

Psycholinguistics and Second language acquisition

Dr. Tahiya Alshaikh Alhameem Yousif

Associate professor of Applied Linguistics - Faculty of Education - English Language Department -Alzaiem Alazhari University

Abstract:

Psycholinguistic currently represents a widely diverse field. Prior to uttering speech sounds, infants make a variety of sounds This paper aims to have a preliminary introduction about psycholinguistics and its role in second language acquisition. Psycholinguistics or psychology of language is the study of the interrelation between linguistic factors and psychological aspects. The main subject of research in psycholinguistics is the study of cognitive processes that underlie the comprehension and production of language, and the way the cultural environment interact. The field of psycholinguistics has been defined by reaction to Chomsky's supporters and opponents. In this paper a selective review of some recent illustrative psycholinguistics research on L2 acquisition will be provided. In psycholinguistics researchers try to develop models to describe and predict specific linguistic behavior. Since the linguistic revolution of the mid -1960 the field has brooded to encompass a wide range of topics and disciplines. Psycholinguistics is interdisciplinary and is studied in different fields such as psychology, cognitive science and linguistics. Here after a brief introduction to psycholinguistics, how psycholinguistics illustrates language comprehension from words to texts will be explained.

Key words: psycholinguistics, comprehension, acquisition process.

يمثل علم علم اللغة النفسي حاليًا مجالًا متنوعًا على نطاق واسع. قبل نطق أصوات الكلام، يصدر الأطفال مجموعة متنوعة من الأصوات. تهدف هذه الورقة إلى الحصول على مقدمة أولية عن علم اللغة النفسي ودوره في اكتساب اللغة الثانية. علم اللغة النفسي، هو دراسة العلاقة المتبادلة بين العوامل اللغوية والجوانب النفسية. الموضوع الرئيسي للبحث في علم اللغة النفسي هو دراسة العمليات المعرفية التي تكمن وراء فهم اللغة وإنتاجها، والطريقة التي تتفاعل بها البيئة الثقافية تم تحديد مجال علم اللغة النفسي من خلال رد الفعل تجاه مؤيدي تشومسكي ومعارضيه. في هذه الورقة، سيتم تقديم مراجعة انتقائية لبعض أبحاث علم اللغة النفسي التوضيحي الحديث حول اكتساب اللغة الثانية. يحاول الباحثون في علم اللغة النفسي تطوير نماذج لوصف السلوك اللغوي المحدد والتنبؤ به. منذ الثورة اللغوية في منتصف عام 1960، نشأ المجال ليشمل مجموعة واسعة من الموضوعات والتخصصات. علم اللغة النفسي متعدد التخصصات ويتم دراسته في مجالات مختلفة مثل علم النفس والعلوم المعرفية واللغويات. هنا بعد مقدمة موجزة لعلم اللغة النفسي، كيف يشرح علم اللغة النفسي فهم اللغة من الكلمات إلى النصوص.

الكلمات المفتاحية: علم اللغة النفسي، الاستيعاب، عملية الاكتساب.

1. Introduction

We have minds and in our minds we have the means for producing and comprehending speech. But how did we come to have such abilities? At birth we cannot comprehend speech, nor can we produce speech. Yet, by the age of 4 years we have learned vocabulary and grammatical rules for creating a variety of sentence structures including negatives, questions, and relative clauses. And although 4-year-olds still have passives and some other elaborate syntactic structures to learn, along with a never-ending stock of vocabulary items, they have already overcome the most difficult obstacles in language learning. This is true of children the world over, whatever the language may be.

Indeed, the language proficiency of the 4- or 5-year-old is often the envy of the adult second-language learner, who has been struggling for years to master the language. It is one of the fundamental tasks of psycholinguists to explain how children learn language.

Psycholinguistics that means psychology of language is the study of the psycho-logical and neurological factors that enable humans to acquire, use, comprehend and produce language (“Altman”, 2001, p.1). Due mainly to a lack of cohesive data on how human brain functions, modern research makes use of biology (natural science concerned with the study of life and living organism), neuroscience (the scientific study of how information concerning faculties such as perception, language, reasoning, and emotion is represented and transformed in a human or other animal nervous system or machinery, linguistics and information theory (a branch of applied mathematics and electrical engineering involving the quantification of information .

To study how brain processes language, there are a number of sub- disciplines with non-invasive techniques for studying the neurological workings of the brain, for example neurolinguistics has become a field in its own right. Psycholinguistics covers the cognitive processes that make it possible to generate grammatical and meaningful sentences out of vocabulary and grammatical structure as well as the processes that make it possible to understand utterances, words, texts, etc. (Miller & Emas , 1983) .

Psycholinguistics concerns with the study of the cognitive process that supports the acquisition and use of language. The scope of psycholinguistics includes language performance under normal circumstances and when it breaks down, For example following brain damage. Historically the focus of most psycholinguists has been on first language (L1), acquisition of first language in children and in research on adult comprehension and production (Schmitt, 2002, p.133-140). The findings and concepts of psycholinguistics is used and studied by people in a variety of fields. Such as psychology, cognitive science linguistics, and neroulinguistic. There are several subdivisions within psycholinguistics that are based on the components that make up the language.

2. Statement of the Problem

Due to the fact that psycholinguistics is an interdisciplinary field, nowadays it is the focus of researchers who study the

interrelation between mind and language. The explanation of the process of comprehension from a psycholinguistic perspective from a word to a text is another area of interest of psycholinguists.

2.Aims of the Study

In this paper a selective review of some recent illustrative psycholinguistic research on second language acquisition and competent bilingual performance will be provided.

3.Research Questions

In this research the following questions will be answered:

1. What is psycholinguistics?
2. Who is psycholinguist?
3. What is the main focus of psycholinguistics?

Literature Review

First-language learning

Of the simple Consonant + Vowel + Consonant variety ('panpan'). This structure of babbling as repeated syllables has been found to be produced by children in all studied languages.

The sounds that infants make involve many but not all of the speech sounds that occur in the languages of the world. For example, English sounds like the 'th' in 'though' and the 'th' in 'thin' are rare, as are the click sounds common in various African languages such as Zulu. In time, however, such vocalizations take on the character of speech. From as early as 6 months of age infants from different language communities begin to babble somewhat distinctively, using some of the intonation of the language to which they have been exposed (Nakazima, 1962).

Research seems to indicate that in languages where the intonation contours are quite distinctive, native speakers can tell the difference between the babble of infants who were learning their (the native speakers') language as opposed to the babble of infants learning other languages (de Boysson-Bardies et al., 1984).

The production of sounds using the intonation contours of the first language is obviously a learned phenomenon because when infants babble they follow the intonation contours of the language which they hear. This is something that deaf infants deprived of

hearing speech do not do. While such infants are able to vocalize and cry, they do not progress to babbling. Interestingly, deaf infants who have been exposed to sign language from birth do the equivalent of babbling – with their hands (Petitto and Marentette, 1991)!

The development of speech production

Prior to uttering speech sounds, infants make a variety of sounds – crying, cooing, gurgling. Infants everywhere seem to make the same variety of sounds, even children who are born deaf (Byrne, B. (1992). The ability and propensity to utter such sounds thus appear to be unlearned. Later, around the seventh month, children ordinarily begin to babble, to produce what may be described as repeated syllables ('syllabic reduplication'), e.g. 'baba', 'momo', 'panpan'. While most of the syllables are of the basic Consonant + Vowel type ('baba' and 'momo'), some consist of closed syllables. It is from the advanced stage of babbling that children move into uttering their first words. Often this occurs at around 1 year of age but can occur much earlier or much later. When children begin to utter words, somewhat surprisingly only some of the sounds that they have uttered in babbling appear in speech. The other sounds must be reacquired.

And there may be some order to the acquisition of speech sounds. For example, sounds like /x/ (as in Bach), /k/, and /l/ that commonly occurred in vocalization and babbling prior to speech may now tend to occur later, after the acquisition of such phoneme sounds as /p/, /t/, /m/, /a/ 'fall', and /o/ 'tall'. A phoneme, it should be said, represents a class of speech sounds in a language. For example, in the word 'pep' the individual sound /p/ can represent the sound at the beginning of the word 'pep' as well as the sound at the end of the word 'pep'. (Incidentally, the letters surrounded by slashes (/ /) indicate that a phoneme sound is identified. A phoneme sound is a single discrete sound of a language.) Phonetically, the two sounds are different, with /p/ in the final position having a large amount of aspiration (puff of air). Nevertheless, they are regarded as the same phoneme.

There is, then, some discontinuity between babbling and meaningful speech Petitto, L. A. and Marentette, P. F. (1991)

Linguistic related areas

Phonetics and phonology are concerned with the study of speech sounds within psycholinguistics, research focus is on how the brain process and understand that sounds.

Morphology is the study of word structure especially the relationship between related words (such as dog and dogs) and the formation of words based on rules (such as plural formation).

Syntax is the study of the patterns which dictate how words are combined to form sentences. Semantics deal with the meaning of words and sentences where syntax is concerned with the formal structure of sentences. Pragmatics is concerned with the role of context in the interpretation of the meaning.

Psychology related areas

The study of word recognition and reading examines the processes involved in the extraction of orthographic, morphological, phonological and semantic information from patterns in printed texts. Developmental psycholinguistics studies infants and childrens' ability to learn and process language, usually with experimental or at least quantitative methods (as opposed to naturalistic observations such as those made by Jean Piaget, in his research on the development of children).

The field of psycholinguistics has been developed and redefined by reaction to Chomsky. Chomsky's view about creating syntactic sentences was that language exists because human possess an innate ability and was highly critical of skinner's book in 1959. That review started what has been termed the cognitive revolution in psychology. The review of Chomsky still holds that the human ability to use syntax is qualitatively different from any sort of animal communication; this ability may have resulted from a favorable mutation or from an adaptation of skills evolved for other purposes (Byrne, B. (1992)).

One of the supporters of this view is that the theory that language serves group needs. Better linguistic expressions may

have produced more cohesion, cooperation, and potential for survival. The con view still holds that that language –including syntax – is an outgrowth of hundreds of thousands of years of increasing intelligence and tens of thousands of years of human interaction.

Contemporary theories besides Chomsky, working in the field of theories of psycholinguistics includes George Lack off and Steven Pinker. More recently, psycholinguists have recognized the importance of extending the study of language processing to individuals who are acquiring or actively using more than one language. In this paper the term bilinguals is used to refer to such individuals, even though their additional languages may not be as strong as their first language. Because bilinguals outnumber monolinguals in the world's population, bilinguals more than monolinguals provide a genially universal account of the cognitive mechanisms that underline language performance (Schmitt, 2002, p.133-149). Furthermore the use of two or more languages provide a powerful tool for investigating issues of cognitive representation and processing that are otherwise hidden from view.

Two important psychological variables: motivation and attitude

Motivation

A number of factors that affect second-language learning operate only in certain types of situations. The question of motivation for learning a second language, for instance, is not likely to arise in a natural type of setting such as with a young child. A 1- or 2-year-old needs no motivation to learn a second language; given language input, the young child will automatically learn – with learning even occurring in negative circumstances. An older child of 4 or 5 years, however, may need motivation in order to learn a second language since by that age the child may be aware of whether a language is positively or negatively regarded by others, or the child may prefer other activities.

The planned learning situation such as the classroom, however, presents a very different problem. There is an element of choice

involved in attending class, listening to the teacher, participating in activities, and in doing assignments. The amount of exposure that one receives and the amount of attention and effort that one devotes to learning may be affected by one's motivation. Dislike of a teacher, for example, could seriously affect Second-language learning.

Language learning unless it is balanced by a high degree of motivation that enables one to persist.

There is no reason to suppose that some sort of special motivation or purpose is necessary for second-language learning. In general, there are a large number of variables involved in second-language learning, such as intergroup attitudes and climate, social situation, personality and self confidence, desire to communicate with a particular person, to name just a few (MacIntyre et al., 1998). In an actual classroom situation any one of them could affect motivation. Teachers are generally well aware of this possibility and often devise ways to increase positive motivation and attitudes (Crookes and Schmidt, 1991).

Attitude

A negative attitude towards the target language or its speakers, or the other members of the class, may also affect one's determination and persistence to be involved in the classroom and its activities (Gardner and Lambert, 1972; Oller et al., 1977, 1978; Chihara and Oller, 1978; Gardner, 1985). This same negative attitude could impair memory functioning and detract from focusing on the target language. In the same way, any of a host of personality and sociocultural variables could have deleterious effects (Brown, 1987). Many variables, such as status and cultural background, become more potent with the age of the learner and are important considerations in the classroom learning situation.

This is not to say that attitude may not play a role in the natural situation as well. By 4 years of age children have developed attitudes towards language. They know how people react to different languages. For example, children may not wish to use their native, but foreign for this country, language outside of the home. They

may prefer to conform to their peers and other members of the dominant language community.

Specific questions with respect to bilinguals are Is L2 acquisition different from L1 acquisition?

To what extent does the L1 play a role in using the L2?

Are there rules governing code-switching (the use of More than one language in an utterance)?

How do speakers of more than one language keep the two languages apart?

How are languages acquired at some point in time Lost or maintained over time? (Schmitt, 2002, p.133-149)

This work according to Schmitt (2002) is framed by an important set of assumption about language and cognition (p.133-137). First it is assumed that the cognitive process that are revealed as individuals acquire proficiency in a second language share a common bases with the process that are in place for competent bilinguals . Here, first of all the basic assumption is that L2 learners and proficient bilingual relay on similar cognitive mechanisms that are generally universal across languages , although the relative importance of some factors may differ depending on the structural properties of the language involved . For example where the L2 shares the same alphabet with the L1 can have profound consequences for the nature of cross language interactions. Yet we assume that fundamentally the same cognitive resources are used when a native Persian speaker learns English or a native English speaker learns Persian. Thirdly it is assumed the same cognitive recourses are universally available to all learners although individuals will differ in some respects that that may have specific implications for success in L2 learning. For example the degree to which individuals can devote memory and intentional resources to processing and storage, may play an important role in their ability to develop automaticity in the L2, to resolve ambiguities during sentence comprehension and to inhibit the L1 when required to do so.

This study is outlined as follows. First we focus on the way in which psycholinguistics construct cognitive models to

characterize to representations and process that underline language performance. Due to the fact that our review will be necessarily brief, our illustration is restricted to a model of language production that has been extended to bilingual speaker. The model captures many of the core problems that need to be resolved when speakers have more than one language available. The model may also be used the way in which psycholinguistics formulate hypotheses and conduct experiments to test theoretically based predictions.

Second we will illustrate the contribution of psycholinguistics research by considering a set of selected questions that have been the focus of empirical selective nature of lexical in word recognition and the development of lexical proficiency in second language and aspects of language retention and attrition. One of our purposes in this paper is to illuminate the general logic and method of psychological approaches to research.

Significance of the studying of psycholinguistic

In psycholinguistics researchers try to develop models to describe and preferably predict specific linguistic behavior (Benson, D. F. and Patten, D. H. (1967)). The significance is that it captures all aspects of language use. Ultimately psycholinguistics tries to have a model that describes how language is processed in our brain. The other significance of studying of psycholinguistics is that it uncovers universal processes that governs the development, use , and breakdowns of language (Bates et.al ,1995 , p.96)

However to the extent that research in a given subfield of psycholinguistics is dominated by English, we cannot distinguish between universal mechanisms and English-specific facts. Psycholinguistics present a research on language development in children, language symptoms in brain injured adults, and language processing in normal adults, in an order that reflects the impact that cross language variations have had on theoretical framework within each field (Homby A.S (2002).

5.Discussion

What is psycholinguistics? The earliest use of the term „psycholinguistics“ was in J.R Kantor Objective Psychology

of Grammar (1936), in which Kantor as an ardent behaviorist attended to refuse the idea that language reflected any form of intended cognition or mind. According to Kantor the German psycholinguists tradition was simply wrong. The term more firmly established with the publication in 1954 of a report of a working group on the relationship between linguistic and psychology entitled psycholinguistics. The reports was published simultaneously in two journals, that separately served the linguistics and psychology discipline. Almost 50 years on, research into the many different aspects of the psychology of language is published in a vast range of journals, and account for around 10 percent of all publications in psychology. Carroll, J. B. (ed.) (1956)

According to Crystal, D. (1987) the wide web free encyclopedia Psycholinguistics is the branch of cognitive psychology that studies the psychological basis of linguistic competence and performance. Psycholinguistics studies the psychological and neurological factors that enable human to acquire, use and understand language. Psycholinguistics mainly concern with the use of psychological / scientific / experimental methods to study language acquisition, production and processing.

In summary we can define psycholinguistics as a scientific study of mental processes and elements employed in language. Psycholinguistics is the empirical and theoretical study of the mental faculty. Since the linguistic revolution of the mid-1960s the field has developed to encompass a wide range of topics and disciplines.

Psycholinguistics started (as did the rest of psychology) in the early to mid 1960s. The Chomskian revolution (e.g. Chomsky, 1957, 1965, and 1968) promoted language and specifically its structure, as obeying laws and principles in much the same way as say chemical structures do, was sensitive to this emerging legacy when he wrote:

The linguistic philosophy which was only about language, and not about the world, is the boy who preferred the clock without the pendulum because although it no longer told the time, it went

more easily than before and at a more exhilarating pace. Martin, R. and He, T. (2004)

Subsequently psycholinguistic research has nonetheless recognized the inseparability of Language from its underlying mental machinery and external world.

Who is psycholinguist?

A psycholinguist is a social scientist who studies psycholinguistics. Ellis, R. (1994). The main interest of a psycholinguist is language development; language use and language break down .perception, attention, motor planning and memory, that is Critical for language but are not unique to language is the other areas of psycholinguistic interest. More specifically a psycholinguist studies language, speech production and comprehension, using behavioral and neurological methods which traditionally are developed in the field of psychology though other methods such as corpus analysis are also widely used. Due to its interdisciplinary nature psycholinguistics, can be found in linguistics, psychology, cognitive science, communication science, communication disorders and other departments. The main purpose of psycholinguistics is to outline and describe the process of producing and comprehending communication understanding. Psycholinguistic currently represents a widely diverse field. Many and are also considered to be linguists, nerolinguists, cognitive linguists neurocognitivist psycholinguistics. There are subtle differences between these titles, though they are all attempting to use different facets of similar issues.

What are the main interests of psycholinguistics?

Interest in psycholinguistics is not confined to psychology and linguistics. Many have been stimulated by its practical possibilities. One thinks of medical applications to the diagnosis and treatment of a heterogeneous variety of language disorders ranging from a simple stammering to the overwhelming complexities of aphasia. One thinks too of pedagogical applications of potential improvement in our methods for teaching reading and writing of second language.

If psycholinguistic principles were made sufficiently explicit, they could be applied to those technical concepts of the twentieth century. In George A Miller view the central task of psycholinguistics is to describe the psychological processes that go on when people use sentences (Field , 2006 , p-93) .

As we mentioned psycholinguistics is interdisciplinary. Harely (2005) states that the main object of research in psycholinguistics is the Study of the cognitive process that underlies the comprehension and production of language and the way cultural environment interacts with these two. More detailed subsections of psycholinguistics describes the language abilities of infants as they acquired their first words and develop their first grammatical skills (Miller , 1990 , p.143-187) , the representation and access of words (spoken and written) in the mental lexicon , the representation and process implicated in sentence processing and discourse comprehension , and finally the manner in which as we speak words and sentences. Psycholinguistics is as much about the study of the human mind itself as it is about the study of minds ability to communicate and comprehend (Altmann , 2001 ,p.129-135) and others . The full depth, richness, and scope of psycholinguistics go far beyond the limits afforded here.

Early days of psycholinguistics move to a selection of current topics, beginning with the language abilities of newborn infants, and moving on from how infants represent the speech they here to , how they acquire first vocabulary and how later , as adults , they represent and access words in the mental lexicon (both spoken and written) . Psycholinguistics also attends to the acquisition of grammatical skills in children and the processing of sentences by adults to text and discourse understanding. Wilhelm Wundt (1832-1920) noted in Die Sprache (1900) psycholinguistics is as much about the mind as it is about the language. 6.Conclusion

The aim of this paper was to have an introductory explanation to psycholinguistics and second language acquisition. Also to provide a brief answer to the questions like: what is psycholinguistics? , who is psycholinguist? And what

is the main interest of psycholinguistics? Due to the fact that psycholinguistics is an interdisciplinary field, nowadays it is the focus of researchers who study the interrelation between mind and language. The explanation of the process of comprehension from a psycholinguistic perspective from a word to a text is another area of interest of psycholinguists that because of our limitation, we cannot afford it here. There are psycholinguistic related factors that affect comprehension. These factors related to individual differences and because of the mentioned reason we didn't explain them in this paper, and it has been left to be studied by other researchers.

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