

INTRODUCTION

1.1 General Background

The role of individual differences in second /foreign language acquisition has been a matter of issue. Fillmore (1979) considers them as an all important factor. On the other hand, they are treated as relatively insignificant (Ellis, 1985, p. 99). In fact, modern attempts to study individual differences were pioneered by the British Scientist Galton in 1885 (Mahdavy, 2008).

Galton tried to investigate the relationship between the intellectual ability and skills such as relation to time and sensitivity to physical stimuli .According to Fancher (1985), Binet was commissioned by the French government in 1904 to develop techniques to identify those primary school children who lacked the necessary capacities for succeeding in normal classes and had to be provided with special education (ibid.). A year later, Binet and Simon produced the first intelligence quotient (IQ) test. Makintosh (1998) and Sternberg (2000) state the use of intelligence in the field of education is said to be started with Alfred Binet and his pioneering IQ test (as cited in Akabari and Hosseini, 2006).

Terman (1916) of Stanford University utilized Stern's (1912) formula to express the relation between an individual's mental age and chronological age (Mahdavy, 2008). Mens and Mens (1991) state that the first theoretical attempt at the description of intelligence and its underlying ability goes back to Charles Spearman (as cited in Akabari and Hosseini, 2006). He developed a theoretical model which is known as g model (g for general) in 1904 (IJES, 2004). He observed different tests of mental ability and analyzed co- relational patterns. Then, he arrived to the conclusion that there must be a common underlying ability or force which served as the basis for all our mental intellectual functions. He was convinced that (g) was a kind of brain power or mental energy and he believed that it was the presence of (g) that made a person intelligent (Howe, 1997, p. 27, ibid.).

1.1.1 Intelligence Interval Designation of Binet

Autumn Group (2003-2009) presents the intelligence interval designation of Binet which is presented below:

Table No.1
Intelligence Interval Designation of Binet

Intelligence Interval	Cognitive Designation
40 – 54	Severely challenged (Less than 1% of test takers)
55 – 69	Challenged (2.3% of test takers)
70 – 84	Below average
85 – 114	Average (68% of test takers)
115 – 129	Above average
130 – 144	Gifted (2.3% of test takers)
145 – 159	Genius (Less than 1% of test takers)
160 – 175	Extraordinary genius

Most intelligence researchers define intelligence as what is measured by intelligence tests, but some scholars argue that this definition is inadequate and that intelligence is whatever abilities are valued by one's culture. According to this perspective, conceptions of intelligence vary from culture to culture. For example, North Americans often associate verbal and mathematical skills with intelligence, but some seafaring cultures in the islands of the South Pacific view spatial memory and navigational skills as markers of intelligence (as cited in Online Encyclopedia, 2003). Those who believe intelligence is culturally relative dispute the idea that any one test could fairly measure intelligence across different cultures. Others, however, view intelligence as a basic cognitive ability independent of culture.

The widely accepted definition of intelligence is, however it is measured and in whatever circumstance-comprises a single factor, usually called the 'g' factor.

Gottfredson (1998, p.24) says that intelligence 'g' can be described as the ability to deal with cognitive complexity, the vast majority of intelligence. Researchers take these findings for granted (as cited in Richards and Rodgers 2001, p. 127). Spearman (1863-1945) analyzed the intelligence test data collected mainly for pragmatic purposes prior to his investigation and by doing factor analysis opted for a two factor theory of intelligence: general and special abilities. However, he was excessively enthusiastic about the general (g) factor. The single factor model correlates higher intelligence (g) with greater speed and efficiency of neural processing that is the higher g factor in the individual, the greater the speed and efficiency of that individual's brain in the performing cognitive operations (ibid.) i.e. if a language learner has a high intelligence, that person will learn most quickly when the content is embedded in a neural frame. This traditional definition defines intelligence in terms of intelligence quotient (IQ), which measures a narrow range of verbal/linguistic and logical/mathematical abilities and disregarded other intelligences of the brain. It is unfair measurement of only logic and language. This test founded on the idea that intelligence is a single, unchanged and inborn capacity.

This monolithic view of intelligence propounded by Spearman (1904) established as a basis for the development and interpretation of IQ tests and their scores for a long time. In L2 teaching literature, one of the first researches addressing the relationship between intelligence and language was Oller (1978) (as cited in Akbari and Hosseini, 2006). He was opposed to the concept of intelligence testing in general and he believed g is nothing but l_1 language proficiency. IQ tests basically measured language proficiency and intelligence is considered same as the linguistic ability.

Except the view of Oller (1978), there are other different multidimensional theories proposed for the description and explanation of intelligence. Thurstone's (1938) identification of 7 types of intelligences which he called "Primary mental capabilities" is regarded as the first multi factor approach to intelligences (as cited in Mahdavy, 2008). In the same way, Guilford (1967,

ibid.). Suggested that there are at least 180 elementary abilities which are made up of three dimensions:

- i) Operations
- ii) Contents
- iii) Products

Sternberg (1985, 1988, cited in Malim and Birch, 1998) defined intelligence as the mental capacity to emit contextually appropriate behavior in response to novelty (Mahdavy, 2008). He proposed a Triachic theory of intelligences (1985, 1988) which is made up of three sub-theories:-

- i) Componential
- ii) Contextual and,
- iii) Experimental sub-theories

Likewise, we find Horn's (1991) conception of intelligence as comprising general/flood and general/crystallized intelligences, Carrol's three stratum theory and Gardenr's MI theory (1983, 1999).

The historical development of intelligence theories indicate that IQ tests can not provide total account of individual differences in terms of mental capabilities and the more recent ideas which emphasize the multi-dimensional nature of intelligence .Among these multidimensional theories of intelligence, the theory of multiple intelligences (MI) which was proposed by Gardner (1983), professor in the Harvard Graduate School of Education and subsequently developed by his team at Harvard. This theory was first published in his seminal book 'Frames of mind' (1983) which has been most influential and could be utilized to investigate whether learners' individual differences in terms of intelligence are related to their different performance. This multiple intelligence theory (MIT) has brought a revolution around the world in educational field though its application in the educational field remains controversial topic. MIT grew out the work of Howard Gardner who

challenged the too narrowly defined intelligence which is a proposal of basic intelligence types. According to Gardner, (1993, p. xiii). Multiple intelligences (MI) refers to a learner based philosophy being based on neurological, evolutionary and cross cultural evidence (as cited in Akbari and Hosseini, 2006).

This is a cognitive perspective in intelligence which has profound implications in education. In Gardner's (ibid.) view, Intelligence is a composition of different abilities or aptitudes. This concept of Gardner contrasts with the concept that intelligence is based on a 'unitary' or 'general' ability for problem solving. He further says that there exists a cluster of mental abilities that are separate but equal. On the other hand, the single factor model correlates higher intelligence (+g) with greater speed and efficiency of natural processing that is the higher the g factor in the individual the greater the speed and efficiency of that individual's brain in performing cognitive operations i.e. if a language learner has a high intelligence, that person will learn most quickly when the content is embedded in a natural form (ibid.). Furthermore, Gardner believed that all of the intelligences could be enhanced through training and practice. He viewed human being do not possess a single intelligence but a range of 'Intelligences' (as cited in Harmer, 2008). Originally, the theory contains seven intelligences which are given below (as cited in Freeman, 2000):

1. Logical mathematical
2. Visual/spatial
3. Body/kinesthetic
4. Musical/rhythmic
5. Interpersonal
6. Intrapersonal
7. Verbal/linguistic

The teachers who recognize the multiple intelligences of their students know that students bring with them specific and unique strengths, which are often not taken into considerations in classroom situations. For example, some students

are better visual learners than aural learners and some students can learn equally well either way (ibid.). Though everyone possess the seven intelligences, they are not equally developed in any one individual. So, teachers need to create activities that include all the intelligences and to facilitate language acquisition among diverse students and to help them realize their full potential with all these intelligences.

There are more than 150 definitions of intelligence in the field of psychology. Instead of considering intelligence in terms of mental performances, Gardner regards it behaviorally. According to Gardner (1983, p.61; 1993, p.15; 1999, p.33-34), an intelligence is the ability or capacity to solve problems or to fashion products in a cultural setting (as cited in Lei, 2009). In other words intelligence is what people can do and may vary culture to culture. Instead of seeing people as rational or irrational, He described human beings as organisms possessing a set of intelligences. Second, "We each of have a unique blend of intelligences." He sees the necessity of taking good advantage of this uniqueness. As he indicates, most people can be outstanding in one or two intelligences. He further mentions, intelligences are not fixed at birth but educable; they change and grow in response to a person's experiences and they vary drastically from culture to culture. Furthermore, intelligences are most completely realized in the process of solving problems and fashioning products in real life situation.

In this new view of intelligence, it is viewed as a composite form of different components which are more or less independent of one another (Akbari and Hosseini, 2008). Thomas and Mcnicol (1998, p.38) mention, according to this approach, "The human mind is quite modular in design and . . . separate and independent cognition processes seem to underlie the performance on intellectual tasks" (ibid.).

The nine different types of intelligences of this model can function independently of one another and individual may have their weaknesses and

strengths in each of these. Gardner (1993), regards his theory as “egalitarian” since it values different manifestations of intelligence in different individuals and strives to provide a stimulating family and learning context which will be conducive to the development of these abilities in children and individuals. No single type of intelligence is viewed as being superior to others (ibid.).

Because different intelligences predominate in different people, the same learning task may not be appropriate for all students. For example, people possessing a strong logical/mathematical intelligence might respond well to a complex grammar explanation while other students might need the comfort of diagrams and physical demonstration because their strength is in the visual/spatial area.

The theory of multiple intelligences is based on a synthesis of information about human beings, including the knowledge of the development of brain; findings obtained from special populations (such as autistic individuals and prodigies); and identification of abilities and skills that are esteemed in cultures very different from our own, including ones that do not have or do not highly value schools (Gardner, 1997).

This theory broadens the traditional view of intelligences as solely composed of verbal/linguistic and logic/mathematical abilities. MI theory maintains that all human possess at least nine different intelligences that represent a variety of ways to learn and demonstrate understanding. Gardner (1993) argues that humans possess a number of distinct intelligences that manifest themselves in different skills and abilities, (as cited in Christison, 1999). All human beings apply these intelligences to solve problems, invent processes and create things. According to MI theory, intelligence is being able to apply one or more of the intelligences in ways that are valued by a community or culture. The current MI model outlines nine intelligences although Gardner (1999), continues to explore additional possibilities (ibid). Saricaoglu and Arican (2009) state as a

theoretical construct, MI suggests that intelligence should be determined by measuring one's capacity for schooling problems and fashioning products in a context rich and naturalistic setting.

1.1.1.1 Eight Intelligences and their Characteristics

With reference to Lei (2009), the brief summary of eight intelligences including their characteristics and the personalities who possess them is presented below:

a) Verbal/Linguistic Intelligence

Linguistic intelligence involves sensitivity to spoken and written language, the ability to learn languages and the capacity to use language to accomplish certain goals. This intelligence includes such skills as the abilities to remember information, to convince others and to talk about language itself. Lawyers, editors, writers, interpreters, poets and among the people with high linguistic intelligence. Famous examples: Charles Dickens, Abraham Lincoln, T.S. Eliot, Sir Winston Churchill.

b) Logical/Mathematical Intelligence

Mathematical intelligence involves the ability to analyze problems logically, carry out mathematical operations and investigate issues scientifically. People of this type are likely to understand the basic properties of numbers and principles of cause and effect to predict mathematicians, logicians, doctors, programmers, engineers and scientists exploit this intelligence. Famous examples: Albert Einstein, John Dewey.

c) Spatial Intelligence

Spatial intelligence entails the potential to recognize and manipulate the patterns of wide space as well as the patterns of more confined areas. In other words, it refers to the ability to sense, form, space, colour, line and shape.

Navigators, pilots, sculptors, decorators, painters, surgeons, chess players, or architects belong to this type. Famous examples: Picasso, Frank Lloyd Wright.

d) Musical Intelligence

Musical intelligence involves skills in the performance, Composition and appreciation of musical patterns. Musicians, composers, conductors, singers, music critics are among people with musical intelligence. Famous examples: Mozart, Leonard Bernstein, Ray Charles.

e) Bodily/Kinesthetic Intelligence

Kinesthetic intelligence includes the potential of using one's whole body or parts of body to express ideas, solve problems, or fashion products. Obviously dancers, actors, crafts men, and athletes, foreground this intelligence. Famous examples: Charlie Chaplin, Michael Jordan.

f) Interpersonal Intelligence

Interpersonal intelligence denotes capacity to understand the intentions, motivations and desires of the other people and to work efficiently with others. Salespeople, teachers, clinicians, religious leaders, political leaders, and actors all need acute interpersonal intelligence. Famous examples: Freud, Eleanor Roosevelt, Plato.

g) Intrapersonal Intelligence

Intrapersonal intelligence refers to the ability to understand oneself, to have an effective working model of oneself-including one's one desires, fears, moods, strengths, weaknesses and capacities-and to use such information effectively in regulating one's one life. Therapist, religious leaders belong to this type.

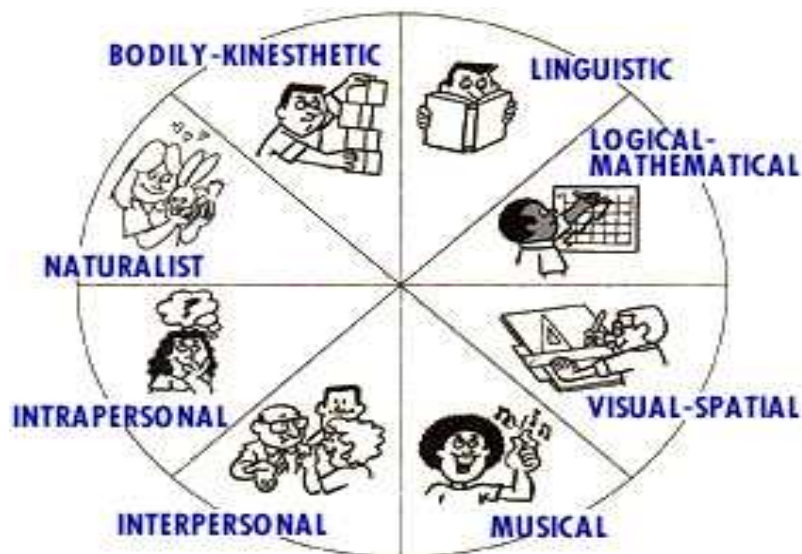
h) Naturalist Intelligence

Naturalist intelligence refers to the ability to recognize and classify plants, minerals, and animals including insects and grass and all variety of flora and fauna. People with naturalist intelligence are biologists, animal protectors, etc. Famous examples: Menka Gandhi, Oprah Winfrey.

Chapman (2003-2009) presents the eight intelligences in the picture as below:

Picture No.1

Eight Intelligences



1.1.2 Gardner's Suggested Possible Additional Intelligences

Chapman (2003-2009) mentions other possible additional intelligences suggested by Gardner which are presented below:

Table No.2

Gardner's Suggested Possible Additional Intelligences

intelligence type	Capability and perception
Spiritual/Existential	religion and 'ultimate issues'
Moral	ethics, humanity, value of life

1.1.3 Gardner's Multiple Intelligences in Detail

The more detailed diagram below (as cited in Chapman2003-2009) expands the detail for the original seven intelligences and also suggests ideas for applying the model and underpinning theories, so as to optimize learning and training, design accelerated learning methods, and to assess training and learning suitability and effectiveness.

Table No.3

Gardner's Multiple Intelligences in Detail

	Intelligence Types	Description	Typical Roles	Related Tasks, Activities or Tests	Preferred learning Style Clues
1	Linguistics	words and language, written and spoken; retention, interpretation and explanation of ideas and information via language, understands relationship between communication and meaning	writers, lawyers, journalists, speakers, trainers, copy-writers, English teachers, poets, editors, linguists, translators, PR consultants, media consultants, TV and radio presenters,	write a set of instructions; speak on a subject; edit a written piece or work; write a speech; commentate on an event; apply positive or negative 'spin' to a story	words and language

			voice-over artistes		
2	Logical- Mathematical	logical thinking, detecting patterns, scientific reasoning and deduction; analyze problems, perform mathematical calculations, understands relationship between cause and effect towards a tangible outcome or result	scientists, engineers, computer experts, accountants, statisticians, researchers, analysts, traders, bankers bookmakers, insurance brokers, negotiators, deal-makers, trouble-shooters, directors	perform a mental arithmetic calculation; create a process to measure something difficult; analyze how a machine works; create a process; devise a strategy to achieve an aim; assess the value of a business or a proposition	numbers and logic
3	Musical	musical ability, awareness, appreciation and use of sound; recognition of tonal and rhythmic patterns, understands relationship between sound and feeling	musicians, singers, composers, DJ's, music producers, piano tuners, acoustic engineers, entertainers, party-planners, environment and noise advisors, voice coaches	perform a musical piece; sing a song; review a musical work; coach someone to play a musical instrument; specify mood music for telephone systems and receptions	music, sounds, rhythm
4	Bodily- Kinesthetic	body movement control, manual dexterity, physical agility and balance; eye and body coordination	Dancers, demonstrators, actors, athletes, divers, sports-people, soldiers, fire-fighters, PTI's, performance	juggle; demonstrate a sports technique; flip a beer-mat; create a mime to explain something; toss a	physical experience and movement, touch and feel

			artistes; agronomists, osteopaths, fishermen, drivers, crafts-people; gardeners, chefs, acupuncturists, healers, adventurers	pancake; fly a kite; coach workplace posture, assess workstation ergonomics	
5	Spatial-Visual	visual and spatial perception; interpretation and creation of visual images; pictorial imagination and expression; understands relationship between images and meanings, and between space and effect	artists, designers, cartoonists, story-boarders, architects, photographers, sculptors, town-planners, visionaries, inventors, engineers, cosmetics and beauty consultants	design a costume; interpret a painting; create a room layout; create a corporate logo; design a building; pack a suitcase or the boot of a car	pictures, shapes, images, 3D space
6	Interpersonal	perception of other people's feelings; ability to relate to others; interpretation of behaviors and communications; understands the relationships between people and their situations, including other people	therapists, HR professionals, mediators, leaders, counselors, politicians, educators, sales-people, clergy, psychologists, teachers, doctors, healers, organizers, careers, advertising professionals, coaches and mentors; (there is clear association between this type of	interpret moods from facial expressions; demonstrate feelings through <u>body language</u> ; affect the feelings of others in a planned way; coach or counsel another person	human contact, communications, cooperation, teamwork

			intelligence and what is now termed <u>'Emotional Intelligence'</u> or EQ)		
7	Intrapersonal	self-awareness, personal cognizance, personal objectivity, the capability to understand oneself, one's relationship to others and the world, and one's own need for, and reaction to change	arguably anyone (see note below) who is self-aware and involved in the process of changing personal thoughts, beliefs and behavior in relation to their situation, other people, their purpose and aims - in this respect there is a similarity to <u>Maslow's Self-Actualization</u> level, and again there is clear association between this type of intelligence and what is now termed <u>'Emotional Intelligence'</u> or EQ	consider and decide one's own aims and personal changes required to achieve them (not necessarily reveal this to others); consider one's own <u>'Johari Window'</u> , and decide options for development ; consider and decide one's own position in relation to the <u>Emotional Intelligence model</u>	self-reflection, self-discovery

1.1.4 Facts and Features of Multiple Intelligences

Gardner presents some facts and features of multiple intelligences (as cited in Armstrong, 1994) which is given below:

Table No.4

Some facts and features of Multiple Intelligences

Facts:	Features:
<ul style="list-style-type: none">) The ability to create an effective product or offer a service that is valued in a culture) A set of skills that make it possible for a person to solve problems in life) The potential for finding or creating solutions for problems, which involves gathering new knowledge	<ul style="list-style-type: none">) All human beings possess all intelligences in varying amounts.) Each person has a different intellectual composition.) We can improve education by addressing the multiple intelligences of our students.) These intelligences are located in different areas of the brain and can either work independently or together.) These intelligences may define the human species.

1.1.5 Basis for Intelligence

Gardner (1983) argues that there is both a biological and cultural basis for the multiple intelligences (as cited in Brualdi, 1996). Neurobiological research indicates that learning is an outcome of the modifications in the synaptic connections between cells. Primary elements of different types of learning are found in particular areas of the brain where corresponding transformations have occurred. Thus, various types of learning results in synaptic connections in different areas of brain. For example, injuries to the Broca's area of the brain will result in the loss of one's ability to verbally communicate using proper syntax. Nevertheless, this injury will not remove the patients understanding of correct grammar and word usage.

In addition to biology, Gardner (1983) argues :

Culture also plays a large role in the development of the intelligences. All societies value different types of intelligences. The cultural value placed upon the ability to perform certain tasks provides the motivation to become skilled in those areas. Thus, while particular intelligences might be highly evolved in many people of one culture, those same intelligences might not be developed in the individuals of another (as cited in Brualdi, 1996).

According to Gardner (1999):

Intelligence is much more than IQ because a high IQ in the absence of productivity does not equate to intelligence. He defines intelligence as a bio-psychological potential to process information that can be activated in a cultural setting to solve problems or create products, that are of value in a culture (p.34).

Gilman, (2001) views instead of intelligence being a single entity described psychometrically with an IQ score, his definition views it as many things.

MIT is taken as rationalist model which has evolved in response to the need to reach a better understanding of how individual differences can be addressed and developed in the classroom.

1.1.6 Criteria for Identification of Intelligences

Gardner (1983) established eight criteria, which provide a theoretical foundation for identification of individual intelligences (as cited in Smith, 2001) .Each group of skills or aptitudes must meet all or most of the criteria in order to be considered an intelligence.

To qualify as an "intelligence" the particular capacity under study was considered from multiple perspectives consisting of eight specific criteria

drawn from the biological sciences, logical analysis, developmental psychology, experimental psychology, and psychometrics. Gardner (1999, p.36) presented the criteria to consider "candidate intelligences" (as cited in Smith, 2001) are:

- 1) the potential for brain isolation by brain damage,
- 2) its place in evolutionary history,
- 3) the presence of core operations,
- 4) susceptibility to encoding,
- 5) a distinct developmental progression,
- 6) the existence of idiot-savants, prodigies and other exceptional people,
- 7) support from experimental psychology, and
- 8) support from psychometric findings (Gardner, 1999).

1.1.7 Comparison Between Traditional View of Intelligences and Multiple Intelligence Theory

The view of intelligences in traditional eye and in MI theory seems contrasting (as cited in Smith, 2001) which are presented below:

Table No.5

Comparison Between Traditional View of Intelligences and MI Theory

Traditional View of "Intelligence"	"Multiple Intelligences" Theory
Intelligence can be measured by short-answer tests: Stanford-Binet Intelligence Quotient Wechsler Intelligence	Assessment of an individual's multiple intelligences can foster learning and problem-solving styles. Short answer tests are not used because they do not measure disciplinary mastery or deep understanding. They only measure rote memorization skills and one's ability to do well on short answer tests. Some

Scale for Children (WISCIV) Woodcock Johnson test of Cognitive Ability Scholastic Aptitude Test	states have developed tests that value process over the final answer, such as PAM (Performance Assessment in Math) and PAL (Performance Assessment in Language)
People are born with a fixed amount of intelligence.	Human beings have all of the intelligences, but each person has a unique combination, or profile.
Intelligence level does not change over a lifetime.	We can all improve each of the intelligences, though some people will improve more readily in one intelligence area than in others.
Intelligence consists of ability in logic and language.	There are many more types of intelligence which reflect different ways of interacting with the world
In traditional practice, teachers teach the same material to everyone.	M.I. pedagogy implies that teachers teach and assess differently based on individual intellectual strengths and weaknesses.
Teachers teach a topic or "subject."	Teachers structure learning activities around an issue or question and connect subjects. Teachers develop strategies that allow for students to demonstrate multiple ways of understanding and value their uniqueness.

1.1.8 Multiple Intelligence Learning Profile With Best Learning Style

The learning style suited best with the MI learning profile is Presented below
(as cited in www.today'steacher.com):

Table No. 6

Multiple Intelligence Learning Profile With Best Learning Style

	MULTIPLE INTELLIGENCE PROFILES	
Intelligence	Strength	Best Learning Style
Verbal – Linguistic	reading, writing, telling stories, memorizing dates, thinking in words,	reading, hearing and seeing words speaking, writing, discussing, and debating
Logical – Mathematical	math, reasoning, logic, problem solving, patterns	working with patterns and relationships, classifying, categorizing, working with the abstract
Visual – Spatial	reading, maps, charts, drawing, mazes, puzzles, imaging things, visualization	working with pictures and colors, visualizing, using the "mind's eye", drawing
Bodily – Kinesthetic	athletics, dancing, acting, crafts, using tools	touching, moving, processing knowledge through body sensations
Musical	singing, picking up sounds, remembering melodies, rhythms	rhythm, melody, singing, listening to music and melodies
Interpersonal	understanding people, leading, organizing, communicating, resolving conflicts, selling	sharing, comparing, relating, interviewing, cooperating
Interpersonal	understanding self, recognizing strengths and weaknesses, setting goals	working alone, doing self-paced projects, having space, reflecting

1.1.9 Important Aspects of Multiple Intelligences Theory

Gardner (1993, p.28) expresses all people from all cultures possess “core abilities in each of the intelligences” (as cited in Smith, 2001). How the intelligences function in individuals will vary, from the extreme of high-level functioning of most intelligences in exceptionally talented individuals, to people with extreme disabilities, whose whole range of intellectual capacities is severely damaged. Gardner believes that most people function somewhere in the middle, with one or two highly developed intelligences, moderate development of another couple of intelligences, and the rest relatively undeveloped. Gardner (1983) proposes that each intelligence has a developmental trajectory, that is, a natural process of development. Intelligences move through stages beginning with a raw patterning ability, which appears universally, to experience of a symbol system, and then to a notational system, such as mathematical numerals and symbols or musical notation (ibid.). During adolescence and adulthood the intelligences are expressed through vocational and avocation pursuits such as accountancy or economics for logical-mathematical intelligence. Gardner believes that there is different time of commencement and a different developmental trajectory for each intelligence, and developmental peaks occur at varying times during a person’s lifetime. Prodigies give a clear indication of the developmental profiles of each intelligence. Linguistic intelligence develops early and with great rapidity in very young children, while mathematical ability emerges later but generally peaks relatively early.

Gardner (1993) also considers that most people develop each intelligence to an adequate level of competency. However, given the right set of circumstances, such as exposure to the raw materials of intelligence, and appropriate training, such as the Suzuki method of music training, everyone has the potential to develop the intelligence to a higher level of functioning (as cited in Smith, 2001).

During early childhood, in particular, but at any time during a person's life, experiences occur through which particular interests and abilities can be discovered. Gardner (1993) refers to these as crystallizing experiences (ibid.). They are turning points in the development of talents and abilities, and mark a special affinity to a domain within an intelligence. Although Gardner identifies and examines the seven intelligences separately he does this only in order to point out the important features of each intelligence. Gardner maintains that it is only in very rare instances that one intelligence exists by itself, such as in the case of savants. Intelligences interact in complex ways, and nearly every cultural role requires several intelligences. Gardner (1993) believes that it is important to perceive individuals as "a collection of aptitudes" (p. 27), rather than being identified by the conventional single IQ measure because he believes that intelligences operate within cultural contexts (Smith, 2001). He maintains that there are many skills and abilities that are indication of particular intelligences. No one set of attributes, activities or products indicate intelligence in a specific area. Linguistic may be expressed through the writing of a best selling novel or, in a society with no written tradition, through the passing on of oral history. Intelligence seen in terms of an IQ factor, or (g) factor, tends to assume that this measurement remains constant throughout a person's life. According to Gardner's theory, intelligence is not fixed. Individuals will differ in the intelligence profiles with which they are born, and in the profiles they develop as adults, due to a combination of opportunities to explore materials that elicit particular intelligences, encouragement and appropriate training.

Gardner (1993) believes, the surrounding culture has an important role in determining which aspects of a particular intelligence will develop, and the extent of that development (as cited in Smith, 2001). Gardner concedes that through further investigation the list may expand to include other intelligences, or an intelligence may be rejected because it no longer meets the criteria.

One of the most important aspects of the theory of Multiple Intelligences is the emphasis it places on the cultural context within which the intelligences operate. Another important fact is Gardner's (1983) belief that most activities and pursuits require the interaction of a number of intelligences (ibid.). This has important implications for education because it challenges the logical-mathematical/linguistic emphasis of current Western\Eastern educational practice.

1.1.10 Multiple Intelligences Theory and Adult Second Language Learning

Smith (2001) explains language learning would seem to be essentially a linguistic process, but someone with a highly developed linguistic intelligence, as measured by conventional IQ tests, is not necessarily a successful second language learner. Gardner's (1983) theory of Multiple Intelligences, with its broad, culturally based view of what constitutes intelligence, indicates that, as with all human activities, language learning is a complex interaction of a number of intelligences (ibid.). This model offers a cognitive explanation for the differences in adult second language communicative competence, which the traditional views of intelligence do not. Language is a social interchange, and interpersonal and intrapersonal intelligences interact in complex and subtle ways during the communication process. Interpersonal intelligence can be seen to play a key role in second language learning. Empathy is an aspect of interpersonal intelligence involving the ability to understand people and respond to them appropriately, and those with a high degree of empathy seem likely to more successful second language learners.

Language is one of the ways in which people respond to each other. Effective communication calls for empathy, which allows an ongoing assessment and modification of what is being said, how it is being said and the body language that accompanies it. Equally fundamental, but more difficult to quantify because of the difficulties in measuring and expressing aspects of self-

knowledge, is the role of intrapersonal intelligence in second language learning. Intrapersonal intelligence is highly involved in adult second language learning. Many of the affective variables that are important factors in second language mastery, such as self-esteem, inhibition and anxiety are aspects of intrapersonal intelligence. Hurwitz (1995,p.576)considers that “successful second language learning depends on the emotional responses of the learner” (as cited in Smith, 2001). A well-developed intrapersonal intelligence enables one to understand both personal strengths and weaknesses, and recognizes the way in which these are challenged by second language learning. Gardner considers that competencies in all intelligences may be improved at anytime during a person’s life. Language learning programs, which take into account the emotional needs of the students, may offer a means by which interpersonal intelligence may be enhanced and result in more successful second language competencies.

Learning a language is learning about a culture. The cross-cultural aspects of language learning are closely linked to interpersonal intelligence through the expression of the positive or negative attitude of the learner towards the culture of the language to be learned. Hurwitz (1995) notes that of the learner’s desire to assimilate into the new culture is an important motivational factor that enables them to move beyond rudimentary communication skills. According to Diaz and Henning-Boynton (1995) authentic cultural understanding can be acquired through the interactions of a variety of intelligences, but particularly by the engagement of the intrapersonal and interpersonal intelligences (as cited in Smith, 2001).

Non-verbal communication plays an important part in the communication process. Brown (1994) also suggests that spatial intelligence may effect the degree to which learners are able to become comfortable in new surroundings (ibid.).

There are some important features of language that may have strong links to musical intelligence, and are even described using the same terms. The most important of these are pitch or tone, intonation and stress. Speakers of all language modify the pitch of their voices when they talk. The majority of languages are tonal languages, languages which vary pitch on individual syllables to change the meaning of the word. In some languages, such as English, the pitch contour or intonation of a phrase changes the meaning of the whole sentence, or indicates the attitude of the speaker. In many languages one or more of the syllables in words are stressed, or receive more emphasis. When words are combined in sentences, she further notices one of the syllables receives greater stress than the others Kin et al. (1990 as cited in Smith ,2001) .It is difficult for someone whose native language is tonal to become familiar with, and competent in using pitch changes to give meaning to a whole phrase rather than individual syllables. Alternatively, for those whose first language is based on the use of intonation, distinguishing between tonal variations can be difficult. Musical intelligence might explain the difficulties some learners have in perceiving changes in pitch, differences in intonation, and stress patterns, and the apparent ease which others seem to manage this aspect of language learning. Brown (1994) suggests that bodily-kinesthetic intelligence may also be important for learning the phonology, or the sounds, of a second language (as cited in Smith, 2001). Speech involves the use of several hundred muscles that control the tongue, mouth, larynx and throat. During childhood children develop the control necessary to make the complex sound combinations used in speech. Brown (1994) points out that it is often difficult for adults to acquire authentic pronunciation of a second language (ibid). It takes much practice and repetition to learn how to make unfamiliar sounds, and to use them fluently. However, some individuals are able to learn to speak a second language with little or no accent, and it may be that having a highly developed bodily-kinesthetic intelligence assists in the control of speech muscles to reduce first language accent interference. Many adult learners of second languages find that is not enough to hear the words and sentences, but seeing the written aspects of

the language is beneficial in remembering vocabulary. Because spatial intelligence involves sensitivity to shape and forms in space, the visual reinforcement of language is important to people who use spatial intelligence to solve problems.

Smith (2001) further expresses that Linguistic intelligence plays a part in the complex process of communication, but interpersonal, intrapersonal, musical, bodily-kinesthetic and spatial intelligence are also highly involved in the process of learning a second language. There may be aspects of logical-mathematical intelligence involved in second language learning, but these are less apparent than the other intelligences. The single construct view of intelligence has not provided an explanation for the differing levels of mastery that adults achieve when learning a second language. Gardner's multi-faceted theory of Multiple Intelligences, with its underlying recognition of diversity in human skills and abilities, which combine to produce a unique intellectual profile, provides a more satisfying explanation for these variations in communicative competence.

1.1.11 Assessment and Evaluation of Multiple Intelligences

Assessment and evaluation of the instruments designed specifically for intelligence types have also drawn attention. With such an aim, McMahon and Rose (2004) evaluated the reliability of the Teele's (2000) Inventory of Multiple Intelligences (TIMI) and investigated the relationship between intellectual preferences and reading achievement (as cited in Saricaoglu and Arican,2009). Their results revealed that the instrument does not provide consistent measurement and needs further development and refinement (p. 48) although relationship was found between reading comprehension and logical-mathematical intelligence. Research has also shed light on the effect of MI activities on a diverse group of students' learning of another language. Noble (2004, p. 205)claimed that one of the greatest challenges for teachers today is to provide curriculum which effectively caters to the needs of diverse groups

students and “The MI framework was providing more options for children who were no academically or linguistically strong in English to demonstrate their knowledge”(ibid.). Shearer (2004) investigated three interrelated propositions about a reliable and valid assessment for multiple intelligences, MI-inspired instruction and curriculum and the use of strength-based learning activities and concluded that MI profiles of students may be used by students and teachers alike to further students’ educational agendas because they serve as the basis for personalized educational planning (ibid.).

1.1.12 Other Theories of Intelligences

Numerous theories have emerged to define, explain and predict human intelligence. Freeman (2009) mentions the following major theories of intelligence that have emerged during the last 100 years:

A. Charles Spearman - General Intelligence

British psychologist Charles Spearman (1863-1945) described a concept he referred to as general intelligence, or the *g* factor. After using a technique known as factor analysis to examine a number of mental aptitude tests, Spearman concluded that scores on these tests were remarkably similar. People who performed well on one cognitive test tended to perform well on other tests, while those who scored badly on one test tended to score badly on other. He concluded that intelligence is general cognitive ability that could be measured and numerically expressed (Spearman, 1904).

B. Louis L. Thurstone - Primary Mental Abilities

Psychologist Louis L. Thurstone (1887-1955) offered a differing theory of intelligence. Instead of viewing intelligence as a single, general ability, Thurstone's theory focused on seven different "primary mental abilities" (Thurstone, 1938). The abilities that he described were:

) Verbal comprehension

-) Reasoning
-) Perceptual speed
-) Numerical ability
-) Word fluency
-) Associative memory
-) Spatial visualization

C. Howard Gardner - Multiple Intelligences

One of the more recent ideas to emerge is Howard Gardner's theory of multiple intelligences. Instead of focusing on the analysis of test scores, Gardner proposed that numerical expressions of human intelligence are not a full and accurate depiction of people's abilities. His theory describes eight distinct intelligences that are based on skills and abilities that are valued within different cultures.

D. Robert Sternberg - Triarchic Theory of Intelligence

Psychologist Robert Sternberg (1985, p.45) defined intelligence as "mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to one's life" (ibid.). While he agreed with Gardner that intelligence is much broader than a single, general ability, he instead suggested that some of Gardner's intelligences are better viewed as individual talents. Sternberg (1985) proposes a Triarchic view of intelligence which takes into account the cultural aspects of intelligence and its underlying mechanisms (as cited in Smith, 2001). He proposes three sub theories which, viewed together, constitute intelligence. The contextual sub theory suggests that intelligence is a reflection of people's ability to adapt and shape their environment to make it fit their skills, interests and values. Different adaptive behaviors will be valued in different cultures. The experiential sub theory suggests that the ability to deal with novelty is an important part of intelligence. The componential sub theory deals with the mechanisms by which intelligent

behaviorism accomplished. Sternberg (1985) identifies three components, or cognitive structures and processes, which underlie intelligent behavior (as cited in Smith, 2001). They are meta components, performance components and knowledge acquisition components.

Sternberg proposed what he refers to as 'successful intelligence,' which is comprised of three different factors (Freeman 2000):

-) Analytical intelligence: This component refers to problem-solving abilities.
-) Creative intelligence: This aspect of intelligence involves the ability to deal with new situations using past experiences and current skills.
-) Practical intelligence: This element refers to the ability to adapt to a changing environment.

While there has been considerable debate over the exact nature of intelligence, no definitive conceptualization has emerged. Today, psychologists often account for the many different theoretical viewpoints when discussing intelligence and acknowledge that this debate is ongoing.

Smith (2001) writes how intelligence is established, and what constitutes being “intelligent” has implications for second language learning. Why are not “intelligent” people necessarily better at learning a second language? There are many affective and cultural variables that have an important impact on second language learning success, but how are they related to cognitive ability? The traditional IQ-based view of what constitutes intelligence does not offer sufficient explanation for why some people, who may be considered to be highly intelligent according to test scores, are not successful second language learners. Attempts to establish a scientific measure of intelligence began early this century.

The Binet-Simon Scale was developed in 1905 (Coleman, 1977) and became the first intelligence testing apparatus. In 1916 it was adapted at Stanford

University and the Stanford-Binet Scale introduced the concept of an intelligence quotient (IQ) (as cited in Smith, 2001).

Likewise, Smith (2001) also mentions the Wechsler Intelligence Scale for Children Revised (WISC-R) test, devised by Wechsler in 1974 (as cited in Smith, 2001) is based largely on the Binet scale. It is commonly used for screening children aged between six and sixteen to decide on placements in giftedness and special needs programs .Although this type of testing is useful, recently there has been dissatisfaction with the test results and the ways in which they are used. IQ tests can predict school performance with some accuracy, but do not reflect post-school professional and personal performance as effectively. They mostly assess logical-mathematical and linguistic skills, which are only part of the range of skills and abilities that any person has. Their design favors people who have had a Western-type schooling which language and mathematics are the main focus. Using such tests to place students in schools according to test outcomes disadvantages students whose language and socio-economic backgrounds are different to those for whom the test was designed.

In the 1960s Guildford (Coleman, 1977) developed an elaborate model by which intelligence was separated into one hundred and twenty independent components, and tests were designed to assess each of them. The results of these tests can be combined to form single estimate of general intelligence; however, this model is unwieldy and difficult to use as a measurement tool (as cited in Smith, 2001) .Recently two more manageable descriptions of what constitutes intelligence have been put forward by Gardner (1983) and Sternberg (1985) in an attempt to overcome the shortcomings of previous models.

Gardner believes that these discrete abilities operate together in complex ways, and provide a much more comprehensive view of what constitutes human intelligence.

1.1.13 Distinction Between Intelligences and Learning Styles

Intelligences and learning styles are two confusing psychological constructs. The term intelligence refers to a capacity specifically relation to content linguistic, logical \ mathematical etc. While according to Gardner (1999) learning style refers to various ways of doing certain tasks which could be transversal with regards to different contents (as cited in Torresan, 2007). For example, mathematical intelligence is a capacity applied to logical mathematic concepts and operations (obviously in different sectors : from pure mathematics to linguistics, from physics to economics) whereas the reflective style is a way of approaching tasks that could be utilized in artistic, musical or individual performances although such operations do not entail any calculation.

Torresan, (2007) further explains, the reflective style emphasize planning, defining objects and ordered presentations of information that at times can be confused with the mathematical intelligence.

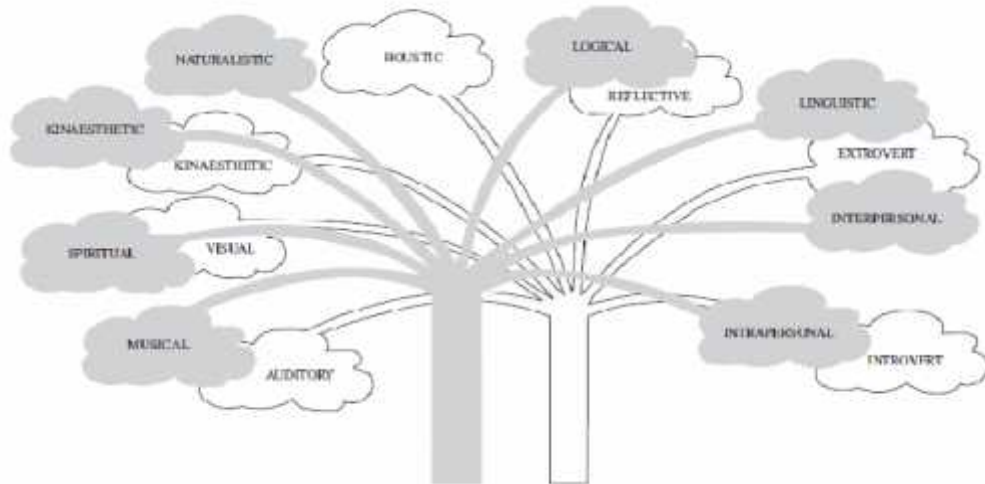
The distinction between intelligences and learning styles forces us to reconsider the outline with which language teaching strategies that give shape to various intelligences is usually presented. Therefore, it is necessary to clarify whether a technique has anything to do with activating certain intelligences or whether it, in fact, acts at the superficial level of styles.

Individual work does not necessarily result in the development of intrapersonal intelligence as proposed by Kagan (1998) and Haley (2004); it is simply an environment preferred by introvert students. On the other hand, it is insufficient to claim simply that such intelligence can be enhanced through self esteem programmers (Christison, 1998; Campbell, Dickison 2004, Hoffmann, Norman 2004, Rinvolucri, 2005 as cited in Torresan, 2007).

Torresan (2007) distinguishes intelligence from learning style. He presents the distinction between them in a diagram which is given below:

Diagramme No.2

Distinction Between Intelligences and Learning Styles



1.1.14 Application of MI in the Classroom

MIT is proposed and put into practice for an alternative classroom design to traditional classroom setting. Shore (2004) mentions it has been embraced by the teachers in need of an educational programme which addresses a variety of ways people learn (as cited in Saricaoglu and Arikan, 2009). MI gives the picture of broad human intelligences which gives teachers a complex model to construct curriculum and also offers teachers ways to examine their best teaching techniques and strategies in light of human difference. The teachers have interrelated the theory in different ways and applied it to their lesson planning and curriculum development to maximize learners' potential.

An awareness of multiple-intelligence theory has stimulated teachers to find more ways of helping all students in their classes. Some schools do this by adapting curriculum. Campbell (1997) describes five approaches to curriculum change (as cited in Guignon, 1998):

- J involve team teaching: ("teachers focusing on their own intelligence strengths") using all or several of the intelligences in their lessons or asking student opinions about the best way to teach and learn certain topics.
- J Interdisciplinary units: Secondary schools often include interdisciplinary units.
- J Student project Lesson design: Some schools focus on lesson design. Students can learn to "initiate and manage complex projects" when they are creating student projects.
- J Assessments: Assessments are devised which allow students to show what they have learned. Sometimes this takes the form of allowing each student to devise the way he or she will be assessed, while meeting the teacher's criteria for quality.
- J Apprenticeships: Apprenticeships can allow students to "gain mastery of a valued skill gradually, with effort and discipline over time."

With an understanding of Gardner's theory of multiple intelligences, teachers, school administrators, and parents can better understand the learners in their midst. They can allow students to safely explore and learn in many ways, and they can help students direct their own learning. Adults can help students understand and appreciate their strengths and identify real-world activities that will stimulate more learning.

1.1.15 Application of Multiple Intelligence Theory to English Language Teaching (ELT)

Kong (2009) mentions about the English language teachers today are better aware of the fact that students bring with them specific strengths, unique learning styles, and different learning potentials. The theory of multiple intelligence offers us a way to examine and form our best teaching techniques and strategies in light of human differences. We can teach our students to be more intelligent in more ways, and on more levels than we ever dreamed. With reference to Armstrong (1994) and Campbell's and Dickinson (1993) and

teaching and observation of his own, (Kong,2009) came up with the list below:

1. Verbal/Linguistic Intelligence

This type of intelligence involves Vocabulary and Grammar Learning-learning new words and grammatical points and practicing using them accurately in regular communication.

-) Listening - listening to tapes of stories, dialogues, and lectures, etc.
-) Formal and Informal Speaking - making verbal presentation to others, making conversations, having discussions and debates, etc.
-) Humor or Jokes - creating puns, limericks, and telling jokes on topics of study
-) Impromptu Speaking - instantly speaking on a randomly drawn topic
-) Storytelling -telling stories about any topic one is studying
-) Reading-silent reading, oral reading, and group/choral/chain reading for comprehension
-) Writing -doing written exercises, note-taking, summary/report writing, and journal/log/ diary keeping to keep track of one's own thoughts and ideas
-) Creative Writing -writing original pieces (e.g., stories, essays, poems, novels, etc.)

2. Logical/Mathematical Intelligence

-) Logic Pattern Games -creating riddles or puzzles that challenge students to find a hidden rationale or pattern
-) Logical/Sequential Presentation -inventing point-by-point logical explanations for items or making systematic presentation of subject matter

-) Number Sequences/Patterns -investigating numerical facts or gathering and analyzing statistics on a topic
-) Problem Solving -listing appropriate procedures for problem solving situations
-) Forming Relationships -creating meaningful connections between different ideas
-) Syllogisms -making "if..., then..." logical deductions about a topic

3. Visual/Spatial Intelligence

-) Visual Aids Using/Making -using flash cards, pictures, paintings, charts, collages, graphs, grids, diagrams, flowcharts, slides, sculptures and video/film-viewing, etc. to facilitate learning and encouraging students to make the visual aids by themselves
-) Active Imagination -finding connection between visual designs (or pattern) and prior experiences (or knowledge)
-) Mind Mapping -creating or arranging visual mapping activities (e.g. word maze, visual webs of written information)
-) Environment Arranging/Decorating -encouraging students to decorate bulletin boards, and arranging learning corner (e.g. English reading corner) to achieve the effect of peripheral learning.

4. Bodily/Kinesthetic Intelligence

-) Physical Actions -arranging and doing TPR and hands-on activities
-) Body Language -"embodying" meaning, interpretation, or understanding of an idea in physical movement
-) Role Playing/Mime - performing skits or characters to show understanding of topics of study
-) Dramatic Enactment - creating a mini-drama that shows the dynamic interplay of various topics of study

-) Sports Games - creating a contest or game based on specific knowledge about a topic of study
-) Field Trips -arranging trips to gain firsthand knowledge away from the classroom

5. Musical/Rhythmic Intelligence

-) Music/Song Listening -listening to rhythmic patterns, recorded music, or songs
-) A Singing/Humming -creating songs for a class, a team, a topic of study or finding existing songs that complement a topic
-) Musical Instruments Playing -employing musical instruments to produce sounds for a lesson (e.g., background accompaniment, enhancement for the teaching)
-) Music Composition/Creation-composing and creating music for the sound effect of a play performance or for the enhancement of teaching
-) Jazz Chants/Rapping - producing or using rhythmic patterns, such as jazz chants, or raps to help communicate, or to remember certain words, sentence structures, concepts, ideas, or processes
-) Vocal Sounds/Tones -producing sounds with one's vocal cords to illustrate the meaning of a word, or a concept (e.g., hiccup, gasp, etc.).

6. Interpersonal Intelligence

-) Person to Person Communication -focusing on how teachers and students relate to each other and how to improve their relating
-) Giving and Receiving Feedback -offering input on one's performance or about one's opinions; and accepting another's input or reaction to one's performance/ opinions
-) Cooperative Learning Strategies -using structured team works for topic learning and/or practicing peer learning
-) Pair Works and Group Projects -investigating and discussing a topic problem with a partner or with others in teams

-) Jigsaw Puzzle/Strip Story - dividing a picture or a story into distinct segments so that students can learn from each other on the process of putting it back to its original form

7. Intrapersonal Intelligence

-) Independent Studies/Projects - encouraging students to work independently for goal-setting, process-planning, self-assessing, and homework choosing
-) Journals/Logs/Diaries keeping -working with reflection tools, such as reflective journals, thinking logs, learning diaries, etc.
-) Focusing/Concentration Skills - learning the ability to focus one's mind on a single idea or task
-) Thinking Strategies -learning what thinking patterns to use for what task

8. Naturalist Intelligence

-) Nature Encounters/Field Trips - going outside for firsthand experiences in nature and/or bringing nature in the classroom via videos, objects, animals, plants, etc.
-) Species Classification - working with classification matrices to understand characteristics of natural objects
-) Sensory Stimulation Exercises - exposing the senses to nature's sounds, smells, tastes, touches, and sights
-) Hands-On Labs - performing experiments or activities that use objects from the natural world.
-) Nature World Simulations - re-creating or representing nature in some form (e.g. photographs, drawings, etc.)

1.1.16 Multiple Intelligences: Strategies In the Classroom

The following list (Armstrong, 1994) provides a survey of the techniques and materials that can be employed in teaching through the multiple intelligences.

a. Linguistic Intelligence

-) lectures, debates
-) large- and small-group discussions
-) books, worksheets, manuals
-) brainstorming
-) writing activities
-) word games
-) sharing time
-) storytelling, speeches, reading to class
-) talking books and cassettes
-) extemporaneous speaking
-) journal keeping
-) choral reading
-) individualized reading
-) memorizing linguistic facts
-) tape recording one's words
-) using word processors
-) publishing (e.g., creating class newspapers)

b. Logical-Mathematical Intelligence

-) mathematical problems on the board
-) Socratic questioning
-) scientific demonstrations
-) logical problem-solving exercises
-) creating codes
-) logic puzzles and games
-) classifications and categorizations
-) quantifications and calculations
-) computer programming languages
-) science thinking
-) logical-sequential presentation of subject matter

-) Piagetian cognitive stretching exercises
-) Heuristic

c. Spatial Intelligence

-) charts, graphs, diagrams, and maps
-) visualization
-) photography
-) videos, slides, and movies
-) visual puzzles and mazes
-) 3-D construction kits
-) art appreciation
-) imaginative storytelling
-) picture metaphors
-) creative daydreaming
-) painting, collage, visual arts
-) idea sketching
-) visual thinking exercises
-) graphic symbols
-) using mind-maps and other visual organizers
-) computer graphics software
-) visual awareness activities
-) optical illusions
-) telescopes, microscopes, and binoculars
-) visual awareness activities
-) draw-and-paint/computer- assisted-design software
-) picture literacy experiences

d. Bodily Kinesthetic Intelligence

-) creative movement, mime
-) hands-on thinking
-) field trips
-) the classroom teacher
-) competitive and cooperative games
-) physical awareness and relaxation exercises
-) all hands-on activities
-) crafts
-) body maps
-) use of kinesthetic imagery
-) cooking, gardening, and other "messy" activities
-) manipulatives
-) virtual reality software
-) kinesthetic concepts
-) physical education activities
-) communicating with body language/ hand signals
-) tactile materials and experiences
-) body answers

e. Musical Intelligence

-) musical concepts
-) singing, humming, whistling
-) playing recorded music
-) playing live music on piano, guitar, or other instruments
-) mood music
-) music appreciation
-) playing percussion instruments
-) rhythms, songs, raps, chants
-) using background music

-) linking old tunes with concepts
-) discographies
-) creating new melodies for concepts
-) listening to inner musical imagery
-) music software
-) super memory music

f. Interpersonal Intelligence

-) cooperative groups
-) interpersonal interaction
-) conflict mediation
-) peer teaching
-) board games
-) cross-age tutoring
-) group brainstorming sessions
-) peer sharing
-) community involvement
-) apprenticeships
-) simulations
-) academic clubs
-) interactive software
-) parties / social gatherings as context for learning
-) people sculpting

g. Intrapersonal Intelligence

-) feeling-toned moments
-) feeling-toned moments
-) self-paced instruction
-) individualized projects and games
-) private spaces for study

-) goal setting sessions
-) one-minute reflection periods
-) interest centers
-) personal connections
-) options for homework
-) choice time
-) self-teaching programmed instruction
-) exposure to inspirational/ motivational curricula
-) self-esteem activities
-) journal keeping
-) goal setting sessions

Arnold and Fonseca (2004) mention that the researches done in the area of learning styles or learner diversity which recognizes that students in our classroom have greatly different learning profiles. He further adds both humanistic psychology and MIT recognize that learning involves the physical and affective sides of the individual as well as the cognitive. So, the incorporation of MIT is an effective way to broaden both the goals and the range of tools at our disposal for teaching a foreign language. Similarly, Kong (2009) views MI theory offers English language teachers, a richly diversified way of understanding and categorizing human cognitive abilities and combinations of abilities, heightening our awareness of what makes learning possible and effective for individual students. There are several ways which may facilitate the implementation of MI inspired teaching in the classroom. Lazear (1991) also states the teacher can show students how to use their more developed intelligences to assist in the understanding of a subject which normally employs their weaker intelligences (as cited in Brualdi, 1969).

Explaining why MI is an effective ways of teaching and why it can overcome problems in education Moran et al. (2006, p. 23) give following example: Think of LEGO building blocks. If we have only

one kind of block, to play with we can build only a limited range of structures. If we have a number of different block shapes that can interconnect to create a variety of patterns and structures, we can accomplish more nuanced and complex designs. The eight or nine intelligences work the same way (as cited in Saricaoglu and Arikan, 2009). Gardner has stated that people have all these intelligences in various strengths and weaknesses. Real world situations such as walking, driving, thinking, planning, doing taxes, listening to a friend arranging furniture etc. use these various intelligences.

It is a framework by which teachers engage in creative, imaginative, thoughtful, exploratory, trial and error from. But it is impossible to include all the intelligence types in each of the lesson. It takes time, patience, imagination and creativity to be successful. Nolen (2003, p. 119) suggests that the presentations of foreign language teaching material should engage all or most of the intelligences because each of the intelligences is potentially available in every learner.

Nolen (2003, p. 119) Suggests that the presentation of foreign language teaching material should engage all or most of the intelligences due to the fact that each of the intelligences is potentially available in every learner. So, employing MI does not necessarily mean designing a lesson in nine different ways so that all students can access classroom material prepared separately for each and all of the intelligence types. Instead Moran, Kornhaber and Gardner (2006), Heacox (2002) view materials should allow students with different intelligence types to interact with each other and to develop intelligences in which they are less strong (as cited in Saricaoglu and Arikan, 2009).

1.1.17 Intelligences and Subintelligences

The concept of Intelligences and subintelligences has also emerged. Paolo Torresan (2007) says that one intelligence does not act independently in daily activities but in concert with others. Each intelligence is comprised of many elements or sub intelligences which are not easily identified. He presents example of being immersed in a conversation with somebody. Because it is not easy to set limits between prosody, Morphology and praxis, it becomes necessary in order to understand the communicative event that one realizes that each of these components represent a different aspect of communications. There exists a sort of compensations not only between the various intelligences, but also between the elements that comprise any particular intelligence. Gardner (1999b, p. 40), state that sub-intelligences that make up any one intelligence are not necessarily themselves compatible. We have no trouble walking or finding our way around while we are conversing; the intelligences involved are separate. On the other hand, we often find it very difficult to converse while we are working on a cross word puzzles or listening to a song with words. In these cases, two manifestations of linguistic intelligence are competing (as cited in Torresan, p. 2007). Further evidence of the existence of sub intelligences, some specific disabilities that company a trauma (as in many case of aphasia, each one being characterized by a loss of a specific language function), besides the idiot Savant cases in which very high levels of performance with regard to one intelligence are accompanied by equally poor performance in other tasks related to that same intelligence. How many and which sub intelligences are related to each intelligence seem to be issues destined to long scientific debate. Armstrong (2004), notes the observations of linguists and neuroscientists, we believe that the various sub-intelligences that form any individual intelligence exhibit traits related to all intelligences. The observations of linguists and neuroscientists lead us to believe that there are at least eight sub-intelligences of linguistic intelligence and in each of these is reflected one of the primary intelligences.

To understand a multiple intelligence approach, we must conceive linguistic intelligence as constituted by relatively autonomous components and linguistic sub-intelligences which like flowers are composed of many petals. Each sub-intelligence can be activated by different stimuli as spores that spread from the petals of a flower. The more stimuli we use when exposing students of different aspects of language, the more individualized, student centered and complete our language instruction will be (Torresan, 2007).

1.1.18 Assessment of MI-Inspired Teaching

After the implementation of MI theory inside classroom, the effectiveness of MI-inspired teaching is needed to be assessed. Smith (2001) views testing represent a singular act that is characteristic of teacher-centered classrooms. Assessment, on the other hand, is a complex process distinctive of student-centered classrooms. Testing is intended to determine what students have learned though it generally fails the job. Assessment is integrated with learning and instruction and is intended to stimulate further learning.

The core spirit of MI theory is opposed to the uniform view of schooling and the formal testing (standardized tests). Gardner (1993) holds the view that assessment is an essential component of an MI education (as cited in Smith, 2001). It is particularly important to use multiple modes of assessment that will allow students to show their strengths and perform optimally. Many testing professionals nowadays share the belief that authentic assessment, which emphasizes assessing what students know (knowledge) and what students do (Performance) from different perspectives so as to provide a complete picture of students' abilities, efforts and progress during the learning process.

In short, we need diverse forms of product and/or process-based, individualized-based, contextualized-based, performance-based and ongoing-based assessment which include paper-and-pencil tests, portfolios, journals/logs, projects, exhibits, performances, and displays, etc. (Lazear,

1999) with feedback gained not only from teachers and parents but also from students themselves and their peers, to reflect and reinforce MI-inspired instruction(ibid.). A copy of MI theory offers us, English language teachers, a richly diversified way of understanding and categorizing human cognitive abilities, and combinations of abilities, heightening our awareness of what makes learning possible and effective for individual students. There are several ways which may facilitate the implementation of MI-inspired teaching in our classroom:

1. Examine our intellectual profiles and find out our own teaching styles through a multiple intelligence inventory.
2. Understand the intellectual profiles of our students through students-generated inventory.
3. Consider specific teaching approaches and methods that appeal to particular intelligences or combinations of intelligences.
4. Plan a variety of activities from different resources (including the use of internet, too) for specific lessons or classes with multiple intelligence theory in mind (e.g. focus on diversity, learning process, and the transferring of learning to life beyond the classroom, etc.).
5. Provide students with different learning strategies necessary for lifelong learners.
6. Put emphasis on multiple forms of assessment rather than traditional standardized testing only.

Following the above-mentioned ways, we can achieve, for sure, a better effect in our MI-inspired ELT classrooms.

1.2 Review of Related Literature

Multiple Intelligence approach is becoming a promising and increasing popular approach to characterize the uniqueness of learners and to develop instruction in response to this uniqueness. Gardner has brought a revolution in the educational field by trying to discover and promote the vast range of capabilities they have a value in life and organization and then set about valuing people for who they are, what they can be and helping them to grow and fulfill their potential. Though initially started from seven types of intelligences, it is extendable.

The ways of teaching and learning has been influenced by the emergence of this approach to education. There is a basic developmental sequence that has been proposed (Lazear, 1991) as an alternative to what we have elsewhere considered as a type of "syllabus" design. The sequence consists of four stages, (as cited in Richards and Rodgers 2001, p.118):

Stage 1: Awaken the intelligence. Through multi-sensory experiences- touching, tasting, smelling, seeing and so on- learners can be sensitized to the many – faceted properties of objects and events in the world that surrounds them.

Stage 2: Amplify the intelligence. Students strengthen and improve the intelligence by volunteering objects and events of their own choosing and defining with others the properties and contexts of experience of these objects and events.

Stage 3: Teach with/for the intelligence. At this stage the intelligence is linked to the focus of the class, that is, to some aspect of language learning. This is done via worksheets and small – group projects and discussing.

Stage 4: Transfer of the intelligence Students reflect on the learning experiences of the previous three stages relate these to issues and challenges in the out-of – class world.

They summarize several of the alternative views as to how the MI model can be used to serve the needs of language learners within a classroom setting:-

- Play to strength. If you want an athlete or a musician (or a students having some of these talents) to be an involved and successful language learner, structure the learning material for each individual (or similar group of individuals) around these strengths.
- Variety is the spice. Providing a teacher –directed rich mix of learning activities variously calling upon the eight different intelligences makes for an interesting, lively and effective classroom for all students.
- Pick a tool to suit the job. Language has a variety of dimensions, levels and functions. There different facts of language are best served instruction ally by linking their learning to the must appropriate kind of MI activity.
- All sizes fit one. An MI approach helps to development the whole person with in person with in each learner, which best serves the person's language learning requirements as well.
- Me and my People. IQ testing is held to be badly biased in favor of western views of intelligence. Other cultures may value other intelligences more than the one measured in IQ testing. Science of language learning involves cultural learning as well, it is useful for the language learning to study language in a context that recognizes and honors a range of diversely valued intelligence.

Freeman (2000, p.169)also has presented one lesson plan adapted from Agostini (1997) from a multiple intelligence perspective so that the different intelligences are represented.

It is not a question of addressing all the individual MI profiles of each learner in every language class but offering a balanced approach where different

"windows on the same concept" Gardner (1993, p.204) are incorporated (as cited in Arnold and Carmen 2004).

Connors and Seymour (1994) note while we are all natural learners, we also have our particular strengths and weakness in how we think and how we put over material. Being aware of your own learning style and the different styles within a group means you can get past your own preferences and put over the material in different ways, making it easy for every one.

Campbell (1997, p. 19) says "MI theory is not prescriptive. Rather, it gives teachers a complex mental model from which to construct curriculum and improve themselves as educators" (as cited in Richards and Rodgers 2001, p.120). Learners are expected to take an MI inventory and to develop their own MI profiles based on the inventory. Christison (1997, p.9) says. "The more awareness students have of their own intelligences and how they work, the more they will know how to use that intelligences to access the necessary information and knowledge from a lesson"(ibid.).

Similarly, Emig (1997, p.50) associates MIT with "magic" since it is highly advantageous for both students and teachers because students feel more competent and confident in an MI-based classroom.

Gardner (1997), being against the background of normal development that characterizes most individuals, focused on those factors that make for an extraordinary childhood. He conducted some case studies of extraordinariness: Mozart, Freud, woolf and Gandhi, he notes some individuals are late bloomers; skill in some domains may not emerge until adolescence or even later. Having a blissfully happy childhood may be under stimulating, even as a series of tragedies can cripple even the most promising youth. He also notes that individuals who present unequal profiles in school; individuals who have a perfect engineering mind but can not compose a coherent paragraph.

So, we all possess to some degree the full range of intelligences, individuals differ in the particular profiles of strengths and weaknesses that they exhibit. The differences make life more interesting but they also complicate the job of school; each of us should instead pay attention to what is special in our own minds as well as the minds of the children over whom we have responsibility.

He also mentions in past, psychologists used clinical interviews or paper-and-pencil instruments and if you are lucky enough to score well in the intelligence sweepstakes, you are likely to do well in life.

Likewise, Christison (1999) outlines the basic tenets of MI theory and describes how it has been applied in teaching English as a second language to adults, which is relevant to the context of teaching English as foreign language. She mentions four ways of using MI theory in the Classroom which are presented below:-

1. As a tool to help students develop a better understanding and appreciation of their own strengths and learning preferences. She has developed an inventory to identify the preferred intelligences of learners.
2. As a tool to develop a better understanding of learners intelligences. She says an understanding of MI theory broadens teacher's awareness of their students' knowledge and skills and enables them to look at each student from the perspective of strengths and potential.
3. As a guide to provide a greater variety of ways for students to learn and to demonstrate their learning. Identification of personal strengths can give students a successful experience that builds their confidence as learners. When multiple activities are available, more students can find ways to participate and take advantage of language acquisition opportunities.
4. As a guide to develop lesson plans that address the full range of learner needs.

MIT helps teachers to become curriculum developers, lesson designers and analyst, activity finders or inventors within the realistic constraints of time, space and resources of the classroom Christison (1999, p.12) says these teachers become major contributors to the overall development of students' intelligences (as cited in Richards and Rodgers, 2001, p. 120).

As Smith (2001, p.44) explains affective variables such as self-esteem, inhibition and anxiety are important factors in second language mastery and are aspects of intrapersonal intelligence which helps learners examine their strength and weaknesses in language learning processes. Similarly, as Rahimi and Abedini (2009, p. 15) show affect is considered to be "one of the main determining factor of success in learning foreign or second languages" (as cited in Saricaoglu and Arikan, 2009).

Hence teachers should try to develop their student's intrapersonal intelligence so that this particular intelligence type will help improving their overall language learning.

These results yield pedagogical implications for foreign language teacher among which the importance of teachers' knowledge of the relationship between intelligence types and acquiring basic language skills is the leading one. Moreover, the positive relationship between writing in English as a foreign and musical intelligence provides support for the remarks made earlier.

Richards and Rodgers (2001, p.117) who claimed that there are aspects of language such as rhythm, tone, volume and pitch that are more closely linked, say, to a theory of music than to a theory of linguistics." They further say MI pedagogy focuses on the language class as the setting for a series of educational support systems aimed at making the language learner a better designer of his/her own learning experiences. Such a learner is both better empowered and more fulfilled than a learner in traditional classrooms. There is a basic developmental sequence that has been proposed

Currie (2003), investigates the possibilities of multiple Intelligence theory in ESL class. He selected a group of students who had enrolled for a first semester Reading class in English at the Federal University of Esparto Santo in Brazil. He concludes saying if the teacher tries to flexibly her approach to the learning process and uses many different entry points as possible then the students soon begin to appreciate that the best students have weakness and the weak students have strengths.

Christison (2003–2004) argues teachers who use MI theory to inform their curriculum development find that they gain a deep understanding of students learning preferences and a greatest appreciation of their strengths. Besides this student's increased engagement and success in learning stimulates teachers to raise their expectations, imitating a powerful expectation response cycle that can lead to greater achievement levels for all. Bas (2008) explains the ways to integrate MI in EFL/ESL class rooms, like telling jokes in the class, letting the students talking to them and playing with language. Similarly, implementing cooperation ,competition using story books, drawing and coloring use of handicrafts, songs or rhymes Drama and games, etc.

As Abott (2004) noted if there are 30 different language learners in the classroom, there are 30 different places they are at in their language development (as cited in Rifkin, 2008).

Likewise, Barrington (2004) ran there workshops for university level foreign language instructors which allowed them to consider MI in the context of their own teaching. After the workshops, they found the theory relevant to and applicable in their higher education teaching contexts.

Haley's (2004, p. 171) research has also resulted that MIT is a promising theoretical construct which can foster students' learning. His research was on the way teachers apply MIT in foreign and second language classrooms showed that students in experimental groups outperformed than those in control

ground while developing a high degree of satisfaction and positive attitude towards the content. (as cited in Saricaoglu and Arikan, 2009). Likewise, Shearer (2004) investigated three interrelated preposition about a reliable and valid assessment for multiple intelligences MI-inspired instruction and curriculum and the use of strength – based learning (as cited in Saricaoglu and Arikan, 2009). His conclusion was that MI-profiles of students may be used by students and teachers alike to further agendas because they serve as the basis for personalized educational planning.

Researchers have also investigated the relationship between gender and MI of specific learners. With an aim of finding out whether or not there were any gender differences in student's intelligence profiles in relation to their gender. Razmjoo (2008) found that the use of intrapersonal intelligence by females was higher than that of males whereas no significant difference was found between male and female participants regarding language success and types of intelligence (as cited in Saricaoglu and Arikan, 2009).

Rifkin (2005) has studied those students learning Russians are unable to attain higher level of proficiency after even more than 600 hours of classroom instruction in lack of an immersion experience (as cited in Rifkin, 2008). So, the lesson planning to boost the students who are more intensively engaged in foreign language learning may be more likely to such additional learning experiences or may be more likely to attain higher proficiency levels greater cultural competence, greater self confidence and improved study habits and language processing strategies.

Akabari and Hosseini (2007) state teachers can see whether they have given their class a variety of activities to help the various types of learners. Though it is not possible to teach directly to each individual student in our class of all the time, they ensure that we sometimes give opportunities for visualization, to work on their own, for sharing, comparing and for physical movement. By

keeping their eyes on different individuals, the teachers can direct them to learning activities.

Application of MI in every classroom is so vital thing whether it is school-level college level adult education or any other level.

Though it is inevitable, researches on application of MI in EFL programmes at college level are not much. Lei (2007) has presented a paper on application of MI in undergraduate classrooms, in which he intends to explore the feasibility of applying the MI theory to undergraduate EFL classroom with focusing in lesson designing, choosing materials, class activities and assessment aiming at facilitating foreign language acquisition, and whole person development. He says EFL teachers not only need to think themselves merely language teachers but also facilitators, observers, curriculum developers, lesson designers, analyst, inventors and even orchestrates. He also mentions class activities under which he mentions eight activity corners being based on the eight intelligences and student project-work. He suggests teachers to provide all kinds of resources which give student's experimental learning relevant to their intelligences' needs. Similarly, he mentions MI assessment principles are diversity, authenticity and expansibility. The important feature of it is context driven assessment, intelligence-based and intelligence-fair assessment.

He also mentions that in response to the uniqueness of students, integrating MI theory into undergraduate EFL classroom worth experimenting to facilitate English language acquisition and whole personal development. So, he tried to seek way to facilitate foreign language acquisition and to use language to encompass all aspects of communication. Not only that it challenges EFL teachers to engage in imagination, creative and exploratory reform, It also makes the learner be more effective and fully functioning people when their intelligence uniqueness is matched with the language learning.

Bas (2008) writes about the implementation of MI supported project based learning (PBL) in EFL/ESL classrooms. He says, a project is an in-depth investigation of a real-world topic worthy of children's attention and effort. Projects can be undertaken with children of any age and they do not constitute the whole educational program. Younger children will play and explore as well as engage in projects. Older children's project work will complement the systematic instruction in their program. They enrich young children's dramatic play, contraction, painting and drawing by relating these activities to life outside school. The project approach provides a way to introduce such a wide range of learning opportunities into the classroom. He mentions possible MI projects dealing with the target subject.

Akabari and Hosseini (2008, p.154) found in their study of investigating possible relations between multiple intelligences and language learning strategies. They found such a relationship exists and they also found that MI and second language proficiency are related. They have also mentioned the recent publications of Gardner in which he becomes more concerned with the applications of his theory in education and the way an alternative method of assessment based on multiple intelligences can lead to more balanced and democratic educational system. He believes that a sound educational system, one which is based on individual-centered schooling (1993), will result in the development of an individual's potentials even long after formal schooling is finished. They suggest teachers can use MI theory as a guide for developing classroom activities that address multiple ways of learning and knowing. The adult learners who have had little success in traditional classrooms where only linguistic and mathematic skills are valued may experience more success when other intelligences are tapped.

Rifkin (2008) finds the students enrich the classrooms with the diversity of their back ground, experiences, aptitudes and purpose. He notes that the foreign language lesson plans lack attention to what is arguably the most important factor in the language learning the learner him or herself. Each learner comes to

the learning process with a different set of background experiences, aptitudes, intelligences, interests and purposes. The established models for foreign language lesson planning do not accommodate the diversity of learners in our classrooms.

Harmer (2008) mentions teacher can see whether they have their class a variety of activities to help the various types of learners. Although we can not teach directly to each individual student in our class all of the time, we can insure that we sometimes give opportunities for visualization, for students to work on their own, for sharing and comparing and for physical movement. By keeping our eye on different individuals, we can direct them to learning activities which are best suited to their own proclivities.

Though the initiator of this campaign of utilizing individual intelligence to language learning is Gardner, Michael Berman was the first to extensively apply MI theory to foreign language teaching (as cited in Palmberg, 2009).

Campbell (2009) has visited the Tibetan children's village and he realized that even in a homogenous culture each student think and learn in a unique way. By providing multiple entry points into the content area, more students would be successful academically. He found that Gardner's theory of multiple intelligences has universal implication for education. Following him, some of greatest benefits of MI theory when it is applied in the classroom are its ability to enhance academic achievement, transform teacher beliefs and improve student motivation and attitudes about learning whether it is in a Himalayan village or in the cites or suburbs of America.

In Department of English Education Faculty of TU, there are no researches conducted till now on this topic” Linguistic Intelligence”. So, this effort will be a new venture in this direction.

1.3 Hypothesis of the Study

Linguistics Intelligences has a direct and interferential role in linguistics proficiency in the EFL classroom.

1.4 Objectives of the Study

The objectives of the study were as follows:

- i. to find out the linguistics intelligence profile and level of language proficiency of the students,
- ii. to compare the linguistics intelligence profile of the level of students with the language proficiency,
- iii. to list some pedagogical implications .

1.5 Significance of the Study

The present study is about the correlation between linguistic intelligence and proficiency in reading and writing in the EFL classroom. The study attempts to exploit and examine correlation between linguistic intelligence and reading and writing proficiency where the learners have been learning English as a foreign language. The study tries to explore the necessity of implementation of linguistic intelligence for more active, engaged and effective learning being aware of the fact that the concept of MI is still new in the context of Nepal.

It is known fact that many successful people were judged to be failures at schools-brilliant scientists, leaders, writers, entertainers, sports-people, religious and political leaders, according to the narrow definition of what constitutes intelligences. Everybody possesses enormous talent which is often under-valued, unknown and under-developed, (children, young people at the beginning of their career), the vast range of capabilities that have a value in life and organizations ,world rediscovering and promoting for the benefit of the society and person both. To quote Chapman (2003-2009), valuing people for

who they are, what they can be and helping them to grow and fulfill their potential.

The study motivates the teachers to make daily lesson plans, designing learning activities and preparing learning materials and implementing them appropriately addressing all types of minds and develop required intelligence of foreign language learners of Nepal.

Because schools, teachers and entire education system persist either a child is intelligent or not, measuring them using the old-fashioned, narrow criteria. Still, many children are growing up being told that they are not intelligent and therefore not of great worth.

This study is beneficial to all those who are interested in language teaching in general and more particularly to language teaching practitioners, subject experts, curriculum designers, policy makers and text book writers of ELT. To be specific, the study will play a significant role for modifying the existing traditional approach of our EFL classroom in the light of the information that are provided in this study. Hopefully, the suggestions and recommendations appeal our whole educational field to revise the values, beliefs and ideas about ELT in changing perspectives.

CHAPTER-TWO

METHODOLOGY

To fulfill the specific objectives of the study the following methodology has been adopted:

2.1 Sources of Data

Both primary and secondary sources of data were used to meet the objectives of this study.

2.1.1 Primary Sources

This study was mainly based on the primary sources of data. The primary sources of data were the students of grade 11 studying at HSEB affiliated Colleges.

2.1.2 Secondary Sources of Data

I consulted the journals, theses, research reports and articles related to the research. Some of the books, I consulted were Freeman (2000), Richards and Rodgers (2001), articles from online journals like the internet TESEL Journal, Journal of Theory and Practice in Education, International Journal of English studies, websites like <http://iteslj.org/www.um.es./engphil/ijes>, etc. and dissertations related to the topic.

2.2 Sampling Procedure

I selected Kathmandu valley as research area of my study. I selected two HSEB affiliated colleges Pasang Lhamu Sherpa College and Manmohan Memorial College respectively using random sampling procedure, i.e. fishbowl draw.

My study population was grade eleven students. I selected a total of forty students. Twenty students from each college including both male and female in

equal number were selected through random sampling procedure. Students were selected with odd roll number to give them equal opportunity for participating the students with all profiles of linguistic intelligence and proficiency.

2.3 Tools of Data Collection

I used two tools to collect information on multiple intelligence survey questionnaire, and a test.

To prepare the intelligence profile of the students, a set of questionnaire was used consisting a set of checklist and a set of rating scale. One of them was based on checklist for EFL students produced by Christison (1999), published in the MEXTESOL Journal and Armstrong (1994) Association for Supervision and Curriculum Development .To find out the English language proficiency of the students various combinations of Intelligences, a written test of 30 marks and a comprehension test of 20 marks were conducted.

2.4 Process of Data Collection

To collect primary data the researcher visited the field and build rapport with concerned people. The researcher selected altogether forty students .Twenty students from each college were selected as respondents including both male and female. Then, she explained the respondents about the purpose and terms of the questionnaires and tests. It took two days to collect data .One day for multiple intelligence survey and another day for written test and reading comprehension test. On the first day, the students were given the linguistic intelligence survey questionnaires to prepare their linguistic intelligence profile which took one hour. The next day, she gave them test items to collect information about their English language proficiency level which also took one hour.

2.5 Limitations of the Study

The study had the following limitations:

1. The study was limited to two HSEB affiliated Colleges of Kathmandu Valley.
2. It was limited to grade eleven students and the test items were based on the basis of their textbook.
3. Only 40 students were involved in the study.
4. The tools for data collection were limited to linguistic Intelligence Inventory and a set of written test item.
5. Test items were limited to grade eleven English syllabus.
6. The test items were limited to reading and writing skills only.

CHAPTER-THREE

ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data which are collected by the researcher from the colleges of Kathmandu valley affiliated to HSEB.

3.1 Preliminary Identification of the Students

To prepare the linguistic intelligence profile of the students, two types of questionnaire were used. The first one was linguistic intelligence checklist. The students were asked to put tick mark () under the Yes if it expresses some characteristics of the respondents and marking “F” if it does not. The score for ‘Yes’ was 1 and 0 for ‘F’. The full marks for this questionnaire was 15. Then, the marks secured by all the students was calculated and the percentage too.

The second type of questionnaire was student rating scale which was of 30 marks. The student put 0 if they disagree with the statement and 2 if they strongly agree and 1 if they are somewhere in between. The total score secured by them was calculated. In this way, the linguistic intelligence profile of the individual students was prepared. The purpose of this profile is to find out the linguistic intelligence of the individual students.

To find out the linguistic proficiency of the students, a test of reading and writing was taken. The reading test was of 20 marks containing comprehension test which was based on 11th grade curriculum. Then writing test of 30 marks was taken which was also based on 11th grade curriculum. Then the total marks secured by the individual student were calculated and converted into percentage.

The answer sheets of individual students were marked systematically. The individual student was given code number and the scores they have obtained were tabulated. The analysis and interpretation of the data was done on the basis of following:

- a. Holistic analysis of intelligence and proficiency
- b. Gender-wise analysis \comparison of intelligence and proficiency
- c. College-wise analysis \comparison of intelligence and proficiency

To calculate the average linguistic intelligence of the students and linguistic proficiency of the students, the mean score was calculated. The formula used to calculate mean is :

$$\bar{x} = \frac{\sum fm}{N}$$

[x- =Mean score, fm= Summation of the product of mid point and frequency, N=Number of the students]

The formula of Pearson’s product moment coefficient of correlation is applied to calculate the coefficient of correlation of the scores of X variables and the scores of Y variables.

3.2 Linguistic Intelligence Profile of the Individual Students

To prepare the linguistic intelligence profile of the individual students involved in the study, linguistic intelligence checklist and students’ rating scale was used which were used to calculate the average linguistic intelligence of them.

Table No. 7

Linguistic Intelligence Checklist

Students (in code)	Statements (in Serial no.)															FM:15	%
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	
Respondent1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	12	80
Respondent 2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	14	93.33
Respondent 3	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	13	86.66
Respondent 4	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14	93.33
Respondent 5	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	12	80
Respondent 6	1	1	1	1	1	1	1	1	1	0	1	1	-	1	1	13	86.66
Respondent 7	1	0	0	1	1	0	0	1	1	1	1	1	1	1	1	11	73.33
Respondent 8	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	13	86.66
Respondent 9	1	1	1	1	1	1	1	1	1	1	1	0	-	1	0	12	80

Respondent 10	1	1	0	1	1	0	1	1	1	1	-	0	1	1	1	11	73.33
Respondent 11	1	1	1	1	1	0	0	1	1	1	1	1	0	1	0	11	73.33
Respondent 12	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	13	86.66
Respondent 13	1	1	1	1	1	1	-	1	1	1	1	1	1	1	1	14	93.33
Respondent 14	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	13	86.66
Respondent 15	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	14	93.33
Respondent 16	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	93.33
Respondent 17	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	12	80
Respondent 18	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	13	86.66
Respondent 19	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	12	80
Respondent 20	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	12	80
Respondent 21	1	1	1	1	1	1	1	1	1	1	1	-	0	1	0	12	80
Respondent 22	1	1	0	1	1	1	1	0	1	1	1	0	0	1	1	11	73.33
Respondent 23	1	0	0	1	1	1	1	1	1	1	0	1	0	1	1	11	73.33
Respondent 24	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	13	86.66
Respondent 25	1	1	1	1	1	1	-	-	1	1	1	1	1	1	1	13	86.66
Respondent 26	1	1	0	1	0	1	0	1	1	1	0	1	0	1	1	10	66.66
Respondent 27	0	1	1	1	1	1	1	1	1	1	1	1	0	1	0	12	80
Respondent 28	1	1	0	1	1	1	1	0	1	1	1	1	0	1	1	12	80
Respondent 29	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	12	80
Respondent 30	1	1	0	1	0	1	1	0	1	1	1	1	1	0	1	11	73.33
Respondent 31	1	1	1	1	-	-	-	1	1	1	1	1	1	1	1	12	80
Respondent 32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	12	80
Respondent 33	1	1	1	1	0	1	1	0	0	1	0	1	1	1	0	10	66.66
Respondent 34	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	12	80
Respondent 35	1	1	1	1	1	1	1	1	1	1	1	1	0	-	0	12	80
Respondent 36	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	13	86.66
Respondent 37	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	13	86.66
Respondent 38	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	13	86.66
Respondent 39	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	13	86.66
Respondent 40	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	13	86.66

The above table shows students 'linguistic intelligence checklist in which individual students' score on each statement and the total of it is shown.

Then, the total marks are converted into percentage. The highest score is

found to be 14 which is 93.33 in percentage and the least score is found to be 11 which is 66.66 in percentage.

3.2.1 Students' Rating Scale

The students' rating scale has been prepared and presented in the table below.

Table No. 8

Students' Rating Scale

Students (in code no.)	No. of statements (in serial no.)															FM:30	%
																Total	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Respondent 1	2	0	2	0	2	2	0	2	2	2	0	2	2	0	2	20	66.66
Respondent 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30	100
Respondent 3	0	1	2	1	2	2	1	0	2	1	2	2	2	1	2	29	96.66
Respondent 4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30	100
Respondent 5	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	28	93.33
Respondent 6	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	28	93.33
Respondent 7	2	0	2	2	2	2	0	2	2	2	2	2	1	1	2	24	80
Respondent 8	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	28	93.33
Respondent 9	2	2	1	-	2	2	2	2	2	2	2	2	2	2	2	27	90
Respondent 10	2	2	0	2	2	2	2	1	2	2	2	2	2	1	2	26	86.66
Respondent 11	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	28	93.33
Respondent 12	2	2	2	1	2	2	2	2	2	2	-	2	2	2	2	27	90
Respondent 13	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29	96.66
Respondent 14	2	2	2	2	2	2	2	2	2	2	1	2	2	0	2	27	90
Respondent 15	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30	100
Respondent 16	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	29	96.66
Respondent 17	0	2	2	-	2	2	2	2	0	0	0	0	2	1	1	16	53.33
Respondent 18	2	1	1	2	2	2	2	2	2	2	2	2	2	-	2	26	86.66
Respondent 19	2	2	2	2	2	2	0	2	2	2	2	2	2	2	2	28	93.33
Respondent 20	1	2	2	2	2	1	2	2	2	2	2	2	1	2	2	27	90
Respondent 21	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	28	93.33
Respondent 22	1	2	0	2	2	0	2	2	2	2	2	2	2	2	1	24	80
Respondent 23	2	2	2	0	2	2	2	2	2	2	2	2	2	2	1	27	90

Respondent 24	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30	100
Respondent 25	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	29	96.66
Respondent 26	1	2	2	1	2	1	1	2	2	1	1	2	1	0	1	20	66.66	
Respondent 27	2	2	2	2	2	2	2	1	2	2	2	0	2	2	2	27	90	
Respondent 28	1	2	2	2	2	2	2	2	2	1	2	0	2	1	2	25	85.33	
Respondent 29	1	2	1	2	2	2	2	1	2	2	2	2	0	2	2	25	85.33	
Respondent 30	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	28	93.33	
Respondent 31	2	2	1	2	2	2	1	2	2	2	2	0	2	0	2	24	80	
Respondent 32	0	0	0	2	2	2	2	2	2	2	2	2	2	2	2	24	80	
Respondent 33	1	0	0	2	0	2	2	2	2	2	2	2	2	2	2	23	76.66	
Respondent 34	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30	100	
Respondent 35	2	0	1	2	2	2	2	2	2	2	2	2	2	2	2	27	90	
Respondent 36	2	2	2	2	2	0	2	2	2	2	2	2	2	2	2	28	93.33	
Respondent 37	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	30	100	
Respondent 38	2	2	2	0	1	1	2	2	2	2	2	2	2	2	2	26	86.66	
Respondent 39	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2	26	86.66	
Respondent 40	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	29	96.66	

The above table shows each student's answers on each statement and the total score of them. The total score is converted into percentage. The highest score is found to be 30 which is 100 in percentage and the least score is found to be 16 which is 53.33 in percentage.

3.2.2 Linguistic Intelligence of the Individual Students

Linguistic intelligence of the individual students has been prepared and presented below.

Table No. 9
Linguistic Intelligence of the Individual Students

Students (in code no.)	FM:15+30=45	Total	%
	Marks obtained in Intelligence Test		
Respondent 1	12+20	32	71.11
Respondent 2	15+30	45	100
Respondent 3	13+29	42	93.33
Respondent 4	15+30	45	100
Respondent 5	12+28	40	88.88
Respondent 6	13+28	41	91.11
Respondent 7	11+24	35	77.77
Respondent 8	13+28	41	91.11
Respondent 9	12+27	39	86.66
Respondent 10	11+26	37	82.22
Respondent 11	11+28	39	86.66
Respondent 12	13+27	40	88.88
Respondent 13	14+29	43	95.55
Respondent 14	13+27	40	88.88
Respondent 15	14+30	44	97.77
Respondent 16	14+22	36	80
Respondent 17	12+16	28	62.22
Respondent 18	13+26	39	80.66
Respondent 19	12+28	40	88.88
Respondent 20	12+27	39	86.66
Respondent 21	12+28	40	88.88
Respondent 22	11+24	35	77.77
Respondent 23	11+27	38	84.44
Respondent 24	13+30	43	95.55
Respondent 25	13+20	42	93.33
Respondent 26	10+20	30	66.66
Respondent 27	12+27	39	86.66
Respondent 28	12+25	37	82.22

Respondent 29	12+25	37	82.22
Respondent 30	11+28	39	86.66
Respondent 31	12+24	36	80
Respondent 32	12+24	36	80
Respondent 33	10+23	33	73.33
Respondent 34	13+30	31	68.88
Respondent 35	12+27	39	86.66
Respondent 36	13+28	41	91.11
Respondent 37	13+30	43	95.55
Respondent 38	13+26	39	86.66
Respondent 39	13+26	39	86.66
Respondent 40	13+29	42	93.33

The above table shows each student's answers on each statement and the total score of them. The total score is converted into percentage. The highest score is found to be 45 which is 100 in percentage and the least score is found to be 28 which is 62.22 in percentage.

3.3 Linguistic Proficiency of the Individual Students

Linguistic proficiency of the students has been presented below.

Table no.10

Reading and Writing Proficiency of the Individual Students

Students (in code no.)	FM:20+30=50	Total	%
	Marks obtained in Proficiency tests		
Respondent 1	12+23	35	70
Respondent 2	19+28	47	94
Respondent 3	17+28	45	90
Respondent 4	19+28	47	94
Respondent 5	16+23	39	78
Respondent 6	19+25	44	88

Respondent 7	17+21	38	76
Respondent 8	18+26	44	88
Respondent 9	18+24	42	84
Respondent 10	17+23	40	80
Respondent 11	18+24	42	84
Respondent 12	19+22	41	82
Respondent 13	18+28	46	92
Respondent 14	18+25	43	86
Respondent 15	19+28	47	94
Respondent 16	17+23	40	80
Respondent 17	11+20	31	62
Respondent 18	14+22	36	72
Respondent 19	14+29	43	86
Respondent 20	17+24	41	82
Respondent 21	18+23	41	82
Respondent 22	19+20	39	78
Respondent 23	16+23	39	78
Respondent 24	19+26	45	90
Respondent 25	17+27	44	88
Respondent 26	8+19	27	54
Respondent 27	18+23	41	82
Respondent 28	16+23	39	78
Respondent 29	16+24	40	80
Respondent 30	19+21	40	80
Respondent 31	16+23	39	78
Respondent 32	17+21	38	76
Respondent 33	12+18	30	60
Respondent 34	17+17	34	68
Respondent 35	17+19	36	72
Respondent 36	18+24	42	84

Respondent 37	16+23	39	78
Respondent 38	15+21	36	72
Respondent 39	18+22	40	80
Respondent 40	19+25	44	88

The above table shows the linguistic proficiency of each student which is calculated by the addition of the score of reading and writing test. The total score of the test and the conversion of it into percentage is also presented in the table. The highest score is found to be 47 which are 94 in percentage and the least score is found to be 27 which is 54 in percentage.

3.4 Average Linguistic Intelligence of Students

Students' average linguistics intelligence is further divided into small groups in the following sections.

3.4.1 Average Linguistic Intelligence of all Students

The average linguistic intelligence of all 40 students of both campuses including male and female both is found to be 38.37 (see appendix no. viii).

3.4.2 Average Linguistic Intelligence of Female Students

The average linguistic intelligence of female students including both campuses is 38 (see appendix no. viii).

3.4.3 Average Linguistic Intelligence of Male Students

The average linguistic intelligence of male students including both campuses is 37.35. Comparatively, the average linguistic intelligence of female students is higher than of male students (see appendix no. vii).

3.4.4 Average Linguistic Proficiency of Students

To find Linguistic Proficiency of the students, reading and writing test was conducted. The testing for reading comprehension took $\frac{1}{2}$ hour and the test for writing took 1 hour (see appendix no. vii).

3.4.5 Average Reading and Writing Proficiency (Linguistic Proficiency) of the Students

The total number of students was 40. Twenty students were taken as respondents from each college including male and female both. The average reading and writing proficiency of the students was found to be 38.38 (See appendix no. viii) . This can be shown as below:

Table no. 11

Average Reading and Writing Proficiency (Linguistic Proficiency) of the Students

Average Proficiency	Mean Score(x-)	In Percentage
Reading	16.80	84
Writing	24.50	81.67

3.4.6 Average Linguistic Intelligence of Male and Female Students

The average linguistic intelligence of male students was 37.35 which is close to average mean score and the average linguistic intelligence of female students was 38 .It was very close to the average mean score (see appendix no. viii).

This can be clearly presented as below:

Table No. 12

Average Linguistic Intelligence of Male and Female Students

Average Linguistic Intelligence	Mean score(x-)
Male students	37.35
Female students	38.00

3.4.7 Average Reading Proficiency of Male and Female Students

The average reading proficiency of male is 16.60 and the average reading proficiency of female students is 17 (see appendix no. viii). To make a comparison between male and female students in reading proficiency, the proficiency of female seems higher than male students. This comparison becomes clear from the table below:

Table no. 13

Average Reading Proficiency of Male and Female Students

Average Reading Proficiency	Mean score(x-)
Male	16.60
Female	17

3.4.8 Average Writing Proficiency of all Students

The average writing proficiency of all students is 24.50. The total number of the students is 40 including male and female both (see appendix no. viii).

3.4.9 Average Writing Proficiency of Male and Female Students

The average writing proficiency of male students is 22.35 and of female was 23 (see appendix no. viii). The reading proficiency of female students is slightly higher than that of male students. Still the difference is not so wide.

Table No. 14

Average Writing Proficiency of Male and Female Students

Average Writing Proficiency	Mean Score(x _̄)
Male	22.35
Female	23.00

3.4.10 Average Reading Proficiency of all Students

The average reading proficiency of all students is found to be 16.80 which is 84 in percentage. On the other hand, the average writing proficiency of all students is 24.50 which is 81.67 in percentage. It means the students are better in reading proficiency than in writing proficiency (see appendix no. viii).

3.4.11 Average Reading Proficiency of Male and Female Students

The average reading proficiency of male students is 16.60 and female students is 17 (see appendix no. viii). The reading proficiency of female students seems

a little bit higher than of male students. In the previous data also the writing proficiency of female students is higher than of the male students. The comparison is shown in the table below:

Table No. 15

Average Reading Proficiency of Male and Female Students

Average Reading Proficiency	Mean score(x-)
Male	16.60
Female	17

3.4.12 Average Linguistic Proficiency of Male and Female Students

The average linguistic proficiency of male is 38.95 and of female is 40.5 (see appendix no. viii). To compare the average linguistic proficiency between male and female students, the mean score of female is found to be higher than of the male students. The comparison becomes clear from the table below:

Table No. 16

Average Linguistic Proficiency of Male and Female Students

Average Linguistic Proficiency	Mean Score(x-)
Male	38.85
Female	39.75

3.4.13 Average Linguistic Intelligence of Manmohan Memorial college

The average linguistic intelligence of first campus is found to be 38.75. The total number of students was 20 including male and female both (see appendix no. viii).

3.4.14 Average Linguistic Proficiency of Manmohan Memorial College

The average linguistic proficiency of Manmohan Memorial college is 41.75. The total number of students was 20 including male and female. To compare the average linguistic intelligence with the average linguistic proficiency, both seems related (see appendix no. viii).

3.4.15 Average Linguistic Intelligence of Pasang Lhamu Sherpa College

The average linguistic intelligence of Pasang Lhamu Sherpa College is 38.00. The total number of students was 20 including male and female both. To compare the average linguistic intelligence of Manmohan Memorial college with this college, Manmohan Memorial college seems a little bit better than this college but the difference is not significant (see appendix no. viii).

3.4.16 Average Linguistic Proficiency of Pasang Lhamu Sherpa College

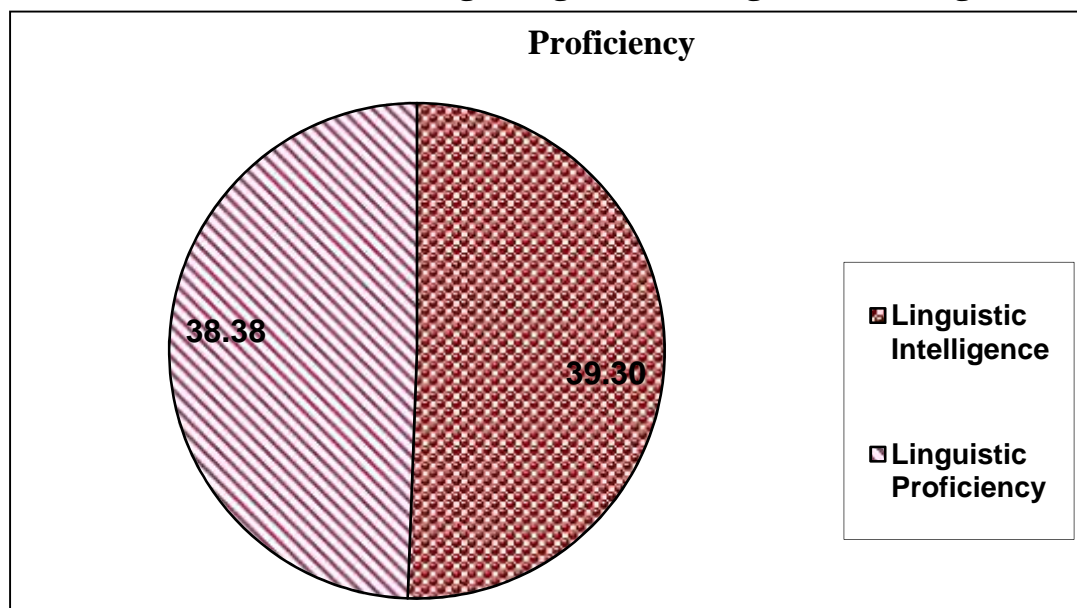
The average linguistic proficiency of Pasang Lhamu Sherpa College is 38.25 while the average linguistic proficiency of Manmohan Memorial college is 41.75. Comparatively, the average linguistic proficiency of this campus found to be less than Pasang Lhamu Sherpa College (see appendix no. viii).

3.4.17 All Students' average Linguistic Intelligence and Linguistic Proficiency

The average linguistic intelligence of all students is 38.38 and the average linguistic proficiency of all students is 39.30 .(see appendix no. viii). The average score of linguistic intelligence and linguistic proficiency shows that they are quite related to each other and linguistic intelligence has greater influence on linguistic proficiency of the students. This finding can be clearly shown in the table below:

Diagram - 1

All Students' average Linguistic Intelligence and Linguistic



3.5 Correlation Between Linguistic Intelligence and Linguistic Proficiency

Correlation is the relationship between two or more sets of data. The degree of relationship is measured and represented by the coefficient of correlation (Best and Kahn, 2003). I have used their method to present and evaluate the magnitude of a correlation:

Table No.17

Correlation Between Linguistic Intelligence and Linguistic Proficiency

Coefficient(r)	Relationship
.00 to .20	Negligible
.20 to .40	Low
.40 to .60	Moderate
.60 to .80	Substantial
.80 to .1.00	High to very high

The magnitude of correlation coefficient indicates how well two sets of scores go together (Hatch and Farhady, 1982) or two determine the degree of

relationship. I have used the most often used and most precise coefficient of correlation (r). The raw score formula requires the use of five columns:

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$\sum X$ = Sum of the X scores

$\sum Y$ = Sum of the Y Scores

$\sum X^2$ = Sum of the squared X scores

$\sum Y^2$ = Sum of the squared Y Scores

$\sum XY$ = Sum of the product of paired X and Y scores

N = Number of paired scores

3.5.1 Correlation Between Average Reading and Writing Proficiency of all Students

The coefficient of correlation between average reading and writing proficiency is found to be 0.81. To interpret and evaluate this correlation with the above criteria produced by Best and Kahn (2003), the relationship seems high. It means the relationship is nearly perfect. On the basis of this what we can conclude is the scores on reading proficiency is associated with writing proficiency (see appendix no. ix) .

3.5.2 Correlation Between Average Linguistic Intelligence of Male and Female

The coefficient of correlation between average linguistic intelligence of male and female amounts to 0.56. If this correlation is compared with the criteria produced by Best and Kahn (2003), the relationship seems moderate. Though the relationship is positive but it is not the perfect one (see appendix no. ix).

3.5.3 Correlation Between Average Reading Proficiency of Male and Female

The coefficient of correlation between average reading proficiency between male and female amounts to be 0.60. Compared to the correlation criteria of Best and Kahn (2003), the relationship seems moderate. Alike correlation in linguistic intelligence, this relationship is also positive but not perfect (see appendix no. ix).

3.5.4 Correlation Between Average Writing Proficiency of Male and Female

The coefficient of correlation between average writing proficiency of male and female amounts to 0.57. This relationship is also moderate. On the basis of this correlation, we can say that the relation between writing proficiency between male and female is positive but not perfect one (see appendix no. ix).

3.5.5 Correlation between Linguistic Proficiency of Male and Female Students

The coefficient of correlation of linguistic proficiency (including reading and writing proficiency) between male and female students amounts to 0.71. This is substantially positive correlation. This type of relationship shows linguistic proficiency between male and female is positive but not high or perfect. The average linguistic proficiency of male was found to be 38.85 and the average linguistic proficiency of female was found to be 39.75. The average linguistic proficiency of female is higher than of male (see appendix no. ix).

3.5.6 Correlation Between Linguistic Intelligence and Linguistic Proficiency of the Students

The coefficient of correlation between linguistic intelligence and linguistic proficiency appears 0.92 which is high correlation between these two variables. Being perfect positive correlation, this is strong enough to prove that the score on linguistic intelligence is responsible in obtaining linguistic proficiency. The

hypothesis linguistic intelligence has direct and interferential role in the EFL classroom is proved (see appendix no. ix).

3.5.7 Correlation Between Average Linguistic Proficiency and linguistic Intelligence of Female Students

The coefficient of correlation between average linguistic intelligence and linguistic proficiency of female students amounts to 0.90. This is the perfect positive correlation. The high score on linguistic intelligence seems highly associated with the score on linguistic proficiency of female students (see appendix no. ix).

3.5.8 Correlation Between Average Linguistic Intelligence and Linguistic Proficiency of Male Students

The coefficient of correlation between average linguistic intelligence and linguistic proficiency of male students amounts to 0.88. This is also high or positive correlation. On the basis of this relationship, we can say that the scores on linguistic intelligence is positively correlated with the scores on linguistic proficiency of students (see appendix no. ix).

3.5.9 Correlation Between Linguistic Intelligence and Proficiency of Students of Manmohan Memorial College

The coefficient of correlation between linguistic intelligence and linguistic proficiency of Manmohan Memorial College amounts 0.97. This is high and perfect positive correlation. This correlation also gives evidence to the hypothesis (see appendix no. ix).

3.5.10 Linguistic Intelligence of Male and Female Students of Manmohan Memorial college

The coefficient of correlation of linguistic intelligence between male and female students of this college is found to be 0.69 which is substantive correlation. This correlation shows the linguistic intelligence of male and female students of this college is positive but not perfect (see appendix no. ix) .

3.5.11 Correlation of Linguistic Proficiency Between Male and Female Students of Manmohan Memorial College

The coefficient of correlation of linguistic proficiency between male and female students of Manmohan Memorial college amounts 0.76. This is substantive correlation. This correlation shows the linguistic proficiency of male and female students of this college is not closely related (see appendix no. ix) .

3.5.12 Correlation Between Linguistic Intelligence and Linguistic proficiency of Students of Manmohan Memorial College

The coefficient of correlation between linguistic intelligence and linguistic proficiency of this college amounts 0.86 which is perfect positive correlation. This correlation also shows the linguistic proficiency is influenced by linguistic intelligence (see appendix no. ix).

3.5.13 Correlation of Linguistic Intelligence Between Male and Female Students of Pasang Lhamu Sherpa College

The coefficient of correlation of linguistic intelligence between male and female of this college is 0.72 which is substantive correlation. This correlation shows the linguistic intelligence of male and female is not closely related (see appendix no. ix) .

3.5.14 Correlation of linguistic Proficiency Between Male and Female of Pasang Lhamu Sherpa College

The coefficient of correlation of proficiency between male and female amounts 0.92. This is perfect positive correlation which shows the positive correlation of linguistic proficiency between male and female of this college (see appendix no. ix).

CHAPTER – FOUR

FINDINGS AND RECOMMENDATIONS

This chapter incorporates the findings obtained from the statistical analysis and recommendations given on the basis of those findings and some pedagogical implications.

4.1 Findings

After the rigorous analysis of the statistical data obtained from the tests and questionnaires, the following findings have been drawn:

A. The average linguistic intelligence of the students is found to be 38.38.

Similarly, the average linguistic proficiency of all students is found to be 39.30.

1. The average linguistic intelligence of female students is found to be 38 and the average linguistic intelligence of male students is found to be 37.35. The linguistic intelligence of female student is a little bit higher than that of male students.
2. The average linguistic proficiency of male students is 38.95 and the average linguistic proficiency of female students is 40. Here also the average linguistic proficiency of the female students is higher than that of male students.
3. The average reading proficiency of male students is found to be 16.60 and of female students is found to be 17. The average reading proficiency of the female students is higher than that of male students.
4. The average writing proficiency of all students including male and female of both colleges is found to be 24.50.

5. The writing proficiency of male students is 22.35 and of female students is 23. The average writing proficiency of female students is higher than that of male students.
6. The average reading proficiency of all students including male and female of both campuses is 16.80 which is 84 in percentage.
7. Average linguistic intelligence of Manmohan Memorial campus is found to be 38.75 while the average linguistic proficiency of Pasang Lhamu campus is found to be 41.75 which is higher than the former college.
8. The average linguistic intelligence of Pasang Lhamu campus is found to be 38.00. On the other hand, the linguistic proficiency of Manmohan Memorial College is found to be 38.25 which is higher than the former college.

B. The coefficient of correlation linguistic intelligence and linguistic proficiency of the students is 0.92 which is high positive correlation. This correlation is enough to say that the linguistic proficiency of the students is highly influenced by linguistic intelligence. Their linguistic intelligence is highly responsible for their linguistic achievements. On the basis of this the hypothesis “linguistic intelligence has direct and interferential role in the EFL classroom” is proved.

1. The coefficient of correlation between average linguistic proficiency and linguistic intelligence of female students amounts 0.90. This perfect positive relationship also proves that linguistic intelligence is highly associated with the linguistic proficiency. Alike this, the coefficient of correlation between average linguistic intelligence and linguistic proficiency of male students amounts to 0.88. This is too perfect or high correlation. From this result also the hypothesis can be seen to be proved.

2. Likewise, the coefficient of correlation of average linguistic intelligence between male and female amounts 0.56. The correlation is moderate. The coefficient of correlation of linguistic proficiency between male and female amounts 0.71. This is substantially positive correlation but still this is also not perfect one.
3. The coefficient of correlation between average reading and writing proficiency of all students amounts 0.81. This correlation is nearly perfect which proves that reading proficiency is associated with writing proficiency.
4. The coefficient of correlation of average reading proficiency between male and female amounts 0.60 which is moderate correlation. Similarly, the coefficient of correlation of average writing proficiency between male and female is found 0.57 which is moderate correlation. So, both correlations were found to be similar.

So, after the analysis of the information obtained from the statistical data, we can conclude that the effect of linguistic intelligence in the EFL classroom is highly influential and related to each other. The other analysis of the same types of correlation between male and female students, the intelligence and proficiency of female students are found to be higher than those of male students.

4.2 Recommendations for Pedagogical Implications

Intelligence is not fixed phenomenon and the individuals differ in the intelligence profiles with which they are born, and in the profiles they develop as adults, due to coordination of opportunities to explore materials that elicit particular intelligences, encouragements and appropriate training (Smith, 2001). The same case is applied with the relationship between linguistic proficiency of the children or students. This close connection between linguistic intelligence and linguistic proficiency is the interesting fact for the

people concerned with the pedagogical arena. After the study of the information obtained from the data analysis, we also come to know that the coefficient of correlation between linguistic intelligence and linguistic proficiency is highly and perfectly positive. After the investigation in male and female the same result is obtained. In the field of MI, it is believed that all types of intelligences can be enhanced, through practice and training. Linguistic intelligence appears determinant of linguistic proficiency. So, for the implication and exploitation of it in the foreign language classroom, the following points should be considered:

1. For the effective and productive foreign language class, the teacher should be careful about the individual differences of the students of their hidden language skills and capacity.
2. While designing lesson plans the linguistically gifted children and linguistically disabled both types of children should be kept in consideration.
3. The language class activities should be structured around the linguistic intelligence of all types of intelligences.
4. The effect and importance of linguistic intelligence in the class should be utilized in the assessment techniques.
5. The teachers, educational institution administrators, educational policymakers and parents should work collaboratively to utilize the effect of linguistic intelligence of the classroom.
6. The educators can use it in the curriculum designing, course book designing, etc. The people who want educational reform may be interested in its implementation to make the classroom different from traditional one.

7. Some special programmes can be launched to recognize the special linguistic ability of the children so that students are familiar to their special ability and parents and teachers are motivated to utilize those intelligences in a creative way. It is not always possible to make use of different activities in the classroom.
8. The students become curious and interested towards learning if the learning subject matter corresponds to their interest and capacity. So, linguistic intelligence implemented classroom has utility in the foreign language education. By the use of it, the educational ideas, beliefs and strategies can be changed. Though its implementation demands hard work from the side of students, learning becomes exciting. It can be used as a tool to promote high quality and genuine students.

4.3 Direction for the Further Research

This research has selected only grade eleven students of education faculty as the respondents. So, to get in-depth information related to the topic, the same type of research can be conducted including the students of other faculties. This study is focused on only the linguistic intelligence but there are other types of intelligences under multiple intelligences. The effect of these intelligences in the English language classroom can be studied including the students of different parts of the country.

This study was limited to only reading and writing proficiency of the students. The further research can be done by finding out the listening and speaking proficiency as well. In this study, it was found that the females got higher score on intelligence and proficiency test than those of male students. So, its reasons of it can be searched by other researches. Similarly, the challenges and advantages of linguistic intelligence implemented classroom is also deserves investigation.

For further studies, it is suggested to investigate the possibilities and effects of linguistic intelligence supported teaching method on students in the third world countries like Nepal, academic achievement, attitude etc, and on students' preferences towards such classrooms. This topic is interesting not only in newest teaching techniques and strategies but in the latest L₂ researches as well. The coming researches in it can be hoped to make it more constructive and useful in the language classes. I hope more researches will be done in this area and it will no more remain a new concept for the Nepalese ELT classrooms, whether it is primary level or elsewhere.

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Appendix-I

Dear Students,

These two sets of questionnaire has been designed for the purpose of my research entitled” The Effect of Linguistic Intelligence in the EFL Classroom”, under the guidance of Dr. Jai Raj Awasthi ,Professor, Department of English Education, TU Kirtipur. Your co-operation in completing the questionnaires will be of great value to me. Please feel free to put your response required to these sets of questionnaires. I assume your response will merely be used as information for this research and will have no harmful effect for you as well as others.

Researcher

Prabha Khadka

Appendix-III

Dear Students,

These two sets of test items have been designed for the purpose of my research entitled” The Effect of Linguistic Intelligence in the EFL Classroom”, under the guidance of Dr. Jai Raj Awasthi, Professor, Department of English Education, TU Kirtipur. Your co-operation in completing these test items will be of great value to me. Please feel free to put your response required to these sets of test items. I assume your response will merely be used as information for this research and will have no harmful effect for you as well as others.

Researcher

Prabha Khadka

Appendix-VI

Letter to the Authority

Dear Madam \ Sir,

I am an M.Ed. student studying under the Department of English Education, Central Department of Education, University Campus, and Kirtipur. I am carrying out a research entitled “The Effect of Linguistic Intelligence in the EFL classroom”. The objectives of this research are to find out the effect of linguistic intelligence (one of the intelligence under Multiple Intelligences) in the context of Nepal where the students have been learning English as a foreign language. The purpose of the study is to explore the necessity of implementation of linguistic intelligence for more active, engaged and effective learning by comparing the Linguistic Intelligence of the students with their Language proficiency .It is not unknown fact that the concept of Multiple Intelligence is still new in the context of Nepal.

I have selected grade 11 students as study population. So, I would like to request you to convince your students to response to the questionnaire and test items.

I am sorry for asking you to make your students involve in it in the work out of their course. However, your help will play crucial role for this effort. I would be grateful to you for this co-operation.

Thank you very much for your kind help and co-operation.

With gratitude

Prabha Khadka

Tribhuvan University

APPENDIX-VII

ANSWER KEY

Item No. A

Reading Comprehension Test

a.	Swamped
b.	Enormous
c.	Devouring
d.	Pests
e.	Excited
f.	Applied

Item No B

i.	Government officials told the farmers about amazing pesticides Which would kill the insects in their field and soon make them rich.
ii.	The chemicals were applied more or less indiscriminately-often in the wrong way and at the wrong time.
iii.	The chemicals disturbed the previous natural balance by killing not Only pests but also their natural predators.
iv.	The shopkeepers happily made them available and the energy of the salesman was overpowering and enormous quantities of the Pesticides were sold.
v.	The nasty surprise was despite the mixture of powerful chemicals On the potatoes, a few moths survived.

Item No. C

i.	True
ii.	True
iii.	False
iv.	False

Item No. 3

a.	Affected
b.	Effect
c.	Loose
D.	Lose
e.	Practice

Item No.4

a.	She has studying compulsory English for four years.
b.	He wanted to become a government official.
c.	She hoped to become a doctor in a hospital.
d.	He asked her to give him a cup of tea.
e.	He has just started to eat his dinner.

Item No.5

a.	e.g. You'd better.....
b.	e.g. You should.....
c.	e.g. It would be better.....
d.	e.g. If I were you.....
e.	e.g. Why don't you.....?

Item No. 6

a.	Monalisa was painted by Leonardo da vinci
b.	Peniciline was discovered by Alexender Flemming
c.	The Pyramids were built by ancient Egyptians
d.	The Singh Durbar was built by the Rana regime
e.	Muna Madan was written by Devkota.

Item No.7

a.	We are not being given money.
b.	A man is being questioned.
c.	Is the book being read?
d.	Another car is being overtaken.
e.	We are being followed by them.

APPENDIX-VIII

Average Linguistic Intelligence of All Students

Score(x-)	Mid Point(m)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	0	0
21-25	23	0	0
26-30	28	2	56
31-35	33	5	165
36-40	38	21	798
40-45	43	12	516
		N=40	fm=1535

$$\frac{fm}{N}$$

$$= \frac{1535}{40}$$

$$= 38.37$$

Average Linguistic Intelligence of Female Students

Score(x)	FM:45	Frequency(f)	fm
	Mid Point		
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	0	0
21-25	23	0	0
26-30	28	1	28
31-35	33	3	99
36-40	38	11	418
41-45	43	5	215
		N=20	fm=760

$$\frac{fm}{N}$$

$$= \frac{760}{20}$$

$$= 38$$

Average Linguistic Intelligence of Male Students

Score(x-)	FM:45	Frequency(f)	fm
	Mid Point(m)		
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	0	0
21-25	23	0	0
26-30	28	1	28
31-35	33	2	66
36-40	38	10	380
41-45	43	7	301
		N=20	fm=747

$$\frac{fm}{N}$$

$$= \frac{747}{20}$$

$$= 37.35$$

Average Reading Proficiency of All Students

FM:20			
Score(x-)	Mid Point(M)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	7	78
16-20	18	33	594
		N=40	fm=672

$$= \frac{fm}{N}$$

$$= \frac{672}{40}$$

$$= 16.8$$

Average Reading Proficiency of Male

Score(x-)	Mid Point (m)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	3	26
16-20	18	17	306
		N=20	fm=332

$$\frac{fm}{N}$$

$$= 332$$

$$20$$

$$= 16.6$$

Reading Proficiency of Female Students

Score(x)	Mid Point(m)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	4	52
16-20	18	16	288
		N = 20	fm=340

$$\frac{fm}{N}$$

$$= \frac{340}{20}$$

$$20$$

$$= 17$$

Average Writing Proficiency of Female Students

Score(x)	Mid Point(m)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	4	72
21-25	23	12	276
26-30	28	4	112
		N = 20	fm=460

$$\frac{fm}{N}$$

$$= \frac{460}{20}$$

$$= 23$$

Average Writing Proficiency of Male Students

Score(x)	Mid Point(m)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	2	36
21-25	23	13	299
26-30	28	4	112
		N = 20	fm=447

$$\frac{fm}{N}$$

$$= \frac{447}{20}$$

$$= 22.35$$

Average Reading Proficiency of All Students

F.M. 20

Score(x)	Mid Point(m)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	7	78
16-20	18	33	594
		N = 40	fm=672

$$\frac{fm}{N}$$

$$= \frac{672}{40}$$

$$= 16.80$$

Average Linguistic Intelligence of Manmohan Memorial College

Score(x)	Mid Point(m)	Frequency(f)	Fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	0	0
21-25	23	0	0
26-30	28	1	28
31-35	33	2	66
36-40	38	10	380
41-45	43	7	301
		N= 20	fm=775

$$\frac{fm}{N}$$

$$= \frac{775}{20}$$

$$= 38.75$$

Average Linguistic proficiency of Manmohan Memorial College

Scores(x)	Mid Point(m)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	0	0
21-25	23	0	0
26-30	28	0	0
31-35	33	2	66
36-40	38	5	190
41-45	43	9	387
46-50	48	4	192
		N=20	fm=835

$$\frac{fm}{N}$$

$$= \frac{835}{20}$$

$$= 41.75$$

Average Linguistic Intelligence of Pasang Lhamu Sherpa College

Score(x)	Mid Point(m)	Frequency(f)	Fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	0	0
21-25	23	0	0
26-30	28	1	28
31-35	33	3	99
36-40	38	11	418
41-45	43	5	215
		N= 20	fm=760

$$= \frac{fm}{N}$$

$$= \frac{760}{20}$$

$$= 38$$

Average Linguistic Proficiency of Pasang Lhamu Sherpa College

Score(x)	Mid Point(m)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	0	0
21-25	23	0	0
26-30	28	2	56
31-35	33	1	33
36-40	38	11	418
41-45	43	6	258
46-50	48	0	0

$$fm=765$$

$$\frac{\phi fm}{N}$$

$$= \frac{765}{20}$$

$$= 38.25$$

Average Linguistic Proficiency of all Students

F.M. 50

Score(x)	Mid Point(m)	Frequency(f)	fm
0-5	2.5	0	0
6-10	8	0	0
11-15	13	0	0
16-20	18	0	0
21-25	23	0	0
26-30	28	1	28
31-35	33	3	99
36-40	38	16	608
41-45	43	15	645
46-50	48	4	192
			fm=1572

$$\begin{aligned} & \frac{\sum fm}{N} \\ &= \frac{1572}{40} \\ &= 39.30 \end{aligned}$$

Appendix - IX

Most precise coefficient correlation formula of Pearson's product –moment coefficient of correlations (r) has been used to find the correlations between the variables.

$$\text{Correlation } r_{xy} = \frac{N \sum xy - \sum x \sum y}{\sqrt{[N \sum x^2 - (\sum x)^2][N \sum y^2 - (\sum y)^2]}}$$

Where,

X = Sum of the X scores

Y = Sum of the Y Scores

X² = Sum of the squared X scores

Y² = Sum of the squared Y Scores

XY = Sum of the product of paired X and Y scores

N = Number of paired scores

1. Coefficient of Correlation between Average Linguistic Intelligence and Linguistic Proficiency of all Students

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

X = 1544

Y = 1604

X² = 60204

Y² = 65124

XY = 62554

N = 40

Coefficient(r) = 0.92

2. Coefficient of correlation between Average Reading and Writing Proficiency of all Students

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

Where,

$$\sum X = 660$$

$$\sum Y = 907$$

$$\sum X^2 = 11328$$

$$\sum Y^2 = 21397$$

$$\sum XY = 15455$$

$$N = 40$$

$$\text{Coefficient}(r) = 0.81$$

3. Coefficient of Correlation of Reading Proficiency between Male and Female

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

Where,

$$\sum X = 457$$

$$\sum Y = 463$$

$$\sum X^2 = 10683$$

$$\sum Y^2 = 10883$$

$$\sum XY = 10692$$

$$N = 20$$

$$\text{Coefficient}(r) = 0.57$$

4. Coefficient of Correlation of Writing Proficiency between Male and Female

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

Where,

$$\sum X = 810$$

$$\sum Y = 797$$

$$\sum X^2 = 33160$$

$$\sum Y^2 = 32135$$

$$XY = 32539$$

$$N = 20$$

$$\text{Coefficient}(r) = 0.71$$

4. Coefficient of Correlation of Linguistic Proficiency between Male and Female

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$\sum X = 348$$

$$\sum Y = 324$$

$$\sum X^2 = 6126$$

$$\sum Y^2 = 5346$$

$$\sum XY = 5687$$

$$N = 20$$

$$\text{Coefficient}(r) = 0.60$$

5. Correlation of Linguistic Proficiency Between Male and Female Students

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$\sum X = 810$$

$$\sum Y = 797$$

$$\sum X^2 = 33160$$

$$\sum Y^2 = 32135$$

$$\sum XY = 32539$$

$$N = 20$$

$$\text{Coefficient}(r) = 0.71$$

6. Correlation Between Linguistic Intelligence and Linguistic Proficiency of the Students

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$X = 1544$$

$$Y = 1604$$

$$X^2 = 60204$$

$$Y^2 = 65124$$

$$XY = 2502160$$

$$N = 40$$

$$\text{Coefficient}(r) = 0.92$$

7. Correlation Between Average Linguistic Proficiency and Linguistic Intelligence of the Students

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$X = 776$$

$$Y = 810$$

$$X^2 = 30406$$

$$Y^2 = 33160$$

$$XY = 31720$$

$$N = 20$$

$$\text{Coefficient}(r) = 0.90$$

8. Correlation Between Average Linguistic Intelligence and Linguistic Proficiency of Male Students

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$X = 768$$

$$Y = 797$$

$$X^2 = 29798$$

$$Y^2 = 32135$$

$$\sum XY = 30902$$

$$N = 20$$

$$\text{Coefficient}(r) = 0.88$$

9. Correlation Between Intelligence and Proficiency of Students of Manmohan Memorial College

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$\sum X = 776$$

$$\sum Y = 768$$

$$\sum X^2 = 29798$$

$$\sum Y^2 = 30406$$

$$\sum XY = 30092$$

$$N = 20$$

$$\text{Coefficient}(r) = 0.97$$

10. Correlation of Linguistic Intelligence Between Male and Female Students of Manmohan Memorial College

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$\sum X = 397$$

$$\sum Y = 388$$

$$\sum X^2 = 15915$$

$$\sum Y^2 = 15228$$

$$\sum XY = 15516$$

$$N = 10$$

$$\text{Coefficient}(r) = 0.69$$

11. Correlation of Linguistic Proficiency Between Male and Female Students of Manmohan Memorial College

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$\sum X = 422$$

$$\sum Y = 412$$

$$\sum X^2 = 17948$$

$$\sum Y^2 = 17152$$

$$\sum XY = 17506$$

$$N = 10$$

$$\text{Coefficient}(r) = 0.76$$

12. Correlation Between Linguistic Intelligence and Linguistic Proficiency of Students of Manmohan Memorial College

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$\sum X = 759$$

$$\sum Y = 770$$

$$\sum X^2 = 29061$$

$$\sum Y^2 = 30024$$

$$\sum XY = 29490$$

$$N = 20$$

$$\text{Coefficient}(r) = 0.86$$

13. Correlation of Linguistic Intelligence Between Male and Female Students of Pasang Lhamu Sherpa College

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$X = 380$$

$$Y = 379$$

$$X^2 = 14562$$

$$Y^2 = 14499$$

$$XY = 14495$$

$$N = 10$$

$$\text{Coefficient}(r) = 0.72$$

14. Correlation of Linguistic Proficiency Between Male and Female Students of Pasang Lhamu Sherpa College

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Where,

$$X = 391$$

$$Y = 379$$

$$X^2 = 15511$$

$$Y^2 = 14513$$

$$XY = 14987$$

$$N = 10$$

$$\text{Coefficient}(r) = 0.92$$