरका बुद्धिमान बालक विभिन्न अवस्थामा के कस्ता व्यवहार प्रदर्शन गर्दछन् ?

९. (५-९) वर्षका सुस्त बालबालिकाले विभिन्न अवस्थामा के कस्ता व्यवहार प्रदर्शन गर्दछन् ?

१०. बुद्धि विकासमा के कस्ता तत्वले प्रभाव पर्दछन् ?

3. Interview Schedule for Guardians

नामः ठेगानाः लिंगः
साक्षर⁄निराक्षरः योग्यताः तालिमः

१. तपाईको विद्यालयमा प्राथमिक तहका बालबालिका भर्ना गर्न कसरी छनौट गरिएको छ ?
२. तपाईले बालबालिका भर्ना गराउँदा कसरी गरियो (प्रक्रिया) ?
३. बालबालिका छनौट गर्दा Intelligence Test लिनु आवश्यक छ⁄छैन ?
३.१. Intelligence test गर्दा उमेरलाई ख्याल गर्नु पर्दछ कि पर्दैन ?
३.२. कुन उद्देश्यको निमित्त यस्तो Test लिनुपर्दछ र कत्तिको गाह्रो हुन्छ ?
४. अहिलेसम्म प्रयोग भइरहेका अभ्यासहरु तपाईलाई कस्तो लाग्छ ?
५. तपाईको विचारमा बुद्धिमत्ता (Intelligence) के लाई मान्न सकिन्छ ?
६. यसका तत्वहरु के के हुन सक्छन् ?
७. (६-१०) वर्षका बुद्धिमान बालकहरुले विभिन्न अवस्थामा के कस्ता व्यवहार प्रदर्शन गर्दछन् ?
८. (६-१०) वर्षका सुस्त बालबालिकाले विभिन्न अवस्थामा के कस्ता व्यवहार प्रदर्शन गर्दछन् ?
९. बालबालक बुद्धिमान वा सुस्त छन् भनि कसरी पत्ता लगाउन सकिन्छ ?
१०. बुद्धि विकासमा कुन कुन पक्षले प्रभाव पार्न सक्दछन् ?

4. FGD guidelines for students of primary age children
(5-9 age children)

नामः लिंगः ठेगानाः

- विभिन्न परिवेशमा चलाख व्यवहारहरु
- सुस्त व्यवहारहरु
- चलाख र सुस्त व्यवहारहरु मापन गर्ने तरिका
- बुद्धिमत्ता तत्वहरु (Component of intelligence)

- भर्ना प्रक्रिया
  - कसरी भर्ना पायौ
  - वार्षिक परीक्षाबाहेक अन्य कुनै परीक्षा लिइएको थियो ?
  - भर्ना प्रक्रियाको बारेमा सहमति⁄असहमति
- भर्ना प्रक्रियामा सुधार आवश्यक छ⁄छैन ?

- Intelligence test को उद्देश्य (कहिले, कसले, किन)
- Age Factor लाई ख्याल गर्नु पर्छ कि पर्दैन ?

ANNEX - D

Intelligent Behaviours of Primary School Age Children

Intelligent Behaviours	Parents	Teachers	Students
Ability to reasoning well			
Ability to rote memory			
Ability to cope with problems			
Ability to do basic work			
Ability doing homework oneself			
Ability to learn quickly			
Ability to make plan & implement it			
Ability to quick answer			
Ability to solve own problems			
Ability to think logically on the basis of concrete objects			
Accept the social values			
Active and creative			
Adjust new situation			
Appropriate use of toilet, bathroom and bedroom			
Be confident & don't hesitate while speaking			
Being leader in group			
Being aware about social & national events			
Being careful			
Capacity to behave appropriatevely and effectively in new situations			
Caring oneself			
Commanding			
Compose short poems, stories etc.			
Cope with problems			
Being Creative			
Playing crossword puzzles			
Curious about new things			
Curious and sensitive about social and cultural events			
Decision making capacity according to age			
Defensive			
Degree of participation in curricular and extra curricular activities			
Being Discipline			
Doing arts			
Do not being hesitate while expressing views			
Do not being more jealous			
Enjoy in reading			
Enjoy listening stories			
Equally behave with all friends			

Sharing the feeling with Parents				
Following time table, rules & regulations of schools				
Goal determination				
Good performance in academic study				
Good performance in curricular and extra curricular activities				
Greeting others (teachers, elders)				
Helping others				
High memory power				
Keeping own materials safely (books, exercise books, pen, pencils etc)				
Kind & loving				
Knowledge of mass conservation				
Knowledge of object permanence				
Knowledge of responsibility				
Listen attentiably and react at time				
Listening (news, poems, stories, music etc.)				
Living active life				
Loving & caring				
Being moral and obedient				
Participating in extra curricular activities				
Picture arrangement				
Playing intellectual games such as building box, solving puzzles				
Problem solving				
Questioning habit				
Questioning while not understood				
Reading habit				
Reasoning habit				
Responsive & creative				
Restless				
Telling jokes & stories				
Selection of knowledgeable T.V. channels				
Self care				
Self management and caring oneself				
Self smart				
Sensitive in sanitation				
Sharing of own ideas				
Some time become over smart				
Sportive				
Think abstractly				
Think logically & classify on several dimensions				
Try to do own work oneself				

Understand and solve mathematical problem/concepts				
Understand and teach others				
Understanding				
Utilize leisure time properly				
Playing videogames				
Well communication skills				