Chapter I

Conceptual Framework

Language, a universal human characteristic, is an exceedingly important means of communication. Since no other species is believed to use such an evolved and complicated system of communication, it is also one of the unique possessions of man and distinguishes man from other lower animals.

1.1 Language

The HighBeam Research Encyclopedia (2006 a) writes “Language is” a “systematic communication by vocal symbols”.

The Wikipedia Encyclopedia (2006 a) defines language as “a system of signals, including voice sounds, gestures or written symbols which encodes and decodes information”.

The encyclopedia further writes language is estimated to have originated sometime between the time of Homo habilis (2,000,000 years) or Croto Magnon man (40,000 years), though The HighBeam Research Encyclopedia (2006 b) claims there are proofs of the written form of languages as long back as 7,900 years.

1.1.1 Uses of Language

As a means of communication, language serves the expressive, the informative and the directive functions. By allowing expression of ideas, feelings, desires, information and directions, it makes communication possible, be it oral or in other forms like written, etc. By using language an individual can reach out to not just another individual but to all the users of that language.

But the uses of language are not confined to communication only. Gardner (1983) lists the following also as (discrete) uses of (public) language:

- to induce actions in other people
- (as a tool) to help remember things
- to transfer explanations or knowledge from one person to another
- to talk about language itself: “to engage in meta linguistic analysis”
Clark (1997) adds, “Language enables us to exploit our basic cognitive capacities of pattern recognition and transformation in ways that reach out to new behavioral and intellectual horizons.”

In addition, as Srinivasan (2000) puts it, a language may act as a literary language, a liturgical language, a cultural language and a conquering language also.

1.1.2 Speech Communities
Functioning at a wider or comprehensive level, a language acts as an agent of psychological bonding and gives rise to social groups, defined by The HighBeam Research Encyclopedia (2006 c) as ‘Speech communities”. The estimated number of speech communities ranges from 3,000 to 7,000 or more though 60% of the world’s languages have 10,000 or fewer speakers, only 120 or so have a million speakers and only a handful are spoken by 100 million speakers.

This number will rise phenomenally up if we include the numbers of dialects and artificial languages also. A dialect is a form of a language distinct in its writing system or mutual intelligibility (The Wikipedia Encyclopedia, 2006 b) and due mainly to “political” or “cultural” differences.

1.1.3 Artificial Language
An artificial language is an idiom that has not developed in a speech community like a natural tongue but has been constructed by human agents from various materials, such as devised signs, elements or modified elements taken from existing natural languages and invented forms (The HighBeam Research Encyclopedia, 2006 d).

The artificial languages or constructed languages included the computer languages and the languages constructed by some individuals for practical, experimental, personal or ideological reasons. The prominent artificial languages are Volapuk introduced in 1850 by Johann Martin Sihleyer, the German priest, Latino San Flexione by Giuseppe Peano, an Italian mathematician (The Columbia Encyclopedia, 2006 a), Esperanto by the Polish Jewish linguist Ludwik Lejzer Zamenhof in 1887, the Lojban, the fantasy and literary languages by J. R. R. Tolkein and Christopher Paolini respectively, Ido Kli ngton, Interlingua created in 1951 by the International Auxiliary Language Association (The HighBeam Research Encyclopedia, 2006 d).
1.1.4 Language and Cultures

Language is deeply concerned or related with cultures also. It originates to meet the need of the speakers to give expression to experiences pertaining to that culture and is constantly reshaped or remodeled also in light of changes in culture. But, it also acts as an instrument of preserving and transmitting it to the subsequent generations.

At the widest, language records the collective cumulative progress of the human race. All future development also depends on language. If there were no language, human life would revert to the primitive level.

It thus becomes imperative that language be learnt and used properly in an error free manner.

The urge to communicate is instinctive but, language, being a socially agreed upon system, is a behavior which everyone has to learn.

1.1.5 Mother Tongue

The language first learned is called one’s native language or Mother tongue (The HighBeam Research Encyclopedia, 2006 f).

1.1.6 Multilingualism

In the modern, globalized world “many persons, through they belong to a particular speech community speak more than one languages”. Crystal (2003) claims “more than half the population of the world is not monolingual”. They are called Bilingual or Multilingual. When people learn a second language very well, they are called bilingual (The Columbia Encyclopedia, 2006 b).

A multilingual person is defined as one who is “able to speak more than two languages with approximately equal facility”. (The Webster’s Encyclopedic Unabridged Dictionary of the English Language, 1996)

Kachru (1986 a) describes the same phenomenon or “linguistic behavior” among the members of a speech community which alternately uses two, three or more languages depending on the situation and function as “multilingualism”.
In terms of language as competence, multilingualism is viewed as 'Multi-competence’ defined as “the knowledge of two or more languages in one mind.” (Cook, 1992)

Multilingualism or linguistic diversity is found in most present day nations. (Mahapatra, 1990)

According to Fasold (1984 a), multilingualism is caused by one or more reasons of migration, imperialism, federation and border area multilingualism.

### 1.1.7 Rationale for Multilingualism

Ellis (1996) states: the primary target of L2 learning is “the ability to use language in communicative situations.”

However, the reasons for learning languages other than the Mother Tongue are far from multifarious and include benefits for the learner's mind such as manipulating language, for the learner's future career and opportunities to emigrate, and effects on the society whether through the integration of minority groups, the creation of a skilled work-force, the growth of international trade, or indeed ‘good citizenship, moral values and the …. way of life” of the adopted country. (Kementarian Pendidikan Malaysia, 1987)

Cook (2002 a) also notes “Enabling students to use a second language does not just give them a tool for talking to people through a different language but changes their lives and minds in all sorts of ways.” He lists of the benefits of multilingualism as:

- Self-development
- Acquisition of new cognitive processes
- Enhanced awareness of the learner’s mother-tongue
- Better understanding of the target culture
- Better understanding of religion or religious books
- Communication for business or pleasure made possible
- Intercultural understanding and peace

Cook (1983 and 2002 b) divides the goals of Multilingualism into two main groups – *external* and *internal*
External goals relate to the students' use of language outside the classroom: traveling about using the second language in shops and trains, reading books in another language or attending lectures in a different country, surviving as refugees in a strange new world.

Internal goals relate to the students' mental development as individuals; they may think differently, approach language in a different way, be better citizens, because of the effects that the second language has on their minds. So-called traditional language teaching often stressed the internal goals: learning Latin trained the brain; studying L2 literature heightened people's cultural awareness.

The Language Resource Centre of the University of Michigan (2004) calls second (or for that matter third or more) language learning “one of the cornerstones of liberal education” and gives five rationales for leaning a second or foreign language. These are:

Communication- which is an “important social skill”.

Personal growth and transformation, because “it gives us new eyes that open up new worlds”.

Diversity and Tolerance, because it enables “cross-cultural thinking”, challenges us “to abandon our own deeply ingrained structures”, creates “bonds of trust, reconciliation, and understanding”, fosters diversity and allows us to “cherish diversity as a high institutional ideal”.

Academics, because it enhances a wide range of analytical, interpretive and critical skills, and

Globalization and internationalization, because it equips us to “respond to the opportunity and the challenge of globalism, “the new internationalism that has enveloped every aspect of our lives”.

The Chinese Ambassador to the United States, Yang Jiechi (2004) also claims in this regard, “the realization of globalization’s most promising potential: the creation of new, transnational cultures of partnership” is not possible without “the bridge of language”.

On the more mundane level, the command of a second language is also a highly marketable skill that opens the door to a wealth of professional opportunities.
According to The Wall Street Journal, the “demand for multilingual workers is rising fast” at middle and upper management levels.

In a recent survey of businesses, cited in the Report of the LSA Foreign Language Review Committee, (2004), “over 80% businesses said they would place a greater emphasis on ‘international competence’ in hiring and training over the next decade”.

International Competence can easily be understood as competence in an international or universal language. The Columbia Encyclopedia (2006 c) defines an international or universal language as one “intended to be used by people of different linguistic backgrounds to facilitate communication among them and to reduce the misunderstandings and antagonisms caused by language differences”.

Though several languages claim to be international languages, none fits the description better than English.

1.2 English Language

English is a West Germanic language of the Indo European language family that originated in England (The Encyclopædia Britannica, 2006 a). Though it has its major roots in Germanic languages and derives most of its grammar from old English, the language of the Anglo-Saxons, yet, as a result of the Norman Conquest and other events in English history, French and Latin influenced it a lot in terms of vocabulary. (The Wikipedia Encyclopedia, 2006 c).

“From England it spread to the rest of the British Isles, then to the colonies and territories of the British Empire”. “Following World War II, the economic and cultural influence of the United States increased and English permeated other cultures, chiefly through development to telecommunications technology and became the lingua franca of the world” (Crystal, 1997 a; Brutt-Griffer, 2002; Seidlhofer, 2003; McKay, 2003; Llurda, 2004; Ha, 2005 a).

The other terms used for English are a ‘global language’ and ‘a world language’ (Ha, 2005 b) and ‘the world’s leading international language’ (The Short Story of English, 2007)

1.2.1 English in Global Context
Yamaguchi (2002 a) observes, worldwide, “there are more than 350,000,000 native English speakers and more than 4,00,000,000 speakers of English as a second language (language used in every day life, even though it is not the native language) or foreign language (a language studied but not used much in everyday life).”

The CIA World Factbook (2006 a) aided with Aneki and the Guinness World Records (2007) observes English is currently the second most commonly spoken language in the world. It has over 500 million speakers. English is today the third most widely distributed language as a first spoken language in the world. Something around 600 million people use the various dialects of English regularly. About 377 million people use one of the versions of English as their mother tongue and a similar number of people use one of them as their second or foreign language as well.

It is further predicted that by 2010, a surge of English language learning will include a third of the world’s people (Graddol, 1997 a).

Crystal (1997 b) observed “there has never been a language so widely spread or spoken by so many people as English”.

The Economist (1996) writes “English continues to be the world standard language, and there is no major threat to its global popularity”. Hasman (2007 a) adds “we still have about 100 years before a now language dominates the world”.

English is also the most widespread language on the earth (The Encyclopædia Britannica, 2006 b). English is used widely in public or private sphere in more than 100 countries all over the world (The Columbia Encyclopedia, 2006 d).

1.2.2 Importance of English

Yamaguchi (2002 b) states, “The importance of English is not just in how many people speak it, but in what it is used for”. “English is the language of news and information of the world. It is the language of international business and diplomacy and the professions. It is also an official language or the official language of many international organizations including the United Nations, the European Union and many professional organizations and most international athletic organizations including the Olympic committee (The Wikipedia Encyclopedia, 2006 d). The Encyclopædia Britannica (2006 c) adds it is one of the five official languages
of the International Telecommunications Union. “English is also commonly used as a medium of communication. Three quarters of all telex messages and telegrams are in English. Hasman (2007 b) adds “About 85% of the world’s mail is written in English and 90% of all information in the world’s electronic retrieval systems is stored in English”.

Five thousand newspapers i.e. more than half of the newspapers published in the world are published in English. (Yamaguchi, 2002 c)

Besides, it is also the language of maritime communication and national and international air traffic control.

English is also the language of science and technology. “Over 70% of the world’s scientists read English (Hasman, 2007 c). The Science Citation index (1997), reports that 95% its articles are written in English.

English is also the most popular language of popular culture, entertainment and travel.

Kitao and Kitao (1997) observe, “(it) being a neutral language”, “English is also used to avoid giving any one indigenous language too much prestige” in multilingual societies or communities.

1.3 English in India

English has been with India since the early 1600’s, when the East India Company started trading and English missionaries first began their efforts. A large number of Christian schools imparting an English education were set up by the early 1800’s. The process of producing English knowing bilinguals in India began with the minute of 1835, which officially endorsed T. B. Macaulay’s goal of forming “a class who may be interpreters between us and the millions whom we govern – a class of persons, Indian in blood and colour, but English in taste, in opinion, in morals and in intellect” (quoted in Raley, 2007). “Ultimately, the legal system, the national media and important functions were conducted in English also” (Kachru, 1986 b)

Hohenthal (2007 a) observes, “By the 1920s English had become the language of political discourse, intra-national administration, and law, a language associated with liberal thinking” also.
English became the official and academic language of India by the early twentieth century. The rising of the nationalist movement in the 1920’s brought same anti-English sentiment with it even though the movement itself used English as the medium (Baldridge, 2002 a).

1.3.1 English in Modern India

India gained independence in 1947 and “in 1950 Indian became a federal republic within the Commonwealth of Nations, and Hindi was declared the first national language. English, it was stated, would continue to be used for all official purposes until 1965”. In 1967, however, by the terms of the English language Amendment Bill, English was proclaimed ‘an alternative official or associate language with Hindi until such time as all non-Hindi states had agreed to its being dropped” (The Encyclopædia Britannica, 2006 d)

As of the present, “English is recognized as an associate official language by the Government of India and is recognized as the official language in four states: Manipur, Meghalaya, Nagaland, Tripura and in eight Union Territories: Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep, Pondicherry, National Capital Territory and Delhi. (Languages of India, 2006)

1.3.2 English- the Preferred Language of the Masses

“A decade ago, the United States of America was the country with the largest English speaking population. Today with “at least 36 crore” Indians, having “the ability to carry on conversation in English” India has taken over that status (Crystal, 1995). As per the Central Intelligence Agency (CIA) report in July 2005, the population of India passed above 108 crores (The CIA World Factbook, 2006 b) with roughly a third of its population possessing English language capability, India has more people speaking the language than the United States of America, the Untied Kingdom, Australia and New Zealand combined” (Manivannan, 2007 a).

And these numbers are growing at a galloping pace.

Das (2005 a) in The Position Paper of National Focus Group on Teaching of English, NCERT, New Delhi, (2006), explaining the reason writes, “….because English is perceived to open up opportunities.”
The National Curriculum Framework (2005 a) elucidates: “English is in India today a symbol of people’s aspirations for quality in education and a fuller participation in national and international life…..the current status of English stems from its overwhelming presence on the world stage and the reflection of this in the national arena.”….. (and) “The visible impact of this presence of English is that it is today being demanded by everyone.”

As far back as 1986, Kachru (c) noted, “the power bases of English in India have to be seen in both material and psychological terms”. English is the language of “cultural renaissance spread of nationalism, pan-regional literary creativity and neutrality and there is a strong emotional attachment to the language” (Kachru, 1986 d).

Hohenthal (2007 b) notes ‘having traditionally been associated with political power and elation. English (in India) is still the language of power and prestige, but, there are more practical reasons of its ever increasing popularity.

Today English is India’s not just the preferred vehicle or medium of international communication, but also the vital link language among a multicultural, multilingual population of 108 million who speak “more than one thousand languages (Fasold, 1984 b) and have few common links apart from English (Spolsky, 1978). Also, being a “neutral language” bereft of any “regional, religious or ethnic connotations that many native languages have”, (Kachru, 1986 e). English is an important unifying linguistic medium at both political and individual level (Manivannan, 2007 b).

“English in India has a special place in the parliament, the judiciary, broadcasting, journalism and in the education systems” also. (Manivannan, 2007 c)

English is also the preferred language of business, commerce, culture, internet communication, information and technology industries, higher education, employment, scientific research, and most importantly globalization”. (Baldridge, 2002 b; Shukla, 2004; The Encyclopædia Britannica, 2006 e; Hohenthal, 2007 c; Manivannan, 2007 d).

1.3.3 English – the Language of Limited Elite

But this rosy picture has a very dark flip side also.
Not withstanding hyperbole like “the new light-house of English leaning” (Gupta, 2005 a) and grand claims like India having more English speaking people than the US” (Manivannan, 2007 e; Gupta, 2005 b), the cold fact remains that “only about three percent of India’s population speak English” (Baldridge, 2002 c) or “use English regularly” (Baral, 2006).

Ghose (2006 a) goes so far as to say “India’s claim to having a large number of English-knowing young people” is nothing but “a myth”.

McGivering (2001) remarks “Indians are very good at English language, but it is limited to an elite class”.

Crystal (2004) stated “bearing a few hundred thousand, most Indians learn English as a second language or as a foreign language”.

The Position Paper of National Focus Group on Teaching of English, NCERT, New Delhi (2006) observes that at the national level, for majority of the students English remains “a principal reason for failure at class X.”

Ghose (2006 b) writes, “a vast majority of the students are being taught English on paper”.

Ghose (2006 c) further writes, “The other part of the problem is the quality of English”. “…..increasing number of young men and women who claim to, and do, speak some kind of English but that is barely recognizable as that language”….“they speak a kind of pidgin English”.

Raman (1996) remarks, “The quality of English written and spoken in India is appallingy poor.

Nair (2004) observed that there is an express “need for making English the language of the masses”.

Gupta (2005 c) observes there is more “emphasis on grades and positions than on issues of fluency or proficiency”. The learners of English are concerned more with “examination than with communicative proficiency”.

Shermila (2006 a) states, “A high percentage of school leavers leave the precincts of the school as ignorant of English as they were when they entered the school first. Many years of learning English leads most of our school-goers nowhere”.
“They do not know how to use the commonest structures of English”.

“It drives home the fact that in general, students are not found to be competent in English. Even after studying the language for nine years, they are not able to speak or write on their own”.

Ghose (2006 d) adds, “Majority of the young people can “just manage a few correct sentences”, they have “pathetically limited vocabulary” and their speech suffers from “gross grammatical errors”.

1.3.4 English in Punjab

The state of affairs is particularly disquieting in Punjab. Punjab is primarily an agrarian state with more than seventy percent of its populace residing in villages which have no direct access to educational facilities worth the name. An overwhelming number of the students from these villages are catered to by the Government run schools affiliated to the PSEB. In these schools, although English has since been introduced from class 1, it is taught and studied as a Third or Foreign language. Additionally, several home, school and personal factors contribute to the consistently low achievement in English language which, on account of its being an out and out non-native language, requires rigorous studies for its mastery. As such, the PSEB School students' knowledge of all aspects of English language is rather limited and they routinely commit grim mistakes in both the spoken and written forms of the language; as such, there is an express need to study the errors of students of Punjab and to correct them.

1.4 Conventions of Language Usage

In every language, there are certain established conventions of expressing ideas and understanding expressions. These conventions are also followed in the use of other different skills and systems of language like sounds, vocabulary, grammar, writing, etc.

Cook (2002 c) observes, an express “goal implicit in much language teaching” is “to make the students approximate to native speakers.” González-Nueno, (1997) adds, “the ultimate goal” is ..... to "sound like a native speaker" “in all aspects of the language.” Thus, ‘the native speaker's ‘competence’ or ‘proficiency’ or ‘knowledge of the language’ is a necessary point of reference for the second language proficiency
(Stern, 1983) and students are considered successful according to how close they get to the native speakers.

### 1.5 Malapropism

Any production or reception that doesn’t comply with or conform to these set practices is labeled as a deviation or malapropism.

### 1.6 Errors

However, every malapropism in the use of these skills or systems of language isn’t an error. The errors or mistakes of native users and foreign learners are quite different not only in incidence or frequency but also in the areas or aspects of language.

Corder (1973 a), the father of Error Analysis, in his seminal work, The Significance of Learners’ Errors” refers to the lapses or mistakes of native speakers as ‘Breaches of code’ since by definition the learners know the formation rules of their mother tongue. However, an error is “a systematic deviation from what is regarded as the norm” (OU notes, 2007 a; Karra, 2006 a) by a foreign learner of the language.

Chanier, Pengelly, Twidale and Self (2007 a) also concur: “……the term ‘error’ is taken to mean some idiosyncratic or ‘un-native-like’ piece of language produced regularly and systematically by a foreign language learner. Lapses and slips refer to occasional actions which are not systematic. They are often called mistakes.”

To elaborate the concept of error and lapses or mistakes further, Corder (1973 b), Miyao (1999), Sattayatham and Honsa (2007), expound, “errors” are related with “competence”, “mistakes” with “performance”. Also, the mistakes of the natives are non-systematic i e these are random performance slips caused by fatigue, excitement, etc. (OU notes, 2007 b).

The mistakes are not significant to the process of leaning and “can be self-corrected” by the speaker (Chomsky, 1986 a; James, 1998 a). This “Error of performance” is also known by other names like, “derailment”, “goof ups”, “slips” (Shaughnessy, 1977) and, “lapses” (Chanier, Pengelly, Twidale and Self, 2007 b).

An error, on the other hand, is a systematic one, and occurs in an second language (Karra, 2006 b). Corder (1974 a) further states, “A leaner cannot” “self-
correct an error because it is a product reflective of their current stage of L2 development”. “Gass and Selinker (2001) also write, though errors are “likely to occur repeatedly, they “are not recognized by the leaner”.

An error also includes “linguistically and pragmatically correct” though “contextually incorrect”, “unnatural or strange” sounding forms and expressions (Emery, 1987; Bridges, 1990; Lennon, 1991; Swan, 1995).

Further, as Verma (1974) points out, in case of the native speaker, the mistakes do not become a part of his linguistic habit, but a foreign learner’s errors get ‘fossilized’.

1.6.1 Types of Errors

Donald (2007 a) writes one way of categorizing errors is “by their linguistic type.”

Chomsky (1986 b) points out that, errors are both receptive i.e. in listening and reading and expressive i.e. in speaking and writing.

As such, “errors can be classified as simply productive (spoken or written) or receptive (faulty understanding).” (Donald, 2007 b)

Lengo (1995) also adds errors can be “classified as ‘productive’ and ‘receptive’ ”. Productive errors are those which occur in the language learner’s utterances; and receptive or interpretive errors are those whose result is the listener’s misunderstanding of the speaker’s intentions.

Alternately, errors can also be classified by the names of the skills or areas in which they are found, as, phonological errors (faulty pronunciation, stress, etc.), semantic errors, lexical errors (word choice), errors of substitution, punctuation errors, orthographic errors, etc. (Haneda, 2005), grammatical (prepositions, articles, reported speed, objectives, clauses, irregular verbs, tenses, possessive cases), syntactic (coordination, sentence structure, nouns and pronouns, word order), semantic, and substance (mechanics, punctuation and capitalization and spelling) organizational and discourse errors, etc. (Ali, 1996 a), interpretive (misunderstanding of a speaker’s intention or meaning), pragmatic (failure to apply the rules of conversation), mondegreens (erroneous perception of the intended sounds) (Donald, 2007 c)

James (1998 b) also gives two bases of error taxonomies:
Linguistic Category, which specifies at what level (phonology, lexis, text, discourse, etc.) or class (noun, verb, adjective, etc.) it occurs.

Surface Structure or the way surface structures (target forms) are altered or modified (omission, addition, misformation, misordering). (Dulay, Burt and Krashen, 1982)

Chanier, Pengelly, Twidale and Self (2007 c) write, “Errors can be "overtly idiosyncratic" (ill-formed in terms of target language rules) or "covertly idiosyncratic" (sentences superficially well-formed but when taking the context into account they are clearly ungrammatical).”

Corder (1974 b) gives the types of errors as “(a) errors of well-formedness (grammaticality) and (b) errors of appropriateness which are further classified as referential errors (e.g. calling a hat a cap), register errors (e.g., referring to a ship as a boat in a naval context), social errors (e.g. addressing a teacher as “old man”) and textual errors (e.g. providing a personal narrative when a project report is required).

Corder (1973 c) further explains the four main categories of errors as: Omission of some required element; Addition of some unnecessary or incorrect element; Selection of an incorrect element; and Misordering of elements. All these errors can occur at more than one levels i.e. phonological, morphological, etc.

Richards (1974 a) classified errors into three different categories (a) interference - the use of elements from L1 when speaking L2 and found at the level of pronunciation, morphology, syntax, vocabulary and meaning (b) overgeneralization - the use of a strategy learnt on one item in the target language at an in appropriate place, and (c) performance errors.

Dulay and Burt (1974 a) proposed three categories of errors: developmental, interference and unique.

Burt and Kiparsky (1974) and Richards, Platt and Weber (1985) also classify or typify errors as Global errors involving “the overall structure of a sentence or even a paragraph and Local errors, affecting “a particular constituent” like a phoneme, a morpheme, a word or a clause.

According to Stenson (1974), errors are of two types: Inter-lingual and Intra-lingual. Inter-lingual errors are caused because of interference of the native language of the foreign leaner and can be found in both utterances and writings of the learners. The intra-lingual ones are the similar errors found in all L2 learners regardless of their L1. These are Overgeneralization; Oversimplification where
certain items perceived redundant are reduced as in “I studied English for two year”; Communication Based or Coinage as in using “airball” for balloon and Induced Errors or the errors picked from faulty understanding of the teacher’s presentation.

Djite (1988) gives four categories of the learners’ deviations: grammaticality, acceptability, correctness and strangeness.

James (1998 c) classified errors into five patterns as: Omission; Over-inclusion; Mis-selection (using wrong words, not wrong forms); Misordering, and Blends (combining two alternative grammatical forms).

Homlcho (2003) classified the errors as Omissions (He hit can); Additions, like Overgeneralization (putted for put) or Unnecessary Insertion (apparatuses for apparatus); Wrong Combination (Your information are* wrong.); Inappropriate Constructions like Fragmented or Incomplete Sentences (Because I didn’t like law. I dropped it in my first year.) or Run-On sentences (compound sentences that have been incorrectly punctuated like writing sentence after sentence without end punctuation or tying sentences together by using the coordinating conjunction but leaving out the comma e.g He loves sociology as a discipline however he plans to major in anthropology to the dismay of his mother she prefers geography. Or He loves sociology and he plans to major in that disciplinary area.) and Misordering or Inversion as in Subject-Verb inversion (Now I don’t know why are we taught this).

A few more types of errors mentioned by Stapp (1997) are: Lexical confusions or Incorrect Approximation, Direct or literal translation, use of Similar Sounding words and Phonological malapropisms.

Another way of typifying or classifying errors is by the reason “for their production” (Donald, 2007 d). Accordingly, the errors are of three types: pre-systematic, systematic and post-systematic.

The Pre-systematic errors occur at the stage where the learner is ignorant of a particular rule and makes a random guess which goes wrong. Since there is no system or patterns yet in his guesses, the errors are random and the learner occasionally produces the correct form also.

The Systematic errors are the errors where the learner’s knowledge is not quite up to the mark and some of the rules he has learnt or discovered for himself are still faulty, but he is consistent (systematic) in their use.

The Post-systematic errors are those errors which occur even though the learner is capable of producing the correct forms but is not consistent in his
performance because of lack of sufficient practice. However, the errors are only transitional and dynamic and disappear when the learner internalizes the rules fully through sufficient exposure to the correct forms of the target language. Since these errors occur after the learner has mastered the language, at least to a reasonable level, these errors are often misconstrued as slips, lapses or mistakes which is patently wrong.

Naqvi (2006) writing in the context of translation, gives the types of errors as (a) Grammatical errors including errors of usage, collocation, syntax, preposition and tense; (b) mistranslations like translating ‘pen’ into the word ‘marker’ or ‘pencil’ due to insufficient lexicographic tools (c) Localization errors which take place due to the fact that the term to be translated normally does not exist as a concept in the target language, for instance translating ‘desserts’ into the Hindi word ‘sweets’, and (d) Errors of Inconsistency meaning erroneously using the different words of synonyms with different connotations for the same word in a single context like using the Punjabi equivalents of ‘electricity’, ‘light’, ‘sunlight’, ‘glaze’, ‘tube light’ and so on for the English lexical item ‘light’.

Hull (2007) also proposes her taxonomy of errors based on what the writer does while editing. These categories are Consulting errors (the errors the writer changes correctly by using internal knowledge of rules), Intuitive errors (the errors the writer recognizes as wrong but can’t state why) and Comprehending errors (the errors recognized by the writer apart from the standard rules of grammar and noticed because of the discrepancy between what is said and what the writer intends to say.

However, since these aren’t apparently related with the teaching learning context of a foreign language learner, these are hardly of any use or interest to the linguists or the language teachers.

1.6.2 Error Correction Theories

Though teachers, particularly the second language teachers “remain concerned with accuracy” (Rose, 1983), and “error identification remains ingrained in their habitual practices” (Cummings, 1983), the “recent theory on language acquisition and teaching methodology supports the position that not all errors should be corrected, and those that are corrected should usually not be ‘treated’ immediately (Rivers, 1964, 1968 and 1976 a; Holley and King, 1971; George, 1972
a; Chastain, 1976; Krashen, 1987; Doff, 1988; Allwright and Bailey, 1991; Lewis, 1993; Nunan and Lamb, 1996; Ur, 1996; Ancker, 2000 a).

Lalande II (1981 a) maintains—“If the language programs are to emphasize communication, teachers will have to develop a greater tolerance to error than they have displayed to the present.”

This “more tolerant modern approach” is based on the fact that errors are normal and unavoidable during the learning process (Ancker, 2000 b).

Another argument extended by Rivers (1976 b) is “If a teacher is a perfectionist and tends to be too critical of every small error, the group or individual may perceive the task as an impossible one…."

Guo (2006) argues “it is inaccurate and harmful to treat the incomplete acquisition of second language learners as ‘errors’ and goes so far as to claim if left untreated “some of them get corrected in due time” by themselves.

Hendrickson (1979) concurs, “….correcting every error is counterproductive to learning a foreign language.” Whereas, “when teachers tolerate some student errors, students often feel more confident about using the target language than if all their errors are corrected.” “Therefore teachers need to create a supportive classroom environment in which their students can feel confident about expressing their ideas and feelings freely without suffering the threat or embarrassment of having each one of their oral and written errors corrected.”

James (1977) and Hughes and Lascaratou (1982) take a middle position and suggest making a hierarchy of errors and correcting only the gravest ones.

Lalande II (1981 b) also suggests that the teachers make a “distinction between errors that render an attempted communication incomprehensible (global) and those that do not (local)” and correct only the selective, more serious ones.

Although the contention held by Corder (1974 c), Richards and Simpson (1974 a), Richards (1974 b), Dulay and Burt (1974 b), Taylor (1975), Jarad (1986) and Selinker (1992 a) that “errors are normal and inevitable features indicating strategies that learners use” isn’t in any way contented, it is also an unchallenged fact that a lack of accuracy in students’ use of language “may interfere with the comprehensibility of their message (or ideas) and mark them as inadequate users of the language” (Ferris, 2002 a). Richards (1973) points out, “Deviancy from grammatical or phonological norms of a speech community elicits evaluation reactions that may classify a person unfavorably. Ferris (1995, 1999 and 2002 b)
remarks, “making typical ESL errors may stigmatize students and negatively affect the grading of their work.”

Besides, “the policy of restraint and selectivity in the correction of spoken errors may seem sensible indeed, but the same can’t be said for the written errors.”

Lalande II (1981 c) argues: “….leaving written errors uncorrected reinforces incorrect grammatical structures.”

It further contends- “Foreign language teachers have an obligation to provide honest and comprehensive assessment of their students’ linguistic competence, and they can best fulfill that obligation by providing total feedback on written errors.”

Countering George’s (1972 b) contention that “ correction of all local errors is excessive, likely to arouse antagonism from students and waste time,” Lalande II (1981 d) further argues “if teachers are not to make students aware of local errors in either spoken or written statements, then when is the necessary feedback to be provided?”

Ludwig (1979) also observes, “Freedom to express oneself doesn’t imply that error is tolerated, or worse, ignored. Feedback is essential if students are to refine their concept of the target language.”

Another noteworthy if less cogent reason for correcting all errors of students’ is: “…if communication is more than a mere exchange of information, then comprehensibility may not be the only criterion for correction of errors.”

This is all the more true for the skill of writing because for one, judging competence in writing involves determining not only whether a message has been communicated but also how well and for two, the ability to write clearly is essential for effective communication and critical to employment and production in the contemporary world. Individuals are expected to be capable of writing, more so in English- the lingua franca of the world- for a variety of audiences in different styles, including standard themes, business writings, financial proposals and technical and professional communications. As such, writing errors not only impede the efforts of the writer to communicate a particular need or desire, but also seriously jeopardize the social, personal or professional relationship he wishes to establish.

1.6.3 Significance of Errors

Since, by definition, an error is something negative and should be avoided; to a lay person, use of the expression ‘significant’ for them may sound quite
paradoxical, but the fact is that the errors of a learner are just as important as a cadaver in study of human body, providing with knowledge of the causes of errors and with keys to minimize them.

Hubbart et al (1950) point out, a careful look into the errors of the students will help the teachers sort out their problems.

Corder (1967), the father of error analysis- the scientific and systematic analysis of factors causing errors and the patterns of their prevalence, maintains the investigation of errors has thus a double purpose: it is diagnostic and prognostic. It is diagnostic because it can tell us the learner’s *tal de langue* (language learning strategies) at a given point during the learning process and prognostic because it can tell course organizers to reorient language learning materials on the basis of the learners’ current problems”.

Corder (1974 d) further expounds that errors are significant to both the teacher and the learner, the syllabus designer and the textbook writer. To the teacher it shows the student’s progress, the reasons why he makes errors, the areas that need reinforcement in teaching and the strategies to adapt to the needs of the learner. To the learner, they provide feedback and enable him “to learn more efficiently”.


Lalande II (1981 e) also agrees “analyzing of the errors committed by the learners while learning L2 helps the language teachers to design the curriculum and teaching materials and also in the gradation of the teaching material.”

Further, “it also helps the linguists in identifying and establishing universal strategies and principals involved in learning L2.”

Listing some more benefits of error analysis Lalande II (1981 f) writes, “errors are important sources of information”, and wield “considerable amount of influence over learning, teaching, testing and evaluation and in the material production.” Some of their uses for language teachers are:

1. Errors guide the teacher not only to identify the problematic areas of L2 learners, but also to spot out areas for which remedial programs and materials are needed.
2. Errors help identify the level of linguistic and communicative competence of the learner.
3. Errors help interpret the learning strategy of the learner.
4. Errors help to identify the influence of L1 while learning L2.
5. Errors are also useful to in deducting the amount of interest learner shows in L2 learning.

The syllabus designer and the text book writer can also benefit from the feedback about the effectiveness of the teaching materials and teaching techniques, about the parts of syllabus needing further attention and in terms of broader planning, for designing remedial syllabus or programmers for re-teaching.

Corder (1974 e), also adds the theoretical object error analysis serves is to “elucidate to the researcher what and how a learner learns when he studies a second language”. The study of errors also provides feedback to both descriptive linguists and psychologists and as part of an experiment, ‘confirms’ or disproves linguistic theories” (Ali, 1996 b; Chen, 2006; Haji, 2006).

1.6.4 Causes of Errors

Owing to their immense importance for the teacher, the learner, the text book writer, the theorist and the researcher, the causes of errors, also at times referred to as the sources of errors, have attracted an impressive, plethora of researches and each researcher has given their total number, names and classes differently.

Selinker (1992 b) reported five sources of errors (1) language transfer (2) transfer of training (3) strategies of second language learning (4) strategies of second language communication and (5) overgeneralization of target language or linguistic material”.

Corder (1974 f) identified three sources of errors (a) language transfer (b) overgeneralization or analogy and (c) method or material or teacher induced errors.

Dulay and Burt (1974 c) gave four types of goofs: (1) interference – like goofs (2) L1 developmental goofs (3) ambiguous goofs which are either interference like or L1 developmental goofs and (4) unique goofs which are neither interference like nor L1 developmental goofs.

Richards and Simpson (1974 c) listed seven sources of errors and gave their details as under:
(1) **Language Transfer:** Carrying over of the habits or concepts/rules of mother tongue (or some previously learnt foreign language) causes error inducing interference.

Earlier it was believed that language transfer, also known as transformation or interlingual interference was a major cause of errors of the foreign language learners, but, the recent empirical evidence indicates it accounts for only 3%-25% of errors.

(2) **Intra-lingual interference**, the reasons for the cause of which are (a) overgeneralization (b) ignorance of rule restrictions i.e. applying rules to contexts to which they do not apply (c) incomplete application of rules (d) semantic errors such as building false concepts or systems i.e. faulty comprehension of distinctions in the target language (3) **Sociolinguistic estimation** which includes factors like motivation (Integrative motivation, the desire to be like valued members of the community that speak the second language or Instrumental motivation, the desire to achieve proficiency in a language for utilitarian, or practical reasons) and settings for language learning (compound or coordinate bilingualism (4) **Modality of exposure** to the target language or that of production (5) **Age of the learner** upon which depend to a large extent the cognitive or learning capacities of the learner (6) **Successions of approximations** systems of language, the possession and the order of acquisition of the person’s different lexical phonological, syntactic items (7) **Universal Hierarchy of difficulty** which can be explained as the inherent difficulty of certain phonological, syntactic or semantic items or structures for learners of all backgrounds.

James (1998 d) exposed three main diagnosis-based categories of errors:

1. **Inter-lingual** errors which happen when the mother tongue “contaminates” the foreign language. Technically, it is called “negative L1 transfer or Mother tongue interference.”

2. **Intra-lingual** or development errors which occur during the internalizing (learning process) of the second language. The learner, in this case, tries to “derive the rules behind the data to which he/she has been exposed, and may develop hypotheses that correspond neither to the mother tongue nor to the target language” (Richards 1974 c)

Dulay and Burt (1974 d) claim almost ninety percent of errors are intra lingual. These could be classified as
(a) Learning strategy based errors, like (i) false analogy (ii) mianaalysis (iii) incomplete rule application (iv) exploiting redundancy (v) over-looking co-occurrence restrictions (vi) hypercorrection or monitor overuse (viii) over generalization or system simplification, and

(b) Communication strategy based errors which could be based on (i) holistic strategies as in approximation, language switch and calques, or on (ii) analytic strategies as in circumlocution which is an indirect expression of the concept rather than direct expression.

3. **Induced errors** which "result more from the classroom situation than from either the student’s incomplete competence in English grammar (intralingual errors) (Stanson, 1983)” or could be (a) Material induced (b) Teacher-talk induced (c) Exercise induced (d) Pedagogical priorities induced or (e) Look-up induced (caused by the learner’s incorrect understanding or inferences or by his misuse of the reference aids like the dictionary, thesaurus, etc.) 

Ali (1996 c) gave the following as the sources or causes of errors:

1. **Interference**: Wilkins (1978) writes, "When learning a foreign language an individual already knows his mother tongue, and it is this which he attempts to transfer. The transfer may prove to be justified because the structure of the two languages is similar - in that case we get 'positive transfer' or 'facilitation' - or it may prove unjustified because the structure of the two languages are different - in that case we get 'negative transfer' - or 'interference'.

2. **Loan words** or the foreign language words adopted by the national language of the learner when pronounced or used with a degree of variation e.g. the word ‘station’ pronounced ‘is tation’ by the learners from UP.

3. **Inherent difficulties of certain features of the target language** e.g. in lexis word ‘fast’ being used as different parts of speech like as a noun, a verb, an adverb and at least in six different ways as an adjective and giving out different meanings or in pronunciation, ‘ch’ being pronounced as ‘k’ ‘ft’ or ‘f’ (Hornby, 1974).

4. **The model or the teacher** particularly when the language is being ‘picked’ from professionally untrained, non-standard (not having high level quality) resources / models or from teachers who have been trained to teach other subjects like science or social studies.
5. *The method*, if it is overemphasizing any one particular aspect of the language as the cost of the other.

6. *The material* when they aren’t organized or sequenced in a psychological or logical way / fashion / manner.

7. *Inadequate exposure to the target language* coupled with insufficient opportunities to practice the target language in areas like grammar, lexis, spelling, punctuation, etc.

8. *Overgeneralization* which “covers instances where the learner creates a deviant structure on the basis of his experience of other structures in the target language (Richards, 1974 d).”

9. *Indeterminacy* referred to by Jain (1974) as “inconsistency or uncertainty in handling a linguistic item e.g. asystematic use of the definite article by an uncertain user.

10. *Medium transfer* i.e. misspelling or mispronouncing a word according to its actual pronunciation or spellings respectively (Tench, 1983) e.g. writing ‘terrible’ as ‘terible’ or speaking ‘k’ in knife.

11. *Communication strategies* or “systematic techniques employed by a speaker to express his meaning when faced with difficulty” because of his “inadequate command of the language used in the interaction” (Corder, 1981). The most common communication strategies are:

    (a) *Avoidance or shunning* of lexical items, sounds or grammatical items which the learner isn’t sure of or has difficulty in producing or is not familiar with (Brown, 1987).

    (b) *Inopportune use* of prefabricated patterns, set phrases or stock sentences for different occasions as in “I don’t understand how can you do that” juxtaposition of two sentences “I don’t understand” and “How can you do it?” without deletion of “can”.

    (c) *Approximation* or employment of a lexical item which shows only certain features of the intended word e.g. using “knife” for “bread knife” or “stick” for “truncheon”, etc.

    (d) *Word coinage* or creating a new word or phrase which is usually non-existent in the target language to convey the intended meaning, for example, coming up with words “water-holder” and “water-boiler” for “bucket” and “bottle” respectively.
(e) **Circumlocution** or description of characteristics of the target object or action like “the thing to hang clothes on” for a “clothes line” and “the person who tests your eyes” for “optician”. Here, it would be pertinent to mention that though circumlocution strategy may not always lead to errors, it shows the learner’s inadequate lexical competence.

(f) **Language switch** or simply falling back on their first language without attempting anything in the target language.

Chanier, Pengelly, Twidale and Self (2007 d) listed the following as the causes of errors:

1. **Inter lingual or mother tongue Interference**: These errors are influenced by the native languages which interfere with target language learning. Learners translate word by word idiomatic expressions, vocabulary and even the grammatical rules of their first language into the second language which leads to errors. However, these can be predicted through contrastive analysis and therefore, restricted.

2. **Intra lingual** errors: “These are the outcome of the learner’s internal processing used for acquiring knowledge of L2 and using it for creating speech” (Chanier, Pengelly, Twidale and Self, 2007 e). The learner’s internal processing involves three types of strategies: strategies of learning (how to internalize and automatize L2), of production (how to use existing resources automatically), and of communication (how to compensate for inadequate resources).

Though unintentionally, all these strategies are often the sources of errors which are described as below:

**Errors caused by Strategies of Learning:**

a) **False Analogy**: assuming that the new item (B) also behaves like the learnt item (A). The plural of ‘boy’ is ‘boys’, therefore that of ‘child’ is ‘childs’

b) **Misanalysis or forming wrong hypothesis**: assuming ‘its’ is the plural of ‘it’ because it has an ‘s’ in the end.

c) **Incomplete Rule Application**: changing or decreasing the complicated rule to simplify it. In “Nobody knows where was* Barbie”, applying only two components of the interrogative formation rule (selecting and
fronting the ‘wh’ element), but omitting to invert the subject and the verb.

d) **Exploiting Redundancy**: carrying unnecessary morphology and double signaling.

e) **Overlooking Co-occurrence Restrictions**: in “I would enjoy to* learn about America”, overlooking the facts that the rules disallow the use of ‘to’ and demand the use of a gerund complement.

f) **Hypercorrection or Monitor Overuse**: deliberate suppression of a potential L1 transfer because of overcautious and strict observance of rules. “I lent him seventeen thousands* rupees.”

g) **Overgeneralization or System Simplification**: over-wide application of words, rules which have worked successfully in one context; like generalization of the relative pronoun ‘that’ to the exclusion of ‘who’ in: “Bill that* studies in my class.”

**Errors caused by Strategies of Production:**

a) **Semantic Simplification**: simplifying a sentence by reducing the number of semantic cases and presupposing that the gaps will be inferred as, dropping ‘He’ in “He hit me” (Agent + action + patient) to simplify the task.

b) **Linguistic Simplification**: simplifying the complex structures or sequences as, “I watching TV. He comes.”

**Errors caused by Strategies of Communication:**

a) **Holistic Strategy or Approximations**: using synonyms or antonyms to refer to a concept e.g. using “He is not a coward.” for “He is brave.”

b) **Circumlocution**: expressing the concept indirectly or through allusions rather than by direct reference like using “picture place” for “gallery”.

Myles (2002) also gives the following social reasons or causes of errors:

1. negative attitude toward the target language
2. continued lack of progress in the L2
3. a wide social and psychological distance between the learner and the target culture, and,
4. a lack of integrative and instrumental motivation for learning.
In light of the above expositions, the present investigator found it convenient to understand the causes of errors by arranging them into the following classes:

(a) Pertaining to the process of acquiring or learning language.
(b) Related to teaching environment and experiences and
(c) Personal variables of the learner

The influence of the first type of factors is seen in inter-lingual or intra-lingual errors i.e. when the mother tongue interferes or when the learner misinterprets the rules of the new language and 'tries out' various expressions.

Major among the teaching related factors are wrong or ineffective teaching where either the ‘model’ from where language is learnt is faulty or the teacher’s instructions aren’t received or understood. This usually happens when there are interfering sounds in the form of classroom noise or outside disturbances.

The teacher is mostly not understood when either there is disparity between his and the learner’s level, the methods are unsuitable to the occasion or the learner, the matter is not inspiring, teaching aids aren’t used, the learner is not actively involved, there are no opportunities for revision or the teacher doesn’t pay individual attention and corrects or remedies the situation immediately.

The factors about the learner himself are the most numerous, the most prominent and the most researched. The learner’s age, intelligence, limits of his physical abilities like hearing or speech, his special aptitude, attitudes (to learning, to the language and its speakers), motivation, choice among strategies, personality, emotional disturbances, quality of nutrition, linguistic or social background, locale, gender and certain personality factors like introversion, extroversion are the most common causative factors.

All these factors have to be looked into scientifically for the analysis of language learning conditions prevailing in Government run schools which are the biggest providers of education to large masses.

Although there was quite an impressive range of variables for studying the errors by the grade XI students of Punjab, available for investigation, the personal variables of Cognitive Styles and Cerebral Dominance, in addition to a few other ones like Locale, Gender and Caste, were given preference over the others because the investigator felt few investigators had researched the problem from this perspective before.
1.7 Cognitive Style

The term ‘Cognitive Style’ refers to the characteristic ways in which an individual filters and processes stimuli so that environment takes on psychological meaning, or, in other words, cognitive style refers to the way an individual conceptually organizes the environment.

Cognitive style is a broad dimension of individual differences that extends across both perceptual and intellectual activities. It refers to the mode an individual employs in perceiving, organizing and labeling various dimensions of the environment.

Cognitive psychology uses the term to describe the way individuals think, perceive and remember information or their preferred approach to using such information to solve problems.

1.7.1 Definitions of Cognitive Styles

Messick (1969) defines cognitive styles as “the information processing habits which represent a person’s typical modes of perceiving, thinking, remembering and problem solving.

Witkin, Moore, Goodenough and Cox (1977) describe, “Cognitive style as the “characteristic approaches the person brings with him to a wide range of (learning) situations”, which “encompasses both his perceptual and intellectual activities”.

Goldstein and Blackman (1978) define cognitive style as “a hypothetical construct that has been developed to explain the process of mediation between stimuli and responses”. According to them, “the term cognitive style refers to characteristic ways in which individuals conceptually organize the environment. They further add, “Cognitive style is an information transformation process whereby objective stimuli are interpreted into meaningful schema. Cognitive style is an aspect of overall personality and cognitive processes”.

Hansen (1995) describes cognitive styles as “the manner in which information is a acquired and processed. Cognitive style measures do not indicate the content of the information but simply how the brain perceives and processes the information.”

Tennant (1988) defines cognitive styles as “an individual’s characteristic and consistent approach to organizing and processing information.”
Riding, Glass and Douglas (1993) term cognitive styles as “a fairly characteristic of an individual” and “are static and are relatively in-built features of the individual.”

Liu and Ginther (2007) define cognitive style as “an individual’s consistent and characteristic predispositions of perceiving, remembering, organizing, processing, thinking, and problem solving.”

Bull, Montgomery and Kimball (2000 a) state “cognitive style refers to the way a learner organizes, filters, transforms and processes information. A person’s cognitive style is determined by the way in which the takes in the environment in which she is embedded. It is composed of variables related to how we think, how we feel and how we sense or acquire input. Each learner builds her own worldview that is highly idiosyncratic. A person’s cognitive style is a pattern of strategies that are used to resolve problems including learning.

Ford, Wilson, Foster and Ellis (2002) define cognitive styles as “tendencies displayed by individuals consistently to adopt a particular type of information processing strategy”.

Hansen (1995) in Cognitive Styles and Technology Based Education writes “Cognitive styles can be described as the manner in which information is acquired and processed. Cognitive style measures identify how the brain perceives and processes information, not the content of the information……it is important to remember that cognitive styles do not indicate differences in learning ability or memory.”

Ausburn and Ausburn (1978) write the Cognitive Styles are characterized by the following three properties. The first important property is the generality and stability across tasks and over time. Therefore, they are resistant to training and change. The second important property is the relative independence of cognitive styles from traditional measures of general ability. The third important property is cognitive styles’ relationships with some specific abilities, characteristics, and learning tasks. Cognitive styles have either positive or negative relationships with motivation and academic achievement depending on the nature of the learning task.

Stannard (2003 a) writes the study of cognitive processes has its roots in the Gestalt psychology of Max Wertheimer, Wolfgang Kohler and Kurt Kafka in the studies of cognitive development in children by Jean Piaget during the nineteenth century and in Carl Jung’s postulates of personality types.
1.7.2 Cognitive Styles and Related Concepts

Controversy exists over the exact meaning of the term cognitive style and also as to whether it is a single or multiple dimension of human personality.

Stannard (2003 b) observes some scholars like Sternberg and Grigorenko (1997) and Riding and Cheema (1991) postulate that cognitive style is a bridge between cognition or intelligence measures and personality measures. But, cognitive style is unique in its polar nature, having on “either or” measure where the absence of one characteristic implies the presence of its extreme. This is in contrast to personality measures that are more multifaceted.

There is also some argument in the literature whether cognitive style is a “preference, disposition, interest, strategy or trait” or “ability”.

Jonass and Grabowski (1993) write “Cognitive abilities cover the content and refer to the level of cognitive activity whereas styles indicate the manner and form of learning”......“abilities are stated in terms of maximal performance; therefore, they are unipolar (i.e., less ability...... more ability) and value directional measures (having more is better than having less), whereas styles are bipolar (visual....verbal) and value differentiated (neither pole is necessarily better).” Also, “abilities enable learners to perform tasks whereas styles control the ways in which tasks are performed.”

Bull, Montgomery and Kimball (2000 b) and Mayers (2003) conclude cognitive style “refers to the way that people process and represent information” and cognitive ability “refers to things people are capable of doing”. As such, Cognitive style differs from cognitive ability (or level) in that the latter can be measured by aptitude tests or so-called intelligence tests.

Differentiating cognitive style from strategy, Pithers (2002) explains that a cognitive style is “the way in which a learner approaches a learning task across a range of different domains” whereas a cognitive strategy involves a conscious choice by the learners as to how they will handle their behavior in a particular learning situation.” Messick (1984) adds, “It is understood that although a cognitive strategy can be adaptable it is still influenced by the underlying and more permanent and persuasive cognitive style.”
Confusion or controversy also prevails on whether cognitive style is the same as learning style or not.

Bull (2003), Meyers (2003) and Dorneyi (2005) aver they are different. “Cognitive style refers to the ways that people process and represent information and learning style or preference refers to the ways that people like information to be presented to them” (Mayers, 2003).

Jonass and Grabowski (1993) write “Learning styles refer to the ways that people learn information, and cognitive styles, which are more global, refer to the way that people see the world around them and interact with it”..... “Learning styles are less specific than the cognitive styles.”

Liu and Ginther (1999) explicate “Generally, cognitive styles are more related to theoretical or academic research, while learning styles are more related to practical applications. A major difference between these two terms is the number of style elements involved. Specifically, cognitive styles are more related to a bipolar dimension while learning styles are not necessarily either/or extremes. Cognitive styles measures conventionally lie somewhere between aptitude measures and personality measures. In addition, cognitive styles in the literature have been viewed in three major respects—structure, process, or both structure and process (Squires, 1981; Wilson, 1981; Tennant, 1988; Riding and Cheema, 1991).”

1.7.3 Types of Cognitive Styles

A number of cognitive styles have been identified and studied over the years. In the seventies, Kefee compiled and synthesized a list of as many as forty separate styles. In 1988, he collapsed his list and developed a shorter, composite list. This list, which is now the basis of for a style instrument, consists of twenty different cognitive styles all of which consist of bi-polar distinctions. Major among these are:

Reflection Impulsivity: Also called conceptual tempo, this theory / style was first studied by Kagan in 1965 and is perhaps the easiest to measure.

Accordingly, impulsive students tend to jump at the first response whereas reflective students think about (or reflect on) their answers. Reflective students make fewer mistakes and are probably more analytical. The reflective learners take more time to analyze the structure of the problem and the details that are presented. Usually this could lead to a lower error rate. Reflective students are better when the
learning, calls for inductive reason (Kagan, Pearson and Walch, 1965) or memory (Kagan, 1966). They are also better generally at school work. (Messer, 1970)

However, Sternberg and Grigorenko (1997) warn: “….impulsivity, as a cognitive style is not the same as having an impulsive personality.”

Holistic Serialistic: The holistic serialistic cognitive style was researched by Pask in the early 1970’s (Stannard, 2003).

Holists or comprehension learners tend to easily conceptualize the global view of a problem and acquire additional knowledge beyond that related to the problem. By contrast, the serialists or operation learners tend to be very analytical and logical in their understanding of the specific goals of the problem. The holists run the risk of becoming ‘globetrotters’ i.e. losing sight of the original purpose and making incorrect analogies whereas the serialists can develop ‘improvidence’ where they are unable to identify the overall concept of a problem.

Some learners seem to be able to switch between the two styles more readily and are called versatile learners.

Deep level Surface level Processing: Expounded by Marton and Saljo in 1976, this style makes distinction between the levels at which the students approach material for learning. ‘The sign’ or surface level students focus their learning on the literal rote learning of the given materials while the deep level processors focus on what is ‘signified’ or the intended meaning of the material. So, the surface level processors tend to ‘just concentrate on trying to remember as much as possible’ whereas the deep level processors tend to determine ‘what is the point of the article’.

Deep level processors tend to quickly grasp the overall concepts and are normally intrinsically motivated but could sometimes miss the details. The surface level processors concentrate on the details, require extrinsic motivation and could sometimes miss the global point of view.

However, both the deep and the surface level processing are required to develop a complete understanding of the problem. (Ford, 2000)

Cognitive Complexity versus Simplicity: Bertini 1986 explains cognitive complexity and simplicity as the tendency to view the world along many or few parameters and tolerance (degree of comfort) or not for unrealistic (out of ordinary) experiences respectively.

Levelers versus Sharpeners: This division of learners was proposed by Holtzman and Klein to explain the first kind as those who tend to see things that are
different as almost or completely alike and the second kind as those who tend to see things that are similar as very different (Riding and Rayner, 1998).

Convergers versus Divergers: Hudson’s convergers divergers construct attempts to measure the processing rather than the acquisition of information by an individual. Accordingly, the convergent thinkers tend to think rationally and logically while the divergent thinkers tend to be more flexible and base reasoning more on heuristic evidence. (The Wikipedia Encyclopedia, 2006 e)

Visualizer Verbalizers: Visualizers learn better from pictorial representations. They form spontaneous mental pictures of objects or concepts about which they are thinking. Verbalizers (imagers) learn better from verbal representations. They consider information in word or verbal associations.

Simultaneous Successive processing: Although considered sometimes as basis for a dimension of intelligence, these measures are used by Das (1988) to differentiate between the cognitive or perceptual processing styles of those who deal globally or process multiple pieces of information simultaneously and those who process multiple pieces of cognitive information in a series or succession.

Adaptation Innovation: One of the most popular models of cognitive styles, this model was devised by Kirton (The Wikipedia Encyclopedia, 2006 f) and is based on an individual’s preferred approach to problem solving. “The adaptors use what is given to solve problems by time-honored techniques. Alternatively, innovators look beyond what is given to solve problems with the aid innovative technologies. While adaptors prefer to do well within a given paradigm, innovators would rather do differentially, thereby, striving to transcend existing paradigms (Kirton, 2003).

Concrete versus abstract (dimension): Goldstein and Blackman (1978) report, “Abstract learners are capable of differentiation and integration; are self-reliant and tolerant of ambiguity; deal well with stress and can see alternatives to problems and emotionally do not have difficulty with role taking and expressing good self-concept.

In contrast, Concrete learners tend to be poor in differentiation; are not completely integrated; have a dichotomous view of their surroundings and tend to rely on authority; are unable to generate alternative solutions to the problems; have a lesser ability to think hypothetically and tend to have a poorly defined self-concept.

In addition to the above, these are several other styles or dimensions like scanning style, conceptual differentiation style, Beiri’s cognitive complexity theories,
Ornstein’s theory, Taggart’s theory, Allison-Hayes cognitive style index, etc (all in The Wikipedia Encyclopedia, 2006 g), cognitive complexity vs. cognitive simplicity (Kelly, 1955), deep-elaborative vs. shallow-reiterative (Schmeck, 1983), global vs. analytical (Kirby, 1988), need for cognition (Tanaka, Panter, and Winborne, 1986-87), objective vs. nonobjective (Leithwood and Montgomery, 1982), organizer vs. nonorganizer (Atman, 1988), right- vs. left-brained (Torrance and Rockenstein, 1988), risk-taking vs. cautiousness (Kogan and Wallach, 1964; Kogan, 1971), scanning vs. focusing (Gardner, 1961), sensitizers vs. repressors (Bergouist, Lloyd, and Johansson, 1973), sensory modality preferences (Bartlett, 1932; Galton, 1883), simultaneous vs. successive (Das, 1988), visual vs. haptic perceptual type (Lewenfeld, 1945); holist vs. analytic (Peters, 1977), holist-analytic vs. verbal-imagery (Riding and Cheema, 1991), holist vs. serialist (Pask, 1972), Kolb’s learning style model (Kolb, 1984), as well as the MBTI learning style model (Lawrence, 1984) (all in Liu 1999) and, as Stannard (2003) and Musser (2007) observe “there is possibility of even more being identified through research and theory”.

However, as Willing (1988) asserts “all of these tend to be assimilated to the construct field-dependence-field-independence.”

1.7.4 Field Dependence and Field Independence

The polar construct of field dependence (FD) and field independence (FI), also known as “psychological differentiation” (Sternberg and Grigorenko, 1997), is “the most researched” and therefore “the most well known” of all these styles (Heineman, 1995; Wyss, 2002).

The field dependence theory of cognitive styles was initially proposed by Hermann Witkin in 1962 and with educational implications by Witkin, Moore, Goodenough and Cox in 1977. Since then, the theory has been continuously revised for over 30 years (Heinman, 1995). It uses the Group Embedded Figures Test (GEFT) developing by Witkin. The GEFT requires subjects to locate simple shapes embedded in more complex geometrical patterns.

People who are less influenced by the surrounding or background field and can easily extract an element are called field independent, those who can’t, field dependent. (Witkin and Goodenough, 1981)

When field dependents interact with stimuli, they find it difficult to locate the information they are seeking because other information masks what they are looking
for. Also, when information is presented in an ambiguous, unstructured format, the field dependent attempt to understand and learn that information as it is presented and without restructuring it. But, the field independents find it easier to recognize and select the important information from its surrounding field because, for one, they perceive objects as separate form the field and can easily dis-embed relevant items from the non-relevant items within the field, and for two, when information is presented in an ambiguous, unstructured format, the field independents can easily provide it structure.

Another way to look at field dependence and independence is through a global versus articulated cognitive style. Those with a global perspective, field dependents, see things in the entire perceptual field (the forest rather than the trees). In other words, field dependents have difficulty separating the part from the complex organization of the whole. The analytic style presented by field independents allows them to create their own models for things they want to understand or articulate to others.

The other principal characteristics of FI and FD learners in classroom / teaching learning situations are given by Garger and Guild (1987), Willing (1988), Chen and Macredie (2002), Pithers (2002) and Town (2007) as below:

<table>
<thead>
<tr>
<th><strong>Field-Dependent</strong></th>
<th><strong>Field-Independent</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceives globally</td>
<td>Perceives analytically</td>
</tr>
<tr>
<td>Experiences in a global fashion, adheres to structures as given</td>
<td>Experiences in an articulate fashion, imposes structures of restrictions</td>
</tr>
<tr>
<td>Makes broad general distinctions among concepts, sees relationships</td>
<td>Makes specific concept distinctions, little overlap</td>
</tr>
<tr>
<td>Social orientation</td>
<td>Impersonal orientation</td>
</tr>
<tr>
<td>Learns material with social content best</td>
<td>Learns social material only as an intentional task</td>
</tr>
<tr>
<td>Attends best to material relevant to own experience</td>
<td>Interested in new concepts for their own sake</td>
</tr>
<tr>
<td>Requires externally defined goals and reinforcements</td>
<td>Has self-defined goals and reinforcements</td>
</tr>
<tr>
<td>Needs organization provided</td>
<td>Can self-structure situations</td>
</tr>
<tr>
<td>More affected by criticism</td>
<td>Less affected by criticism</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Uses spectator approach for concept attainment</td>
<td>Uses hypothesis - testing approach to attain concepts</td>
</tr>
<tr>
<td>Finds it difficult to learn where the task involves several steps</td>
<td>Accomplishes learning tasks that involve several steps</td>
</tr>
<tr>
<td>Prefers deductive learning</td>
<td>Prefers inductive learning</td>
</tr>
<tr>
<td>Is motivated through verbal praise, through helping the teacher, through external rewards (stars, stickers, prizes)</td>
<td>Is motivated through grades, through competition, through choice of activities, personal goal chart,</td>
</tr>
<tr>
<td>Needs showing the task's value to other people</td>
<td>Needs showing how the task is valuable to him</td>
</tr>
<tr>
<td>Prefers providing outlines and structure</td>
<td>Prefers freedom to design their own structure</td>
</tr>
<tr>
<td>Finds forging links between new information and prior knowledge difficult</td>
<td>Forges links between new information and prior knowledge difficult more easily</td>
</tr>
<tr>
<td>Prefers material which has a human, social content; or which has fantasy or humor; personal; musical, artistic</td>
<td>Favors material tending toward the abstract and impersonal; factual or analytical; useful; ideas</td>
</tr>
<tr>
<td>Has affinity for methods in which various features are managed simultaneously; realistically; in significant context</td>
<td>Has affinity for methods which are: focused; systematic; sequential; cumulative</td>
</tr>
<tr>
<td>Prefers material which has a human, social content; or which has fantasy or humor; personal; musical, artistic</td>
<td>Likely to set own learning goals and direct own learning; (but may well choose or prefer to use---for own purpose---an authoritative text or passive lecture situation.</td>
</tr>
<tr>
<td>Prefer discussion method of teaching</td>
<td>Prefer the lecture method</td>
</tr>
<tr>
<td>Less adept at learning and using rules</td>
<td>More adept at learning and using rules</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Performs best on tasks calling for intuitive &quot;feel&quot; for language (e.g. expression; richness of lexical connotation; discourse; rhythm and intonation)</td>
<td>Performs best on analytical language tasks (e.g. understanding and using correct syntactical structures; semantically ordered comprehension of words; phonetic articulation)</td>
</tr>
</tbody>
</table>

### 1.7.5 FI/ FD and Language Learning

In light of the above descriptions, it naturally follows that the FI learners have a clear advantage in formal L2 classrooms and final written exams (Brown, 1994 a; Chapelle, 1995) whereas the FD learners have an edge in acquiring language from natural, social contexts and also communicate on performance level.

Brown (1993) concurs: “field independence is closely related to classroom learning that involves analysis, attention to details, and mastering of exercises, drills and other focused activities” and that “primarily field dependent persons will, by virtue of their empathy, social out–reach and perception of other people, be successful in learning the communicative aspects of second language” or what Omaggio (1986) calls ‘functional language proficiency.” (Nodoushan, 2007)

So, “clearly both styles are important” and “language learning in the ‘field’ beyond the constraint of the classroom, requires a field – dependent style and the classroom types of learning requires conversely, a field – independent style.”

But, Griffiths and Sheen (1992) argue that “field dependence / independence does not have and never has had any relevance for second language learning.”

Ellis (1994 a) also states that the research into field-dependence / independence has shed little light on the relationship between this cognitive style and L2 learning and concludes that “field-dependence/independence does not appear to be an important factor in SLA.”

However, Chapelle (1992) asserts “the relation between field-dependence/independence and second language learning has a logical foundation and specific benefits might be gained through careful examination of its evaluational results.”
Ghonsooly and Eghtesadee (2006) also claim, “Among the various identified cognitive styles, the cognitive style of field dependence/ independence has been suggested potentially more significant for second language acquisition.”

This and a slew of a similar contrasting evidence from an overwhelming number of researches/ researchers and, a practical dearth of researches particularly on relationship between / impact of field dependence and field independence on errors in writing only necessitate a fresh look into any possible relationship between the two - the F D / FI cognitive style and errors in written language, especially English.

Another significant source of systematic variance in measures of language proficiency is Hemispheric lateralization or Cerebral Dominance.

Musser (2007) asserts “There may be evidence that there are neurophysiologic differences in the brain based on field dependence – independence. Silverman, Adevai and McGough (1966) showed that a group of left-handed subjects were more field dependent that a group of right-handed subjects. Pizzamiglio (1974) also found that ambidextrous subjects were more field dependent that right-handed subjects. Because the right and left hemispheres of the brain function independently, these studies predict that there are actual differences in the hemispheric lateralization between field dependent and independent people; hence, the need to study the consequences / effects of cerebral dominance on L 2 learning.

1.8 Cerebral Dominance

Cerebral Dominance or “Brain hemisphericity is the tendency of an individual to process information through the left hemisphere or the right hemisphere or in combination (Bradshaw and Nettleton, 1981; Springer and Deutsch, 1993; McCarthy, 1996).

1.8.1 Definitions of Cerebral Dominance

The Oxford Dictionary of Psychology (2005) defines cerebral dominance as “the tendency for one of the cerebral hemispheres of the brain to dominate certain functions.

Encarta (2006) also defines cerebral dominance as “dominance of one side of the brain” and explains it as “the normal tendency for one of the two sides of the
brain or cerebral hemispheres to have stronger control over some functions of the mind and the body.”

Sackheim, Greenberg, Weiman, Gur, Hungerbuhler and Geschwind (1984) write “Cerebral dominance or hemisphericity “refers to the relative dominance of the left or right cerebral hemisphere in an individual’s functioning, irrespective of the cognitive nature of the task.” The Encyclopedia of Neurological Disorders (2007) states “Cerebral dominance refers to the dominance of one cerebral hemisphere over the other in the control of cerebral functions”. Thus, cerebral dominance is the ability of one cerebral hemisphere, commonly referred to as the left or right side of the brain, to predominately control specific tasks.

Harth (1990) expounds cerebral dominance refers to the functioning of the neo-cortex which is the outer, visible, portion of the brain that covers the brain stems like the head of a mushroom. It is divided by a longitudinal tissue into two highly convoluted walnuts like configuration of left and right hemisphere more commonly known as cortical hemispheres. The two hemispheres communicate with each other through a thick band of 200-250 million nerve fibers called the corpus collosum. The cortex contains something like two thirds of all neurons and is the seat of all cognitive, sensory, linguistic, voluntary movement and attentive processes.

The two cerebral hemispheres are very similar in appearance, but they differ significantly in their structure. One of the best known differences between the two structures is motor control, the right hemisphere controls the left half of the body and the left hemisphere controls the right half of the body. Also, in general, sensory information from the left side of the body crosses over to the right side of the brain and information from the right side of the body crosses over to the left side of the brain.

These motor control differences were discovered by Marc Dax in 1836 and developed into the theory or concept of lateralization of function by the contributions of the likes of Pierre Paul Broca, a French neurologist (1861), Karel Demecke, a German neurologists (in Neuromyth 6, 2007), Holmes and Reichard (1916) (all the above in Dorfsman 1997), Joseph Bogan (1975) and Michael Gazzaniga (The Wikipedia Encyclopedia, 2006 h) and the 1981 Nobel Prize laureate Roger Sperry and his colleagues at the California Institute of Technology.

1.8.2 Functions of Hemispheres

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The concept of hemisphericity postulates the hemispheres are “specialized and perform different functions” (Gibson, 2002). The different functions ascribed to the left and right hemispheres are as given below:

<table>
<thead>
<tr>
<th>The left hemisphere</th>
<th>The right hemisphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does verbal processing i.e. responds to speech and uses words</td>
<td>Does non-verbal or visual, spatial processing i.e. responds to pictures, colors, shapes, creativity</td>
</tr>
<tr>
<td>Does symbolic processing</td>
<td>Does concrete processing</td>
</tr>
<tr>
<td>Does sequential processing</td>
<td>Does random processing</td>
</tr>
<tr>
<td>Does linear processing</td>
<td>Does holistic processing</td>
</tr>
<tr>
<td>Does reality-based processing i.e. context independent and prepositional</td>
<td>Does fantasy-oriented processing, i.e. addresses emotions and is affected by music, touch and body language. Also, is context dependent and appositional</td>
</tr>
<tr>
<td>Does analytical processing</td>
<td>Does gestalt, synthetic processing</td>
</tr>
<tr>
<td>Is the rational side. It organizes, analyses and rationalizes information and theorizes</td>
<td>Is the fluid and spontaneous i.e. it is initiative and follows hunches and feelings rather than logic</td>
</tr>
<tr>
<td>Forms strategies</td>
<td>Presents possibilities</td>
</tr>
<tr>
<td>Deals with more logical subjects such as math and science</td>
<td>Deals with subjects like religion and philosophy</td>
</tr>
<tr>
<td>Is practical</td>
<td>Is impetuous</td>
</tr>
<tr>
<td>Knows object name</td>
<td>Knows object function</td>
</tr>
<tr>
<td>Concerned with safety</td>
<td>Risk taking</td>
</tr>
<tr>
<td>Keeps track of time</td>
<td>Is time independent</td>
</tr>
</tbody>
</table>

(Galloway, 1981)

This description of functional asymmetries leads to notions or interpretations such as, each brain hemisphere being specialized, must function independently with a different thinking style or that rationality is exclusively a left brain function and creativity a right brain function or that the left is the active and dominant brain whereas the right brain is only a “passive partner” of the former.
Several researchers however contend these premises and continue to affirm that “we do not possess two limited brains that vie for control”, rather there is a “constant subtle, and profound interplay of the two hemispheres” to form “an almost transparently unified mind of much greater ability than merely the sum of the two parts”. (Zalewski, Sink, and Yachimowicz, 1992)

Both these seem to be extreme stands on the concept; though in some measure sustainable and true.

The theory of Hemisphericity has been validated irrefutably “in the researches and experimentation, public demonstrations, doctoral dissertations of Roger Sperry, Robert Ornstein, Henry Mintzberg, and Michael Gazzanniga, Ned Hermann, C Victor Bunderson and James Olsen of Wicat and Kevin Ho, Schadty and Potin at the University of Texas (Thinking Styles and Learning Styles in Houghton Mufflin College paper) and researches by Werner Whitting, Stuart Dimond, Roger Drake, Patrizio Tessoldi, Edward Fonty and Steve Levick and scores of studies using the Wada (intracarotid sodium amobarbital procedure) test (TheFreeDictionary, 2007); but there is sufficient ground for going with the other view also that “in most higher vertebrates, brain systems interact together as a whole brain with the external world.” (Elman, Bates, Johnson, Karmiloff-Smith, Parisi and Plunkett, 1997) and that “the specific functions of the specific regions of the brain are not fixed at birth but are shaped by experience and learning.”(Genesee, 2000)

So, it will be safe to conclude as Sperry (1982) points out “the two hemispheres integrate their contributions so as to form a unified mind.”

Saleh and Iran-Nejad (1995) also state brain hemispherely is not ‘dictrotomous’, but ‘operates on a continuum’.

Evidence by Luria (1973), Das, Kirby and Jarman (1979), Sperry (1982), Levy (1985), O’ Boyle (1986), Tortora (1986), Das (1989), Hellige (1990), Myers (1998) [all in Zalewski, Sink and Yachimowicz (1992)] and by Dunn, Dunn, Andrews and Languis (1992); Iran-Nijad and Cecil (1992); Saleh Iran-Nijad (1995); McCarthy (1996); Elman, Bates, Johnson, Karmiloff-Smith, Parisi, and Plunkett (1997); Daheane (2006) also establishes that “the brain circuits use a holistic approach of building patterns and analyze than ‘concurrent for categorical, temporal, logical or sequential relationships using an analytic strategy”. They also acknowledge that the brain subsystems employ holistic and analytical processes in both hemispheres. As such, “Almost any human behavior or higher mental function”: thinking, logic,
reasoning or creation and appreciation of music or art “clearly involves more than the actual specialties of either hemisphere and utilizes what is common to both hemispheres.” (Springer and Deutsch, 1989)

However, the 2 brains may function seamlessly together as one but, this is also an irrefutable fact that “this is not an equal partnership” and that “one hemisphere usually dominates over the other”. (Jonathan, 1998)

1.8.3 Cerebral Dominance and Language

One natural corollary flowing from the concept of lateralization of the functions of the brain is the lateralization of language in human beings. Since Broca’s landmark study in the late nineteenth century and later Sperry’s assertion of the same in the 1970’s, the left hemisphere has been unequivocally considered in the popular folk lore as the seat of the major language functions.

But the catch is the ‘major’ functions-- language is a complex human behavior-- it is not just comprehension and mechanical verbal production, the aspects ascribed to the left hemisphere-- it involves deeply subtle and connotative aspects also and the current researches reveal “language is represented on both sides of the brain.” (Hellige, 1990)

So, while areas on the left deal with speech, read and written language and synthetic and semantic analysis (Blatchley, 1998), core aspects of speech such as lexical or grammatical abilities and word production (Hellige, 1990), structures (The Wikipedia Encyclopedia, 2006 i), etc; the right hemisphere is associated with intonation, emphasis (Hellige, 1990), emotional and metaphorical aspects of speech (Mc Crone, 2000), recognizing the speech sounds and decoding the written words in reading (Neuromyth 6, 2007), guessing, associating and getting the main idea (SIL module, 2007) and melodic quality and subtle connotative aspects like jokes, puns and figures of speech (The Encyclopedia Britannica, 2006 f), etc.

Obviously, “both hemispheres are needed for a normal”, quality “use of language” (Castro, 2006).

“For example, the reciting of a poem, would involve the right side in the visual preprocessing of the pages of words, sending the results to the left side’s reading association, Wernicke, area for recoding into words, sending the information back to the right side for the processing of the poem’s emotional and visual imagery, going back again to the left side in combination with the left’s Wernicke processed
information to the Left’s Broca’s area for recoding into speech motor movements”. (Levy, 1985)

The Encyclopedia Britannica (2006 g) states: “Evidence from a number of converging sources……indicates that the left hemisphere is dominant for the comprehension and expression of language in close to 99 percent of right handed people. At least 60 percent of left handed and ambidextrous people also have left hemisphere language, but up to 30 percent have predominantly right hemisphere language. The remainder has language represented to some degree in both hemispheres.”

Holder (2005) also concurs, “Between 70% and 95% of humans have left hemisphere language specialization. That means that some unknown percentage of humans (may be 5% to 30%) has anomalous patterns of specialization. This might include persons having: (a) a right hemisphere language specialization or (b) little lateralized specialization.

Should one infer from it that left-brained analytical thinkers will make good linguists but will lack communicative fluency or that the right brained global thinkers will be inaccurate or that those with bilateral dominance will have an advantage in language learning? Currently there is more work and less agreement in neurolinguistics, write Chengappa and Bhat (2004). In spite of vast and intensive research and consequent varied evidence, it still fails to provide with any reasonable authority any conclusive answers to these or other questions like- How large a role does cerebral dominance play in errors of language learners?