LANGUAGE PROFICIENCY QUESTIONNAIRE:

An Adaptation of LEAP-Q in Indian Context

Ramya Maitreyee

Register No.: 07SLP016

A Dissertation Submitted in Part Fulfillment for the Degree of

Master of Science (Speech - Language Pathology)

University of Mysore

Mysore

ALL INDIA INSTITUTE OF SPEECH AND HEARING

MANASAGANGOTHRI

MYSORE-570006

May 2009

DEDICATED TO

MY

DEAR

MAMA, BAPA,

SOMU and SOM BHAINA

CERTIFICATE

This is to certify that this Dissertation entitled **"Language Proficiency Questionnaire: An Adaptation of LEAP-Q in Indian Context"** is a bonafide work in part fulfillment for degree of Masters of Science (Speech-Language Pathology) of the student (Registration No. 07SLP016). This has been carried out under the guidance of a faculty of this institute and has not been submitted earlier to any other university for the award of any other Diploma or Degree.

Dr. Vijayalakshmi Basavaraj

Mysore   **Director**

May 2009   All India Institute of Speech and Hearing,

Manasagangothri,

Mysore-570006

CERTIFICATE

This is to certify that this Dissertation entitled **"Language Proficiency Questionnaire: An Adaptation of LEAP-Q in Indian Context"** is a bonafide work in part fulfillment for degree of Masters of Science (Speech-Language Pathology) of the student (Registration No. 07SLP016). This has been carried out under my guidance and has not been submitted earlier to any other university for the award of any other Diploma or Degree.

Mysore

May 2009

Dr. S.P.Goswami

Guide

Reader and Head,

Department of Speech Language Pathology

All India Institute of Speech and Hearing,

Manasagangothri,

Mysore-570006

DECLARATION

This Dissertation entitled **"Language Proficiency Questionnaire: An Adaptation of LEAP-Q in Indian Context"** is the result of my own study under the guidance of Dr. S.P.Goswami, Reader and Head, Department of Speech Language Pathology, All India Institute of Speech and Hearing, Mysore, and has not been submitted earlier to any other university for the award of any other Diploma or Degree.

Mysore   **Registration No.07SLP016**

May, 2009

ACKNOWLEDGMENTS

This work of mine reflects the kind help, support, and advice of a number of scholars and friends without whom this would not have been possible ever.

Before all, I thank **Almighty God** for giving me strength and courage to pursue all my endeavors.

I would like to express my gratitude to my supervisor, **Dr. S.P.Goswami**, Reader and Head, Department of Speech Language Pathology, AIISH, whose expertise, understanding, and patience, added considerably to my experience. You have been a great mentor all these two years and I doubt that I will ever be able to convey my appreciation fully, but I owe him my eternal gratitude. Thanks a lot sir………

I would like to thank **Dr. Vijayalakshmi Basavaraj**, Director, AIISH, Mysore for permitting me to carry out this dissertation.

My thanks are also due to **Vasanthalakshmi ma'am** who has provided her statistical advice all the times. Thank you ma'am for patiently analyzing my data and ever confusing languages and groups of participants.

Words fall short when it comes to acknowledging my Mama and Bapa. There constant support has helped me overcome all the hurdles that I have gone through in my life. All I can say is a small thank you deep from my heart.

Somu, my sister…….. The word thank you is very tiny and small to convey of what I owe you. You are my dearest sister who has always patiently heard all my tiny troubles. Thanks to **Som Bhaina** for adding a new dimension to her life and my family.

I would like to thank to **Prof. S.R. Savithri, Prof. K.S. Prema, Prof. Shyamala.K.C, Dr. N. Sreedevi, Dr. Sapna Bhatt, Mrs. Suchitra** and **Mr. Brajesh.P**. for all their guidance and support.

A special thanks to **Ms**. **Jayashree** who helped me all the times during my research work. I have learnt a lot from you ma'am……..

I thank all my **Lecturers at AIISH** who have imparted knowledge. I was lucky to be a student of such knowledgeable teachers because of whom the field of speech and hearing became so interesting.

I would also like to acknowledge **Marian, Blumenfeld and Kaushanskaya**, authors of LEAP-Q whose enthusiasm in my research work helped me to begin this endearing work.

Swati……. Thanks a lot. You've been like a sister and a great friend of mine all the five years we were together. I would also like to extend my thanks to my seniors **Chithra, Janani, Neha** and **Shwetha**. It was great being with you all.

Sincere thanks to **Anjana, Preeti, Leah, Akku, Deepa maam, Sahana maam**, **Sandhya, Pallavi, Tamanna, Priya, Sachin sir, Kanan sir and Savitha** for helping me in every possible way during my research.

I would like to thank all the **participants** of my study and **Mahajana's college** for helping me in data collection. Thank you all.

Ridz, Hmai,, Tamy, Pallu, Minu, Shuchi, Arun and Sharat……. You've been great pals all these years throughout. I would also like to thank all my other classmates who made AIISH an enjoyable place to live in.

Samas……… You were great. I'll cherish the moments spent with you forever.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Language is the system of arbitrary verbal symbols arranged in a conventional code that evolved as a social tool to communicate ideas and influence the behavior of others (McLaughlin, 2006). It is the essence of communication that bridges the gap between any two individual or groups of people. It pre-exists the birth of an individual and continues to be an existence even after the individual dies. Every human being is born into a language or to be precise into a linguistic condition. The environment in which an individual is brought up can either be monolingual or bi/multilingual depending on the needs and demands of the society (Thirumalai & Shyamala, 1986).

Monolingualism or unilingualism is the ability to speak only one language. However, the practice of alternatively using two languages is called as bilingualism, and the person involved is referred as bilingual. Unless otherwise specified, all remarks about bilingualism apply as well to multilingualism, the practice of using alternately three or more languages (Weinreich, 1953).

Any two individuals interact and communicate with each other either through verbal and/or non-verbal means. When both of them belong to two different language communities, when they come in contact with one another, tend to communicate in the language common to both of them. However, it might also occur that they prefer to communicate through a third language or using a combination of these languages.

Bilingualism has been found to have both positive and negative effects on the linguistic, cognitive and emotional abilities of an individual. It helps an individual to become more sensitive to the fine distinction between languages. Further, it enhances the effective use of their first language and aids in learning other languages. However, many researchers have found that bilinguals tend to use fewer alternate words, build up a confused and mixed vocabulary and use non standard patterns of speech compared to their monolingual counterparts. As reported by few investigators, they have a limited capacity to participate in group discussions. McLaughlin (1978) reported that these insufficiencies in linguistic abilities are not found in any single bilingual individual child. The negative effects majorly occur at the performance level and not at the competence level, giving an urge to make a distinction between both while evaluating any bilingual individual. Mixed findings have been reported considering the effects of bilingualism on cognitive abilities. Peal and Lambert (as cited in Thirumulai & Shyamala, 1986) put forward their views on cognitive effects of bilingualism. They found that bilingual children conceptualized objects based on their general properties and not on their linguistic symbols. Cognitive flexibility has also been seen as a positive effect of bilingualism. In a bilingual individual, interference between the two languages is most likely to occur. In order to effectively communicate children start developing coping strategies which further boosts cognitive development. It is mostly seen that bilingualism has a detrimental effect on emotional adjustment and character formation. It creates tension and emotional liability as well as other psychological disorders. Several investigators have argued that these emotional conflicts could be due to social antagonism and not caused by learning two languages.

Bilingualism is considered as one of the most remarkable feature of all expanding cultures and nations and the positive consequences have overridden the negative effects. The process of globalization has increased the extent and character of bi/multilingualism, as people realize the advantage of adding a language to their verbal repertoires. The advancement of technology has made the world a smaller place to live in. The use of technological advancements like the radio, television, computer and internet has increased the global connectivity and has fostered in adapting and learning languages of different regions for better and effective communication. Bi/multilingualism is currently the rule throughout the world and will become increasingly so in the future.

India is a multilingual country and houses a number of languages, culture, religion and society. According to the Eighth schedule of the Indian constitution there are 22 recognized languages in India. Apart from these 22 languages, there are an innumerable number of vernaculars or dialects.

Bi/multilingualism is widely spread in India making it the tower of babbles. It is very unnatural to find a monolingual in the true sense in India. Every individual might not be proficient in all the languages they know, but exposure to more than two languages is a common scenario in the present day in India. In India, bilingualism is one of the least understood phenomenons and there lies a dearth of studies in this area. It has been viewed as an area too complex to investigate, considering the multilingual mosaic of India. At times it becomes difficult on part of the researchers to adequately assess the proficiency level of an individual in the skills of understanding, speaking, reading and writing especially in a language they do not speak and thus, have to rely on self-assessed

information. This provides the need and urge to develop valid and reliable self-assessment questionnaires assessing all the skills of language.

Need for the study

India is a multilingual, multi-ethnic, and multi-religious country. Its great diversity of culture, languages, customs, traditions and ideas have been shaped by the unique co-mingling over the past five millennia and has made the picture of India a very complex one. The linguists all over the world look upon India as a linguistic area because of the myriad of languages it has. Multilingualism is incomplete, if the cultures that these languages represent are not taken into consideration. The life style and standard of living of an Indian varies from that of the western culture.

A number of factors have been found to be responsible for attaining proficiency in a language. The age of acquisition, the environment where it is learnt, the culture and socioeconomic status of an individual plays a vital role in the proficiency of languages. The complex nature of bilingualism in India has led us to adapt easily to the western models blindly and as a result have failed to appreciate the multiplicity of Indian languages as a beautiful aspect of this country. Thus, the tests developed in western context may not be viable to be used in the Indian context. Hence, there is a need to modify the tests according to our diversified multilingual situation which would further prove to be a more valuable tool.

Till date, a very few attempts have been made using tools / questionnaire to assess the proficiency of persons with bilingualism at different skills of language. These levels

include speaking, reading, understanding and writing. And the unavailability of such materials in the Indian context gives us an incentive and zeal to carry out the study.

Aim of the study

The aim of the present study was to modify and adapt the LEAP-Questionnaire to the Indian multilingual situation.

CHAPTER II

REVIEW OF LITERATURE

"In India one must be at least bilingual- most people are; a large proportion is in fact trilingual. And it is quite common to come across people who know four or more languages well. Usually it is the native language of one's region, Hindi and English. One may also learn the "neighbour" languages, particularly if living in a border region. Being bilingual in India is natural; it is expected, encouraged, approved, and applauded. It is a part of education."

This is what a Marathi-Hindi-English multilingual in India says when asked about what is bilingualism (Grosjean, 1982, pp.22).

Bilingualism is a major fact of life in today's world. It is one of the most striking feature of all developing cultures and the beneficiaries of such cultures. The phenomenon is widespread and multifaceted in nature. Therefore, it is very difficult to define bilingualism in a manner covering all aspects. This multifaceted nature and not the ambiguity of the term has given birth to innumerable definitions of bilingualism. A bi/multilingual's competence in each of the languages should be analyzed from the point of his/her proficiency in the various language skills (listening, speaking, reading and writing), linguistic components (phonology, morphology, syntax, semantics), the pragmatic use and the varied contexts that control the choice and use of the language.

Bilingualism has been extensively viewed as the equal mastery of two languages. Different researchers have defined it in different ways. However, the core aspect remains

the same. Bloomfield (1933) defined it as the native-like control of two languages, Haugen (1953) as the ability to produce complete meaningful utterances in the other language. The practice of alternatively using two languages is called as bilingualism, and the person involved is referred as bilingual. Unless otherwise specified, all remarks about bilingualism apply as well to multilingualism, the practice of using alternately three or more languages (Weinreich, 1953). Diebold (1961) defined it as simply passive knowledge of the written language or any contact with a second language and the ability to use it in the environment of the native language, and Macnamara (1967b) defined a bilingual as an individual possessing one of the language skills (speaking, reading, writing, and listening) and their various complexities even to a minimal degree.

Innumerable definitions have led to the emergence of a number of typologies or classification systems to describe various types of bilingualism.

Types of bilingualism

The number of classificatory systems or typologies for characterizing bilingual persons and communities would equal to the number of researchers working in this area. The three broad levels of categorization that can be discerned are as follows:

- *Social or sociolinguistic typologies*: It focuses on the social context and the patterns of language use. Pohl (as cited in Mohanty, 1994) based on the patterns of language use at the societal level distinguished three types of bilingualism, i.e. horizontal, vertical and diagonal bilingualism.

Horizontal bilingualism occurs in a community when an individual learns two different languages which have almost equal status as modes of official, cultural and family language use. Often in a speech community a standard language variety and a different but related dialectal variety co-exist. They are often used in highly differentiated social context and this kind of situation gives rise to vertical bilingualism.

- ***Psychological approach***: It refers to classifying bilingualism on the basis of absolute or relative levels of skills in the use of the languages. Peal & Lambert (1962) classified the bilinguals as dominant or balanced. Halliday, McIntosh & Stevens (as cited in Mohanty, 1994) gave the term ambilingualism and defined it as the ability of an individual to function efficiently in any one of his/her languages, in all the domains without any interference from the other languages.

- ***Linguistic and/or developmental approach***: These approaches generally emphasize the context of development of bilingual skills and the outcome of such development. According to this approach the different varieties of bilingualism that have been differentiated are additive and subtractive bilingualism (Lambert, 1975); natural, school and cultural bilingualism (Skutnabb-Kangas, 1984). Natural bilingualism is acquired without formal instruction in a daily life situation at a young age either in the family or community in which two languages are used. The school bilingualism is a result of formal instruction in a second language at school. Cultural bilingualism, according to Skutnabb- Kangas (1984), "largely coincides with school bilingualism, but the term is more often used to refer to adults who learn a foreign language for reasons of work, travel and so on".

The different classificatory system as cited in Thirumalai and Shyamala (1986) are listed below:

A)   Compound and Coordinate Bilingualism

Compound and coordinate bilingualism are thought to be related to the psycholinguistic concepts of language independence and language interdependence.

Compound bilinguals: It refers to the individuals who have learnt both the languages in the same environmental context, or learned the second language through translation of the first. They attribute identical meanings to corresponding words and expression in their two languages. It is acquired by learning one language at home and another in a school situation, or by learning both the languages at home, where both are spoken interchangeably by the same people in the same situations. Example: Learning Kannada and English both at home which are interchangeably used.

Coordinate bilinguals: It refers to those who have acquired two languages in different contexts and are able to keep both languages apart. They attribute different or partially different meanings from words in the two languages. This situation arises when both the languages are learnt in different situations where they are rarely interchanged. Example: Learning Kannada at home and English at school only.

Weinreich (1953) made a distinction between compound and coordinate bilingualism. According to him, the compound bilingual has one semantic system and two codes and the coordinate bilingual has two semantic systems, and two codes.

B) **Simultaneous versus Sequential/Successive acquisition of two or more languages**

An ideal bilingual is one who is brought up in an environment with two languages. The child is given all types of opportunities to learn both the languages in a perfect natural way. This distinction has been conceptualized to arise when the children hear one language from their mother and another from their father, or one language from their parents and another from their caretakers or peers and acquire both the languages simultaneously. The contexts of acquisition of both the languages are different. Example: mother speaks Tamil and father speaks Kannada, so the child learns both the languages simultaneously.

However, bilingualism can also be successive in nature. It occurs when one language is established first and a second language is learnt subsequently or successively. The second language is introduced only after the first has been fully or partially acquired or established. Example: The child acquires Kannada at home and after s/he has partially acquired learns English at school. According to Garcia and Seitel (2009) individuals who acquired both the languages before the age of three were considered as simultaneous whereas, if acquired the L2 after the age of three were sequential bilinguals.

C) **Second language acquisition and Second language learning**

Second language acquisition refers to the acquisition of a second language (L2) in the natural environment without any formal instruction. In the second language learning, a formal learning situation prevails which helps in the acquisition of the second

language. An artificial linguistic environment is created for learning the language. The individual is given feedback about his/her errors and the rules of the language are taught. This introduces aspects of the grammar in a progressive manner. This classification has been made based on the nature of the exposure to the language. Example: A Hindi speaking individual learning Kannada by speaking with neighbors is an example of second language acquisition and if he learns the same language in the school, it refers to second language learning.

D)   Dominant versus Balanced bilingualism

"Language dominance is defined as the proportional index of frequency of the effective and efficient use of one language with respect to another" (Taeschner, 1976). Here equal mastery of two languages is believed to be only a myth. This classificatory system considers that usually one of the two languages is dominant. Some individuals may master the other language at the expense of their native language. Rao (1975) commented that dominant language predominates in most of the language functions.

Balanced bilinguals are the ones whose skills in the two languages are comparable. However, the proficiency in the use of each of the languages is topic or context specific. It is quite rare to find a truly balanced bilingual across all situations of language use (Dornic, 1979).

E) Additive and Subtractive Bilingualism

Lambert (1975) reported that the earlier studies on bilingualism were majorly carried out with immigrant or minority language children whose first language (L1) was

gradually replaced by a more dominant and prestigious second language (L2). He termed the resulting form of bilingualism as subtractive, in that bilingual children's proficiency in their two languages at any point in time is likely to reflect some stage in the subtraction of L1[*] and its replacement by L2. However, in children whose L1 is dominant and prestigious and is in no danger of replacement by L2 results in additive bilingualism. They relatively have high proficiency in both the languages.

All these classifications mentioned above which are either based on developmental or contextual parameters of bilingualism indicate the necessity of emphasizing the process by which bilingual proficiency is acquired in order to fully understand the nature of individual bilingualism.

Bilingual proficiency

Bilingual proficiency refers to an individual's ability in their two languages. The following four skills form a core for attainment of bilingual proficiency:

- Understanding
- Reading
- Speaking
- Writing

Thus, a bilingual person needs to have proficiency in all the four dimensions of each of the languages (L1 & L2). The four language abilities form an approximate ladder of complexity. Listening would be the easiest to acquire, followed by speaking, reading and writing. However, these four aspects are neither independent nor different skills. The development of proficiency in one of the skills has an effect on the other. Listening to a language in turn enhances speaking and results in a wider expressive vocabulary.

---

* L1- First language, L2- Second Language, L3- Third Language in the course of acquisition

Similarly, more accurate grammatical structure aids accurate writing skills. Both skills of listening and speaking enhance reading acquisition.

Theoretically, there is no connection between ability in one skill and the other. For example, a bilingual might have good understanding of the language but may not be able to exert effective control while using the language for speaking. Or a bilingual might have excellent skills in all the formal linguistic aspects of writing and speaking skills, but is unable to control the stylistic range. However, in practice, there are some interdependencies between these four skills. It is highly unlikely for an individual to develop speaking without listening skills. This kind of representation thus, results in a wide difference in ability under each level and skill category. A bilingual's competence hence encompasses a range of skills, some of which may not be equally developed, in a number of languages and varieties. For example, a Punjabi speaker residing in Karnataka can understand spoken Punjabi, but is unable to read the gurmukhi script in which it is written. So the proficiency level of that particular individual, will be higher for listening and speaking but not for reading and writing. Some individuals also learn L2/L3 only for the purpose of academic skills and in this case speaking skills for that language would be poor. This can well be seen in all the southern parts of India where Hindi has been mastered only for reading and writing and not for speaking.

Any individual might have an adequate knowledge of the language but while performing might not be able to use this language to the fullest extent. Chomsky (1965) made a fundamental distinction between these two concepts, which he referred to as competence and performance. According to him, competence refers to the speakers-

hearer's knowledge of language and performance to the actual usage of language in concrete situations. "Competence, as Chomsky assumes is the central element around which performance models revolve, but performance will not determine the structure of competence" (Winitz, 1971). Thus, while evaluating proficiency in a language a fair distinction needs to be maintained between the two.

Dorian (1982) studied Gaelic-English bilingual communities along the east coast of Sutherland in Scotland. The results indicated that few of the participants had a very good receptive competence but had minimal control of Scottish Gaelic. They had the ability to comprehend all conversational rules, appreciate jokes, and interject a proverb or other piece of formulaic speech at the appropriate place in a conversation. However, their weak expressive skills went unnoticed by more proficient speakers in the community because of their ability to carry out the functional communication. Dorian (1982) used the term "semi-speakers" to refer to these individuals, whom she defined as "individuals who have failed to develop full fluency and normal adult proficiency in East Sutherland Gaelic, as measured by their deviations from the fluent speaker norms within the community."

Cummins (1984, 2000) suggested that a person can attain proficiency in basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP). Recent emphasis is more on the concept of communicative competence which takes into account the rules of grammar and rules of pragmatic language use.

Midgley, Holcomb and Grainger (2009) examined language effects in second language learners. The participants were asked to monitor a stream of words for occasional probes from one semantic category and ERPs were recorded to non-probe critical items. They found a large effect of language on the amplitudes of N400 component both in participants who had L1 as English and L2 as French and participants who had French as L1 and English as L2. The results indicated that the effect is due to language dominance and not language. Among the French/English bilinguals different patterns of language effects were observed depending on the proficiency level, indicating that these effects were modulated by proficiency in the language.

The level of proficiency is an important factor in determining the cognitive effects of bilingualism. This fact has been elaborated in the threshold hypothesis by Cummins (1976). It proposes that there may be threshold levels of linguistic proficiency that bilingual children must attain in order to avoid cognitive disadvantages and to allow the potentially beneficial aspects of becoming bilingual to influence cognitive growth. According to him, some aspects of bilingualism positively influence cognitive growth. But until the child attains a certain minimum or threshold level of proficiency in both the languages, the effect of bilingualism on cognitive growth is short-lived. Conversely, if bilingual children only attain a very low proficiency in L2 or L1, the range of potential interaction with the environment through that language is likely to be limited.

According to the threshold hypothesis, there are two levels of thresholds, i.e., the lower and the higher level of threshold of bilingual proficiency. The attainment of the former would be sufficient to avoid any negative cognitive effects, but the child with a

lower threshold level of bilingual proficiency can be sufficiently weak in that language in order to impair the quality of the interaction either in the educational or peer group environment. The attainment of higher threshold of proficiency both for L1 and L2 leads to rapid cognitive and academic progress and has long-term cognitive benefits. It also predicts that dominant bilingualism neither produces positive nor negative effects on cognitive development. This type of bilingualism results when children develop native-like proficiency in their dominant language but achieve only intermediate levels of proficiency in their weaker language. The various underlying processes of cognition as a result of bilingualism are shown in Figure 1.
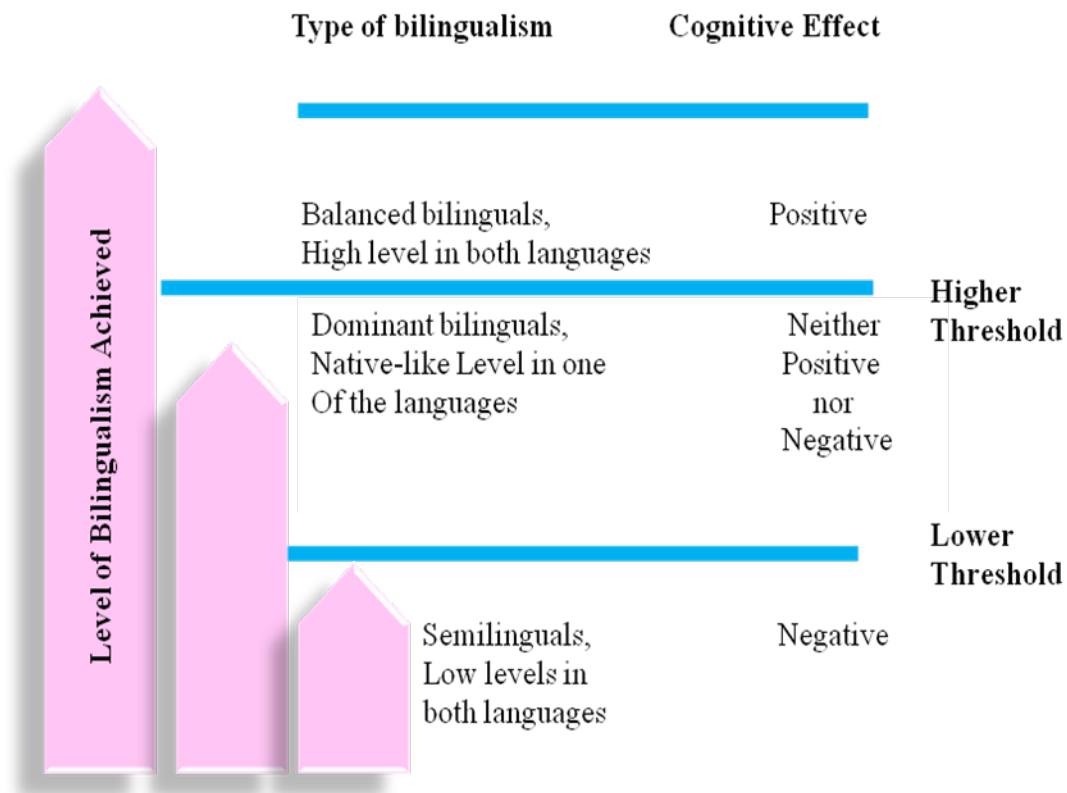
Figure 1. Cognitive effects on types of bilingualism

(Source: adapted from Toukomaa & Skutnaab-Kangas, 1977)

Bilingualism can therefore, be seen to have both positive and negative effects in the development of an individual and is further shaped by host of factors like environment, age and sequence of acquisition, education, exposure etc.

Factors affecting language acquisition and proficiency

a.   *Developmental Factors*

Age of acquisition has been shown to be closely connected to language learning. The effects of age can be seen on the route and rate of acquisition and the ultimate attainment of proficiency. Lenneberg's (1967) critical period hypothesis was one of the pioneered researches in the area of the effect of age of acquisition in the development of language. This hypothesis was proposed on the basis of clinical data on patients with brain injuries and children with Down's syndrome. He proposed that the critical period starts at around one year of age and ends at puberty, by which time the brain looses its plasticity. Critical period hypothesis has been derived from the fact that it is difficult to learn L2 after puberty. However, there is no consensus among investigators as to when the onset and closure of the critical period takes place. Researchers have suggested different times for closure, such as: at 12 years old or "puberty" (Lenneberg, 1967); 5 years old (Krashen, 1973); 15 years old (Johnson and Newport, 1989) and 6 years old (Pinker, 1994). The same critical period hypothesis was suggested for acquisition of any language, whether it is the first or the second language.

Kohnert, Bates and Hernandez (1999) studied developmental changes in lexical production skills in early sequential bilinguals at five different age levels (5 years-young adults), in both Spanish (L1) and English (L2). They explored the effects of age, years of

experience, and basic-level cognitive processing within a timed picture-naming task in blocked single language and mixed alternating conditions. A developmental trend was in the acquisition of proficiency seen among the participants of the study. The youngest children were Spanish (L1) dominant while adolescents and young adults were English dominant. The findings also revealed relatively balanced Spanish and English skills in middle childhood.

Flege, Mackay and Piske (2002) investigated whether the age had an effect on the classification of Italian-English bilinguals. They found that early bilinguals were English (L2) dominant and the late bilinguals Italian (L1) dominant. Further analysis illustrated that dominant Italian bilinguals had detectable foreign accents when speaking English, but early bilinguals (English dominant) had no accents in either language. The results of this study were in support of the critical period hypothesis.

Marian, Blumenfeld and Kaushanskaya (2007) administered the LEAP-Q on 52 adult bilingual participants and found that the age of acquisition of L1 was around 0.33 years for learning and 4.5 years for reading. In contrast, they reported that the mean age of acquisition of learning the above two skills was 6.82 and 8.15 years respectively for L2. They also found that the mean age of attainment of L1 proficiency for learning and reading was prior to that of L2. The age of acquisition of a language has been found to have a direct effect on the attainment of proficiency in that language or facilitates the acquisition of the other languages. Findings across studies show that age of L1 acquisition is an influential factor in the success of both L1 and L2 acquisition. The effects are apparent across all the levels of linguistic structure, i.e., phonology, syntax,

and the lexicon. Mayberry (2007) in a study on hearing impaired and sign language users concluded that that the age of L1 acquisition not only facilitates the linguistic structure of L1 but also helps in learning L2.

The first and second language acquisitions are same in the psychological language system but differ in their detailed learning strategies (Li, 2009). A difference can also be noted among the languages (L1 and L2) for the acquisition of the skills of understanding, speaking, reading and writing. The author considered that oral skills were acquired earlier than the written skills in mother language. However, the above two skills were acquired in a parallel fashion in L2.

Thus, it can be stated from the findings that age is a major variable in the acquisition of a second language. However, it is important to note that the effect of age diminishes over time as the acquirer becomes more proficient in the second language. An interplay between age of acquisition and the environmental factors leads to efficient language development and use.

b. *Educational and Environmental factors*

- *Educational context*: Wilkins (1974) considered time as an important factor that has an effect on determining the use of the language in the educational context. The hours of instruction in the particular language has an impact on the language proficiency of an individual. The intensity and frequency of contact of the learner with the second language also have a very significant role. However, there are suggested no defined numerical limits to the time and intensity of exposure. However,

he commented that that too little or too much of exposure may lead to boredom and loss of motivation. If the exposure is minimal it would lead to a lack of interest in learning and thus, result in poor achievement and progress. When overloaded with too much of exposure it would result in easy fatigability.

The availability of resource materials such as textbooks, supplementary readers, exercise books, self-instruction tapes, video and audio recordings, internet sources etc further enhance language learning. United States of America policy makers and educators emphasize that English should be learnt first by the students. Collier and his colleagues (1995) constructed a conceptual model that explains the process that students undergo while acquiring the second language during the school years, especially when the second language is used for instructional purposes across the curriculum. The four major components of this model are sociocultural, linguistic, academic and cognitive processes which are interdependent and complex. Collier (1995) reported that all these processes have a major impact on the acquisition of second language for school contexts. Formal teaching in the schools in L2 helps in achieving native-like proficiency.

Ellis (1989) used an information-gap task inorder to study the acquisition of German word order rules. The participants were 39 learners of German (L2) and the results showed that classroom learners appeared to be more successful than the naturalistic learners. The outcomes of this study also support the claim that the classroom and naturalistic L2 acquisition of complex grammatical features such as word order follow similar routes. Rahnu and Puur (n.d.) analyzed the data obtained in the 1989-2000 survey conducted to study the language behavior in non-Estonians settled in Estonia.

They concluded that the Estonian language proficiency was strongly correlated with the educational attainment.

Durgonuglu and Oney (2000) considered listening comprehension and decoding as the building blocks of literacy development. Listening skills are well developed when children start schooling. It is also affected by the vocabulary and background knowledge. They constructed a general model of literacy development in which the final outcomes were reading and writing. The home environment, schooling and the basic cognitive abilities acted as contributors to the development of these skills.

Flege and Liu (2001) suggested that the learner's years of education is a good predictor of language proficiency. Educational factors appear to have the most direct effect on language domains that are related to academic settings. Lopez and Tashakkori (2004) studied the effects of a two-way bilingual program on the literacy development of the students in the kindergarten and first grade. In their study the experimental group was instructed 70% of the time in English and 30% of the time in Spanish, whereas the control group experienced English 90% of the time. The results indicated no significant difference between both the groups implying that two way bilingual programs can assist in improving English language learner's academic achievement in English. Carhill, Suarez-Orozco and Paez (2008) carried out a study on 274 adolescent first-generation immigrant students from China, the Dominican Republic, Haiti, Central America, and Mexico in order to understand the factors that account for academic English language proficiency. Their findings showed that differences in individual student characteristics and the schools that they attended attributed to the variation in English language

proficiency. The time spent by the students speaking English in informal social situations was a good predictor of English language proficiency. These findings demonstrate that social context factors directly affect language learning among adolescent immigrant youth. It also suggests a crucial role for school and peer interventions. Li (2009) stated that second language acquisition consists of two basic concepts of conscious learning and unconscious acquisition. For any individual these two processes are important and are interlaced. He emphasized the use of English in formal teaching situations and classroom activities.

- *Web-based learning*: Sanaoui and Lapkin (1992) investigated the effect of electronic communication on language learning among English and French learners in grade 12 (aged 17-18). They found that it provided them with good language practice and increased their appreciation for the other target culture. During the use of internet, discussion groups from different languages are formed. These groups provide the learners with convenient access to native and proficient speakers, thus, directly or indirectly affecting the acquisition of native-like proficiency in foreign languages. Resources are not an adjunct but an integral part of the learning situation. The unavailability of the resource materials would restrict impositions in learning the language more easily and efficiently. Chiswick and Miller (n.d.) using the 2001 Australian Census Household Sample File studied the determinants of computer use at home and the impact of computer skills and destination language proficiency on the earnings of the native born and immigrants in Australia. They reported that L2 was maximally used by the participants for internet use. Computer technology provides

individuals who acquire a second language (L2) with new and varied options for language learning through interactive tasks delivered through CD-ROMs, web pages, and communications software on the internet (Chapelle, 2007).

- *Exposure to language in the family/society*

Some researchers consider that language, a complex system, is learnt with rapidity at a very young age. The nativists (Chomsky, 1957) consider that this learning is possible only by innate mechanisms. In contrast, the empiricists emphasize the role of learning and influence of the environment on language acquisition (Cairns, 1996). The nature versus nurture debate continues till date. However, there is some consensus between both schools of thought. The empiricists claim that biological maturation plays a generalist role that is not unique to language, and nativists claim that the human brain is specially designed to learn language, but accept that the environment plays a role as well. Considering both views, it can be seen that both the innate mechanisms and the duration and the type of exposure has an important role to play in the language acquisition.

The attitude of the family and society where an individual lives helps in determining the proficiency of language that can be attained. Some communities expect a reasonably high degree of bilingualism to be a normal quality of the educated man or woman. However, there are also societies which promote monolingualism. Rosenberg (1996) commented that the choice of language depends on the family in which the child is brought up. Language learning is also influenced by an individual's attitude towards cultural aspects of language. At one end, language cannot be learned without familiarity

with features of the culture, since language and culture are connected. On the other hand, it is possible to master the linguistic code without acquiring the knowledge of the culture.

An immigrant, a member of a minority language group, is surrounded by a community whose language s/he needs to learn and therefore, receives ample opportunities to learn the language. Rather s/he is more obliged to do so in order to maintain communication. Most of the earlier researchers have attributed the attainment of high proficiency to adequate exposure to the language, however, there have been contradictory findings also. The importance of environmental and contextual variables in language acquisition was also studied by Carroll (1967). The author found a significant relationship between language performance and the extent to which the target language was used at home. In order to develop linguistically, cognitively and socially, the child must be exposed to the native language in numerous environments, i.e., home, school, and community (Anstrom, 1997). Delgado, Guerroro, Goggin and Ellis (1999) also found that 96.25% of the parents of the participants had L1 as their native language which in turn was a factor in language acquisition. Similar findings were stated by Genesse (n.d.). Cummins (2000) stated that native language has profound effects on the overall personal and educational development in a bilingual child. The building of a strong foundation in L1 helps further, in literacy development and easy transfer of skills in L2.

Hakuta and Pease-Alvarez (1994) compiled the findings of Watsonville study. The findings indicated that for maintenance of proficiency in Spanish, language usage at the home plays a principal role rather than the participant's language attitude or language

choice outside the home. English proficiency is related to language usage with peers and is not associated with usage of English at home.

Olshtain (1989) found the attrition of English as a second language (ESL) in an environment where Hebrew is the dominant language. This finding suggests that the environment has a major role to play in the acquisition and maintenance of a second language. Flege, Yeni-Komishian and Liu (1999) found that the number of years of education received in an L2 country, years of residence in an L2 country, average self-estimated use of L1 and L2, and chronological age all influenced age of acquisition and effects on bilingual language dominance. Flege et al. (1999) used a self-reported language history questionnaire and found significant correlations between language history and degree of foreign accent in L2. The factors considered in the language history of L2 were age of arrival in L2-speaking country, age of attained proficiency, duration of immersion, years of schooling, percentage use of L1/L2, frequency of exposure to TV, movies/videos, and radio, frequency of use of L1/L2 in a working environment, and ability to imitate foreign accents. Bongaerts, Mennen and van der Slik (2000) reported that some individuals attain native like proficiency in L2 and this could be due to intensive instruction, high motivation levels and continuous and massive L2 input from their surroundings.

Jia, Aaronson and Wu (2002) found that mothers' L2 proficiency and frequency of speaking L2 at home were predictive of bilingual children's behavioral performance. Bilinguals who used L2 more often than L1 had better pronunciation and higher morpho-

syntactic performance in L2 than bilinguals who used L1 more often than L2 (Flege, MacKay & Piske, 2002).

Sebastián-Gallés, Echeverría and Bosch (2005) studied the representation of L2 words and non-words in Catalan-Spanish bilinguals. The participants differed in terms of their L1 and the age of exposure to their L2 (since birth-simultaneous bilinguals-or starting in early childhood-early sequential bilinguals). They were asked to perform a lexical decision task on Catalan words and non-words. The non-words were based on real words, but with one vowel changed. It was proved that in spite of early, intensive exposure, Spanish-Catalan bilinguals failed to perceive certain Catalan contrasts, and that this failure had consequences at the lexical level. Further, the results from simultaneous bilinguals showed that the dominant language prevails and they do not attain the same level of proficiency as early bilinguals in their first language.

Hasson (2006) descriptively studied the language use and examined the extent to which the bilingual Hispanic young adults used their two languages in varying aspects of their lives. The author found that the individuals used only English for thinking, praying and dreaming. However, the usage of both the languages was seen for more passive activities like watching television, listening to music and talking and interacting with friends and siblings. The participants overwhelmingly chose to use Spanish while interacting with friends. Language choice for interacting with parents and siblings reflects the generational trend of language shift as described by Grosjean (1982).

The human potential for language is based in human biology but requirements of the social environment also need to be realized. Hoff (2006) reported evidence regarding the nature of those environmental requirements; the ways in which the varied social contexts in which children live meet those requirements, and the effects of environmental variability in meeting those requirements on the course of language development. The author suggested that all human environments support language acquisition by providing children with opportunities for communicative experience. These experiences in turn motivate the language acquisition process, and a language model, which serves as data for the language acquisition mechanism. However, the individual differences in the rate and course of language development could be attributed to the degree of exposure to the environment.

Carlson and Meltzoff (2008) used a language background questionnaire to study the children's language exposure and found that either both parents were native Spanish speakers who spoke both Spanish and English at home and in the community, or one parent spoke Spanish and the other English. Majority of the children spoke English with friends. Similar results were obtained by August and Hakuta (1997).

Harniess (2008) collected information about the factors contributing to second language learning from the parents through a survey. The author found the educational variables to be the most contributing factors in acquiring L2.

A large vocabulary is necessary to function in a second language (English). In addition, a number of word knowledge aspects also need to be learned about each lexical

item. Taken together, these amounts to a substantial lexical learning challenge, one which many/most learners fail to meet. To facilitate this adequate vocabulary learning, Schmitt (2008) found that the following four vocabulary learning partners (students, teachers, materials writers, and researchers) contribute an important role to the learning process. Vocabulary learning programs need to include both an explicit, intentional learning component and a component based around maximizing exposure and incidental learning.

Research on participant's pronunciation on second language after an exposure of five years consistently have indicated that the large majority of adults retain their accent when the second language is acquired after puberty, whereas children initiating second language acquisition before puberty have little or no foreign accent (Oyama, 1976; Tahta, Wood & Loewenthal, 1981). Fathman (1975) & Williams (1979) assessed students' acquisition of pronunciation after three years of exposure to the second language and found that younger students had retained more accent-free pronunciation when compared to adolescents just past puberty. Various number of factors like the age of acquisition, length of residence in the state of that particular language, language use, language learning aptitude, motivation, amount of native-language use and gender are thought to play a role in the acquisition of foreign accent in L2 (Flege, 1988b; Flege, Munro & Mackay, 1995; Piske, Mackay & Flege, 2002)

- *Length of Residence (LOR):* The length of residence in the native country/state and the hours of exposure have also been found critical to the language acquisition and attainment of proficiency. Nakajima (as cited in Bhatia & Ritchie, 2004) compared English reading performance among Japanese children who arrived in Canada

in four different age groups (before 3, 3-6, 7-9, and 10-12). The author also aimed at examining the duration taken by these children to reach the norm among monolingual English speaking children who were in equivalent age groups. The results indicated that the Japanese children who arrived in Canada between the ages of seven and nine years took the shortest time to catch up with their native counterparts. It was also found that children's reading performance in their L1 (Japanese) was a good predictor for their performance in L2 reading (English).

- *Media-based learning*: Television and radio contribute to language development to a greater extent. Johannessen and Lopez (2002) conducted a survey and found that only a small percentage of students engage themselves in listening to the radio or television in Spanish (less than 29%) and only 28% used Spanish to read in regular basis or in professional settings. The participants remarked of using English to a greater extent and this led the author to support and include bilingual education programs. However, a large percentage (81%) indicated that they used Spanish on a regular basis in social and familial contexts.

c. *Psychological Factors*: The attitude, motivation and the personality of an individual also contributes to language learning.

Bilingualism, a complex phenomenon, influenced by a number of factors as mentioned above requires care and caution during the assessment process. Measurement of bilingualism involves several issues which are as complex as those in its definitions and classifications.

Assessment of bilingualism

All measures of bilingualism can be grouped under two major categories-reported or observed (Skutnabb-Kangas, 1984). The reported measures includes self-report of the person's linguistic behavior (through interviews or self-report questionnaires or assessments) or reports of individual's linguistic behavior through other sources (such as census reports, demographic or background information). Whereas, the observed measures basically include observation of the individual either in a structured, semi-structured or informal situation. A number of interview schedules, questionnaires about background data have been used in the literature of bilingualism. Background data usually have a high correlation with other measures of bilingualism (Skutnabb-Kangas, 1984).

Observation can be systematic or unsystematic including test-based observation. Tests designed to measure bilingualism can either be designed with reference to the monolingual norm or are specifically designed for the bilingual population. Particularly in the case of tests used to measure bilingual proficiency, the use of monolingual norms is guided by two different processes (Skutnabb-Kangas, 1984). First, the test developed can compare the bilingual with the native speaker of the target language. Second, the test can assess "the pedagogically presented knowledge about the language that teachers have tried to impart quite consciously, by ordinary instruction. Here the subject being tested is monolingual, and the norm for proficiency in the target language is a kind of command a monolingual speaker might expect to have of a foreign language". Thus, the focal aim of the first type of tests is to find the commonality between the mono- and bilingual. The

second types of tests goals at assessing the language proficiency characteristics of a bilingual.

Earlier research was especially focused on measuring those aspects of language (size of vocabulary, control of inflectional morphology) that were easier to quantify. This was due to the fact of the problems faced in objectively quantifying the data. Broadly the tests have been classified into two categories:

- Informal

- Formal

A simple classification of bilingualism is not adequate to account for the multidimensional nature of language proficiencies. And hence, a detailed profiling method rather than a simple test score should be adopted while assessing an individual's proficiency in each of the languages.

Language proficiency measurement provides a description of the language development of the child in listening, speaking, reading, and writing. "They are designed to document students' progress over time and to determine whether the support services or language programs are adequate enough to attain the learning standards" (Gottlieb, 1999). A formal and informal assessment helps in obtaining information on language proficiency in the various skills. A few of the informal and formal testing procedures that are available are discussed below.

Informal Methods for Assessing Language Proficiency (Kayser, 2001)

There are a number of informal methods for assessing language proficiency. Each has its own advantages and disadvantages.

Eliciting language samples

- Language samples are elicited over a period of time and compared for progress in language development.

- The sample is transcribed and the analysis depends on the clinician.

Count the number of complete utterances that are grammatically correct. Then the percentage of correct utterances is calculated.

Example: % of correct utterances= No. of grammatically correct utterances/ No. of total utterances ×100.

In a speech sample of 120 words, if the number of grammatically correct utterances is 54, then, % of correct utterances = $54 \times 100/120 = 45$

Advantages

- It helps in measuring language development over a period of time. Hence, it can be used as an indicator of prognosis for an individual's oral language abilities.

Disadvantages

- Transcription is time consuming.

- There is no measure of complexity and content variability, if the child possesses only simple structures.

- It focuses on measuring only the oral language ability.

Portfolio/authentic assessment

- The samples that reflect the achievements, growth, and efforts in one or more areas (e.g., reading, writing, listening, speaking) are collected.

- It measures a child's performance on meaningful tasks that are relevant to classroom learning and real-world activities.

Advantage

- It emphasizes the ability of an individual.

Disadvantage

- It is time consuming and does not assess progress in all areas.

Rubric

- Assist teachers to assess and students to self-evaluate their progress in the four modalities of speaking, listening, reading, and writing.

- It provides the specific guidelines or stages of development.

An example for speaking, if the child says isolated words or phrases, repeats short phrases, and relies exclusively on first language for communication, and then s/he is at the pre-production-I level. Whereas, a child who speaks fluently in the academic and social settings using both formal and informal language is considered to be at the level of developed speaker V.

Informal methods of assessing language proficiency are alternatives or could be an additional source of information to standardized testing procedures. These methods are time consuming but provide adequate information at times.

Formal Methods for assessing language proficiency

Many tests have been used to measure bilingualism. Macnamara (1967a, 1969) grouped these tests as:

- Rating scales
- Flexibility tests

- Fluency tests
- Dominance tests

I.   *Rating scales include*:

- Self-rating scales
- Language background questionnaires

- Language usage rating scales
- Experimenter interviews

In self-rating, the bilingual is asked to rate his/her proficiency in each of the basic skills in each language. A balance score is then calculated by subtracting the ratings of one language from those of the other. If the difference is zero or close to zero, the bilingual is considered to be equally fluent in both the languages. Halliday, McIntosh, and Stevens (as cited in Mohanty, 1994) have used the term ambilingual to refer to a person who is capable of functioning equally well in either of the languages in all domains of activity and without any traces of one language in his use of the other. Self-ratings have been found to be highly reliable and independent assessments of language proficiency. Baetens-Beardsmore (1986) used the term equilingual to refer to this kind of bilingual profile.

Lim, Liow, Lincoln, Chan and Monslow (2008) developed a self-report classification tool to be used in multilingual Asian communities. This tool was designed

to determine language dominance which would further be helpful for clinical assessment and intervention. It comprised of a language history questionnaire and the results revealed variables such as age of first exposure, years of formal instruction, and years of exposure exerted only a limited influence on the dominance classifications.

II.   *Fluency Tests*: In this category**,** tasks like picture naming, word completion, oral reading and following instructions have been used. These tests have also been used in the measurement of proficiency. Lambert (1955) developed a reaction time measurement to measure the extent of bilingualism in which the participants had to respond to instructions in both languages. The reaction time was obtained in each of the language and the difference in reaction time in the responses indicated the type of bilingual. If the participant took the same time to respond to instructions in both the languages he was considered to be a balanced bilingual. Another set of tasks that are majorly used to measure bilingualism focuses on synonyms, associations, and word frequency estimations. Lambert, Havelka and Gardner (1959) used nonsense words and asked the bilingual individuals to identify as many English and French words as possible from that non-word. The individual was considered to be balanced if s/he produced the same number of words in a given amount of time both in English and French. The use of cognate pairs has also been used to measure the type of bilingualism. The language, in which the individual pronounces the word, is considered to be dominant.

De-Ramírez and Shapiro (2007) assessed the type of bilingualism in 68 Spanish-English bilinguals across grades I to V using an oral reading task. A high correlation was obtained for reading in Spanish and English across grades and time periods, with the

exception of fourth grade. In addition, Spanish oral reading fluency at the beginning of the year significantly predicted English reading outcomes at the end of the year.

Similarly, Gollan, Fennema-notestine, Montoya and Jernigan (2007) used a picture naming task to assess bilingualism in Spanish-English bilinguals. The participants were asked to name all pictures in the Boston Naming Test (BNT) first in their dominant language and then in their less-dominant language. The results revealed that balanced bilinguals named more pictures correctly on feedback of producing a correct response in either language. However, compared to the unbalanced bilinguals they could name fewer pictures in their dominant language. Unbalanced bilinguals did not benefit from the alternative (either-language) scoring procedure and showed cognate effects only in their non dominant language.

III.   *Flexibility tests***:** They include tests of synonyms, associations and word-frequency estimations in both their languages.

IV.   In the fourth group of tests, i.e. ***dominance tests***, the bilingual is confronted with ambiguous stimuli that could belong to either of his language and would be asked to pronounce or interpret it. Lambert (1955) was the pioneer researcher to assess linguistic balance or dominance of bilingualism using these kinds of tests. The tests mostly employ a comparison of speed and efficiency in dealing with the stimuli presented in two languages in a variety of tasks such as word association, word completion, detection of embedded words, picture naming, translation etc. Lambert (as cited in Grosjean, 1982) also used stroop test of language interference. If the results of these tests indicate equal proficiency in both the languages it implies that the individual has native-like

proficiency in each. However, it is also possible that a bilingual may have poor command in both the languages. Therefore, the bilingual balance scores should only be interpreted as showing that the relative proficiencies of a bilingual in his two languages are nearly equal. Apart from this problem of interpretation, balance measures have also been criticized on the ground that measures of speed, interference, translation efficiency, etc. themselves are artifacts and far removed from the mechanisms involved in the use of language in real life situations.

Lambert, Havelka and Gardner (1959) found that rating scales, fluency and flexibility, and dominance tests yielded measures of bilingualism that could be inter-correlated. Thus, they concluded that although these tests appeared to be assessing distinct skills, they were measuring a single factor.

ISLPR (International Second Language Proficiency Rating) {Ingram, 1985} formerly known as the ASLPR has been used mostly by researchers in order to assess proficiency levels of bilinguals in their second language. It uses a nine-point rating scale. The continuum ranges from zero to native-like proficiency and describes language performance in each of the four macro skills (listening, speaking, reading and writing). An additional 3 points are available at 2+, 3+ and 4+ for learners, whose proficiency is considerably above one level but not at the next. The outcome of the ratings is a profile indicating the learner's proficiency in each of the four skills. It was re-assessed in fifty interviews with adult learners of English as a Second Language (ESL). The participants in the study comprised of individuals distributed throughout the proficiency range. Ingram (1985) aimed at eliciting the characteristics of language behavior at each level, so

as to ensure the appropriateness and coherence of the behavioral descriptions adopted. The findings suggested that ISLPR had high level validity and reliability and that it could be confidently used for assessing second language proficiency.

However it has some limitations. These include:

- The interview techniques are not clearly specified.
- It is helpful in assessing only proficiency level for L2.
- It has a 9-point rating scale.

Some other proficiency scales are tabulated in Table 1.

The scales that have been listed are Language Assessment Scales (De Avila & Duncan, 1990); Idea Language Proficiency Test (Dalton and Barrett, 1991) and Woodcock Munoz Language Survey (Woodcock and Munoz-Sandoval, 1993). These scales though have been useful in measuring proficiency either of four skills, yet have some shortcomings that are underlined below:

(i) Many of the test items are not valid (Haber, 1985; Carpenter, 1994; Hedberg, 1995; Kao, 1998)

(ii) Inter-rater reliability is low (Crocker, 1998)

(iii) Norms are available on populations that are not representatives of the samples of the children to whom these measures are commonly administered (Haber, 1985; Lopez, 2001)

Table 1

Language Proficiency Tests

Pray (2005) examined the efficiency of three tests the Language Assessment Scales-Oral, the Woodcock-Munoz Language Survey, and the IDEA Proficiency test which are most commonly used to assess the English oral-language proficiency. Native English-speaking non-Hispanic white and Hispanic students from varied socioeconomic levels served as the participants of the study. These tests use native-language proficiency as the standard relative to which the responses are evaluated. Hence, it is expected that a native English speaker performs extremely well on these instruments. However, the findings indicated that none of the native English-speaking children scored in the "fluent" or "advanced fluent" English ability in the Woodcock-Muñoz Language Survey. 100% of the students scored in the "fluent English speaking" range of the Language Assessment Scales-Oral, and 87% of the students scored in the "fluent English speaking" range of the IDEA Proficiency Test.

Hence, these scales can be judged to be not accurate enough to evaluate the proficiency of an individual and all the scales assess only the oral proficiency and not the other three major skills, i.e. understanding, reading and writing.

Linguistic Minorities Project (1985) conducted a survey in order to check for reliability of self rating scales of various kinds. The respondents were asked to rate their expressive and receptive skills in the oral and writing skills for each of the languages they knew. They found that the four different abilities for each language were quite strongly correlated with each other, though the correlation between oral and written skills was sometimes weaker.

MacIntyre and Charos (1996) reported that participants either under or over-estimated their performances and abilities in L2. MacIntyre, Noels, and Clement (1997) indicated that self-reporting, obtained through interviewing, self-rating scales, or language use questionnaires, is generally consistent with actual linguistic ability of an individual. They therefore, concluded that self-reports could be used as an efficient approach to obtain information regarding the language proficiency in each of the four skills of language. These authors examined perceived competence in L2 as a function of actual competence and language anxiety in 37 young adult Anglophone students. The participants completed scales of language anxiety and a modified version of the "can-do" test, which assessed their self perceptions of competence on 26 French tasks and then attempted each of those tasks. The results showed that anxious students tended to underestimate their competence and less anxious students overestimated their competence.

Shameem (1998) developed a performance test and implemented to validate self-reported first language proficiency in the Wellington Indo-Fijians community. The author reported significant difference between oral performances and self-reports. The general trend in the data of their study indicated that the respondents rated their oral abilities at a level higher than their actual performance.

Delgado, Guerrero, Goggin, and Ellis (1999) studied the relationship between competence and language performance in Spanish-English bilinguals. The participants were asked to evaluate their Spanish and English language skills both before and after administration of the Woodcock-Muñoz Language Survey (1993). The results indicated

that self-assessments were more accurate for L1 (Spanish) than for L2 (English) and, in the case of English, varied with the skill being rated. However, the self ratings improved after the feedback.

Munoz, Marquardt, and Copeland (1999) also developed a language use questionnaire which includes questions about language acquisition, educational history, and language use, and has been used effectively with both clinical and nonclinical populations.

Vaid and Menon (2000) studied bilinguals using a questionnaire and reported that language preference for mental arithmetic correlated with variables in the bilinguals' language history. The language of early formal instruction was found to be the strongest predictor followed by length of residence in the L2 country, onset of bilingualism, and relative language dominance.

Jia, Aaronson and Wu (2002) used a 32 item questionnaire and found that self-reported ratings of language proficiency were positively correlated with behavioral performance. It appears that bilinguals are able to assess their language proficiency and report their language history in away that is consistent with behavioral performance (Flege et al., 1999; Jia et al., 2002).

Though these were some of the early studies which focused on quantifying bilingualism, it is imperative to be critical about these measures.

Some of the shortcomings of these standardized questionnaires were that:

(a) A clear distinction among language proficiency, dominance, and preference was not given.

(b) Questions and scales were not consistent across studies.

(c). Behavioral tasks used to validate the questionnaires were limited.

The Language Efficiency and Proficiency Questionnaire (LEAP-Q) developed by Marian, Blumenfeld and Kaushanskaya (2007), is a self-assessment tool that includes relevant proficiency and experience variables in a single instrument. Various schools of thought view L2 acquisition as an interplay between proficiency and experience variables (Hyltenstam & Abrahamsson, 2003). This tool was constructed within the context of bilingualism theories. They considered both language proficiency and language history variables to specify the type of bilingualism. Language competence is evaluated using proficiency, dominance, and preference ratings. The questionnaire was also constructed keeping in purview all the factors, like the age and modes of language acquisition, prior language exposure, and current language use, which influence the bilingual status. The internal validity of the Language Experience and Proficiency Questionnaire (LEAP-Q) was examined in study 1 which was based on the self-report data from 52 multilingual adult participants. In Study 2, criterion-based validity was established on the basis of standardized language tests and self-reported measures from 50 adult Spanish–English bilinguals. Factor analyses were carried out which revealed consistent factors across both the studies. Multiple regression and correlation analyses established criterion-based validity and suggested that self-reports were reliable indicators of language performance. L1 proficiency was reported to be better than L2 proficiency. Family based experiences,

years spent in a L1 country contributed to L1 competence and proficiency. On the other hand, L2 reading, age of acquisition contributed to the maximum to L2 competence. It was also found that self-reported reading proficiency was a more accurate predictor of first-language performance, and self-reported speaking proficiency that of second-language performance.

Although, this was one of the first questionnaires which evaluated proficiency in both the languages, yet it also has some limitations. It does not include a detailed language history during the childhood and all the possible factors that would contribute to language acquisition and proficiency directly or indirectly. It uses a wide rating scale which can give us varied data. Keeping these shortcomings in mind the present questionnaire is being modified and adapted to be used in the Indian scenario for adult bi/multilinguals.

CHAPTER III

METHOD

The aim of the present study was to modify and adapt the LEAP-Questionnaire to the Indian multilingual situation.

Participants

A total of 60 participants were included in the present study.

- 30 Hindi-English bi/multilinguals (14 males & 16 females)
- 30 Kannada-English bi/multilinguals (15 males & 15 females)

Ethical procedure

Participants were selected by ethical procedures. They were explained the purpose and procedures of the study, and an informed verbal consent was obtained from them.

Inclusion criteria

(1) The educational qualification level of all the participants ranged from a minimum of 12 years of education or higher in at least one of the languages.

(2) All the participants were native speakers of Northern/Southern India and had acquired the first language (L1*-Hindi and Kannada in the present study) both for academic and communicative purposes.

(3) They had acquired English as their second language (L2-English for all the participants) both for academic and communicative purposes.

---

* In the present study, L1- Hindi/ Kannada; L2- English; L3- Kannada/ Hindi

(4) All the participants also knew a third language (L3- either Kannada or Hindi). The Hindi group participants had learnt Kannada for functional communication and the Kannada group had learnt Hindi as a part of their academic curriculum.

(5) All participants were normal, with no present/past history of any neurological, psychological problems and or sensory deficits.

Age groups

Adult bilinguals in the age range of 18-25 years were included in the present study.

Procedure

The study was carried out in three stages. The three stages are as follows.

Stage I

A modified version of the already existing Language Efficiency and Proficiency Questionnaire (LEAP-Q) was made. The questionnaire (Appendix I) contained a total of 18 questions. The first question was intended to collect details about the number of languages known by each of the participants. The rest 17 questions with their sub-sections were more relevant to assess proficiency in a language. The following domains were included in the questionnaire:

- Language history during childhood (3 questions)
- Acquisition of language (3 questions)
- Proficiency of language (4 questions)
- Usage of language in different context (2 question)
- Exposure to different languages (4 questions)
- Native/non-native speaker (1 question)

The participants were asked to encircle the required language used with specific people and situations. In obtaining information about the language acquisition age for each of the languages (L1, L2 & L3), the participants were asked to give the approximate age of acquisition and proficiency level reached for each of the languages. A 4-point rating scale (1- Zero proficiency, 2- Low proficiency, 3- Good proficiency, and 4- perfect proficiency) was used for self-proficiency rating. A 4-point rating (1-never, 2- sometimes, 3- most of the times, 4- always) was also employed to obtain information regarding the native/non-native status and the duration for exposure of each of the 14 variables (e.g. family, friends, textbooks, internet, etc.) considered in the present questionnaire.

Stage II

For the appropriateness of the questionnaire, it was distributed to five speech language pathologists experienced in working with issues concerned with bilingualism for their suggestions and the questionnaire was altered accordingly. A pilot study was also carried out with ten adult bilinguals in the age range of 18-25 years recruited from All India Institute of Speech and Hearing campus and based on their difficulty of answering the questions the questionnaire was modified accordingly.

Stage III

At this stage the participants were given to fill in the final questionnaire. Along with filling in the questionnaire the participants performed similar tasks in both the languages for the four skills of understanding, speaking, reading and writing.

The following samples were collected:

1. **Speaking**

a. *Picture description*: The picture stimulus from the Western Aphasia Battery (Kertesz, 1982) was used in the present study. The participants were asked to describe the picture for duration of 1 minute in both the languages, i.e., L1 and L2. Their sample was recorded on Wavesurfer 6.0 using a microphone, placed six inches from the mouth of the participant, which was connected to a laptop.

b. *A spontaneous speech* sample of 1 minute was also recorded from each participant using the Wavesurfer 6.0 version.

2. **Comprehension**: A passage from the XII Standard English textbook of Karnataka state board (Appendix II) was chosen for the study. The original passage was retained and then it was translated to both Kannada and Hindi. 5 questions were framed in order to assess the comprehension abilities. The participants were asked to read the passage and answer the questions. The same procedure was followed for both the languages, i.e., L1 and L2.

3. **Reading**: Three standardized passages were used in the following study. The standardized Kannada passage containing both voiced and unvoiced sounds was selected for the study. The Hindi passage was selected from the AIISH Research Fund project entitled "Speech Rhythm in Indo-Aryan and Dravidian languages". The "Rainbow passage (Fairbanks, 1960)" was used in order to study their proficiency in reading in L2 (English). The samples were recorded on Wavesurfer 6.0 using a microphone, placed six

inches from the mouth of the participant, which was connected to a laptop. The passages for all the three languages are given in Appendix III.

4. **Writing:** The participants of the study were asked to write on "India- My country" in both the languages (L1 and L2) and their performance was evaluated by three competent speech language pathologists.

The samples collected were given to three competent speech language pathologists to assess their proficiency levels in each of the four skills. The judges were asked to rate on 4-point rating scale (1- Zero proficiency, 2- Low proficiency, 3- Good proficiency, 4- perfect proficiency). This was carried out to find a co-relation between the competence and the actual performance levels of each of the participants in the various language abilities.

Task

The participants were seated comfortably and they were instructed to read the questions thoroughly and select the most appropriate option that best suits the question. The instructions were also given in written form in the questionnaire.

The samples were collected in a quiet environment after taking consent from the individual participants in the study.

Analysis of data

The data collected from 60 participants was subjected to quantitative analysis using SPSS (16.0 version) software. The following statistical analyses were used:

(i) *Crosstabulations*: It was used inorder to calculate the frequency of participants opting for the same choice for the respective question. This statistical parameter was

used to calculate the frequency of responses of the participants for the questions related to language history during childhood, agreement between the competence and performance ratings and usage of language in different contexts and situations.

(ii)   ***Mean, Standard deviation and Range*** was computed for the age of acquisition and attainment of proficiency in L1, L2 and L3. It was also used for comparison of proficiency ratings among languages and skills and average days and hours of exposure to different situations.

(iii)   ***Mann-Whitney U test***: This test was carried out to see group differences among Hindi and Kannada groups, if any.

(iv)   ***Friedman test***: It was done to analyze differences among languages for the age of acquisition, age of attainment of proficiency and competence ratings, if any.

(v)   ***Wilcoxon-signed rank test***: If there was a statistical significant difference among the languages, the data was further subjected to Wilcoxon-signed rank test pair-wise analysis.

The results and discussion have been drawn based on the above methodology and statistical analyses which are outlined in chapter IV.

CHAPTER IV

RESULTS AND DISCUSSION

The present investigation aims at modifying and adapting the LEAP-Q to the Indian multilingual situation. Further, the effect of age of acquisition, educational and environmental factors on the attainment of proficiency in a language, i.e., in various sub-skills was also investigated. In this study 60 bilingual participants (Hindi-English/Kannada-English bilinguals) in the age range of 18-25 years were considered. The questionnaire was administered to all the participants and the results obtained were subjected to item-wise analysis using the SPSS software (version 16.0). Further, the participants were rated by three speech language pathologists for their performances in all the four skills, i.e., understanding, speaking, reading and writing in both languages (L1[*] & L2).The self rated performances and the performance judged by the professionals were also analyzed.

The results of the study are being presented under the following domains:

- Language history during childhood

- Acquisition of language

- Proficiency of language

- Usage of language in different context

- Exposure to different languages

- Native/non-native speaker

---

[*] L1- First Language, L2- Second language, L3- Third language

I. Language history during childhood

This section consisted of three questions which revealed details about the history of the language background of each participant. These four questions were aimed to know the usage of language at different levels and in social context during childhood.

The content of various aspects included in these questions are presented below:

(i) Language spoken by the participant at home, with parents, siblings, guardians and neighbors.

(ii) Native language of the parents, siblings and guardians.

(iii) Language spoken by the parents, siblings, guardians and neighbors.

Descriptive statistics using cross-tabulation was performed for all these three questions. Table 2 shows the percentage of participants and the language they used to communicate during childhood in each of the groups.

The overall statistical analysis revealed that in both the groups, i.e., Hindi and Kannada 100% of the participants used L1 to communicate with guardians and neighbors, 96.7% with fathers and 98.3% with mothers and siblings in childhood. 100% of the participants in the Hindi group reported using only L1 with parents, siblings, guardians and with neighbors. In the Kannada group, a small percentage of the population also accounted of using a combination of L1 and L2 while interacting with father (6.7%), mother and siblings (3.3%).

Table 2

Details of language history during childhood

	Hindi (in %)[*]	Kannada (in %)[*]	Total (in %)[*]
Language spoken at			
1. Home	100 (L1)	96.7(L1)	98.3(L1)
2. Father	100 (L1)	93.3 (L1)	96.7(L1)
3. Mother	100 (L1)	96.7(L1)	98.3 (L1)
4. Siblings	100 (L1)	96.7(L1)	98.3 (L1)
5. Guardians	100 (L1)	100 (L1)	100 (L1)
6. Neighbors	100 (L1)	100 (L1)	100 (L1)
Native Language			
1. Father	100 (L1)	96.7(L1)	98.3 (L1)
2. Mother	100 (L1)	100 (L1)	100 (L1)
3. Siblings	100 (L1)	100 (L1)	100 (L1)
4. Guardians	96.7(L1)	100 (L1)	98.3 (L1)
Language spoken by			
1. Father	83.3(L1)	80(L1)	81.7(L1)
2. Mother	83.3(L1)	93.3(L1)	88.3(L1)
3. Siblings	80(L1)	73.3(L1)	76.7(L1)
4. Guardians	76.7(L1)	90(L1)	83.3(L1)
5. Neighbors	70(L1)	86.7(L1)	78.3(L1)

[*] The numbers in the columns represent the percentage of participants.

The languages preferred are indicated in the brackets.

L1 was found to be the native language of the father (100% in the Hindi group and 96.7% in the Kannada group), mother (100%), siblings (100%) and guardians (96.7% in the Hindi group and 100% in the Kannada group). The results revealed that majority of the parents of the participants (father-81.7%, mother-88.3%), siblings (76.7%) and guardians (83.3%) used L1 for communication. Differences among the groups in the usage of language in certain contexts were noticed. The usage of L1 by the mothers of the participants in the Kannada group was noticed to be higher (93.3%) than that of the Hindi group (83.3%). Similarly, in the Kannada group more than 85% of the guardians and neighbors preferred using L1 to communicate with their children. However, the rest of the participants reported that they used a combination (L1 and L2) of the languages.

In summary, the results indicated that L1 (Hindi/Kannada in the present study) was the most commonly used language for communication in childhood.

The findings of the present study indicate the predominant use of the native language (L1) during childhood by all the bilinguals in both the groups. This could be due to the proficient and frequent usage of L1 by the family members. This suggests that the nurture influences the acquisition of a language which is also evident from the results of the present study. Thus, this study advocates that the stimulation provided by the environment has an impact during the childhood. Similar views have been reported by the empiricists (Cairns, 1996).

The results are in accordance with the view of Carroll (1967); Anstrom (1997); Delgado, Guerroro, Goggin and Ellis (1999) and Li (2009) who considered mother

language to be learnt basically during the childhood. Similar findings were also noted by Cummins (2000) who stated that native language has profound effects on the overall personal and educational development in a bilingual child. Further, these results also showed that the building of a strong foundation in L1 helps in the further literacy development and easy transfer of skills in L2. The development of proficiency can be attained due to rich experiences in the particular language which is mainly fostered by the family environment during the childhood. The use of the native language by the parents and other family members has a positive effect in learning the particular language (Delgado, Guerroro, Goggin and Ellis (1999) and (Genesse, n.d.). Li (2009) also indicated that a large percentage of contact of the participants with the L1 users during childhood have been viewed as an important factor in the language acquisition.

Thus, the results of the present study are in accordance with the reports suggested in the western context where the influence of various factors on L1 during childhood has been reported.

Group differences were also noted in the language usage during childhood. The use of a combination of language was more prevalent in the Hindi group which could be due to the environmental demands that vary from region to region in India. The usage of English by the mothers of Hindi speaking participants may be due to the need of adapting to the common language for globalization or higher educational achievements. Support for this view has been received from Carlson and Meltzoff (2008) who reported the usage of a combination of languages by the parents with the children during childhood. Similar findings have been remarked by August and Hakuta (1997).

Thus, it can be stated that during their early stages of life usage of L1 is more compared to L2. The nurture plays an important role for using L1 and L2.

II.   Acquisition of language

This section included three questions related to understanding, speaking, reading and writing   with reference to:

(i) Learning of language

(ii) Age of acquisition of the above skills in L1, L2 and L3.

(iii)Age of attainment of proficiency of the above skills in L1, L2 and L3.

Learning of language

Descriptive statistical analysis performed to observe the learning of language, has been depicted in Table 3. A look into the data shows that for all participants the language first learnt for understanding and speaking was L1. L2 formed the language that was learnt first for reading (90%) and writing (90%) in the Hindi group, but on the other hand the Kannada group participants reported of learning L1 first for reading (60%) and writing (56.7%). This group also illustrated the combined use of L1 and L2 for reading (36.7%) and writing (40%). However, no such results were found for the Hindi group. It is to note that the total percentage obtained by both the groups for understanding and speaking, reading, and writing for L1 was 100%, 35% and 33.3% respectively. The total combined usage of L1 and L2 noticed for reading and writing were 18.3% and 20% respectively. This is a small percentage compared to the usage of either L1 or L2 alone for academic skills. Thus, the results depict a preference of language for acquiring literacy skills among the two zones of India. Hence, varied results were found in the

choice of language for academic skills, while 46.7% of the participants used L2 first for

reading and writing.

Table 3

Learning of language

Skills	Hindi[*]	Kannada[*]	Total[*]
Understanding	100(L1)	100(L1)	100(L1)
Speaking	100(L1)	100(L1)	100(L1)
Reading	90 (L2)	3.3(L2)	46.7(L2)
	10 (L1)	60(L1)	35(L1)
	0(L1+L2)	36.7(L1+L2)	18.3(L1+L2)
Writing	90 (L2)	3.3(L2)	46.7(L2)
	10 (L1)	56.7(L1)	33.3(L1)
	0(L1+L2)	40(L1+L2)	20(L1+L2)

In brief, it can be stated that

- L1 is the first language learnt for understanding and speaking.

- L2 was the first language used for reading and writing in Hindi group.

---

[*] The numbers in the columns represent the percentage of participants.

The languages preferred are indicated in the brackets.

- L1 alone or a combination of L1 and L2 was used by the Kannada-English bilinguals for reading and writing.

The results of the study show that L1 was the first language acquired by the participants. This could be attributed to the fact that the exposure of the participants from the surrounding environment was maximum for L1. Thus, the usage of L1 in the early stages of life for fulfilling the basic needs of an individual or for functional communication, i.e. for understanding and speaking is widely used and accepted. Similar findings were reported by Carroll (1967); Anstrom (1997); Delgado, Guerroro, Goggin and Ellis (1999) and Li (2009).

However, the role of the second language comes into effect when an individual starts acquiring literacy skills (reading and writing) during childhood. In the present study the participants used L2 first for literacy skills. The rearing of bilingual children is appealing and has become a common phenomenon in Indian families in the present scenario. It is not only a common occurrence in the west but has also engulfed India into the stream of globalization. Learning two or more languages has advantages in today's world. The choice of language, however, depends on the family in which the child is brought up (Rosenberg, 1996). Some families prefer of using only the native language at home and the second language to be learnt through schooling which supports the present findings. However, few parents also emphasize on growing up their children as simultaneous bilinguals.

The findings of the present investigation are in agreement with the study by Marian, Blumenfeld and Kaushanskaya (2007) where they reported that L1 was acquired

earlier than L2 for understanding and reading in adult multilingual participants. Learning of language depends on several variables such as demand from the society, vocation, exposure, usage and other factors contributing to the nature.

Age of acquisition of the above skills in L1, L2 and L3

Descriptive statistical analysis was carried out and the mean score, standard deviation and the age range for both the groups (Hindi & Kannada) have been shown in Table 4.

From Table 4, the following conclusions can be made for each of the languages:

(i) For **L1**: In Hindi group the mean age of acquisition for understanding, speaking, reading and writing was 1.00 (SD=0.00), 1.00 (SD=0.00), 4.05 (SD=0.27) and 4.03 (SD=0.31) years respectively. The mean age ranges for these skills were 1.00 for understanding and speaking while 3.00-5.00 years for reading and writing. The mean values obtained for the Kannada group were 1.19 (SD=0.91) for understanding, 1.08 (SD=0.26) for speaking, 4.37 (SD=0.76) for reading and 4.57 (SD=0.85) for writing with the age ranges of 1.00-6.00, 1.00-2.00, 3.00-6.00 and 3.00-6.00 years respectively. The overall mean values obtained by both the groups were 1.09 (SD=0.64), 1.04 (SD=0.18), 4.20 (SD=0.59) and 4.30 (SD=0.69) years for understanding, speaking, reading and writing respectively. The overall mean age range was 1.00-6.00, 1.00-2.00, 3.00-6.00 and 3.00-6.00 years for understanding, speaking, reading and writing. This is closely similar to Kannada group.

Table 4

Mean score, standard deviation and the age range for acquisition of L1[*], L2 and L3 in both the groups (Hindi and Kannada)

	Hindi (in years)			Kannada (in years)			Total (in years)		
Skills	*Mean*	*SD*	*Range*	*Mean*	*SD*	*Range*	*Mean*	*SD*	*Range*
L1U	1.00	0.00	1.00-1.00	1.19	0.91	1.00-6.00	1.09	.64	1.00-6.00
L1S	1.00	0.00	1.00-1.00	1.08	0.26	1.00-2.00	1.04	.18	1.00-2.00
L1R	4.05	0.27	3.50-5.00	4.37	0.76	3.00-6.00	4.20	.59	3.00-6.00
L1W	4.03	0.31	3.00-5.00	4.57	0.85	3.00-6.00	4.30	.69	3.00-6.00
L2U	4.60	0.89	3.00-6.00	4.77	1.45	3.00-10.00	4.68	1.20	3.00-10.00
L2S	4.87	0.89	3.00-7.00	6.06	2.99	4.00-15.00	5.46	2.27	3.00-15.00
L2R	4.75	0.65	3.50-6.00	4.97	1.29	4.00-10.00	4.85	1.02	3.50-10.00
L2W	4.80	0.64	3.00-6.00	5.00	1.31	4.00-10.00	4.90	1.03	3.00-10.00
L3U	16.80	4.11	4.00-22.00	9.60	1.58	4.00-12.00	13.20	4.76	4.00-22.00
L3S	17.60	3.26	7.00-22.00	10.63	2.31	6.00-16.00	14.11	4.49	6.00-22.00
L3R	-	-	-	10.17	1.76	7.00-17.00	10.16	1.76	7.00-17.00
L3W	-	-	-	10.23	1.85	7.00-17.00	10.23	1.85	7.00-17.00

Thus, it can be observed that the two groups (Hindi and Kannada) studied showed an almost similar trend in the acquisition of understanding, speaking, reading and writing skills for L1. It is obvious from the results that the basic skills (understanding

---

[*] L1- First language, L2- Second Language, L3- Third language

and speaking) to communicate are acquired at an earlier age (1 year), however, the skills which require more precise integration of language and cognition for literacy skills (reading and writing) are acquired at the age of 4 in both the groups.

(i)   For **L2**: The data collected from the participants in Hindi and Kannada group for the usage of L2 were analyzed. The overall mean age range for acquisition of L2 was 4.68 (SD=1.2) years for understanding, 5.46 (SD=2.27) years for speaking, 4.85 (SD=1.02) years for reading and 4.90 (SD=1.03) years for writing. It was found that the mean age of acquisition of understanding, speaking, reading and writing were 4.60 (SD=0.89), 4.87 (SD=0.89), 4.75 (SD=0.65) and 4.80 (SD=0.64) years respectively for Hindi group. The mean age range of the above skills was 3.00-7.00 years respectively. The mean age of acquisition for the four skills in the Kannada group were 4.77 (SD=1.45), 6.06 (SD=2.99), 4.97 (SD=1.29) and 5.00 (SD=1.31) years. Wider age ranges than the Hindi group were obtained, i.e., 3.00-10.00 years for understanding, 4.00-15.00 years for speaking and 4.00-10.00 years for reading and writing skills. It can be seen that all the four skills developed in a parallel fashion in second language.

(ii)   For **L3**: The overall mean age of acquisition for understanding, speaking, reading and writing were 13.20 (SD=4.76), 14.11 (SD=4.49), 10.16 (SD=1.76) and 10.23 (SD=1.85) years. The participants in the Hindi group acquired L3 at a later age of 16.80 years (SD=4.11) and 17.60 (SD=3.26) years for understanding and speaking respectively. The acquisition of these skills among the participants ranged from 4.00-22.00 years for understanding and 7.00-22.00 years for speaking. However, these participants did not acquire the reading and writing skills in L3. In contrast, the mean

age of learning L3 for understanding, speaking, reading and writing were 9.60 (SD=1.58), 10.63 (SD=2.31), 10.17 (SD=1.76) and 10.23 (SD=1.85) years respectively in the Kannada group. The age ranges for these skills were 4.00-12.00 for understanding, 6.00-16.00 for speaking and 7.00-17.00 years for reading and writing.

A significant difference was obtained on Mann-Whitney U test between Hindi and Kannada groups for L1 writing ($|z|$= 2.876, $p<0.05$), L3 understanding ($|z|$= 5.873, $p<0.05$) and L3 speaking ($|z|$= 5.875, $p<0.05$). The Hindi group attained understanding and speaking L3 at a later age than the Kannada group.

A comparison in age of acquisition across languages (L1, L2 and L3) was done. The mean and standard deviation as obtained for both the groups are given in Table 5.

Table 5

Comparison of age of acquisition across languages

Languages	Hindi (in years)		Kannada (in years)	
	Mean	*SD*	*Mean*	*SD*
L1	2.52	1.54	2.80	1.82
L2	4.75	.78	5.20	1.94
L3	17.20	3.70	10.15	1.90

It is evident from the above Table 5, that the acquisition of L1 was followed by the acquisition of L2 and then L3. The Friedman test was further carried out to look for any significant difference across languages in both groups. A significant difference was

obtained in Hindi $\{\chi^2 (2) = 120, p<0.05\}$, and Kannada group $\{\chi^2 (2) = 202.31, p<0.05\}$, the data was further subjected to Wilcoxon signed rank test. Results of this test indicated a significant difference between L1 and L2 ($|z| = 7.88, p<0.05$); L2 and L3 ($|z| = 9.14, p<0.05$) and L1 and L3 ($|z| = 9.53, p<0.05$) in the Kannada group. Similar findings were observed in Hindi group and a significant difference in the age of acquisition between L1 and L2 ($|z| = 8.79, p<0.05$); L2 and L3 ($|z| = 6.75, p<0.05$) and L1 and L3 ($|z| = 6.78, p<0.05$) was viewed.

In sum up,

- The acquisition of L1 for understanding and speaking is learnt first followed by reading and writing.

- All the skills develop in a parallel fashion in the acquisition of L2 and L3.

- L1 is acquired first followed by L2 and L3.

The results are in accord with Durgonuglu and Oney (2000) who considered listening skills to be developed prior to the acquisition of reading and writing in English speaking beginning readers. The same explanation can be attributed to the discrepancy in the age of acquisition for understanding, speaking and literacy skills in the current study. The skills of understanding and speaking act as building blocks to further strengthen literacy development.

Li (2009) stated that first and second language acquisitions are same in the psychological language system but differ in their detailed learning strategies. The above

mentioned findings of the present study are in consonance with Li (2009) who stated that in mother language acquisition, oral language is acquired first and then the written skills. While for second language acquisition, oral and written skills are acquired at the same time. The age of acquisition has been found to play a critical role in attainment of proficiency in a language. There has been no consensus among the researchers regarding the critical period, which was first proposed by Lenneberg (1967). The onset and closure of the critical period are found to be varied among the authors. The critical period hypothesis has been found to be the same for the acquisition of L1 and L2. In the present study L1 was acquired within the age range of 1-6 years and L2 within 3-15 years. These findings are in consonance with the report of Lenneberg (1967) who stated the acquisition of L2 by 12 years or puberty, while Johnson and Newport (1989) considered the time of closure to be 15 years of age.

From the outcomes of the current investigation, it is evident that the second language was acquired once the first language was mastered or partially acquired. It signifies that the participants chosen for the present study comprised of the sequential bi/multilinguals. The findings are in consonance with Garcia and Seitel (2009) who defined sequential bilinguals as the ones who acquire L2 after the age of 3 years. Similar findings were reported by Marian, Blumenfeld and Kaushanskaya (2007) who found that the age of acquisition of L1 was around 0.33 years for learning and 4.5 years for reading. In contrast they found that the mean age of acquisition of learning the above two skills was 6.82 and 8.15 years.

The participants in the Hindi group also reported of never acquiring L3 for reading and writing purposes. This is due to the fact that all the participants in Hindi group were recruited from the student groups of colleges and universities who were from Northern states (Hindi region) of India. The participants were pursuing higher education in the state of Karnataka. They had learnt Kannada in order to understand and communicate for routine activities and for communicating to the general public. Also these participants were expected to know L3 (Kannada) as they belonged to a health care professional where the demand to learn Kannada (L3) was more. However, there was no much demand of learning L3 for academic purposes and hence the learning for reading and writing could not be attained.

In Kannada group, Hindi was the L3 of the participants and it is seen that this language is normally introduced in the academic curriculum in the V standard as per the Indian education system which emphasizes learning of three languages during schooling. Further, in Indian scenario Hindi gets more prominence as it is the national language. The Kannada participants had initial exposure either through school, media, neighbors etc. However, such exposure was not available for Hindi group to learn L3 (Kannada) in the early stages of life. Thus, the Hindi group participants did not learn the literacy skills in L3. This gives a clear picture of the influence of educational context in acquiring a particular language.

Age of attainment of proficiency of the above skills in L1, L2 and L3

A self-reported age for attainment of proficiency in each of the four skills (understanding, speaking, reading and writing) for L1, L2 and L3 was obtained and

subjected to descriptive statistical analysis. The overall mean score, standard deviation

and the age ranges were computed and have been given in Table 6.

Table 6

Mean age for attainment of proficiency in understanding, speaking, reading and writing

skills in L1, L2 and L3.

	Hindi (in years)			Kannada (in years)			Total (in years)		
	Mean	*SD*	*Range*	*Mean*	*SD*	*Range*	*Mean*	*SD*	*Range*
L1U	7.87	1.45	4.00-10.00	7.17	1.91	2.00-10.00	7.51	1.72	2.00-10.00
L1S	8.37	0.88	7.00-10.00	7.73	2.43	2.00-15.00	8.05	1.84	2.00-15.00
L1R	9.00	1.28	6.00-12.00	9.53	2.80	3.00-15.00	9.26	2.17	3.00-15.00
L1W	9.23	1.30	7.00-13.00	9.60	2.64	4.00-15.00	9.41	2.07	4.00-15.00
L2U	12.47	2.92	7.00-17.00	12.03	3.43	3.00-18.00	12.25	3.17	3.00-18.00
L2S	14.07	2.85	9.00-19.00	13.60	3.43	4.00-18.00	13.60	3.13	4.00-19.00
L2R	14.13	2.65	9.00-18.00	12.90	3.17	5.00-18.00	13.48	2.96	5.00-18.00
L2W	18.00	2.67	9.00-18.00	13.17	3.10	5.00-18.00	13.65	2.91	5.00-18.00
L3U	16.80	5.52	9.00-22.00	13.96	2.63	8.00-17.00	15.02	3.96	8.00-22.00
L3S	18.67	5.54	9.00-22.00	15.67	3.04	9.00-21.00	16.48	4.02	9.00-22.00
L3R	-	-	-	14.83	2.47	9.00-20.00	14.83	2.47	9.00-20.00
L3W	-	-	-	14.92	2.43	9.00-20.00	14.91	2.43	9.00-20.00

(i)   For **L1**: On whole the mean age of participants for the attainment of proficiency in each of the four basic skills of understanding, speaking, reading and writing were found to be 7.51 (SD=1.72), 8.05 (SD=1.84), 9.26 (SD=2.17) and 9.41 (SD=2.07) years respectively. Participants reported of attaining proficiency of L1 at an age range of 2.00-10.00 years for understanding, 2.00-15.00 for speaking, 3.00-15.00 years for reading and 4.00-15.00 years for writing. The participants in the Hindi group acquired proficiency by the age of 7.87 (SD=1.45) for understanding, 8.37 (SD=0.88) years for speaking, 9.00 (SD=1.28) for reading and 9.23 (SD=1.30) years for writing. In Hindi group, mastery in L1 was obtained in the age range of 4.00-10.00 years for understanding, 7.00-10.00 years for speaking, 6.00-12.00 years for reading and 7.00-13.00 years for writing.

Similar results were obtained in the Kannada group with the mean ages of 7.17 (SD=1.91), 7.73 (SD=2.43), 9.53 (SD=2.80) and 9.60 (SD=2.64) years respectively. It can be noticed from Table 6, that the minimum age for acquiring proficiency in all the skills in this group was lesser than that of the Hindi group. The participants started attaining proficiency for understanding from 2.00-10.00 years and for speaking, reading and writing in the age range of 2.00-15.00 years. It is obvious from the results that the participants attained the proficiency in understanding and speaking at the age of 7 years. Similarly, for reading and writing skills the age of proficiency for L1 languages was 9 years. Thus, it can be stated that the proficiency for speaking and understanding were acquired at an early age (approximately 7 years) compared to reading and writing at a later age (9 years).

It can be noted that understanding and speaking which were mostly used for functional communication reached a level of native like proficiency earlier than reading and writing skills.

(ii)   For **L2**: The average mean age for understanding, speaking, reading and writing were 12.25 (SD=3.17), 13.60 (SD=3.13), 13.48 (SD=2.96) and 13.65 (SD=2.91) years respectively. It was seen that the proficiency in L2 was achieved later than L1 and proficiency in all the skills were achieved at around the similar ages. The mean ages obtained by the Hindi group were 12.47 (SD=2.92) years for understanding, 14.07 (SD=2.85) for speaking, 14.13 (SD=2.65) years for reading and 18.00 (SD=2.67) years for writing. The mean age ranges for this group were 7.00-17.00 for understanding, 9.00-19.00 for speaking, 9.00-18.00 both for reading and writing.

 The Kannada group also showed a similar trend in acquiring L2 with a mean age of 12.03 (SD=3.43), 13.60 (SD=3.43), 12.90 (SD=3.17) and 13.17 (SD=3.10) years respectively. The age range for acquisition of the skills in this group ranged from 3.00-18.00 years. Proficiency acquiring in all participants on a whole ranged between 3.00-19.00 years for both functional and literacy skills.

(iii)   For **L3:** The total mean ages of acquisition of proficiency were 15.02 (SD=3.96), 16.48 (SD=4.02), 14.83 (SD=2.47) and 14.91 (SD=2.43) years in each of the four skills studied. The Hindi group obtained a mean age of 16.80 (SD=5.52) years for acquiring proficiency in understanding and 18.67 (SD=5.54) years for speaking and 9.00-22.00 years was the age range for attaining proficiency in literacy skills. It is evident from the study that Hindi participants did not acquire literacy skills in L3. The mean age

of attainment of proficiency in reading and writing skills in the Kannada group were 14.83 (SD=2.47) and 14.92 (SD=2.43) years and for understanding and speaking were 13.96 (SD=2.63) and 15.67 (SD=3.04) years respectively. The participants in the Kannada group achieved proficiency in all the four skills within the age range of 8.00-21.00 years.

Comparison across the Languages: The overall mean and standard deviation (as depicted in Table 7) was calculated using descriptive statistical analysis and it was seen that the attainment of proficiency followed the same pattern as the age of acquisition; L1 was mastered first followed by L2 and L3. Friedman test revealed a significant difference across languages in both the groups [{$\chi^2(2) = 32.00$, p<0.05}-Hindi and {$\chi^2(2) = 174.20$, p<0.05}-Kannada]. Pair wise comparison was done using the Wilcoxon signed rank test and significant difference was obtained across all the languages in both the groups.

Table 7

Comparison of age (in years) of attainment of proficiency across languages

Languages	Hindi		Kannada	
	Mean	*SD*	*Mean*	*SD*
L1	8.61	1.34	8.50	2.66
L2	13.56	2.82	12.92	3.30
L3	18.33	5.37	14.83	2.68

Non-parametric statistical analysis (Mann-Whitney) did reveal a significant difference in the attainment of reading ($|z|= 2.42$, $p<0.05$) and writing ($|z|= 2.40$, $p<0.05$) abilities in L3 among the Hindi and Kannada groups. The participants in the Hindi group never acquired the literacy skills in L3. The acquisition and attainment of proficiency in L1, L2 and L3 is depicted in Figure 2. It is evident from the figure that the acquisition and attainment of proficiency follows a uniform trend for L1, L2 and L3 for both Kannada-English and Hindi-English bi/multilinguals.
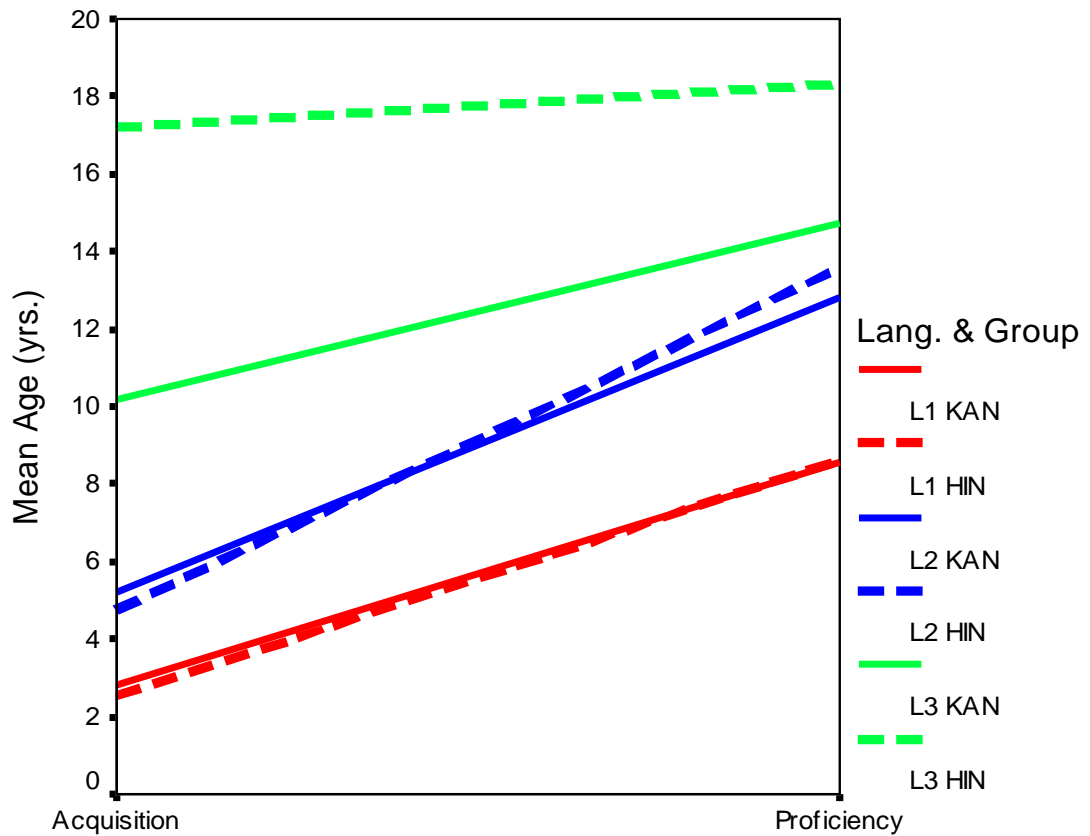
Figure 2. Mean age of acquisition and proficiency across languages and groups.

In concise,

- The skills for understanding and speaking L1 were mastered earlier than the literacy skills.
- The attainment of proficiency of all the skills in L2 and L3 developed in a parallel fashion.
- L1 was mastered earlier than L2 and L3.

The attainment of proficiency also followed the similar trend as that of acquisition where L1 was mastered at an early age followed by the mastery of L2 and L3 at a later age after L1 was partially or fully achieved. This could be due to the fact that the exposure to L1 was maximum as this being the native language of the parents and the participants. Evidences from the literature have shown that interactions with family members posed to be one of the major contributors for attaining proficiency in L1 (Hakuta & Pease-Alvarez, 1994; Anstrom, 1997; Hasson, 2006; Marian, Blumenfeld & Kaushanskaya, 2007). Apart from the innate ability to learn a language, the current results shed a light of importance on the variables that facilitates language proficiency.

Thus, the participants constituted a group of sequential bi/multilinguals as they had acquired one language after the other had been partially or fully mastered. They were introduced to L2 (English) only when they began schooling and the language was learnt utmost while interacting at the educational set-up and while acquiring the literacy skills. All the four skills, understanding, speaking, reading and writing were acquired and

mastered at the same time for L2. The duration of exposure and the language choice in varied situation directly or indirectly had an effect on the attainment of proficiency.

The third language (Hindi for the Kannada group) was introduced in the academic curriculum at a later age than L2 and hence, the proficiency in L3 was attained later. However, it was quite evident that the Hindi group never learnt reading and writing in L3 and therefore, they did not achieve any proficiency in these skills.

This finding could be attributed to the fact that the participants chosen for the present study consisted of Hindi-English bilinguals who dwelled in the state of Karnataka for pursuing higher education and learning of Kannada for reading and writing was not a compulsion for academic purposes.

The upshots of the current investigation corroborated the earlier findings of Marian, Blumenfeld and Kaushanskaya (2007) who studied Spanish-English bilinguals and reported that the mean age of attainment of L1 proficiency was prior to that of L2. They also stated that the skill of understanding achieved a native like proficiency before reading in L1. But the skills in L2 developed in a corresponding manner. Hence, it can be concluded that all bi/multilinguals have the same pattern of language acquisition and mastery inspite of regional, social, cultural, environmental and attitudinal differences among varied regions of the world. This supports the role of the nature or the innate language device as stated by Chomsky (1957).

III. Proficiency of language

The proficiency of an individual in each of the languages and skills was self rated by the participant and the three professionals (having a minimum degree of Masters in Speech Language Pathology) and the results are discussed under the following headings:

a.   ***Competence across languages***: This parameter reflects an individual's ability to perform linguistic skills for various purposes. This was judged by asking the participants to report their proficiency level in each of the three languages they knew in understanding, speaking, reading and writing and an overall mean rating and standard deviation was calculated across languages for both the groups which are given in Table 8.

Table 8

Mean rating and SD in each language as rated by the participants

Groups ⟍ Languages	Hindi		Kannada	
	Mean	*SD*	*Mean*	*SD*
L1	3.36	0.50	3.60	0.49
L2	3.11	0.37	3.12	0.47
L3	1.60	0.73	2.48	0.62

The mean values indicate that the proficiency in L1 was considered to be the best in both Hindi-English (3.36, SD=0.50) and Kannada-English (3.60, SD=0.49) bilinguals. The participants rated themselves to be better competent in L2 [{Hindi group: 3.11, SD=0.37} & {Kannada group: 3.12, SD=0.47}] than in L3. A difference can be noted in the mean ratings of L3 between the groups where the Kannada participants (2.48, SD=0.62) rated themselves to be better than Hindi (1.60, SD=0.73). The same is also shown in Figure 3.

The Friedman test was further carried out which revealed a significant difference across languages for both the groups [Hindi: {χ^2 (2) = 193.47, p<0.05}, Kannada: {χ^2 (2) = 154.64, p<0.05}]. Additionally, the Wilcoxon signed rank test was done to analyze pair-wise difference and a statistically significant difference was obtained across all the languages (L1, L2 and L3) in both the groups.
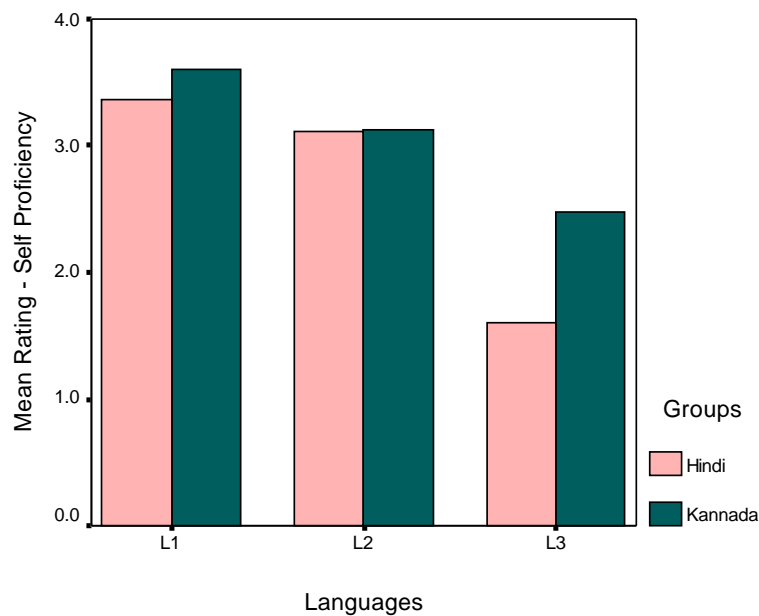

Figure 3. Mean rating of Self proficiency across languages

The participants of the study also evaluated their skills of effectively switching over from one language to the other. The overall mean rating obtained for the same was 3.03 (SD=0.31).

The results of the current study also revealed that most of the participants (43.3%) did not know any dialectal variation. The rest percentage of bilinguals reported of knowing either two (18.3%) or three (16.7%) dialects only in L1 and none in L2 and L3. 58.8% and 35.3% of the participants reported of being native-like proficient in understanding and speaking the dialect of L1.

b.   *Comparison between the competence and performance ratings*: A comparison of the self-ratings and the ratings by the professional was carried out. The performance was judged by three proficient judges in each of the languages and an inter-rater reliability was also found among the judges. The reliability coefficient (Cronbach's alpha) was calculated to measure the inter-rater reliability among the judges for both the languages and across all the skills. The alpha coefficient was 0.96, 0.95, 0.91 and 0.94 among the Kannada judges for understanding, speaking, reading and writing respectively. An inter-rater reliability of 0.95, 0.85, 0.79 and 0.78 was obtained among the Hindi judges for the four skills. A reliability of 0.89, 0.92, 0.70 and 0.93 was found among the English judges for the four skills in the Kannada group and 0.81, 0.93, 0.78 and 0.87 in the Hindi group. These coefficients indicate a good reliability among the judges. The raw scores of the judges were converted into the four point rating scale and then the average rating of the judges was considered for analysis. Further, the cross-tabulations were performed to obtain the percentage of agreement in the competence and performance skills of the participants studied (Table 9).

Table 9

Agreement between the self and judge's ratings[*].

		Judges agreement			
		Hindi (%)		Kannada (%)	
	Judges / Self ratings	3	4	3	4
L1U	3	62.5(5)	37.5(3)	80(4)	0(0)
	4	18.2(4)	81.8(18)	64(16)	32(8)
L1S	3	7.7(1)	92.3 (12)	50(6)	50(6)
	4	0(0)	100(17)	55.6(10)	44.4(8)
L1R	3	14.8 (4)	85.2(23)	60(9)	40(5)
	4	0(0)	100(3)	33.3(5)	66.7(10)
L1W	3	19.2(5)	80.8(21)	46.7(7)	40(6)
	4	0(0)	100(3)	33.3(5)	66.7(10)
L2U	3	87.5(21)	12.5(3)	69.2(9)	30.8(4)
	4	100(6)	0(0)	60(9)	40(6)
L2S	3	80.8 (21)	19.2(5)	77.8(21)	22.2(6)
	4	0(0)	100(2)	-	-
L2R	3	76.9 (20)	23.1(6)	47.8(11)	52.2(12)
	4	75(3)	25(1)	50(3)	50(3)
L2W	3	88.5(23)	7.7(2)	64.3(18)	14.3(4)
	4	75(3)	25(1)	100(1)	0(0)

[*] The numbers in the columns indicate the percentage of agreement between the judges and self report ratings of various skills. The numbers in the parentheses represent the number of participants. 3- Good proficiency, 4-Native-like/perfect proficiency

(i) Hindi group

The analyses as shown in Table 9 are the performances of the self and agreement ratings by the judges. It is evident from the Table 9 that out of 30 participants, 22 considered themselves to be native like proficient in understanding L1. 62.5% was the agreement between judges and self ratings where, it was felt and reported that the participants were good in understanding the L1. On the other hand, the disagreement between the self reporting and judge's view was 37.5%. The judges felt that the participants underestimated their performances, i.e., with the existing data the judges felt that out of 8 participants 3 were proficient rather than good in understanding L1. 81.8% was the agreement between self reporting and judge's view that the participant's performances in understanding were native like (rating of 4). The rest 18.2% was the disagreement where judges felt that the participants overestimated their performance. However, there was 100% agreement between the participants and the judges (as regards speaking) who rated and felt to have native like proficiency. Out of the 13 participants 12 underestimated their performances. This was evident from the judge's view where they felt that 92.3% were native like proficient in speaking L1. In the skill of reading and writing, 27 and 26 of the participants respectively considered themselves to have good proficiency and an agreement of only 14.8% and 19.2% was noticed. The judges rated these participants to have native like proficiency in both the skills in L1. A small number of participants (three numbers) reported and were felt by the judges to be native like proficient. The percentage score obtained clearly depicts that a good agreement between the participants and the judges was found in L2, i.e., for understanding (87.5% of the 24 participants), speaking (80.8% of the 26 participants), reading (76.9% of the 23

participants) and writing (88.5% of the 23 participants) for a rating of good proficiency. However, the agreement rated and felt by the participants and judges were 100 % (for two participants) for speaking. The disagreement was 100% (for 6 participants) for understanding L2 where the judges felt that these 6 participants over-estimated their performances. The judges were of the view that the performances of these participants were good (rated-3) rather than native-like (self-rating-4). The performance and competence ratings are depicted in Figure 4 and Figure 5 for L1 and L2 respectively.

Figure 4. Comparison of competence * and performance in L1 for Hindi group

---

* Com- Competence, Per- Performance
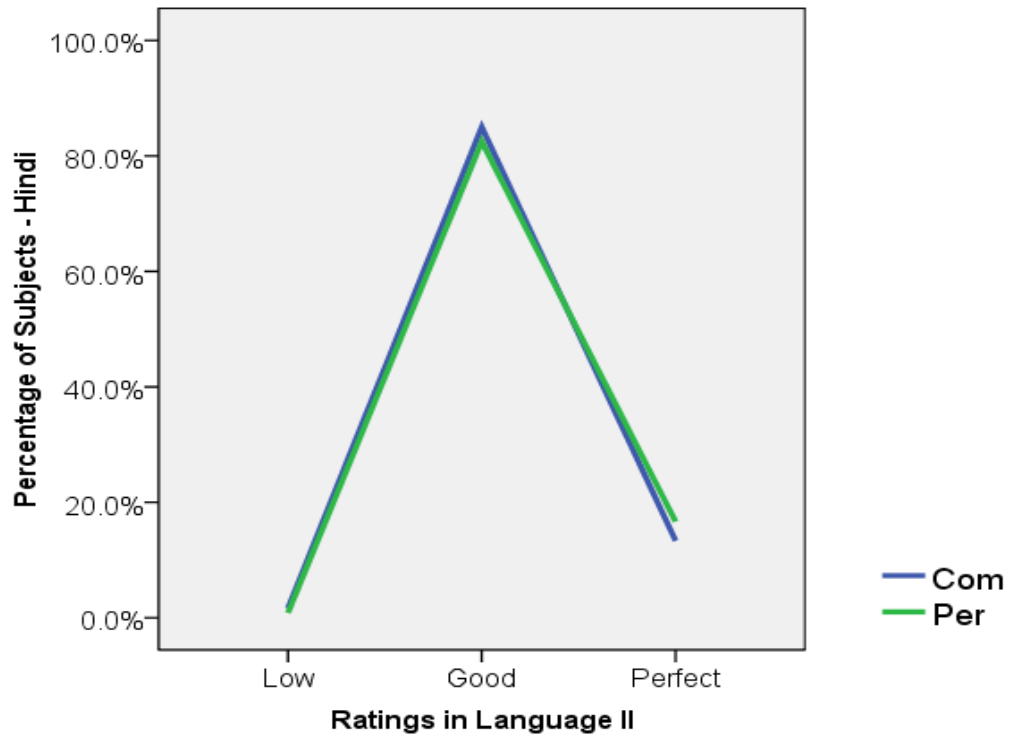
Figure 5. Comparison of competence and performance in L2 for Hindi group

(ii) **Kannada group**

In Kannada group, out of the 24 participants who scored themselves to have perfect proficiency in understanding L1 (Kannada), only 32% agreement was found with the judges. The rest 68% were judged to have good proficiency. It is evident from the Table 9 that according to the SLPs only 44.4% of the 18 participants and 66.7% of the 15 participants were native-like or perfectly competent in speaking and reading L1 respectively. The rest of the participants who considered themselves to have native like proficiency were judged to have at least good proficiency in the language.

A total of 13 participants, 9 (69.2%) were judged as having good proficiency while 4 (30.8%) as native like in understanding L2. On the other hand, 9 (60%)

participants rated themselves as good (rating of 3) and 6 (40%) rated themselves as native-like. Thus, it is evident from the results that the judges felt that few participants over-estimated their understanding abilities in L2. 77.8% was the agreement for having good proficiency in speaking as felt by the judges and reported by the participants. 22.2% (6 out of 27 participants) underestimated their performances. The judges felt that the performance of these 6 participants were native-like rather than good proficiency for L2. 47.8% and 64.3% was the agreement while 52.2% and 14.3% was the disagreement for reading and writing for a rating of good proficiency. 50% (3 out of 6 participants) was the agreement and disagreement for native like proficiency for reading in L2. The findings are represented graphically below (Figure 6 and 7).
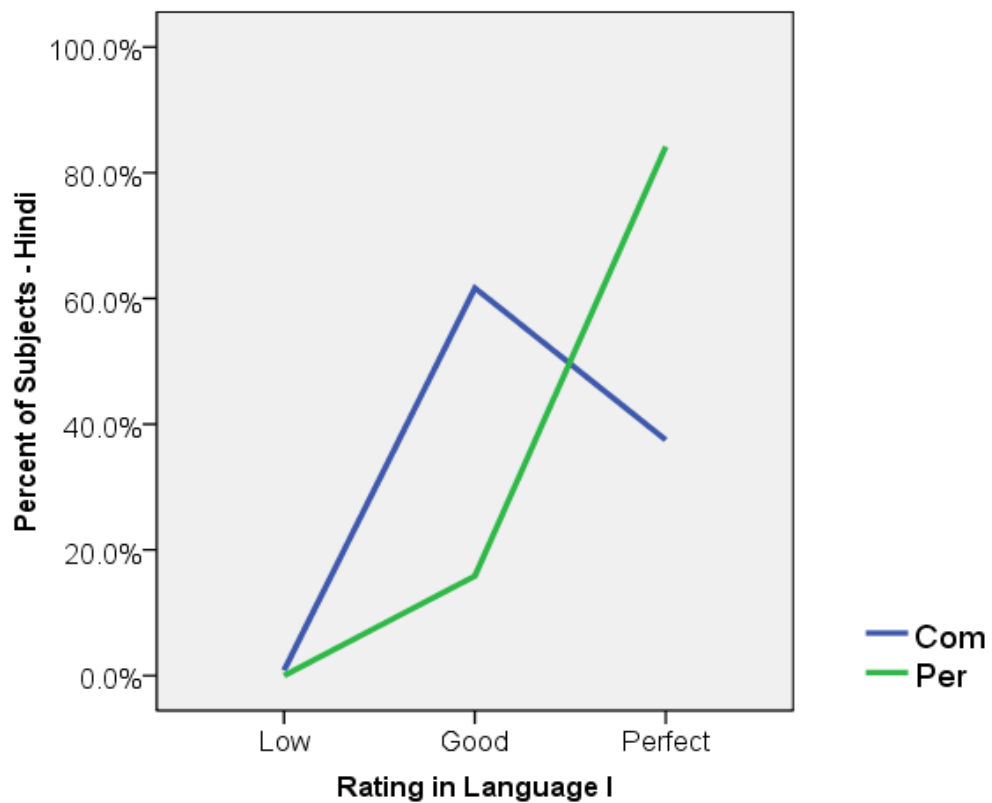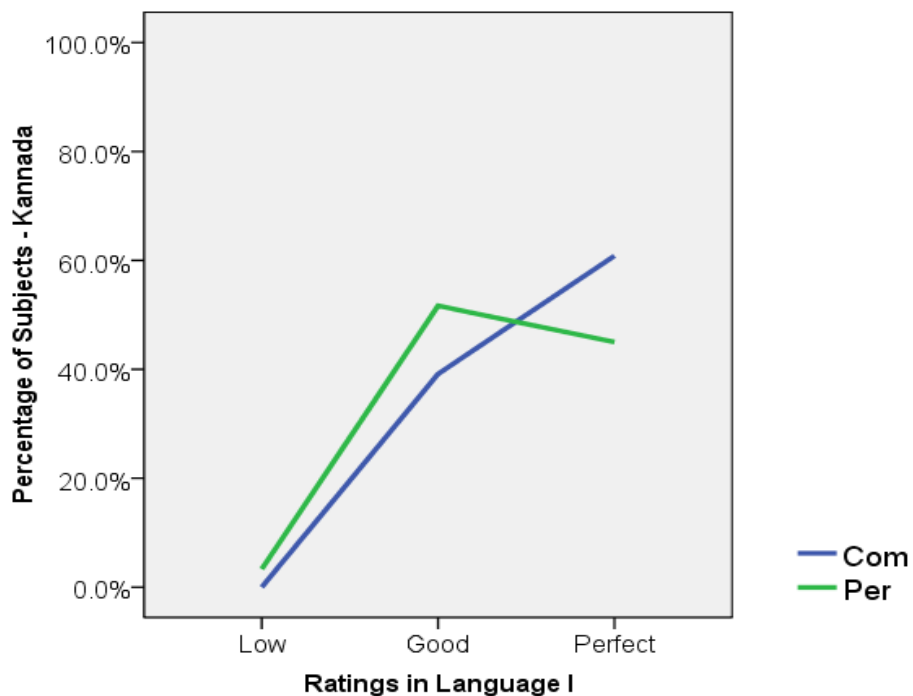

Figure 6. Comparison of competence* and performance in L1 for Kannada group

---

* Com- Competence, Per- Performance
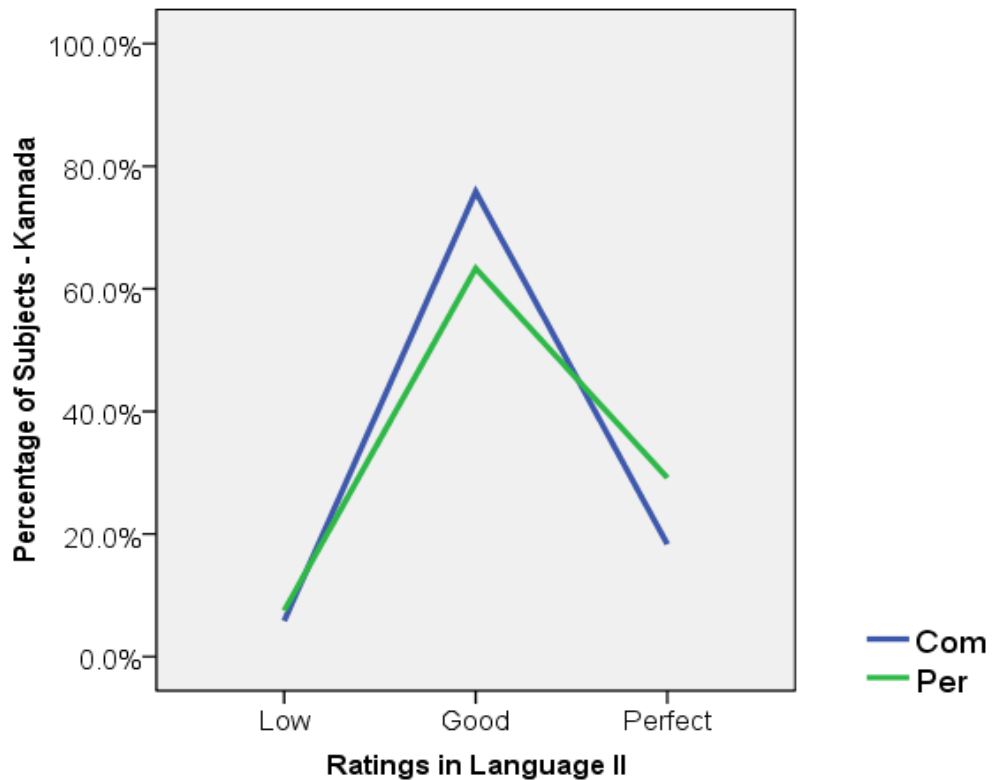
Figure 7. Comparison of competence and performance in L2 for Kannada group

In precise,

- The self-reports indicated a better L1 competence than L2 and L3.

- The ratings of participants and the judges were in concordance for L2.

- However, it was seen that on an average the Hindi-English bilinguals rated themselves to be more competent in L1 than their actual performance. In contrast, Kannada-English bilinguals felt that they were less competent than they actually were.

As L1 was the native language of all the participants, they considered themselves to be native like competent in using the language. With reference to L1, participants received either little or no feedback about their skills. Hence, leading to either an over- or underestimation of their skills in L1. MacIntyre and Charos (1996) speculated that overestimation of competence in L2 may or may not be problematic. On the one hand, students who overestimate their ability are more likely to fall short. On the other, if such failures were infrequent and do not distress the students, a positive bias may actually aid the language learning process. A similar explanation can be assumed for the present investigation. Review of earlier findings suggests similar results as of the present study. Shameem (1998) reported significant difference between oral performances and self-reports. The general trend in the data of their study indicated that the respondents rated their oral abilities at a level higher than their actual performance. From the results it was also evident that a difference was obtained in rating the various skills.

There was accordance among the judges and the self-ratings for L2. The results replicate and extend previous research on self ratings for L2, where researchers have reported a correlation between competence and performance levels, thus validating the use of self reports as a quick tool to measure proficiency. The present outcomes are consistent with the results of MacIntyre, Noels and Clement (1997). One possible explanation for this result is that participants receive more practice and feedback in English (L2) compared to L1. As all bilinguals had English as a medium of instruction during schooling which resulted in better self rating of their own skills. One may contemplate that bilingual students in schools, where English is the lingua franca, engage

in more use of English either for literary activities or communication than L1. However, it refuted the findings of Delegado, Guerrero, Goggin and Ellis (1999) who found self-assessments to be more accurate for L1 (Spanish) than L2 (English) and within English varied depending on the skill. Also self perceptions of language competence are not isomorphic with measured proficiency; affective factors could be cause of discrepancy (MacIntyre, Noels & Clement, 1997).

The overall ratings revealed that the competence ratings for L2 almost coincided with the performance ratings. In contrast, this was not the case for L1 in both the groups. They either under or over-estimated themselves by one level of their actual performing abilities. Hence, the ratings need to be inferred with caution in order to assess the degree of bilingual proficiency in an individual.

Thus, it can be concluded that the performances of the participants should be placed one step below their ratings. This would be their minimum level of their performance in the respective language. Thus, a correction factor of level-1 below the reported rating is advocated.

IV.   Usage of language in different contexts

Two questions formed the core of this domain which was related to the language preference in:

(i)   School environment (Table 10)

(ii)   Interaction with family, friends, market places, media and web-based learning situations (Table 11).

Table 10

Usage of Language in school environment[*]

	Hindi (%)	Kannada (%)	Total (%)
Medium of instruction	96.7 (L2)	90.0(L2)	93.3(L2)
Language used maximally for communication	53.3(L1) 36.7(L2)	53.3(L1) 43.3(L2)	53.3(L1) 40(L2)
Language spoken with teachers	80(L2)	80(L2)	80(L2)
Language spoken with classmates	53.3(L1+L2) 46.7(L1)	50(L1+L2) 40(L1)	51.7(L1+L2) 43.3(L1)
Language spoken by teachers	76.7(L2)	70(L2)	73.3(L2)
Language spoken by classmates	70(L1+L2) 30 (L1)	56.7(L1+L2) 30(L1)	63.3(L1+L2) 30 (L1)
Change in medium of instruction	3.3	13.3	8.3

(i) **School environment**: Descriptive statistical analysis was done and frequencies were calculated through cross-tabulations. In 93.3% (Hindi-96.7% and Kannada-90%) of the total participants, L2 was the medium of instruction in schooling. 53.3% of the participants both in Hindi and Kannada group used L1 maximally for communication and the rest 40% (Hindi-36.7% and Kannada-43.3%) used only L2 while interacting in the

[*] The numbers in the columns represent the percentage of participants.

The languages preferred are indicated in the brackets.

school environment. It can also be noted that English was the most preferable language (80% in both the groups) when the students interacted with their teachers. Observations were also drawn from the Table 10 that 76.7% and 70% of teachers in the Hindi and Kannada group used L2 (English) as a medium of instruction for teaching, communication and other literary activities. However, it was noticed that 51.7% of the total participants, when interacting with their peer groups used a combination of the languages, i.e., L1+L2 {L1: Hindi/Kannada, L2-English}. 43.3% of the participants preferred using L1 alone with their classmates. It is evident from the table 11 that the Hindi group showed a higher percentage of using the combination of languages (53.3%) than the Kannada group (50%). 63.3% of the total participants reported that their classmates used to speak with them in English. The mean years of education were 17.26 (SD=1.74) years [Hindi-17.36 (SD=1.99); Kannada-17.16 (SD=1.48)] and all the participants had a range of 15-21 years of education. Only 8.3% of the participants had changed their medium of instruction and it was observed that the medium opted was English.

In brief, L2 was found to be the medium of instruction in schools and was the language used maximally when interacting with teachers. However, L1 formed the language of communication between peers. Some of the participants even reported of using both the languages.

The results indicated that L2 was the most widely used language during formal teaching situations. This would further help to contribute to the development of L2 in an individual. This finding is supported by the study of Collier (1995) who proposed a

conceptual model to explain the processes that the students undergo while acquiring the second language during the school years. In this model the use of L2 in formal teaching has been emphasized for the development of the language. Evidences from the study of Ellis (1989); Johannessen and Lopez (2002) and Li (2009) support the present findings. The constant use and exposure to L2 in the school setting can be attributed as a contributor to the acquisition of good proficiency in L2 (English). Not only the individual characteristics but the type of schooling affects language proficiency in L2 (Carhill, Suarez-Orozco & Paez, 2008). The results are in consonance with Rahnu and Puur (n.d.) who considered educational attainment to be a major predictor of language proficiency. The language usage by the vocabulary learning partners (students and teachers) could have also attributed to the attainment of proficiency (Schmitt, 2008).

However, the use of L1 or a combination of languages while interacting with friends could be attributed to the fact of language choice or proficiency of language use of the listener/ communication partner.

The longer duration of education also contributes to the attainment of language proficiency. This finding is in harmony with the view of Flege and Liu (2001).

(iii) **Interaction with family, friends, market places, media and web based learning situations**: In order to calculate the frequency, cross tabulation was carried out and the results are depicted in Table 11.

Table 11

Usage of Language in other contexts

	Hindi[*]	Kannada*	Total*
Interaction with family	93.3(L1)	86.7(L1)	90(L1)
Education/work places	53.3(combination) 36.7 (L2)	66.7(combination) 30(L2)	60 (combination) 33.3(L2)
Listening to tapes	76.7 (L2)	70(L2)	73.3(L2)
Textbooks	90(L2) 10(combination)	43.3(L2) 43.3(combination)	66.7(L2) 26.7(combination)
Dictionary	70(L2)	63.3(L2)	66.7(L2)
Story books	63.3(L2) 36.7(combination)	40(L2) 43.3(combination)	51.7(L2) 40.0(combination)
Newspapers	66.7 (L2) 33.3(combination)	36.7 (L2) 70 (combination)	51.7 (L2) 41.7(combination)
Historical books	73.3(L2)	63.3(L2)	68.8(L2)
Internet source	100 (L2)	90 (L2)	95 (L2)
Writing	63.3(L2)	56.7(L2)	60(L2)
Friends	83.3(combination)	80 (combination)	81.7(combination)
Neighbors	56.7(L1)	73.3(L1)	65(L1)
Watching TV	66.7(combination)	76.7(combination)	71.7(combination)
Listening to the radio	60(combination)	66.7(combination)	63.3(combination)
Market places	70(combination)	53.3 (L1)	-

[*] The numbers in columns indicate percentage of participants and the languages preferred are indicated in parentheses.

Overall, it was noticed that 90% of the participants used L1 while interacting with their family members. It was seen that the percentage of participants using L1 (93.3%) in Hindi group was greater than that of the Kannada group (86.7%) indicating the regional variations seen in language usage. The rest of the participants of Kannada (13.3%) and Hindi (6.7%) group indicated that they used a combination of L1 and L2 while communicating with family members. 81.7% (Hindi-83.3% and Kannada-80%) of the participants used a combination of languages while interacting with peer groups and L1 was more preferable (65%) with neighbors. A greater percentage of participants (73.3%) in Kannada group reported of using L1 with neighbors compared to the 56.7% in Hindi group. This findings show that L2 is often and even used while interacting with family and friends in the northern parts of India and is not restricted to the academic viewpoint alone.

A combination of languages (60% of the total participants) was most chosen at the educational set-up and if, they used only one language than L2 (33.3%) was preferred over the other languages. It was seen that more number of Kannada participants (66.7%) used combination of languages than the Hindi participants (53.3%).

On an overall basis, 73.3% (Hindi-76.7% and Kannada-70%) of the recruited participants listened to instruction tapes at school in L2. These tapes mainly focused on teaching American accent/pronunciation and are a part of the English language syllabus. Either English (66.7%) or a combination of languages (26.7%) was used for reading textbooks. In Hindi group, 90% of the bilinguals used L2 alone for reading textbooks while in Kannada group it was 43.3%. The 10% of Hindi group and 43.3% of Kannada

group used a combination of the languages. For writing an average of 60% of all the participants (Hindi-63.3% and Kannada-56.7%) reported of using L2.

L2 was found to be used by most of the participants in the present study in reading dictionary (66.7%), story books (51.7%), newspapers (51.7%) and historical books (68.8%). The frequency analysis also revealed differences among the two groups (Hindi and Kannada). 70% and 63.3% of Hindi and Kannada participants respectively used English dictionaries for their reference. The Hindi-English bilinguals used either L2 (63.3%) or a combination of languages (36.7%) for reading story books during leisure time. The Kannada-English bilingual group used either L2 (40%) or a combination of languages (40%) for the same. English (L2) newspapers (66.7%) were more preferred by the Hindi group than the Kannada participants (70%) who read both English and Kannada newspapers. 73.3% and 63.3% of participants in the Hindi and Kannada group respectively, chose L2 for reading historical books.

In the web and media based experiences an overall percentage revealed that 95% (Hindi-100% and Kannada-90%) used only L2 while using internet services, on the other hand a combination of languages was chosen while listening to radio (Hindi-60% and Kannada-66.7%) and watching television (Hindi-66.7% and Kannada-76.7%). The percentages reveal that the Kannada group was more exposed to the use of combination of languages than Hindi group. It was reported by the participants that L1, L2 and L3 were the preferred combination for viewing and listening to television and radio.

The findings also revealed that 53.3% of the participants in the Kannada group used L1 alone for communication in market areas whereas 70% of the participants in the Hindi group used a combination of the languages.

To summarize:

- L1 was the preferred language while interacting with family members and neighbors

- L2 was most preferred in the educational set-up and in listening to language instruction tapes, reading books, using internet sources.

- A combination of languages (L1, L2 and L3) was preferred for media based learning, talking to friends and in market places.

Results of the present study contribute to the existing body of literature which also emphasizes the usage of L1 while interacting with family members (Hakuta & Pease-Alvarez, 1992; Anstrom 1997; Hasson, 2006; Marian, Blumenfeld & Kaushanskaya, 2007). The reasons of language choice could be due to the interlocutor's proficiency or choice of language. Cultural and ethnic factors also play a role in the choice of language according to situations.

L2 was found to be the language of choice in educational set-ups or while reading, writing and using internet. These findings could be due to the fact that all the participants included in the present study had English as their medium of instruction which probably reflected in their language choice. The usage of L2 especially for internet sources has also been reported by Chiswick and Miller (n.d.) using details from the 2001 Australian Census Household Sample File survey. The choice of language for internet

can be used as a predictor of language proficiency, with the highly proficient bilinguals preferring a choice of English for the same. The choice of L2 (English) provides convenient access to native speakers and provides with good language practice and appreciation of other target cultures (Sanaoui and Lapkin, 1992). It also provides individuals with varied options for language learning (Chapelle, 1997).

A combination of languages was most preferred for media-based learning and while interacting with friends. Similar evidences were given by Hasson (2006). The shift in languages between parents and siblings reflect a generational shift as indicated by Grosjean (1982).

The findings of the present study also corroborated the earlier findings of interchanging usage of L1 and L2.

V.   Exposure to different languages

The raw data on duration of exposure to each of the languages in terms of days and hours was collected and subjected to statistical analysis and the mean, standard deviation and range was computed (outlined in Table 12).

(i)   **For L1**: The participants in both the groups reported of being exposed to L1 for all the 7 (SD=0.00) days in a week. The overall average hours of exposure to L1 ranged from 8-18 hours with a mean of 14.69 (SD=1.94) hours. The Hindi-English and the Kannada-English bilinguals reported of being exposed to L1 for 10-16 hours {mean=14.7 (1.64)} and 8-18 hours {mean=14.68 (SD=2.25)} respectively.

Table 12[*]

Mean, Standard Deviation and Range of number of days and hours of exposure to L1, L2 and L3

	Hindi				Kannada				Total			
	Days		Hours		Days		Hours		Days		Hours	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range
L1	7 (0.00)	7-7	14.7 (1.64)	10-16	7 (0.00)	7-7	14.68 (2.25)	8-18	7 (0.00)	7-7	14.69 (1.94)	8-18
L2	7 (0.00)	7-7	10.53 (2.75)	6-14	6.58 (0.77)	5-7	8.48 (2.95)	4-16	6.79 (0.58)	5-7	9.52 (3.01)	4-16
L3	6.4 (0.93)	5-7	4.13 (2.11)	1-8	5.93 (1.85)	0-7	3.13 (2.24)	0-10	6.16 (1.46)	0-7	3.64 (2.21)	0-10

[*] The numbers in the parentheses indicate the standard deviation.

(ii)   **For L2**: The total average number of days and hours of exposure to L2 ranged from 5-7 {mean=6.79 (SD=0.58)} and 4-16 {mean=9.52 (SD=3.01)} respectively for all the participants. The participants in the Hindi group were exposed to L2 all the 7 days; the Kannada group for 5-7 days {mean=6.58 (SD=0.77)}. The mean hours of exposure was 10.53 (SD=2.75) for the Hindi group and 8.48 (SD=2.95) for the Kannada group.

(iii)   **For L3**: On the whole, the average number of days and hours all the participants were exposed to L3 was 6.16 (SD=1.46, range: 0-7) days and 3.64 (SD=2.21, range: 0-10) hours. The Hindi-English and Kannada-English bilinguals were exposed to L3 for 4.13 (SD=2.11) and 3.13 (SD=2.24) hours respectively.

The Mann-Whitney U test was further carried out but no significant difference was seen between both the groups in the number of days and hours of exposure in any of the languages (L1, L2 and L3).

The data for duration of exposure of each of the languages in different settings (family, school and state) was collected and subjected to statistical analysis and the mean, standard deviation and the range were obtained. The values are depicted in Table 13 below. The total mean hours of exposure to L1 for both the groups by the family was 21.15 (SD=2.02, range: 18-25) years; school was 16.76 (SD=1.62, range: 13-20) years and state was 19.62 (SD=1.97, range: 17-23) years. However, it was seen that participant's family was never exposed to L2 (English) and L3 (Kannada/Hindi). Similarly the participants did not visit an English speaking country.

Table 13

Mean, Standard Deviation and Range of number of years of exposure to L1, L2 and L3 in family, school and state.

	Hindi (in years)			Kannada (in years)			Total (in years)		
	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range
L1									
Family	21.30	2.52	18-25	21.00	1.36	19-23	21.15	2.02	18-25
School	16.7	1.80	13-19	16.82	1.44	15-20	16.76	1.62	13-20
State	18.36	1.56	17-22	20.93	1.43	19-23	19.62	1.97	17-23
L2									
Family	0.00	0.00	0-0	0.00	0.00	0-0	0.00	0.00	0-0
School	16.70	1.80	13-19	16.00	3.62	3-20	16.35	2.84	3-20
State	0.00	0.00	0-0	0.00	0.00	0-0	0.00	0.00	0-0
L3									
Family	0.00	0.00	0-0	0.00	0.00	0-0	0.00	0.00	0-0
School	0.10	0.30	0-1	7.62	1.63	5-10	3.79	3.96	0-10
State	3.43	2.96	0-9	0.03	0.18	0-1	1.76	2.71	0-9

(i)   **Hindi group**: The average number of years that the participants were exposed to a family speaking L1 (Hindi) was 21.30 (SD=2.52, range: 18-25) years, school was 16.7 years (SD=1.80, range: 13-19) years and state (Hindi speaking states) was 18.36 (SD=1.56, range: 17-22) years. The years of exposure to L2 and L3 in the school ranged from 13-19 years (mean=16.7, SD=1.80) and 0-1 year (mean=0.10, SD=0.30) respectively. The results also indicated that the mean number of years of exposure to L3 state (3.43, SD=2.96) was minimum. All the participants reported of having changed their state and used a combination of languages for communication on daily basis. The same has been represented in Figure 8. From the Figure it is evident that the exposure for L1, L2 and L3 was maximum from the family, education and state respectively.
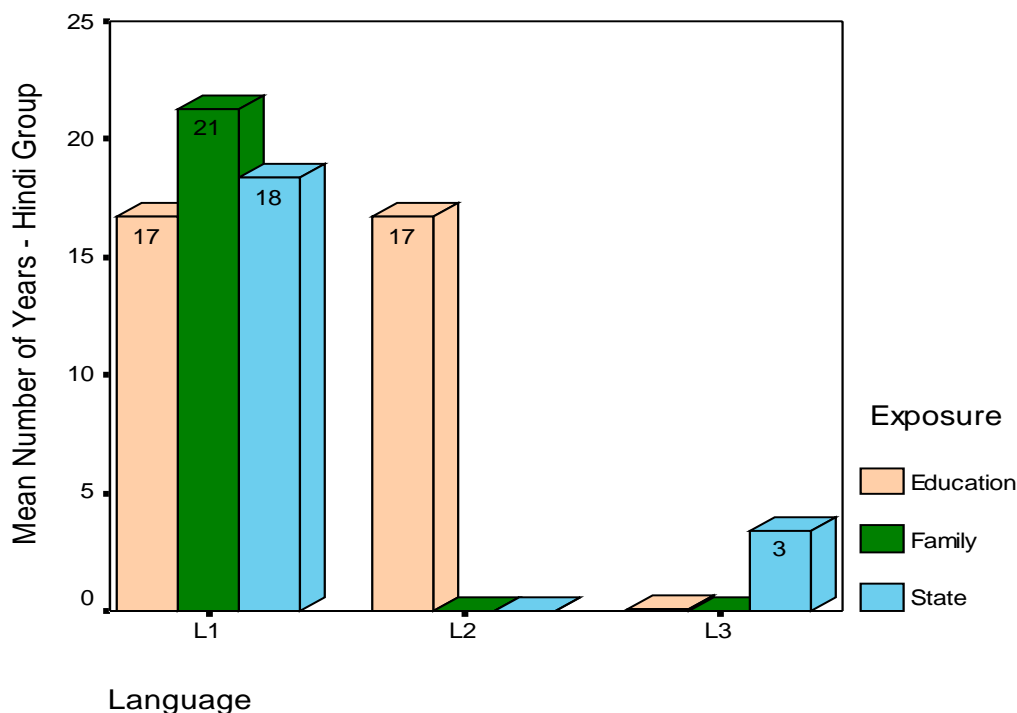
Figure 8. Mean years of exposure to education, family and state for L1, L2 and L3 (Hindi group)

(ii)   **Kannada group**

An exposure to a family speaking L1 (Kannada) ranged from 19-23 years (mean=21.00, SD=1.36). The mean number of years of exposure to schooling in L1 (Kannada), L2 (English) and L3 (Hindi) were of 16.82 (SD=1.44), 16.00 (SD=3.62) and 7.62 (SD=1.63) years respectively. The participants had stayed in the Karnataka state for 20.93 (SD=1.43) years.

The results are also shown in Figure 9. Similar results as the Hindi group was obtained for L1 and L2. However, it was seen that the education played a major role in the acquisition of L3 in this group. None of the participants reported of having changed their states.

The Mann Whitney U-test was carried out and a significant difference among both the groups was noted for the number of years of exposure to schooling in L3 ($|z|=6.98$, $p<0.05$) and the duration of stay in a L1 ($|z|=5.16$, $p<0.05$) and L3 ($|z|=6.54$, $p<0.05$) state. From the mean scores, it is evident that the Kannada group had more exposure to schooling in both the languages; however, the Hindi group resided for a longer duration in a L3 state (Karnataka for the present participants of the Hindi group).
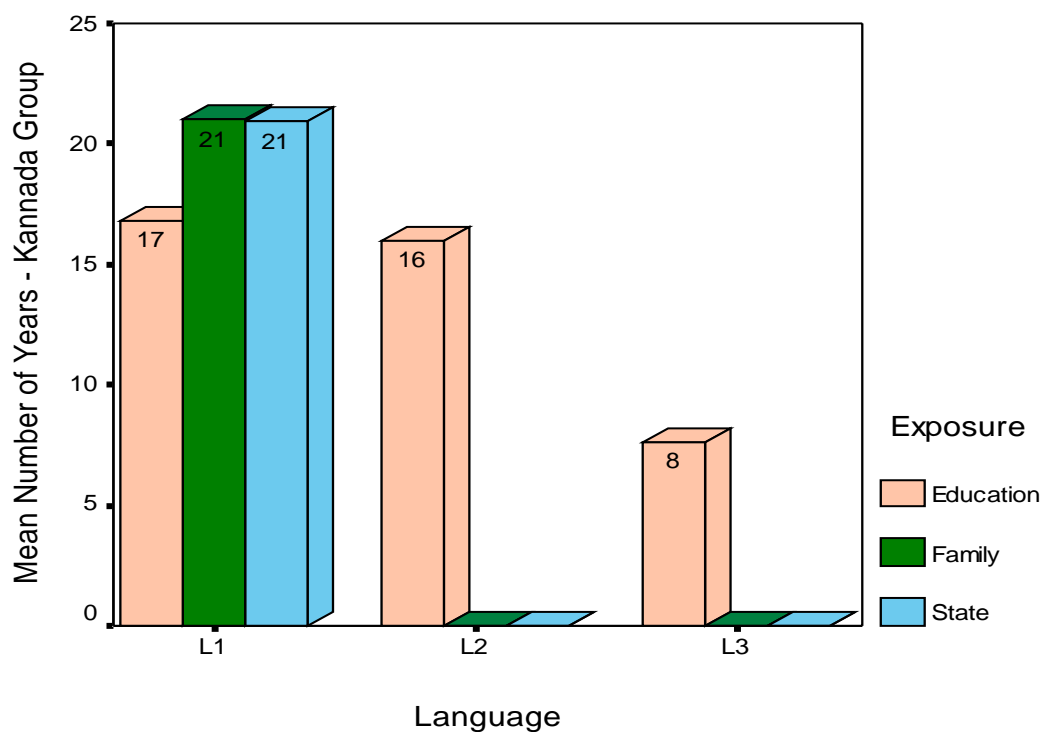
Fi

gure 9. Mean years of exposure to education, family and state for L1, L2 and L3

(Kannada group)

To summarize:

- The participants were exposed to L1 for maximum number of days and hours, followed by L2 and then L3.

- The duration of stay in a family and state contributed maximum to L1 learning.

- The number of years of education contributed to L2 learning.

- L3 was learnt mostly through education or exposure in a L3 state.

The participants showed maximum exposure for L1 with respect to the number of days, hours, interaction with family members and residing in the L1 native-state. These factors were same for both the groups. This shows that the exposure has played a

significant role in acquiring and making the participants native-like speakers. Similar reports have been documented in the literature. Marian, Blumenfeld and Kaushanskaya (2007) reported that L1 competence was achieved by learning language from family members and exposure to families speaking L1. The number of years spent in a L1 country, learning L1 for reading, exposure to friends speaking L1were found to important predictors of proficiency in various skills of L1.

Acquiring of proficiency in L2 for both the groups could be attributed to the medium of instruction in schooling. In the Indian scenario the schools affiliated to state or central board mostly have English as medium of instruction. As most of the participants studied in private institutions where the medium of instruction was English, it is evident from the results that these participants were exposed to L2 for 5-7 days with an average mean of 10 hours per day. Thus, the duration of schooling was an important factor in learning L2. Further, all the participants belonged to literate families where parents used L2 also for communication. Collier (1995) and Marian, Blumenfeld and Kaushanskaya (2007) also reported that classroom experience was found to be a contributor to learning L2. However, age of acquisition for reading, exposure at home, classroom learning, reading in L2, interacting with friends, listening to radio and years spent in L2 workplace were important predictors of proficiency in L2. Parallel outcomes were obtained in the current study.

The Kannada group participants had an exposure to L3 at the school level, whereas the Hindi participants began learning L3 only when they moved from their own states to Karnataka for higher education. This again shows that classroom teaching at

school did play an active role in learning L3. This was evident from the performance of Kannada group who learnt L3 (Hindi) during initial stages and continued till 12th standard of education. Thus, most of the participants had an exposure for academic purposes for L3 for more than 7-8 years. However, such exposure was not seen for Hindi group. This further strengthens that classroom exposure is an important contributing factor for acquiring L3. Thus, the results of the study gets support from Marian, Blumenfeld and Kaushanskaya (2007) who reported that classroom experience was found to be a contributor to learning L2. A similar explanation can also be assumed for learning of L3.

As a result, it can be stated from the findings that it is not the only the factors but the duration of exposure which acts as a significant variable to learn a language/s.

Duration of exposure

The raw data for the duration of exposure to all the three languages (L1, L2 and L3) were further analyzed to study the most important factors that directly or indirectly contribute to the proficiency in each of the languages. The mean and standard deviation was computed and the following results were interpreted:

(i)   **For L1:** Interaction with family (3.83, SD=0.41), neighbors (3.40, SD=0.71), market places (3.33, SD=0.74), radio (3.33, SD=0.84), watching television (3.31, SD=0.74) and friends (3.16, SD=0.58), and were the different settings where the participants were maximally exposed for most of the time to L1. The next major important factors that contributed to L1 learning were education (2.93, SD=0.75), writing (2.56, SD=0.90), newspapers (2.30, SD=0.92), story books (2.13, SD=0.74) and textbooks (2.01, SD=0.70). The use of instruction tapes (1.88, SD=0.78), dictionary

(1.86, SD=0.74), historical books (1.78, SD=0.66) and internet sources (1.35, SD=0.75) contributed to a very less extent for attaining proficiency in L1. The influence of each of the factors is also represented in Figure 10.
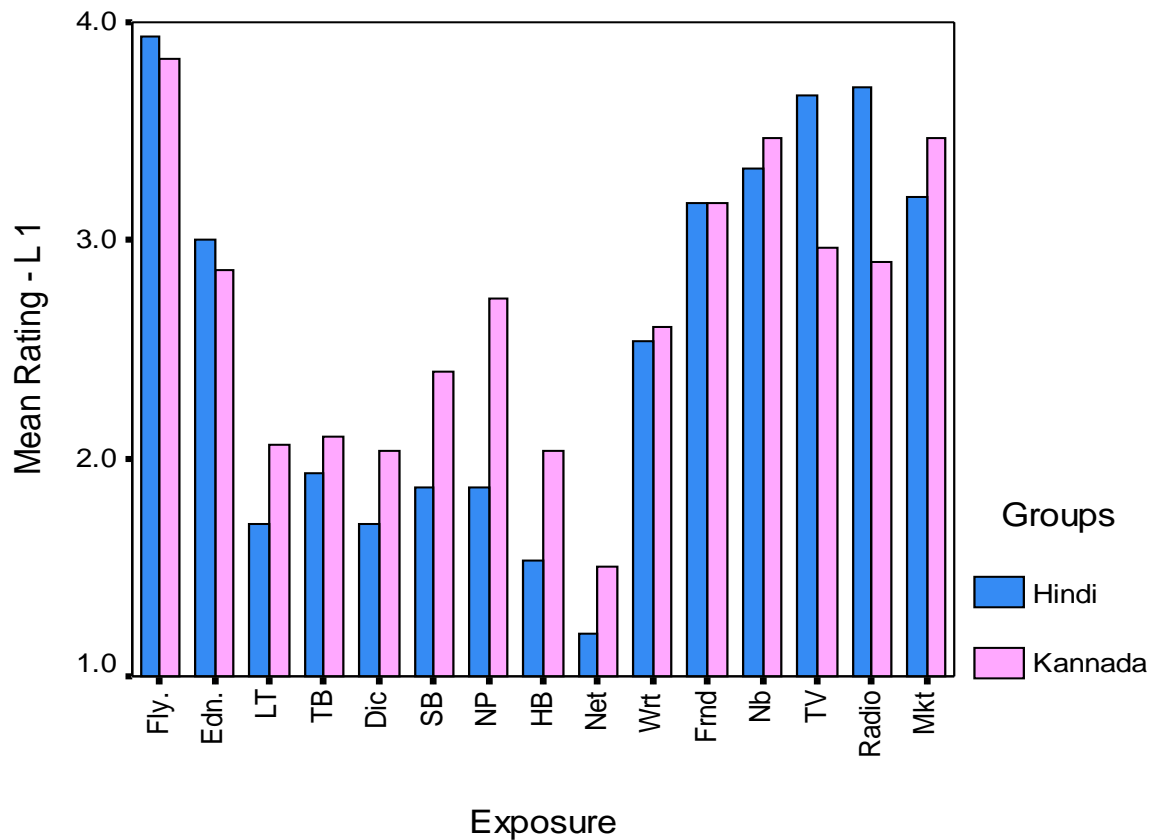
Figure 10. Mean ratings of duration of exposure to the factors [*] contributing to L1

(ii) **For L2:** The results revealed two categories of contributors, i.e. most important and the moderately important contributors to the learning of L2. The most important contributors, i.e., the factors to which all the participants were exposed for

---

[*] Fly: Family; Edn: Education; LT: Listening to instruction tapes; TB: Textbooks; Dic: Dictionary; SB: Story books; NP: Newspapers; HB: Historical books; Net: Internet; Wrt: Writing; Frnd: Friend; Nb: Neighbors; TV: Watching television; Radio: Listening to radio and Mkt: Market. Ratings: 1-never exposed, 2-sometimes, 3-most of the time, 4-always.

most of the time or always were internet (3.91, SD=0.27), textbooks (3.83, SD=0.34), dictionary (3.81, SD=0.46), writing (3.76, SD=0.56), newspapers (3.76, SD=0.62), story books (3.73, SD=0.54), historical books (3.60, SD=0.78), instructional tapes (3.45,SD=0.75) and educational set-up (3.13,SD=0.62),. The factors that contributed to the learning of L2 but to a lesser extent were neighbors (3.08, SD=0.80), radio (2.66, SD=0.89), market places (2.41, SD=1.04), television (2.26, SD=0.93) and family (2.00, SD=0.52). Figure 11 shows the effect of factors influencing L2.
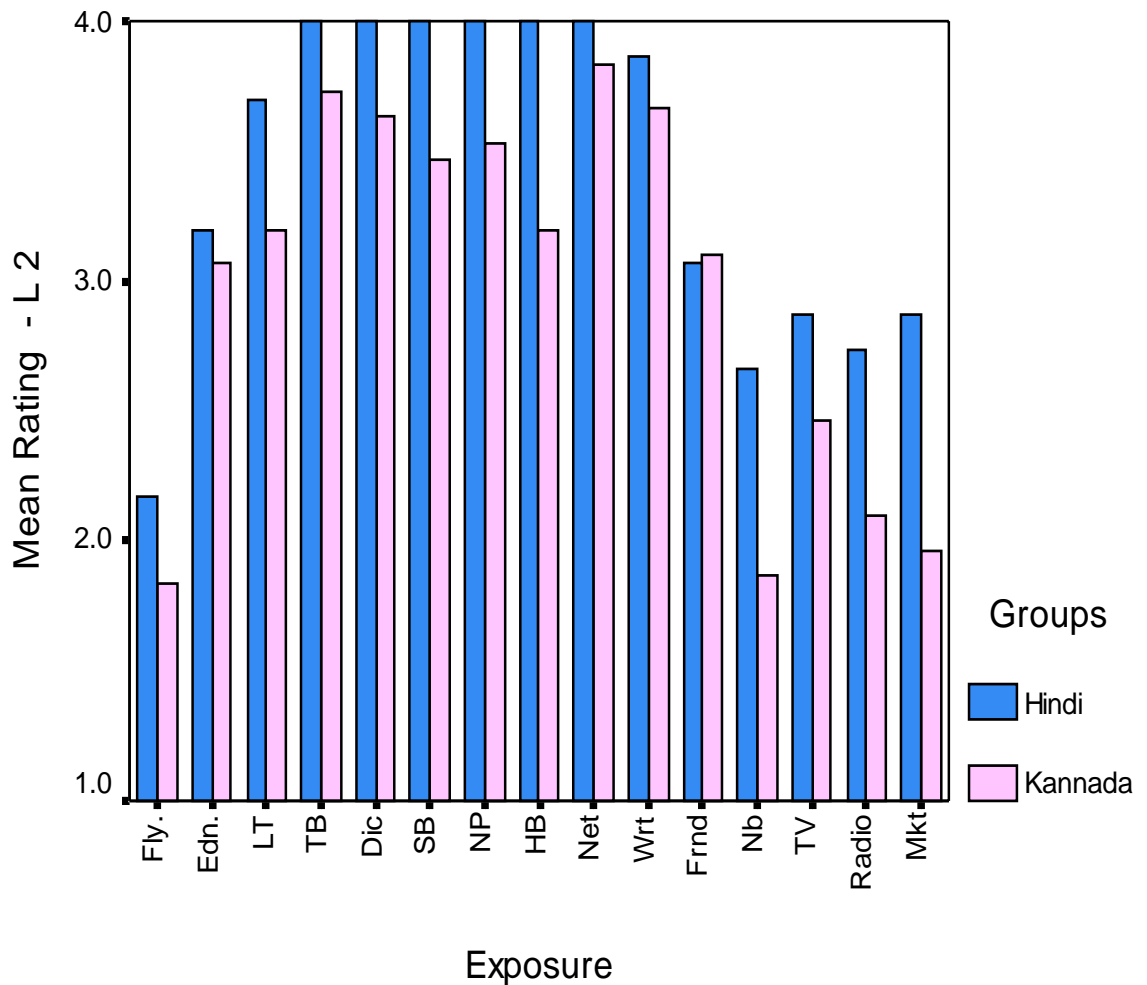
Figure 11. Mean ratings of duration of exposure to the factors contributing to L2

(iii)   **For L3**: The statistical analysis revealed that all the participants were exposed to L3 to the above mentioned factors to a lesser extent, which is also presented in Figure 12. The low proficiency attained in L3 could be attributed to the fact that the duration of exposure to the contributing factors was lesser as compared to L1 and L2. The mean scores indicate that the participants were exposed to L3 maximally when watching television (1.96, SD=0.88), followed by educational/workplaces (1.95, SD=0.72), interaction with friends (1.73, SD=0.66), listening to radio (1.60, SD=0.69) and market areas (1.58, SD=0.69). The mean ratings for the duration of exposure to the various factors such as interaction with the family members, instruction tapes, textbooks, dictionary, storybooks, newspapers, historical books, internet sources and writing varied from 1.01 to 1.46.
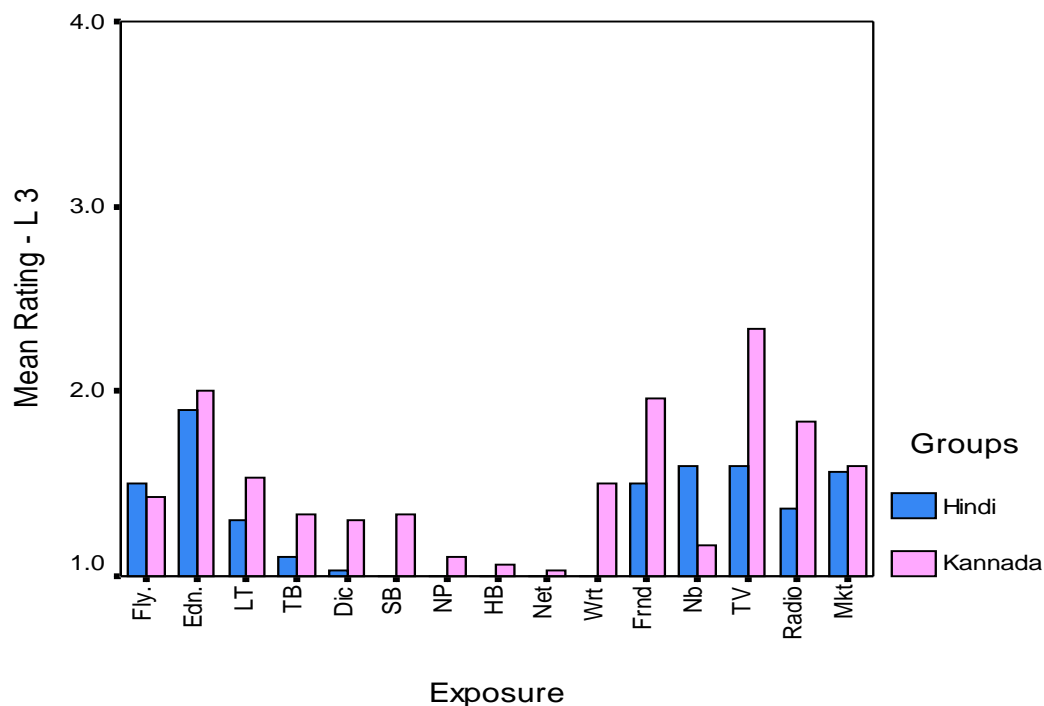
Figure 12. Mean ratings of duration of exposure to the factors contributing to L3

It is obvious from the results that the above mentioned factors and the duration of exposure of these factors do contribute in learning and mastering L1, L2 and L3. These factors serve as catalyst to improve either the learning and/or proficiency of language. Thus, all the above variables are unique and contribute in a unique manner to learn the language. This study receives support from the findings of Harniess (2008). He reported that reading story books, books related to films, subject books, incentive reading, comics and magazines, writing short stories, paragraphs and free writing were some of the methods adopted by the parents to improve language proficiency. Speaking and listening skills improved by role playing in English, watching television, attending summer schools, encouraging the child to speak in English to other people and employing a native English tutor.

VI.   Native/non-native speaker

The participants were asked to rate themselves on a four point rating scale about their identification as a native speaker of the language based on their accent and pronunciation. 95% (Hindi-96.7% and Kannada- 93.3%) of the total participants reported of being identified as a native speaker of L1 the entire time. However, majority of the participants though competent in using L2 were rarely identified as the native speakers of that language.93.3% of the participants in both the groups reported of never being identified as the native speaker of the language based on their pronunciation. A total of 68.3% (Kannada-66.7% and Hindi-70%) judged themselves to be never identified as a native speaker of the third language (L3). The results are outlined in Table 14.

Table 14

Identification as native/non-native speaker.

	Hindi (%)[*]	Kannada (%)*	Total (%)*
L1(always identified)	96.7	93.3	95
L2(never identified)	93.3	93.3	93.3
L3(never identified)	66.7	70.0	68.3

Various number of factors like the age of acquisition, length of residence in the state of that particular language, language use, language learning aptitude, motivation, amount of native-language use and gender are thought to play a role in the in the acquisition of foreign accent in L2 (Flege, 1988b; Flege, Munro & Mackay, 1995; Piske, Mackay & Flege, 2002). The participants of the present study identified themselves as native speakers of L1 (Hindi/Kannada) as they had acquired the language since childhood and were maximally exposed to it in all kind of situations and contexts.

Though they had attained good proficiency in the usage of L2 yet the degree of foreign accent was not achieved as the participants were never exposed to the native speakers of English. The review of literature also suggests that if a child acquires L2 before puberty, then they acquire little or no foreign accent (Oyama, 1976; Tahta, Wood & Lowenthal, 1981). All the participants in the present study had acquired L2 before puberty and hence this could have attributed to the development of no foreign accent.

[*] The numbers represent the percentage of participants.

Even it was reported that neither they had stayed in any of the English speaking countries nor were exposed to any English speaking family which would have resulted in their low self-perception of functioning like a native speaker. However, few of the participants self-reported of being identified sometimes as the native speaker of L3. This finding could be due to a longer and intensive exposure to the language by native speakers compared to L2.

Every individual is born into a linguistic condition; which is further nurtured by an innumerable number of variables. As stated by Chomsky (1957), every individual possess an innate language device which contains a specific set of rules for learning a language and is universal in nature. This is further influenced and acted upon by several developmental, academic, social, cognitive and attitudinal factors which helps to exert an effective control over the language and gives the individual an identity as a native-speaker of that language. The findings of the various sub-sections indicate that this tool will help us in assessing the proficiency level of a bi/multilingual participant in any of the languages in four skills, i.e., understanding, speaking, reading and writing. It would serve as a quick measure to assess the competence levels of an individual. The actual performance level of an individual can be judged by placing one level below his/her self reported rating. However, it was observed that the participants could judge their proficiency levels well in L2. Apart from evaluating the proficiency levels, this tool provides a detailed history of the language background, language of choice, exposure variables and duration of exposure which will augment the Speech Language pathologist

in planning an effective assessment and intervention program for a bi/multilingual individual with communication disorder.

CHAPTER V

SUMMARY AND CONCLUSION

The prime focus of the current study was to modify and adapt the LEAP-Q to the Indian scenario. The modified version of the questionnaire was made and given to five speech language pathologists working in the area of bilingualism for their suggestions. It was modified accordingly and was piloted on a group of 10 Kannada- English bilinguals. Based on their difficulty level to respond to the questions, further modifications were incorporated and the final questionnaire was administered on 60 Kannada/Hindi- English bi/multilinguals. The second objective of the study was to find a correlation among the competence and performance levels of the participants and further evaluate the factors responsible for acquiring proficiency in a language. The responses were tabulated and subjected to statistical analysis using the SPSS (16.0 version) software package.

The data was analyzed and categorized under the following domains:

- Language history during childhood

- Acquisition of language

- Proficiency of language

- Usage of language in different context

- Exposure to different languages

- Native/non-native speaker

The results indicated that the native language (L1) was the primary language of communication during childhood with family members, friends, neighbors and siblings. All the participants had acquired L1 prior to L2 and then followed by L3. The understanding and speaking skills were acquired earlier than the literacy skills in L1. However, all the four skills developed in a simultaneous manner for L2 and L3. The attainment of proficiency levels in all the language followed a similar pattern as in the acquisition of the language. The findings of the present study support the fact that the participants recruited were from the sequential/successive bilinguals' category. The current results also support the fact that the environment plays a major role in language development. The parents and the family members are a crucial part and foster and enhance L1 during childhood which is supported by earlier findings.

The proficiency ratings for understanding, speaking, reading and writing in all the languages (L1, L2 and L3) obtained did not indicate a one to one correlation between the competence and the performance levels for L1. However, it was seen that if the participants rated themselves to be proficient like in using the language then there actual performance was either native-like or good proficiency, but not below that. Hence, this finding indicates that a correction factor needs to be employed while judging the actual performance level of an individual. Conversely, not much discrepancy was obtained between the competence and performance ratings for L2. This could be due to the continuous feedback and error learning situations that an individual confronts whilst learning L2. But such feedback was not available while learning L1 resulting in an over or under-estimation of their competency skills.

The usage of a particular language was either context or situation dependent. The findings suggested that L1 was the language of choice while interacting with family members and neighbors. A combination of languages was used when interacting with friends and siblings. This reflects a generational shift in the usage of language as suggested by Grosjean (1982). The factors contributing to the attainment of proficiency differed based on the language. The most important contributing factors for learning L1 were interaction with family, neighbors, market places, radio, watching television and friends. In contrast, it was seen that the educational environment and the resource people (teachers, classmates) and materials (textbooks, internet, story books, newspapers, historical books and instructional tapes) were the major contributing variables in L2 learning. The participants in the present study attributed watching television, exposure in educational set-up/workplace, interacting in market places and with friends as contributors of learning a third language. The exposure duration and not only the variables pose a vital role in the acquisition of a language. The exposure to the variables was found to be maximum for L1 and L2 and thus, making the participants good to perfect users of the language. Though the exposure to L3 was present, yet it was limited in the number of hours and days which could have contributed to their low proficiency in that language. These findings suggest that a detailed assessment of the variables needs to be taken up while planning any intervention program for bi/multilingual persons with communication disorder/s.

The results obtained from the Language Proficiency Questionnaire reveals that the participants studied appeared to be successive/sequential bilinguals during the acquisition

stage. While in the later stages when they develop equally good proficiency in L1 and L2, they fall under the category of balanced bilinguals. Thus, the present study has further provided corroborative evidence stating that the bilinguals do differ during the acquisition and mastery stage of language development. As these participants had good proficiency in both the languages it can be speculated that these individuals would have an added long-term cognitive effect which would in turn enhance rapid cognitive and academic progress.

Thus, it can be concluded that this is a viable tool in assessing the language proficiency of an individual and the factors contributing to it. This questionnaire does not replace the earlier assessment batteries but can serve as an adjunct and quick measure for assessing a bi/multilingual for his proficiency level. It would assist a Speech Language Pathologist to assess the language levels of an individual in the language that s/he does not know. Hence, it can be stated that the present questionnaire is not supplementing rather complementing the existing tools.

Implications of the study

1. This questionnaire will help the professionals to find out the level of proficiency of an individual in a language on four basic skills, i.e., understanding, speaking, reading and writing.

2. The present study further corroborates the evidences to research in language proficiency and the factors contributing to it and opines to carry out extensive research in this area.

3. Evaluation of first and second language factors will give an insight into the transfer skills between L1 and L2 and should be considered during routine speech and language assessments in bilinguals.

4. In therapeutic intervention, for individuals with aphasia, factors related to second language exposure become crucial while deciding on the selection of language for intervention. Hence, an evaluation of the proficiency level in the pre- and post-morbid condition will help to choose the appropriate language for speech and language remediation program.

REFERENCES

Anstrom, K. (1997, Summer/Fall). Native language literacy: Is it just another option? *Early Childhood Update.* Retrieved February 25, 2009, from http://www.ed.gov/ offices/ OERI/ECI/ newsletters/97fall/ early10.html.

August, D., & Hakuta, K. (1997). *Improving schooling for language-minority children: A research agenda*. Washington, D. C.: National Academy Press.

Baetens-Beardsmore. (1986). *Bilingualism: Basic principles*. Clevedon, UK: Multilingual Matters.

Bhatia, T. K., & Ritchie, W. C. (2004). *The handbook of bilingualism*. United Kingdom: Blackwell Publishing.

Bloomfield, L. (1933). *Language.* New York: Henry Holt & Co.

Bongaerts, T., Mennen, S., & van der Slik, S. (2000). Authenticity of pronunciation in naturalistic second language acquisition: The case of very advanced late learners of Dutch as a second language. [Abstract]. *Studia linguistica*, 54, 298-308.

Cairns, H.S. (1996). *The acquisition of language*. Austin, TX: Pro-Ed.

Carhill, A., Suarez-Orozco, C., & Paez, M. (2008). Explaining English language proficiency among adolescent immigrant students. *American Educational Research Journal*, *45 (4),* 1144-1179.

Carlson, S. M. & Meltzoff, A. N. (2008). Bilingual experience and executive functioning in young children. *Developmental Science, 11*, 282–298.

Carpenter, C. D. (1994). *Review of language assessment scales, reading and writing: Supplement to the eleventh mental measurements yearbook*. Lincoln, NE: University of Nebraska Press.

Carroll, J. B. (1967). Foreign language proficiency levels attained by language majors near graduation from college. *Foreign Language Annals, 1*, 131-151.

Chapelle, C. A. (2007). Technology and second language acquisition. *Annual Review of Applied Linguistics, 27*, 98-114.

Chiswick, B. R., & Miller, P.W. (n.d.). Computer usage, destination language proficiency and the earnings of natives and immigrants. *KMI Working Paper Series*, *9*, 1-41

Chomsky, N. (1957). *Syntactic Structures*. The Hague:Mouton.

Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.

Collier, V. P. (1995). Acquiring a second language for school. *Directions in Language and Education, 1(4),* 1-10.

Crocker, L. (1998). *Review of the Woodcock-Muñoz language survey: The thirteenth mental measurements yearbook.* Lincoln, NB: University of Nebraska Press.

Cummins, J. (1976). The influence of bilingualism on cognitive growth: A synthesis of research findings and explanatory hypotheses. *Working Papers on Bilingualism*, *9*, 1-43.

Cummins, J. (1984). *Bilingualism and special education: Issues in assessment and pedagogy*. Clevedon, England: Multilingual Matters Ltd.

Cummins, J. (2000). *Language, power, and pedagogy: Bilingual children in the crossfire.* Clevedon, England: Multilingual Matters.

Dalton, E., & Barrett, T. (2001). *IDEA oral language proficiency test, Forms E & F English technical manual.* Brea, CA: Ballard & Tighe.

DeAvila, A., & Duncan, S. (1990). *Language Assessment Scales oral technical report*. Monterey, CA: CTB Macmillan McGraw-Hill.

Delgado, P., Guerrero, G., Goggin, J. P., & Ellis, B. B. (1999). Self-assessment of linguistic skills by bilingual Hispanics. *Hispanic Journal of Behavioral Sciences, 21*, 31–46.

De-Ramirez, R. D., & Shapiro, E. S. (2007). Cross language relationship between Spanish and English oral reading fluency among Spanish-speaking English language learners in bilingual education programs. *Psychology in the Schools, 44 (8),* 795-806.

Diebold, A. R. (1961). Incipient bilingualism. *Language, 37*, 97-112.

Dorian, N. E. (1982). Defining the speech community to include its working margins. In S. Romaine (Ed.), *Sociolinguistic Variation in Speech Communities* (pp. 25-33). London: Edward Arnold.

Dornic, S. (1979). Information processing in bilinguals: some selected issues. *Psychological Research, 40*, 329-348.

Durgunoglu, A. Y. & Oney, B. (2000). *Literacy Development in Two Languages: Cognitive and Sociocultural Dimensions of Cross-Language Transfer.* Paper presented at a research symposium on High standards in reading for students from diverse language groups: Research, practice & policy, Washington D.C.: U.S.

Ellis, R. (1989). Are classroom and naturalistic acquisition the same? A study of the classroom acquisition of German word order rules. *Studies in Second Language Acquisition, 11*, 305-328.

Esquinca, A., Yaden, D. & Rueda, R. (2005). Current language proficiency tests and their implications for preschool English language learners. In Cohen, J., McAlister, K.T., Rolstad, K., & MacSwan (Ed.), Proceedings of the 4th International Symposium on Bilingualism (pp. 674-680). Somerville, MA: Cascadilla Press.

Fathman, A. (1975). The relationship between age and second language productive ability. *Language Learning, 25*, 245-253.

Fairbanks, G. (1960). *Voice and articulation drillbook* (2nd edn.). New York: Harper & Row.

Flege, J. (1988b). Factors affecting degree of perceived foreign accent in English sentences. *Journal of Acoustical Society of America, 84*, 70-79.

Flege, J. E., & Liu, S. (2001). The effect of experience on adults' acquisition of a second language. *Studies in Second Language Acquisition, 23,* 527-552.

Flege, J. E., MacKay, I. A., & Piske, T. (2002). Assessing bilingual dominance. *Applied Psycholinguistics, 23,* 567-598.

Flege, J. E., Munro, M. J., & MacKay, I. R. A. (1995). Factors affecting strength of perceived foreign accent in a second language. *Journal of Acoustical Society of America, 97(5),* 3125-3134.

Flege, J. E., Yeni-Komishian, G. H., & Liu, S. (1999). Age constraints on second-language acquisition. *Journal of Memory and Language, 41*, 78-104.

Garcia, M. P., & Seitel, A. (2009). *Bilingual language learners: Difference, delay or disorder?* Paper presented at Texas Speech-Language-Hearing Association convention, Austin: Texas.

Genesse, F. (n.d.). *Bilingual Acquisition*. Retrieved March 12, 2009, from http://www.earlychildhoodnews.com/earlychildhood/article_view.aspx?ArticleID= 38

Gollan, T. H., Fennema-Notestine, C., Montoya, R. I. & Jernigan, T. L. (2007). The bilingual effect on Boston Naming Test performance. *Neuropsychological Society, 13*, 197-208.

Gottlieb, M. (1999). Assessing ESOL adolescents: Balancing accessibility to learn with accountability for learning. In C. J. Faltis & P. M. Wolfe (Eds.), (pp.176-201). *So much to say: Adolescents, bilingualism, and ESL in the secondary school.* New York: Teachers College.

Grosjean, F. (1982). *Life with two languages: an introduction to bilingualism*. Cambridge, MA: Harvard University Press.

Haber, L. (1985). *Review of Language Assessment Scales*: *The ninth mental measurements yearbook*. Lincoln, NE: University of Nebraska Press.

Hakuta, K. & Pease-Alvarez, L. (1994). Proficiency, choice and attitudes in bilingual Mexican-American children. In G. Extra & L. Verhoeven (Eds.), *The cross-linguistic study of bilingual development* (pp. 145-164). Royal Netherlands Academy of Arts and Sciences. North-Holland, Amsterdam.

Harniess, J. (2008). Approaches to second language English proficiency: Parents' perspective. Retrieved March 23, 2009 from http://www.hkugac.edu.hk/news/EnglishAcquisition- A Parents Perspective-November 2008.pdf

Hasson, D. J. (2006). Bilingual language use in Hispanic young adults: Did elementary bilingual programs help? *Bilingual Research Journal*, *30,* 45-64.

Haugen, E. (1953). *The Norwegian Language in America*. Cambridge: Cambridge University Press.

Hedberg, N. L. (1995). *Review of Language Assessment Scales-Oral*: *The twelfth mental measurements yearbook*. Lincoln, NE: University of Nebraska Press.

Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review, 26*, 55-88.

Hyltenstam, K., & Abrahamsson, N. (2003). Maturational constraints in second language acquisition. In C. Doughty & M. Long (Eds.), *Handbook of second language acquisition* (pp.539–588). Malden, MA: Blackwell.

Ingram, E. D. (1985). How native like? Measuring language proficiency in bilinguals. *Indian Journal of Applied Linguistics, 11 (2)*, 47-64.

Jia, G., Aaronson, D., & Wu, Y. (2002). Long-term language attainment of bilingual immigrants: Predictive variables and language group differences. *Applied Psycholinguistics, 23*, 599–621.

Johnson, J. S., & Newport, E. L. (1989). Critical periods effect in second language learning: The influence of maturational state on the acquisition of English as a second language. *Cognitive Psychology, 21*, 60-99.

Johannessen, B. G. G., & Bustamante-López, I. (2002). Bilingual Academic Spanish Proficiency Tests: Assessment of bilingual cross-cultural and language and academic development teacher candidates. *Bilingual Research Journal*, 26, 563-574.

Kao, C. (1998). *Review of the Woodcock-Muñoz language survey*: *The thirteenth mental measurements yearbook*. Lincoln, NE: University of Nebraska Press.

Kayser, H. G. (2001). Assessing Language Proficiency and Language Dominance. Retrieved April 4, 2009 from http://www.bilingualtherapies.com/kayser-newsletter/2001/assessing-language-proficiency-and-language-dominance/

Kertesz, A. (1982). The Western Aphasia Battery. Philadelphia, PA: Grune & Stratton.

Kohnert, K., Bates, E., & Hernandez, A. E. (1999). Balancing bilinguals: Lexical-semantic production and cognitive processing in children learning Spanish and English. *Journal of Speech, Language, and Hearing Research, 42*, 1400 - 1413.

Krashen, S. (1973). Lateralization, language learning, and the critical period: Some new evidence. *Language Learning, 23*, 63-74.

Lambert, W. E. (1955). Measurement of the linguistic dominance of bilinguals. *Journal of Abnormal and Social Psychology, 50,* 197-200.

Lambert, W. E. (1975). Culture and language as factors in learning and education. In A. Wolfgang (Ed.). *Education of immigrant students* (pp.55-83). Toronto: Ontario Institute for Studies in Education.

Lambert, W., Havelka, J., & Gardner, R. (1959). Linguistic manifestations of bilingualism. *American Journal of Psychology, 72*, 77-82.

Lenneberg, E. (1967). *Biological foundations of language*. New York: John Wiley.

Li, Z. (2009). A probe into classroom teaching and second language acquisition. *International Education Studies. 2(1),* 124-128.

Lim, V. P. C., Liow, S. J. R., Lincoln, M., Chan, Y. H., & Onslow, M. (2008). Determining language dominance in English-Mandarin bilinguals: Development of a self-report classification tool for clinical use. *Applied Psycholinguistics, 29*, 389-412.

Linguistic Minorities Project. (1985). *The other languages of England*. Routledge and Kegan Paul, London.

Lopez, E. A. (2001). *Review of the IDEA oral language proficiency test*: *The fourteenth mental measurements yearbook*. Lincoln, NE: University of Nebraska Press.

Lopez, M. G. & Tashakkori, A. (2004). Effects of a two-way bilingual program on the literacy development of students in kindergarten and first grade. *Bilingual Research Journal*, *28*, 19-34.

Macnamara, J. (1967a). The bilingual's linguistic performance: A psychological overview. *Journal of Social Issues, 23*, 59-77.

Macnamara, J. (1967b). The linguistic independence of bilinguals. *Journal of Verbal Learning and Verbal Behavior, 6*, 729-736.

Macnamara, J. (1969). How can one measure the extent of a person's bilingual proficiency? In L.Kelly (Ed.), *Description and measurement of bilingualism* (pp.80-97). Toronto: University of Toronto press.

MacIntyre, P. D., & Charos, C. (1996). Personality, attitudes, and affect as predictors of second language communication. *Journal of Language and Social Psychology*, *15*, 3-26.

MacIntyre, P. D., Noels, K. A., & Clement, R. (1997). Biases in self-ratings of second language proficiency: The role of language anxiety. *Language Learning*, 47, 265–287.

Marian, V., Blumenfeld, H. K., & Kaushanskaya, M. (2007). The Language Experience and Proficiency Questionnaire (LEAP-Q): Assessing language profiles in bilinguals and multilinguals. *Journal of Speech, Language, and Hearing Research, 50*, 940–967.

Mayberry, R. I. (2007). When timing is everything: Age of first-language acquisition effects on second-language learning. *Applied Psycholinguistics, 28(3),* 537-549.

McLaughlin, B. (1978). *Second Language Acquisition in Childhood*. Hillsdale: Laurence Erlbaum Associates.

McLaughlin, S. (2006). *Introduction to Language Development*. Thomson Delmar Learning, USA.

Midgley, K. J., Holcomb, P. J. & Grainger, J. (2009). Language effects in second language learners and proficient bilinguals investigated with event-related potentials. *Journal of Neurolinguistics. 22*, 281-300.

Mohanty, A. K. (1994). *Bilingualism in a multilingual society: Psycho-social and pedagogical implications*. Central Institute of Indian Languages, Mysore.

Muñoz, M. L., Marquardt, T., & Copeland, G. (1999). A comparison of the code-switching patterns of speakers with aphasia and neurologically normal bilingual speakers of English and Spanish. *Brain and Language*, *66*, 249–274.

Olshtain, E. (1989). Is second language attrition the reversal of second language acquisition? *Studies in Second Language Acquisition, 11*, 151-165.

Oyama, S. (1976). A sensitive period for the acquisition of a nonnative phonological system. [Abstract]. *Journal of Psycholinguistic Research, 5*, 261-285.

Peal, E., & Lambert, W. E. (1962). The relationship of bilingualism to intelligence. *Psychological Monographs, 76,* 1-23.

Pinker, S. (1994). *The language instinct: How the mind creates language.* New York: Harper Collins.

Piske, T., MacKay, I. R. A., & Flege, J. E. (2001). Factors affecting degree of foreign accent in an L2: A review. *Journal of Phonetics*, *29(2),* 191-215.

Pray, L. (2005). How well do commonly used language instruments measure English oral-language proficiency? *Bilingual Research Journal*, *29*, 387-409.

Rahnu, L. & Puur, A. (n.d.). *Determinants of destination-language acquisition among foreign-origin population in Estonia.* Retrieved on April 15, 2009 from http://iussp2009.princeton.edu/download.aspx?submissionId=92894

Rao, T. S. (1975). *The Bilingual Child: His Adjustment, Difficulties and Second Language Attainments*. Allahabad: Indian International Publications.

Rosenberg, M. (1996). Raising Bilingual Children. *The Internet TESL Journal*, *2(6).* Retrieved March 12, 2009 from http://iteslj.org/Articles/Rosenberg-Bilingual.html

Sanaoui, R., & Lapkin, S. (1992). A case study of an FSL senior secondary course integrating computer networking. [Abstract] *The Canadian Modern Language Review, 48 (3),* 525-552.

Schmitt, N. (2008). Review article: Instructed second language vocabulary learning. *Language Teaching Research, 12(3),* 329-363.

Sebastián-Gallés, N., Echeverría, S., & Bosch, L. (2005). The influence of initial exposure on lexical representation: Comparing early and simultaneous bilinguals. *Journal of Memory and Language, 52(2)*, 240-255.

Shameem, N. (1998). Validating self-reported language proficiency by testing performance in an immigrant community: The Wellington Indo-Fijians. *Language Testing, 15*, 86–108.

Skutnabb-Kangas, T. (1984). *Bilingualism or not: the education of minorities*. Clevedon, England: Multilingual Matters Ltd.

Taeschner, T. (1976). How to Define the Dominant Language in a Subject who is Bilingual from Birth. [Abstract].*Rassegna Italiana di Linguistica Applicata, 8*, 105-116.

Tahta, S., Wood, M., & Loewenthal, K. (1981). Foreign accents: factors relating to transfer of accent from the first language to a second language. *Language and Speech, 24(3),* 265-272.

Thirumalai, M. S. & Chengappa, S. (1986). *Simultaneous acquisition of two languages: An overview*. Central Institute of Indian Languages, Mysore.

Toukomaa, P. & Skutnaab-Kangas, T. (1977). *The intensive teaching of the mother tongue to migrant children of pre-school age and children in the lower level of comprehensive school.* Helsinki: The Finnish National Commission for UNESCO.

Vaid, J., & Menon, R. (2000). Correlates of bilinguals' preferred language for mental computations. [Abstract]. *Spanish Applied Linguistics, 4,* 325–342.

Weinreich, U. (1953). *Languages in Contact*. The Hague: Mouton.

Williams, L. (1979). The modification of speech perception and production in second language learning. [Abstract]. *Perception and Psychophysics, 26(2),* 95-104.

Wilkins, D. A. (1974). *Second language learning and teaching*. London: Edward Arnold Ltd.

Winitz, H. (1971). Psycholinguistic Consideration in Language Development. In Travis, L.E. *Handbook of Speech Pathology and Audiology* (Ed.), (pp.1113-1142). Appleton-Century-Crofts Inc., New York.

Woodcock, R. W., & Muñoz-Sandoval, F. (1993). *Woodcock– Johnson Language Survey*. Itasca, IL: Riverside.

LANGUAGE PROFICIENCY QUESTIONNAIRE

Name: Age: Gender: Male / Female

Instructions:

Please read the questions carefully and choose the most appropriate choice wherever applicable.

1. Name all the languages you know beginning with the language that you learnt first.

    Using the below mentioned scale, answer the questions below.

    (1- L1, 2-L2, 3-L3, 4- Combination of any of the languages)

    L1- First language that you learnt, L2- Second language that you learnt in your life,

    L3- Third language.

2. When you were a child, which language did you speak

    - At Home   1   2   3   4

    - With your father   1   2   3   4

    - With your mother   1   2   3   4

    - With siblings   1   2   3   4

    - With guardians   1   2   3   4

    - With neighbors   1   2   3   4

3. Native Language of

- Father   1   2   3   4

- Mother   1   2   3   4

- Sibling's   1   2   3   4

- Guardians   1   2   3   4

4. Language spoken with you by your

- Father   1   2   3   4

- Mother   1   2   3   4

- Sibling's   1   2   3   4

- Guardians   1   2   3   4

- Neighbors   1   2   3   4

5. Which language did you learn first for

- Understanding   1   2   3   4

- Speaking   1   2   3   4

- Reading   1   2   3   4

- Writing   1   2   3   4

6. Mention the age when you first started using each of the languages for each of the following parameters:

	Understanding	Speaking	Reading	Writing
L1				
L2				
L3				

7. Mention the age when you became proficient for each of the following parameters:

	Understanding	Speaking	Reading	Writing
L1				
L2				
L3				

8. How many years of formal education do you have? (please specify your qualification)

What was the medium of instruction?	1	2	3	4
Which language was used maximally?	1	2	3	4
Which language did you speak with teachers	1	2	3	4
Which language did you speak with classmates	1	2	3	4
Which language was spoken by your teachers with you	1	2	3	4
Which language was spoken by your classmates with you	1	2	3	4
Did you change your medium of instruction?	Yes		No	

If yes, specify the changed medium of instruction. At what   1   2   3   4

age did you change your medium of instruction?

9. Have you changed your state? If yes, which language do   1   2   3   4

you use to communicate?

10. On a scale from one to five, mark your level of proficiency in each of the skill

(1-Zero proficiency, 2- Low, 3- Good, 4- Native like/perfect)

Language	Understanding	Speaking	Reading	Writing
L1				
L2				
L3				

11. How many dialects can you speak in each of the languages?

L1:   L2:   L3:

12. On a scale from one to five, mark your level of proficiency in each of the skill for each of

the dialects in L1, L2, L3.*(1-Zero proficiency, 2- Low, 3- Good, 4- Native like/perfect)*

	L1			L2			L3		
Dialect	D1	D2	D:	D1	D2	D3	D1	D2	D3
Understanding									
Speaking									

13. On a scale from one to five, mark your level of proficiency in shifting from one language to the other

    1-Zero proficiency   **2- Low**

    3- Good   **4- Perfect**

14. Use the rating scale mentioned below, indicate which language you used maximum for the following:

(1- L1 , 2- L2, 3- L3, 4- Combination of any of the languages)

Interaction with family	1	2	3	4
Education/ work	1	2	3	4
Listening to instruction tapes at school	1	2	3	4
Text books	1	2	3	4
Dictionary	1	2	3	4
Story books	1	2	3	4
Newspapers	1	2	3	4
Historical books	1	2	3	4
Internet source	1	2	3	4
Writing	1	2	3	4
Interacting with friends	1	2	3	4

Interacting with neighbors	1	2	3	4
Watching TV	1	2	3	4
Listening to the radio	1	2	3	4
Market places	1	2	3	4

15. On an average, mention below the time you are exposed to each of the languages.

Languages	Number of days per week	Number of hours per day
L1		
L2		
L3		

16. Mention the number of years you spent in each language environment:

	Family	School	State	Work place
L1				
L2				
L3				

17. Using the rating scale mentioned below, indicate the extent to which you are currently exposed to each of the languages in the following contexts in a day.

(1- never, 2- sometimes, 3- most of the time, 4- always)

	L1	L2	L3
Interaction with family			
Schooling/ work			

Listening to instruction tapes at school

Text books

Dictionary

Story books

Newspapers

Historical books

Internet source

Writing

Interacting with friends

Interacting with neighbors

Watching television

Listening to the radio

Market places

18. Rate how frequently others identify you as a native speaker based on your accent or pronunciation in the language *(1- Never, 2- Sometimes, 3- Most of the time, 4- Always)*

1. L1   2. L2   3. L3

COMPREHENSION PASSAGES

II.1. English

PEOPLE FROM MARS (Helena Norberg- Hodge)

Imagine living your day to day life as usual and suddenly waking up to find your town invaded by people from another planet. Speaking a strange tongue and looking even stranger, these extraterrestrials lead quite extraordinary lives. They do not appear to know what work is, but enjoy constant leisure. Moreover they have special powers and inexhaustible health.

I was in Ladakh from the time tourism started, and was able to observe the process of change from the beginning. Since I spoke the language fluently, I gained an insight into the intense psychological pressures that modernization brings.

With no warning, people from another world descended on Ladakh. In one day a tourist would spend the same amount that a Ladakhi family might in a year. The tourists for their part think Ladakhis are backward. The few who experience the hospitality of a village home invariably speak of this as the highlight of their holiday. But most of them can only see Ladakhi culture from the outside, and they view it out of experience of their own culture and economy. They assume that money plays the same role in Ladakh as at home. If they meet a Ladakhi who is earning only two dollars per day, they are horrified and show it. Implicitly or explicitly, they say to him, "Oh, you poor thing, I would better give you a big tip". To western eyes Ladakhis look poor. Tourists can only see the material

side of the culture- worn out woolen robes, the dzo pulling a plough, the barren land. They cannot see peace of mind or the quality of family and community relations. They cannot see the psychological, social, and spiritual wealth of the Ladakhis.

Questions

1. Who are the extraterrestrials that the author refers to?

2. What are the distinguishing features of the extraterrestrials?

3. Contrast the role played by money in traditional Ladakhi economy with the role it had for foreigners.

4. Give a brief insight into the tourist's impression of Ladakhi people.

5. What are the inherent features of Ladakhis that the tourists fail to see?

II.2. Hindi

MüsmÉIÉÉ MüÐÎeÉL ÌMü AÉmÉMüÏ ÌSIÉcÉrÉÉïxÉÉqÉÉlrÉ ÃmÉ xÉå cÉsÉ UWûÏû Wæû AÉæU AcÉÉlÉMü LMü ÌSIÉ AÉmÉ AmÉÉIÉå vÉWûûU MüÉå SÕÒxÉÉÉå aÉëWû Måü mÉëÉÍhÉrÉÉã, oÉÉkrÉeÉÏÏuÉrÉÉãÇ xÉå ÍbÉUÉ mÉÉiÉå WæûÇ | LMü AÇeÉÉÉ oÉÉåsÉÏ AÉæU ExÉxÉå pÉÏ AÇeÉÉÉ ÃmÉuÉÉÉsÉå rÉå mÉëÉhÉÏ AxÉqÉÉÉlrÉ eÉÏuÉÉÉ eÉÏiÉå WæÇû | uÉå MüÉrÉ MüUiÉå WÒûL mÉëiÉÏiÉ IÉWûÏÇû WûÉåiÉå , sÉåÌMülÉ uÉå sÉaÉÉÉÉU AÉIÉÇÇSqÉÉrÉ WûÉåMüU UWûiÉå WæÇû | AÉæU iÉÉå AÉæU EIÉMåü mÉÉxÉ ZÉÉxÉ zvÉÌ£ürÉÉ AxÉÏÍqÉiÉÉ Wæû |

qÉæÇ ExÉ xÉqÉrÉ sÉ¬ÉMü qÉÉå jÉÉ eÉoÉ xÉå mÉrÉÉïOûlÉ vÉÑÑ ¬ÒOû AÉæU qÉÉæ oÉÉsÉÉsÉ MüÐ mÉËïUÉÉ MÉå zvÉÑÂAÉiÉ xÉå WûÏûû qÉWûxÉÉÔxÉ MüU EûÉ WÕûû| MürÉÉÉãÌÌMü qÉæÇ pÉÉæÉÉ MÉå ÌÍÉÉoÉÉÉïkÉ

ÃmÉ xÉå oÉÉåsÉiÉÉÉ jÉÉ, qÉæÇÌÉå mÉÔhÉïÃmÉ xÉå pÉÉÉUÏ qÉÌÉÉãuÉægÉÌlÉMü iÉÌÉÉÉuÉ MüÉå eÉÉå AÉkÉÑÌÉÉMüiÉÉÉ MüÐ uÉeÉÉWû xÉå jÉÉ, ExÉå qÉÉWûxÉÔxÉ ÌMürÉÉ |

ÌoÉ]ÉÉ AÉaÉÉÉWû ÌMüL WÒûL SÒxÉÉUÏ SÒ]ÌÉrÉÉÉ Måü sÉÉÉaÉ sÉ¬ÉMü qÉåÇ AÉ eÉÉÌÉÉå WæÇÇû | LMü ÌSIÉ qÉåÇ LMü mÉrÉÉïÔûMü EÌÉÉ mÉÉæxÉÉÉ ZÉcÉï MüUåaÉÉ ÎeÉÉÌÉÉÉ sÉ¬ÉMü qÉåÇ LMü mÉÉEuÉÉÉU LMü uÉwÉ[ï qÉåÇ ZÉcÉï MüUÉiÉÉÉ Wæ | mÉrÉÉïÔûMü AmÉÉÉÉ iÉETü xÉå rÉÉå ÌuÉÉcÉÉÉU kÉÉÉ UZÉÉiÉÉ WæûÉ ÌMü sÉ¬ÉMüÐ ÌuÉÉdQåû WÒûL WÇæû | MÑÉÉÕ eÉÉÉå sÉ¬ÉMüÐ aÉëÉÉqÉÉÉÉÍxÉrÉÉãÇ Måü AÌÉÉÉÅeÉÉÉÌMÉÉEÉ MüÉå qÉÌÉWûxÉÔxÉ MüÉU cÉÑÑÑMüÉå WæÇÉû | uÉÉå ExÉÉå AmÉÉÉÉ NÒûÌÉÑÉrÉÉãUÉÉÉÉãÇ MüÉ AÉÉÉMüÉwÉühÉ oÉÉÉÉÉÉå WæûÉû |

sÉÉålÉÉÕÉ AÍMüÉÉÉÌÉEÉ sÉÉÉÉãÉ sÉ¬ÉMüÐ xÉÉ]x¢ÉÉüÌÉ MüÉã oÉÉÉÉ ÃmÉ xÉÉå WÒûÏ SåûZÉ mÉÉÉÉÉå WæÉÇÉû AÉÉU uÉÉå ExÉÉkÉÉÐ AmÉÉÉÉÉ xÉÉ]x¢ÉüÌÉ AÉÉU AjÉÉïÉuÉÉEÑÉÉEÉxÉÉ]jÉÉÉ MüÉã SØûwÉÉÉ]ÉÉÉãÉÉÉÉÉhÉÉ xÉÉå WÒûÏ SåûZÉ mÉÉÒÉÉÉå WæÉÉÇÉû| uÉÉå rÉÉåWÒûÉ ÌÑuÉÉEÉ]û UZÉÉÉÉå WæÉÉÇÉû ÌMü kÉÉ]É sÉ¬ÉMüÐ qÉÌÉÉÉåÇ pÉÉÏ uÉÉ]xÉÉEÉÏ WÒûÏ EmÉÉrÉÉÉÉÌÉÉÉÉÉÉÉ UZÉÉ]É WæûeÉÉåxÉÉÉÉ ÌMüÉ EIÉÉÉÉå bÉÉEUÉ qÉÉåÉÇÉÉ | AaÉÉÉEÉûû uÉÉÉÉã L[]]xÉÉå sÉ¬ÉMüÐû xÉå ÍqÉÉÉÉÉå sÉÉÉãÉ LMüÉ ÌÑuÉÉEÉÉÉÐ qÉÉåÌÇÉÉÉÉÉÉÉÉÉÉÉÉÉ WæÉû |

AÇÉÉÉÉ]ÉÉ]ÉÉÉÇÉÉÉ rÉÉ oÉÉÉÉÉÉÃÉmÉÉÉÉ xÉÉå uÉÉÉÉ rÉÉÉÉåÇÇÉÉ qÉÉÉÉÉÉÉÇÉÉÉÉÉ WæÉÇÇÇÇÉÉÉ WæÉûÉÉû

TüOûÉ WÒûAÉ FIÉÏ cÉÉåaÉÉ, WûsÉ ZÉÏÇcÉiÉÉ WÒûAÉ AÉæU oÉÇeÉU

eÉqÉÏìÉ, AÉæU IÉÉ WûÏ EIÉMåü qÉIÉÉ MüÐ   vÉÉÇÌiÉ, mÉÉÉËUuÉÉÉÏUMü

xÉÇxMüÉUÉãÇ, AÉæU xÉÉÉqÉÉÉÎeÉMü ÉUxiÉÉÉåÇ MüÉå|

- sÉåZÉMü ÌMüxÉMüÉÉ oÉÉ½eÉÏuÉÏ MüWûMüüU xÉÇoÉÉÉÃíkÉiÉ MüU
  UWûÉ Wæû |

- oÉÉ½ÎeÉÉuÉrÉÉÉÃÇ MüÉã SÕxÉÉå mÉëÉÉÏhÉrÉÉÉÇ xÉå MüÉÉælÉ xÉå
  sÉ¤ÉhÉ AsÉaÉ MüüUiÉå WÇæû |

- mÉÉÉUÇqÉÉÏUMü sÉ¬ÉMüÐ   AjÉÏurÉÉuÉxjÉÉÉ AÉæU   ÌuÉSåvÉÏ
  AjÉÏurÉÉuÉxjÉÉ MüÉ pÉåS oÉiÉÉÉCL |

- mÉÉrÉÉÏOMüÉÇÇ mÉU sÉ¬ÉÎMüürÉÉÇ MåÉü mÉÉëpÉÉÉuÉ MüÉÉå xÉÇ¤ÉåmÉÉ
  qÉÉÇÇoÉiÉÉÉÉLÆ |

- sÉ¬ÉÏMürÉÉÉÇ Måü AÇÇiÉÉÏÌìÉÉÌWûriÉÉ aÉÉÑhÉÉÉÉÇ MüÉã xÉÇ¤ÉåmÉÉ qÉÉÇÇ
  oÉiÉÉÉÉLÆ ÎeÉÉ<ÉMüÉÉã mÉÉrÉÉÉÏÉOûMüÉ SåZÉsÉÉå qÉÉÉÇ AxÉÉÉÉjÉÉÏ WæÇÇ |

II.3. Kannada

ªÀÄÄUÀ¼À UÀæºÀzÀ ªÀiÁ£ÀÄµÀågÀÄ

MªÉÄä PÀ°à¹ £ÉÆÃr. ¢£À¤vÀå ¤ÃªÀÅ ¤ªÀÄäzÉÃ dUÀwÛ£À°è,

¤ªÀÄäzÉÃ   UÀÄÄVªÀ°è   §zÀÄÄPÀÄ   ̧ÁV̧ÀÄéwÛ¢Ýj.   DzÀgÉ

JzÀÝQÌzÀÝAvÉÛ MAzÀÄÄ ¢£À ¤ªÀÄÄ ¥ÀlÖt UÉÆÃvÀÄÛUÀÄÄÀj¬Ä®èzÀ

C£ÀåUÀæºÀ fã«UÀ½AzÀ vÀÄÄ©ºÉÆÃVzÉ. C¥Àjavà ¨sÁµÉ ¸C¥Àjavà ªÀÄÄRUÀ¼ÀÄ . F CzÀÄæ±Àå ¯ÉÆÃPÀzÀ, C£ÀƺÀå gÀÆ¥ÀzÀ d£ÀgÀ fãªÀ£À ±ÉÊºiÉÄÃ «avÀæ, ªÉÃgÀ°ÄzÀå. zÀÄ¢zÀÄ GtÄÚºÀ §zÀÄQ£À ªÀÄ»ªÉÄ0iÀÄ Cjºé¢À CºÀjV®è. CzÉÆªÀÄÄÝ «PÀÄævÀ §zÀÄQ£À ¸ÀAvà¸ÀPÉÌ ªÉÄÊ0iÉÆÃrzÀÝgÉ. J®èQÌÀvÀ «ÄVᯃÁV CªÀgÀÄ CzÀÄãvÀ ¸Áª_ÀÄxÀåð ªÀÄvÀÄÛ C¥Àj«ÄvÀ L±Àéç÷åUÀ¼À MqÉ0iÀÄgÀAvÉ UÉÆÃZÀj¸ÀÄwÛzÁÝgÉ.

¥Àæª_Á¸ÉÆÃzÀåªÀÄÄ ¥ÁægÀÄ¨ºÀ°ÄzÀ ªÉÆzÀ®®è ¢£À¢AzÀ©É D ¸ÀÜ¼ÀzÀÝ°ÃègÀÄªÀ¸À PÁgÀt C°è¥À ¥ÀÄæw ZÀ®è£ÀµÀ£À®À , ºÀÄvÀ°ÄvÀAzÀ §zÀÄQ£À §zÀ¯ÁªÀuÉ0iÀÄ£À£Àß UÀµÀÄ¤¸ÀÄwÛzÉÝ.C°è¥À ¨sÁµÉ, ¤gÀUÀð¼ÀªÁV £À£Àß Cj«UÉ ¨ïAzÀ £ÀÄvÀgÀ, ºÁÚÄÀ ªÀiÁ£À¹PÀ MvÀÛqÀ¢ÀAzÀ EzÀ MAzÀ DzsÀ¤PÀvÀ0iÀÄ ¨ïÀ4ªÀÀtÂÚÉÚ £Á¢ JA§ CjªÀ ªÀÄÆÃrvÀ.

D¥ÀÄ¼ÀÉÃ ¸ÀÆZÀ£É¬Ä®èzÉ, ¨ÉÃgÉÆÃAzÀ dUÀwÛ£À d£ÀgÀ ®zÀ©Q£À¯è §A¢½zÀUÀÄ. ®zÀ©Q£à d£ÀgÀ MAzÀ ªÀÀÄÀ|ÀÀÝzÀ°è ªÀÀÄÁÁqÀÄÄwÛzÀ0 RZÀÄÄÄ½ªÁÉZÀÙª_À£À®ÀÛ¸, 0iÀÁÀÆwQÀPÀ vÀ®Àß L±ÀÃgÁ«ÀÄ jhÄÃ¥À£ÀzÀ MAzÉÃ ¢£À¢©Ä PÀ½É¼iÀÄÀÙª_ÀzÀ¸. ®zÀ©Q£à d£ÀgÀ »AzÀÀ½zÀ gÀhÄ£Á¥À¹¸À¹ÀÀgÀzÀ JA§ ¨ïAæÉæ 0iÀ¸ÁÆwQÀPÀÀgÀ£À£Àß D¥ÀÁj¹vÀ¸. DzÀgÉ ®zÀ©Q£à d£ÀgÀ ¸Ëd£À¥ÀÀÝ¥ÀÀÝPÀÀÀðPÀ DwxÀåªÀ¥À£À£Àß ¹ÃPÀÀ½¹zÀ 0iÀ¸ÁÆwQÀPÀgÀÀ EzÀ vÀ£À£ÀÄ ¥Àæ0iÀ©tzÀ ¥Àæª_À£ÀR

1. ¯ÉÃRPÀgÀ C©ü¥Áæ0iÀÄzÀ°è C£ÀåUÀæºÀ fÃ«UÀ¼ÀÄ 0iÀiÁgÀÄ?

2. C£ÀåUÀæºÀ ªÀåvÀå÷ì ®PÀëtUÀ¼ÀÄ 0iÀiÁªÀÅªÀÅ?

3. ®zÁQ d£ÀgÀ ¸ÀA¥ÀæzÁ¬ÄPÀ §zÀÄPÀÄ ‰°ÁUÀÄ ¥Á²ÑªÀiÁvÀå 0iÀiÁwæPÀgÀ DyðPÀvÉ0iÀÄ°è °ÀtzÀ ªÉÊgÀÄzsÀå

¥ÁvÀæªÀ£ÀÄß w½¹.

4. ®zÁQ d£ÀgÀ §UÉÎ 0iÀiÁwæPÀgÀ C©ü¥Áæ0iÀĪÀ£ÀÄß w½¹.

5. 0iÀiÁwæPÀgÀ Cj«UÉ ¨ÁgÀzÀ, ®zÁQ d£ÀgÀ «±ÉÃµÀ ®PÀëtUÀ¼ÀÄ 0iÀiÁªÀÅªÀÅ?

APPENDIX III

READING PASSAGES

III.1. English

The Rainbow Passage (Fairbanks, 1960)

When the sunlight strikes raindrops in the air, they act as a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is according to legend, a boiling pot of gold at one end. People look, but

no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow. Throughout the centuries people have explained the rainbow in various ways. Some have accepted it as a miracle without physical explanation. To the Hebrews it was a token that there would be no more universal floods. The Greeks used to imagine that it was a sign from the gods to foretell war or heavy rain. The Norsemen considered the rainbow as a bridge over which the gods passed from earth to their home in the sky. Others have tried to explain the phenomenon physically. Aristotle thought that the rainbow was caused by reflection of the sun's rays by the rain. Since then physicists have found that it is not reflection, but refraction by the raindrops which causes the rainbows. Many complicated ideas about the rainbow have been formed. The difference in the rainbow depends considerably upon the size of the drops, and the width of the colored band increases as the size of the drops increases. The actual primary rainbow observed is said to be the effect of super-imposition of a number of bows. If the red of the second bow falls upon the green of the first, the result is to give a bow with an abnormally wide yellow band, since red and green light when mixed form yellow. This is a very common type of bow, one showing mainly red and yellow, with little or no green or blue.

III.2. Hindi

mÉÉËUrÉÉ§ÉÉ lÉÉqÉMü eÉÇaÉsÉ qÉÇå LMü mÉãQû mÉU qÉåbÉuÉqÉÉï lÉÉqÉMü MüÉæAÉ AmÉlÉå mÉËUuÉÉU Måü xÉÉjÉ xÉÑZÉ xÉå UWûiÉÉ jÉÉ | LMü mÉWûÉQû Måü aÉÑTüÉ qÉåÇ ÍcÉ§ÉaÉëÏuÉ lÉÉqÉMü MüoÉÔiÉU UWûiÉÉ jÉÉ | LMü ÌSlÉ qÉåbÉuÉqÉÉï MüÉæAÉ AÉWûU MüÐ ZÉÉãeÉ qÉå vÉWûU Måü UÉWû xÉå eÉÉ UWûÉ jÉÉ, iÉpÉÏ ExÉlÉå LMü ÌuÉ±Mü lÉÉqÉMü

ÍvÉMüÉUÏ MüÉã eÉÉsÉ Måü xÉÉjÉ AÉiÉå WÒûL SåZÉÉ | ExÉlÉå xÉÉåcÉÉ "AÉaÉU qÉÉæÇ AÉWûÉU MüÐ ZÉÉåeÉ qÉåÇ eÉÉFaÉÉ iÉÉå rÉWû ÍvÉMüÉÉU qÉÉåUå mÉËUuÉÉU Måü xÉÉUå xÉÉSèxrÉ ÌlÉÉUcÉrÉ WûÏ CxÉ eÉÉsÉ qÉÉåÇ TüÆxÉ eÉÉÉLÇãaÉå" | LåxÉÉ xÉÉãcÉiÉå WÒûL ÌMü qÉÉåUÉ AoÉ oÉÉÉWûU eÉÉÉiÉÉ PûÏMü iÉÉWûÏÇ Wæû uÉÉWû MüÉÉæAÉ mÉåQÒû Måü mÉÉÉxÉ AÉ aÉÉrÉÉ | mÉÉËUuÉÉU Måü xÉÉSèxrÉÉÇ xÉå rÉÉWû oÉÉiÉ MüÉWûMüU AxÉlÉÉå EIWÇåÒ MüÉWûÏÇ IÉ eÉÉÉlÉå MüÉ AÉSåÉ ÌSrÉÉ | CiÉlÉÉå qÉÉåÇ uÉÉWû ÍvÉMüÉÉU AmÉlÉÉÏ eÉÉsÉ ÌuÉÉÑÉÉÉåU SÉÉiÉÉ ÌoÉÉZÉÉåUMÉåU SÕÉU eÉÉÉMüU oÉÉPÉû

III.3. Kannada

QæµÁÚ £À¢0iÀÄ ¸À°Áå¢æ ¥ÀªÀðvÀÄÀ¼À°è ªÀÄ°Á§¯Éñ±ÀégÀzÀ °ÀwÛgÀ °ÀÄlÄÖvÀÛzÉ. EzÀ °ÀÄlÄÖªÀ ¥ÀæzÉã±ÀªÀÅ gÀªÀÄtÂã0iÀÄ ¸ÁÜ£À. EzÀ ªÀÄ°ÁgÁµÀÖç, PÀ£ÁðlPÀ ªÀÄvÀÄÛ DAzÀæ¥ÀæzÉã±ÀUÀ¼À°è °ÀjzÀÄ §AUÁ¼À PÉÆ°è0iÀÄ£À£Àß ¸ÉãgÀÄvÀÄÛzÉ. EzÀPÉÎ G¥À£À¢UÀ¼À °À®ªÀÅ. PÉƬÄ£À, vÀÄAUÀ¨sÀzÀæ, WÀl¥Àæ¨sÁ, ©üÃ£ÀiÁ, ªÀÄ®¥Àæ¨sÁ CªÀÅUÀ¼À°è PÉ®ªÀÅ. PÉƬÄ£À £À¢UÉ CuÉPÀlÖ£ÀÄß PÀnÛ «zÀÄåvÀÛ£ÀÄß GvÁàzÀ£É ªÀiÁqÀÄvÁÛgÉ.