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1. Introduction

Over the past few decades, a considerable number of studies have been made on multilingualism. Numerous attempts have been made by scholars to demonstrate how people learn languages other than their native tongue and in what situation a particular language is chosen among other languages. The purpose of this paper is to introduce the previous studies on bilingualism and cognitive development of bilingual speakers. In particular, the paper will focus on the previous researches on code switching in early age bilingual children and their speech development and its influence on cognitive processing.

2. Language Acquisition

The evidence from several studies of both first and second language acquisitions imply that typical language learning occurs only when exposure to the language begins early in life. Every child acquires a language, his/her first language or native tongue, in the first few years of life. There are exceptions on either psysiological grounds such as deafness, or social grounds such as 'wolf children.'

The effects over age of language exposure are approximately linear through childhood with a flattening of the function in adulthood. Though our command of language shows little progress in some areas such as in vocabulary, and the language learning continues throughout our life span. A large number of people learn more than one language. There are various ways in which this may happen, and the transitions between them are incremental. A child may be exposed to two or even more languages right from the beginning of his/her life,

in such case, his/her parents use different languages. In this kind of situation, we still say this is 'first language acquisition' except that not only one but two languages are 'first.'

3. First Language Acquisition and Second Language Acquisition

According to Wolfson (1982), in cognitive development in first language acquisition, two important conclusions can be drawn from previous studies. First, the production of grammatically well-formed utterances does not imply that the speaker has mastered the language, the speaker may provide these utterances with quite a different meaning. Secondly, a speaker must have acquired the cognitive categories which underlie the various expressive means of natural languages, which are categories such as time, space, modality, causality, and so on. Whereas usually met in second language acquisition, however it is not necessarily so in first language acquisition.

4. Social Development in First Language Acquisition

Learning the first language is necessary for young child to develop into fully- fledged member of society. Language makes it possible for the child to express their feelings, ideas, and wishes in a socially accepted manner. Language is the medium through which the child acquires the cultural, moral, and other values in society. A child may acquire social identity and within its framework, develop one's own personal identity. On the other hand, this does not apply to most types of second language acquisition. The social identity of the second language learner is more or less fixed. (Diaz, 1991) In fact, the desire to preserve one's identity may become an obstacle in mastering a second language. The apparent facility with which children learn a second language is often attributed to biological factors, but an alternative explanation might be the following.

Unlike adults, children have no need to fear the loss of their social identity. First language acquisition is closely linked with the child's social development and hence, to the evolution of a social identity. This does not apply to second language acquisition to the same extent. (Diaz, 1991)

5. Bilingualism

Bilingualism refers to the use of two languages by an individual or a speech community. If a speaker is fluent in two languages, they are said to be 'bilingual.' The commonly held image of bilingual person is one brought up in such cultures where they are exposed to two languages from birth. It is not necessary for them to be equally fluent, but at least they should be very competent in the second language. (Harley, 1995)

In some cases, people are 'multilingual' who is fluent in three or more languages. Weinreich (1953) proposed that there were three types of bilingualism depending on the way in which the two languages are learned. These are compound bilingualism, co-ordinate bilingualism, and subordinate bilingualism.

The compounding bilingualism is the type of bilingualism whose totally integrated arrangement could only arise when equal prominence was given to each language in childhood. In this case, one maintain their first language, adding to the second language to their linguistic repertoire. They may become 'balanceed bilingual' and any two language systems, no matter how different they are, have some features in common. Lambert (1974) says that this likely to occur when learners have a positive view of their own ethnic identity and of the target language culture.

A bilingual person who in has acquired another as a second language, adding to their first language, and initially develops one system is called co-ordinate bilingualism. The person builds up another system and can operate the two in parallel.

Changing one language to another, he/she switches from one system to another, rather than switching over within one, compound system. If one of the two languages is dominant, we can infer that much of the person's language processing is effected in the dominant language, and that the other language is used only at a superficial level of production or comprehension. In extreme cases, the use of the second language may involve merely the substitution of second language phonological structures for the first language structures within an otherwise unified system that provides for a suitable correspondence of sound

and meaning.

In co-ordinate bilingualism, there are parallel sets of word-concept pairs and the second language is connected to a new conceptual structure, even though this overlaps with the first. This situation arises when the learning situation for the second language is less ideal. The case where the second language develops so that it is entirely parasitic on the first language is known as subordinate bilingualism.

Co-ordinate and subordinate bilingualism arise when one language is learned before another. However, it is not all easy to distinguish between these categories in practice, and it is not clear that order of acquisition is so fundamental as Weinreich originally considered. (Bialystok and Hakuta, 1994) One possibility is to assume that compound bilingual person may become a co-ordinate bilingual person when equal prominence was given to each language throughout their experiences. Another possibility is co-ordinate bilingual person gradually changes to compound bilingual person as their environments change. It seems reasonable to say that compound bilingualism can occur in preschool children, school children, and adults. It is also possible to say that bilingualism is influenced in the home as well as by geographical location.

A German linguist Leopold reported his diary studies (1939-49). He observed his daughter who had an American mother and lived from an early age in the US. German was used in the home at first, but this soon gave way to English which was the environment language. This study shows that the child can quickly (in this case 6 months) forget the old language and pick up a new one if they move to another country. In later study, it is observed that language mixing where words combine, such as an English suffix added to a German root, or where English words put into a French syntactic structure, or answering questions in one language with answering in another. (Redlinger & Park, 1980 Swain & Wesche, 1975)

6. Cognitive Flexibility

We can say that early bilingual experience offers children certain cognitive flexibility in their task performance, however this flexibility stems from reliance

on the self-regulatory functions of language.　The code-switching hypothesis, which investigators believed that the possibility of switching linguistic codes while performing cognitive tasks gave bilingual children an added flexibility that monolingual children did not enjoy, is limited by the fact that there is no empirical evidence that bilinguals indeed switch languages while performing cognitive tasks.

　　　The concept of individual code-switching during problem solving and its effects on cognitive flexibility have not been determined.　To translate from one language to another language requires the translator to mentally move from the linguistic representation level of one language to the logical level of word reference.　What is unique to bilingual situation are the tasks of flexibility switching between language usage as a speaker and language usage as a listener, and of translating between languages.

7. Code Switching

　　　Code switching, sometimes called language switching, is the name of the tendency of bilinguals when speaking to other bilinguals to switch from one language to another, often to more appropriate words or phrases even though distinction between borrowing transfer where the second language influences the first language, and substratum transfer where the first language influences the second language is not clear-cut.　This processes is highly variable between individuals, and there is no obvious processing cost attached.　Code switching is considered an extremely important aspect of both cognitive development and social communication.　As Diaz (1983) says the following in his research:

　　　1) bilingual children are thinking verbally while performing the non-verbal
　　　　　tasks;
　　　2) bilinguals switch from one language to the other while performing these
　　　　　tasks; and
　　　3) bilingual's habit of switching language while performing these tasks
　　　　　results in improved task performance.

　　　Taylor & Taylor pointed out that, in bilingual speakers' case, mixture of

common and separate stores for each language is used in individuals. There is no separate store for each language, or just one common store. For example, concrete words, cognates (words in different languages that have the same root and meaning and which look similar), and culturally similar words act as though they are stored in common; abstract and other words act as though they are in separate stores. (Kirsner, Smith, Lockhart, King & Jain, 1984) In separate store models, the two languages connected through underlying conceptual system that is hypothesised to be the same interface as that which interface between language and pictures. It is argued in previous studies that the language systems is flexible in a bilingual speaker and that its behavior depends on the circumstances. When the speaker is in unilingual mode, when the input and output are limited to only one of the available languages, and perhaps when the other speakers involved are unilingual in that language, interaction between the language systems is kept to a minimum and the bilinguals try to switch off the second language. In the bilingual mode, both language systems are active and interact.

However, when children get older, they tend to rely more on sophisticated aspects of language to solve cognitive tasks. This is influenced by individual differences in strategy use. Code-switching in social communication happens frequently in bilingual children. There is no evidence for bilingual children to code-switch in their problem solving or cognitive performance activities. Even though bilinguals switch languages easily and frequently in the context of communicative social speech, there is no evidence of bilinguals' code-switching in their private speech or verbal mediation.

The concepts of individual code-switching during problem solving and its effects on cognitive flexibility have not yet been tested within the framework of current psycholinguistic theory regarding the relationship between thought and language. Nevertheless, it is hypothesized that two elements help to explain the interaction between language and cognition. In order to substatiate the theory, model embracing both language and cognitive development must first be formulated and tested.

The particular dialect or language that a person chooses to use on any

occasion is a code, a system used for communication between two or more parties. It is unusual for a speaker to have command of, or use, only one such code or system. Command of only a single variety of language, whether it be a dialect, style, or register, would appear to be extremely rare phenomenon, one likely to occasion comment. Most speakers command several varieties of any languages they speak, and bilingualism, even unilingualism. People are usually required to select a particular code whenever they choose to speak, and they may also decide to switch from one code to another or to mix codes even within sometimes in very short utterances and thereby create a new code.

Gal (1988) says that "code switching is a conversational strategy used to establish, cross or destroy group boundaries, to create, evoke or change interpersonal relations with their rights and obligations." Equating in this instance code with language, we can describe two kinds of code switching, which are situational and metaphorical. Situational code switching occurs when the languages used change according to the situations in which the conversants find themselves. They speak one language in one situation and another in a different one. No topic change involved.

When a change of topic requires a change in the language used, we have metaphorical code switching. The interesting point here is that some topics may be discussed in either code, but the choices of code adds a distinct flavor to what is said about the topic. The choice encodes certain social values. Code mixing occurs when conversants use both languages together to the extent that they change from one language to the other in the course of a single utterance.

Instances of situational code switching are usually fairly easy to classify for what they are. What we observe is that one variety is used in a certain sets of a situations and another in an entirely different set. However, the changeover from one to another may be instantaneous. Sometimes the situations are socially prescribed that they can even be taught. Others may be more subtly determined but speakers readily observe the norms. This kind of code switching differs from diglossia.

Code switching is often subconscious, people may not be aware that they have switched or be able to report, following a conversation, which code they

used for a particular topic. What we have conversants with a sophisticated knowledge of both languages who are acutely aware of community norms. These norms require that both languages be used in this way so that conversants can show their familiarity or solidarity.

A fundamental difficulty in understanding the phenomenon of code switching is accounting for a particular choice or switch on a particular occasion. In order to provide such an account we must look at the total linguistic situation in which the choice is made.

8. Speech Development

Children are faced with many more different signals at each stage of the acquisition process. However, bilingual children do not always know to which language they belong since younger children do not even know they represent two languages. Both the differences and the similarities between the two language systems will lead to interference which hampers the acquisition process after the child is able to differentiate between the languages. The cross-linguistic differences cause interference, when the child does not realize that a feature of one language is not shared with another language. It becomes a problem when two languages are similar semantically without being identical.

However, the mistakes caused by similarities or the differences are not a big problem in spoken language. When children's speech behavior is close to that of other speakers of each language, lexical distinctions are maintained and communication is efficient. Slight mispronounciations happen sometimes, however, they are inconsequential. The nature of these strategies may vary from individual and according to the type of bilingualism.

Adopting different strategies during phonological development does not necessarily entail the use of different processes once the development process is completed. Despite differences in the acquisition process, it would be quite possible for a perfectly balanced bilingual to have two completely independent phonological and phonetic systems, each integration between the two systems, but which would differ in some way from those of monolinguals.

In cases when two systems are mixed in the early stage, this is due to the

undifferentiated state of the two languages as a whole. After differentiation, the children will begin to develop two sound systems. However, there is variation in the correspondence of these systems to those of monolinguals, especially in their phonetic detail. At the phonetic level, even children who are dominant in one language seem to achieve an almost perfect match with monolinguals in both languages. In their speech production, they may, however, retain noticeable traces of interference in the realization of particular phonemes, such as that is at the phonetic level. In speech production, we may find that bilinguals rarely use strategies monolinguals never use, however they do use them with different frequencies.

9. Monolingual Children and Bilingual Children

In many parts of the world it is just a normal requirement of daily living that people speak several languages. Perhaps one or more at home, another in the village, still another for purposes of trade, and yet another for contact with the outside of the world. These various languages are usually acquired naturally and unselfconsciously, and the shifts from one to another are made without hesitation.

People who are bilingual or multilingual do not necessarily have exactly the same abilities in the languages. As Sridhar (1996) pointed out, multilingualism involving balanced, nativelike command of all the languages in the repertoire is rather uncommon. Typically, multilinguals have varying degrees of command of the different repertoires. The differences in competence in the various languages might range from command of a few lexical items, formulaic expressions such as greetings, and rudimentary conversational skills all the way to excellent command of the grammar and vocabulary and specialized register and styles.

Sridhar also says "Multilinguals develop competence in each of the codes to the extent that they need it and for the contexts in which each of the language is used." Context determines language choice.

In a society in which more than one language is used, your language choices are part of the social identity you claim for yourself. Monolingualism which is

the ability to use only one language, is such a widely accepted

There are two forms of comparison in the evaluation of bilingual children. The first form is to compare the similarity between the way bilingual children function in a certain situation or solve problems and the way monolingual children behave in the same situations. The second form is a comparison of the way in which the bilingual children perform a certain task in their first language or in their second language. These comparisons indicate that bilingual children have linguistic characteristics that are unique from monolingual children. They also show how bilingual children react in certain situations that are not influenced by linguistic competence.

Second language acquisition and translation are the typical activities of bilingual speakers. However, comparisons between performance in the first and second language tells which of these achievements are influenced by the children's general linguistic competencies and those that are not. Bialystok (1987) says that the ability to think about language is often associated with increased ability to learn language. In fact, bilingual children seem to have greater metalinguistic awareness than monolingual children.

10. Conclusion

As Snow(1993) pointed out that bilingual children suffer no obvious disadvantages from learning two languages simultaneously. There might be some initial delay in learning vocabulary items in one language, but this delay is soon made up, and of course the total, bilingual vocabulary of the children is much greater. Indeed, bilingual children show an advantage in acquiring and using metalinguistic skills over monolingual children.

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バイリンガリズム

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　二つの言語を話す人々いわゆるバイリンガル、あるいは二つ以上の言語を話すマルティリンガルの研究であるバイリンガリズム学は諸外国ではすでに研究も盛んで、様々な研究結果が発表されている。この分野における研究は、単に二つ以上の言語を話す人々の言語を研究するだけにとどまらない。バイリンガルの言語習得過程を研究するには、認知心理学の研究対象である彼らがどのように言語を認知するのかということにはじまり、彼らが発話する言語の音素、形態素、意味、統語などの言語学の分野での研究対象である言語の単位や構造の発達を観察することも必要である。しかしバイリンガリズム学の研究範囲はそれだけではない。その言語が使われている家庭環境、複数の言語を同時に習得したのか、あるいは時期がずれて習得したのか、バイリンガルが持つ言語への話者自身の評価、あるいは属する社会の言語教育、言語政策など様々な要因が複雑に絡まりあっているのである。

　この論文では第一言語あるいは母語の習得と第二言語習得の相違点にはじまり、習得過程の違いによるバイリンガルのタイプについてそれぞれのタイプの特徴、言語習得時期の違いについて、また複数言語話者のコードスイッチについて、その言語選択がどのようにされるのかについて対人関係や社会的背景などによってどのような影響を受けるのかについて過去の研究成果をまとめてみた。最後に一言語話者と複数言語話者の違いについて述べた。