

MODULE 1 WHAT IS PSYCHOLINGUISTICS?

Unit 1	What is Psycholinguistics?
Unit 2	Different Forms of Psycholinguistic Inquiry
Unit 3	Current Issues in Psycholinguistics
Unit 4	Controversies in Psycholinguistics

UNIT 1 WHAT IS PSYCHOLINGUISTICS?

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1.0 INTRODUCTION

This module is a general introduction to the field of psycholinguistics, its definition and history. It thus brings to our understanding the reality of the way psychology and linguistics come together to create a new field – psycholinguistics.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- state some definitions given by different scholars of psycholinguistics;
- draw the psycholinguistics operational circle and discuss its working procedure; and
- discuss the history of psycholinguistics and the factors that led to its emergence.

HOW TO STUDY THE UNIT

- a. Read this unit as diligently as possible.
- b. Find meaning of unfamiliar words in the unit using your dictionary.
- c. As you read, put major points down in a piece of paper or jotter.

- d. Do not go to the next section until you have fully understood the section you are reading now.
- e. Do all the Self-Assessment exercises in the unit as honestly as you can. In some areas where it is not feasible to provide answers to Self-Assessment exercises, go to the relevant sections of the unit to derive the answers.

3.0 MAIN CONTENT

3.1 What is Psycholinguistics?

This is the question that has bothered the minds of scholars for several years. Essentially, psycholinguistics is the study of language as it relates to the human mind. It is broadly a combination of psychology and linguistics, i.e. an interdisciplinary field. That is, both experts in the two fields are keenly interested in it. Psycholinguistics started as far back as the 18th century. Aitchison (1990) asserts that the first known experiment in psycholinguistics was conducted by the German philosopher, Dietrich Tiedemann, who used his son for the experiment by carefully recording his linguistic development along with other developmental characteristics. However, the first experimental record in psycholinguistics was nonetheless credited to the British psychologist Francis Galton (1822-1911). However, it was only in the 20th century, that the field got serious attention from scholars. By the 1950s and 1960s, the field had grown by leaps and bounds, due to the assiduous work of such scholars as B.F. Skinner, Jean Piaget, Noam Chomsky, Zelig Harris, George Miller, Karl Lashley, Charles Osgood, John Carroll, Thomas Sebeok, Vygotsky and Herbert Simon among a host of others.

You may therefore need to ask yourself some very pertinent questions as you go through this course. What actually is the relevance of psychology to linguistic studies? How much of psychology is relevant to the social study of language? What basis is there to look at psycholinguistics as a distinct course on its own? Is the course really useful to your life as a person? I am sure that by the time you have gone through this course, you should find answers that you seek.

SELF ASSESSMENT EXERCISE

Define psycholinguistics and briefly describe its history.

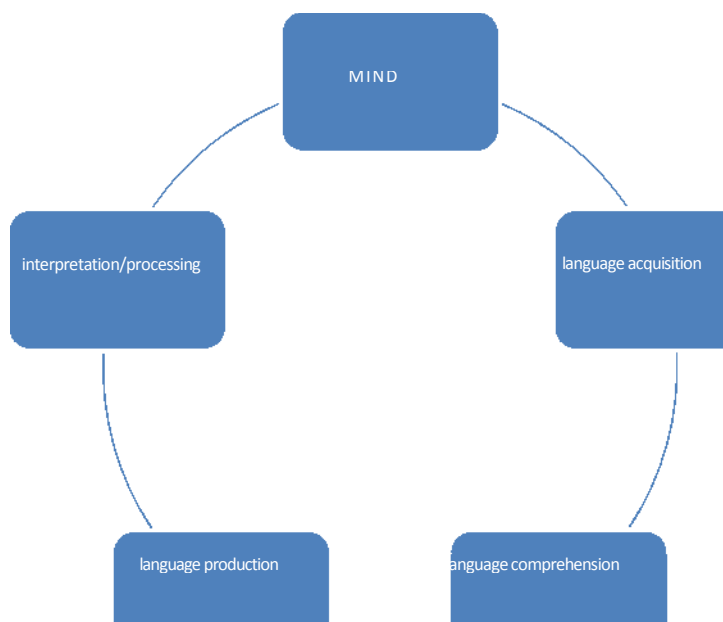
3.2 Some Definitions of Psycholinguistics

Aitchison (1990: 333) defines psycholinguistics as the study of language and mind, which “aims to model the way the mind works in relation to language”. This view of psycholinguistics maps out language usage as well as language comprehension. To Aitchison, anything that the mind does in relation to language is psycholinguistics. She further distinguishes between psycholinguistics and neurolinguistics. While neurolinguistics seeks to link language to brain functioning and its influence, psycholinguistics measures the unobservable operations of the mind as relates to language.

Aitchison (1990) also claims that the psychologists’ attempt to study human language in the laboratory environment has proven unrealistic because language is a social phenomenon which needs to be observed beyond the walls of the laboratory. Also, descriptive linguistics provides the most sensible manner of collecting psycholinguistic data.

Language acquisition, processing, comprehension and production are all intertwined and psycholinguistics is essentially about language usage and how it is affected by psychological dispositions. The next section gives a graphic representation of how the mind relates with language.

Figure 1: A Psycholinguistic Operational Circle



The graph above presents a non-directional circle of language link with the mind. In this sense, the mind is involved in the acquisition of language, in comprehending what has been said, in producing what is to be said, in processing what is heard or to be said.

SELF ASSESSMENT EXERCISE

State clearly the three definitions of psycholinguistics discussed by authors in this unit.

4.0 CONCLUSION

This unit defined psycholinguistics as a link between psychological and linguistic studies. The attempt by authors to relate the field to individuality is also apparent. However, the collective mind is also a possibility as shown by some of the authors. You may therefore ask further questions on how to resolve the issues raised in this work. This will show that you are not a passive learner in this course.

5.0 SUMMARY

This unit discusses in detail the definition of psycholinguistics. It also brings to the fore the many attempts of scholars to define the field. One sure issue that is not hidden in this work is the fact that psycholinguistics is a link between the human psychology or the human mind and the human language.

6.0 TUTOR MARKED ASSIGNMENT

1. Looking at the different definitions given by the scholars discussed in this unit, create a working definition for the field of psycholinguistics, bearing in mind the importance of capturing the different areas of interest it has.
2. Give a short description of what you think psycholinguistics means.
3. Discuss the views of two scholars on the subject of psycholinguistics.
4. Draw the psycholinguistic operational graph and discuss the way it operates.

7.0 REFERENCES/FURTHER READING

- Aitchison, J. (1990). "Language and Mind: Psycholinguistics." *Encyclopaedia of Language*. N. E. Collinge. Ed. London and New York: Routledge. 333-370.
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UNIT 2 DIFFERENT FORMS OF PSYCHOLINGUISTIC INQUIRY

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- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Psycholinguistics Processes
 - 3.2 Speech Comprehension Processes
 - 3.3 Speech Production Processes
 - 3.3.1 Lexical Selection
 - 3.3.2 Assemblage
 - 3.4 Language Acquisition
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

In Unit 1 of this module, you learnt the history of psycholinguistics. The unit introduced you to some key players in the history of psycholinguistics. It discussed different views on the subject. The influence of Noam Chomsky's grammatical postulations on the development of psycholinguistics was especially noted. This unit gives other diverse attempts made to develop psycholinguistics. The references at the end of the unit will help you to understand this unit better.

2.0 OBJECTIVES

By the end of the unit, you should be able to:

- state the three processes involved in psycholinguistic inquiry;
- discuss the comprehension process;
- determine the processes involved in the production of speech;
and
- explain the language acquisition process.

HOW TO STUDY THE UNIT

- a. Read this unit as diligently as possible.
- b. Find meaning of unfamiliar words in the unit using your dictionary.
- c. As you read, put major points down in a piece of paper or jotter.

- d. Do not go to the next section until you have fully understood the section you are reading now.
- e. Do all the Self-Assessment exercises in the unit as honestly as you can. In some areas where it is not feasible to provide answers to Self-Assessment exercises, go to the relevant sections of the unit to derive the answers.

3.0 MAIN CONTENT

3.1 Psycholinguistics Processes

Psycholinguistic studies are interested in the processes of speech comprehension, production, and language acquisition. Language comprehension usually precedes speech production. For example, listening precedes speaking. This unit first discusses speech comprehension followed by speech production and finally language acquisition.

SELF-ASSESSMENT EXERCISE

State at least, three processes involved in psycholinguistics.

3.2 Speech Comprehension Processes

Research has found it impossible to establish the actual time that comprehension begins for humans. Nonetheless, comprehension can occur once meaning is understood. This thus shows meaning as being basic to comprehension. Scovel (1998) actually regards comprehension as the ability of the listener or reader to be able to decipher the information being passed across. Steinberg, Nagata & Aline (2001) actually state that except the word in the language is linked to real or existent element, it cannot be regarded as able to be meaningful. In their view, speech can only be comprehended if the person receiving the information can link the words in the language to concrete things, making communicative meaning within that language or communication event may be difficult.

In addition, Steinberg, Nagata and Aline (2001) also aver that thought is the foundation of language. To them, meaning is rooted in the thought of the user of the language. The idea is that without thought, language cannot form meaning. It is this meaning contained in a thought element or the idea contained in the language that contains the meaning. As such, concepts are contained in the language and they can only be comprehended if they are explicitly passed across. The question here is that, as noted by Steinberg, Nagata and Aline (2001),

those mute people that can comprehend language can essentially do so because they have thought processes.

They were thus able to establish the importance of thought to making meaning in language.

It is also important to also determine that their argument is not an extension of linguistic relativism. Nonetheless, one could only say that the connection of thought to language is an important aspect of what psycholinguistics is expected to study after all. Thought is naturally a part of the linguistic process; only that it is never expressed.

It is also important to state that the being able to produce speech is not the only way of measuring language acquisition. This is because, as mentioned above, it is possible to have comprehension of language without actually being able to produce it. This is seen in the examples provided by Steinberg, Nagata and Aline (2001) in the experiments done with Christopher Nolan, Anne McDonald and Rie (Japanese) who despite being mute went ahead to make use of written language to make impact, even publishing best seller books. It is thus obvious that muteness does not equal lack of language. You may see this being re-enacted in President Hugo Chavez of Venezuela having to be communicating with his aides essentially through writing, due to his partial loss of speech owing to cancer.

SELF-ASSESSMENT EXERCISE

1. Discuss the speech comprehension process.
2. Would you consider a mute person as 'languageless'? State your reason(s) for your view.

3.3 Speech Production Processes

Aitchinson (1990) avers that speech comprehension and speechproduction cannot be regarded as two sides of a coin. She opines that they actually have some dynamics operating in each of them. She also notes that there is the tendency to concentrate on the discussion of speech comprehension at the expense of speech production. However, this position seems at variance with Steinberg, Nagata and Aline (2001) who posit that comprehension is the underdog in the study of speech production and comprehension processes. Nonetheless, this debate is not the focus of this Unit.

Aitchison (1990) suggests that there are two broad processes involved in speech production. These are lexical selection and assemblage.

3.3.1 Lexical Selection

The idea is that lexical selection process has been viewed as possibly an important means of determining speech production processes in that the tip of the tongue phenomenon suggest that there is an attempt to choose particular words that fit into the intended meaning but the wrong or related in terms of meaning or sound may be chosen instead. This is why someone may say *knife* instead of *wife* or as is often the case with many of us, in answering an older caller, we may say *sir* to a woman instead of *ma* or vice versa. It thus shows that there is some relationship in the choices made by speakers in their production of speech.

Aitchison (1990) also reports that some scholars have suggested that all possible sounds related to what the speaker has in mind to say are activated at the same time. She nonetheless wonders at the possibility of such occurrence as it could lead to the cumbersomeness of choice on the part of the speaker. Her view is that the actual thing that happens is that the speakers of the language appear to have the ability to suppress the word not required immediately in order to select that which best fits the communication intentions of the speaker.

Nevertheless, an important point made by Aitchison is her observation that verbs seem to form a fulcrum in that they get selected first and thus less liable to error in production. In addition, she notes that the speakers of the English language tend to have the ability to provide a word in the case where an existing word may not be readily available. This should clearly explain the creativity often observed in the users of the language. It affirms the reality of the dynamism of language. As such, saying that “Children use *deduceful* rules” (Aitchison, 1990:352), where one means to say the word *deductive* is a situation saving device to allow the communication process to move on without interruption. Pragmatics, thus, becomes a useful tool in psycholinguistic analysis as it is obvious that there will be no communication breakdown in such a situation as the cooperative principle will easily enable the co-interlocutor(s) to supply the required correct word in their minds to interpret the meaning content of the statement.

3.3.2 Assemblage

The slip of tongue phenomenon gives the easiest clue to the assemblage process. It involves words, morphemes, syllables and phonemes. There are about three possible manners in which the process occurs. These include anticipation, perseverations and transpositions (Aitchison, 1990).

Anticipation has to do with when an item comes earlier than expected while perseverations are the wrong repetition of a linguistic item. Transpositions tend to involve a situation where items substitute one another.

Examples of these occurrences include:

He took *sail* out of his *winds*. (Transposition)

Aitchison (1990) outlines some tendencies that characterise the occurrence of errors in speech production. She asserts that:

- a. Anticipation generally outnumbers perseverations, noting that some anticipations may actually be unfinished transpositions
- b. Errors normally occur within tone-groups
- c. Units of errors tend to be of approximate equal size, with equal metrical pattern
- d. Sound slips are usually obedient to the rules of syllable positioning
- e. They also obey the laws of English syllable structure
- f. The words formed by slips of tongue are usually more patterned than chance occurrences.

All these suggest that the human speech production process is actually orderly, making anticipation prominent and giving verbs a fulcrum position that allows for other syntactic and phonemic elements to be filled in as the production process unfolds. In addition, there is a suggestion of a rhythmic patterning, following a hierarchical ordering.

The suggestion then is that the human processing of the language production tends to be that of 'scan-copying mechanism' (Aitchison, 1990). The ability to self-correct also shows that there is a monitoring mechanism in the process of speech production.

The question we need to ask ourselves at this point is: what is the difference between error and mistake? Aitchison (1990) appears to see them as same. But we hold differently that errors being fundamental and thus suggestive of perseveration are due to linguistic incompetence, mistakes are those that are possible to correct in the production process as some of the factors that predispose to slips of tongue are at the root of such slips and not incompetence on the part of the speaker. Clearly, then, it will seem that this dichotomy in the nomenclature of apparent performance fault lines need to be clearly defined.

SELF-ASSESSMENT EXERCISE

Outline clearly some of the important processes involved in speech production.

3.4 Language Acquisition

Language acquisition is considered a normal process in development. When it is delayed or never started in children, it is usually seen as a source of concern by the adult (Scovel, 1998). Developmental psycholinguistics is considered the field that appropriately studies this phenomenon.

The assumption here is that there are stages of human speech development. Even though in their study Steinberg et al (2001) have tried to show that the stage of language learning or acquisition by children involves the neonate stage, Scovel argues for a later stage. He notes that the literature has put the stage at which children actually begin to manifest their acquisition of their mother tongue as eighteen months. The question is: what was happening before this time?

As argued by Steinberg et al. (2001), it appears that the children are soaking up all the linguistic input from their environment. It thus makes it such a landmark when the child utters its first complete word. However, as noted by Scovel, the period before this time is actually foreshadowed by some kinds of communication. The author calls the initial sounds made by the child as iconic as it merely expresses signs of discomfort or sudden outbursts that may seem inexplicable. The following stage from about two months is that stage at which the child can now express some communication pattern in terms of the child being able to link randomly its expressions to its needs. This crying stage is thus considered the precursor to the actual human speech. It thus prepares the child for the time it can effectively make use of its vocal organs among the human species.

The question then is “Did the child pick up this ability to speak from its environment or was it naturally predisposed to this skill?” Chomsky (1965) has proposed that all human beings have the innate ability to acquire language due to a naturally inbuilt mechanism called the Language Acquisition Device (LAD). Chomsky (1981) later called this to Universal Grammar (UG). Nonetheless, when the required environment is made available, the human element tends to develop speech and move from the iconic stage to the symbolic communicative stage. This turning point is usually achieved with the first words of the child (Scovel, 1998). Nonetheless, children tend to be egocentric, i.e. their

focus tends to be on their world. Anything outside never seems to get a labelling.

Evidence that language acquisition may actually be innate to all humans, as argued by Chomsky and his co-travellers, could be seen in the example of swimming and playing of piano or drum, as noted by Scovel (1998), is very pertinent. He points out that not everybody eventually learns to swim or to play any of the musical instruments mentioned above; but it is rare for anyone not to be able to acquire language except where the environmental linguistic input is available except there is a congenital hindrance. In addition, the fact that every attempt to teach the chimpanzee nicknamed Nim Chimsky (after Noam Chomsky) language proved abortive whereas the human child appeared already predisposed to complex linguistic structures through a regular patterning of its structures even at age two. Scovel insightfully observes that in comparing these two sets of data, we are led to the inescapable conclusion that even at a very young age, before they have any conscious awareness of the difference between parts of speech such as nouns and verbs, young humans very rapidly acquire the notion that words do not combine randomly but follow a systematic pattern of permissible sequences (1998: 16).

This proves two things: that the language ability in the human species starts early and that children tend to follow the pattern of their target language in phonology and syntax. In addition, as noted by Scovel, creativity is also a mark of the child's acquisition of language. He notes examples such as the one from Reich (1986:142):

Daughter: Somebody is at the door
 Mother: There's nobody at the door.
 Daughter: There's *yeshbody* at the door.
 (Scovel, 1998: 19)

There is no evidence that the child learnt this particular word from anyone. It will appear that what the child tried to do was to insist on bringing the syntactic initial *yes* in a tag into play and combining same to create the new word *yeshbody* in contrast to the mother's *nobody* as its own emphatic stress.

Scovel also gives another example of such advanced creativity that took the father of the child a bit of time to puzzle out its ungrammaticality while seeing its acceptability. *There Carlos is!* said by a child is actually a replacement of the usual pronominal with a nominal in the sentence as explained by Scovel. And following his analysis of the pattern as shown below, it shows the child's ability to create not just new words but also adapt sentence structures for its utilitarian communication purposes. The patterns are:

Pattern A: There's Carlos! [There's/Here's + Noun]
 Pattern B: There he is! [There/Here Pronoun + is]
 Pattern C: *There Carlos is! [There/Here + Noun + is]
 (Scovel, 1998:20)

*The asterisk is used to mark ungrammaticality in structures.

Looking at the examples above, it is easy to see that the child has actually combined the structures of Patterns A and B to form a new one in Pattern C. As argued in Daniel (2012), communicative contingency at times determines linguistic choices more than grammatical correctness. It appears that children's ability to do this efficiently in their linguistic production may supersede that of adults greatly. And why not, if it serves their purposes.

Another important issue that needs to be dealt with here is the issue of stages in acquisition. Following Klima and Bellugi (1966), Scovel observes that there are about three stages in language acquisition. He notes that for both the child linguistic acquirer and the adult language learner, the stages appear fixed and cannot be jumped, even if individual ability seems to determine the rate of acquisition for each person.

The three stages are:

Stage 1: use of NO at the start of sentence

No the sun shining

No Mary do it.

Stage 2: use of NO inside the sentence but no auxiliary

Where will she go?

Why Doggy can't see?

Why you don't know?

Stage 3: use of WH word and auxiliary verb before subject

Where will she go?

Why can't Doggy see?

Why don't you know?

(Scovel, 1998:23)

One important point made by scholars here is that none of these stages are ever skipped. The length of time an individual uses in each stage is determined by the individual cognitive level. Scovel also avers that an adult learning a new language actually undergoes each of these stages. It is thus obvious that it is not age that determines the language acquisition process, but the progression ability of individuals. Eventually, keeping at it is the important thing as every faithful learner of a new language can eventually gain proficiency in it.

This brings to the fore the debate on the critical period. However, when we look at the universal stages outlined above and the fact that an adult learner of a new language can actually go through these stages and possibly attain proficiency, the question of the critical period for language learning seems suspect. Critical period is supposed to be that period after adolescence when a person can no longer master the learning of a new language. The evidence of people at very mature stages of their lives getting into new communities and linguistically integrating abound. In our view, the only thing, beyond the congenital factor, that can hinder an individual from attaining proficiency in a new language learning situation is actually more psychological than biological. Thus, when a language's relevance to the social advancement of the learning appears invisible, the learner may lack the motivation to learn such a language. If the social prestige of such a language is suspect, the learner may have no desire to master the language. A myriad of reasons could be adduced for why a learner may have low motivation for learning a new language; these reasons are however likely to be sociolinguistic rather than biological. All we are saying here is that to us the critical stage period appears fallacious and should be discarded as a factor in psycholinguistic inquiry. You may of course test the points made by looking within your environment to find out if there is stage or age in life when the members of your community lack the wherewithal to master a new language introduced into the community.

SELF-ASSESSMENT EXERCISE

1. State the role played by the Language Acquisition Device and the way it works in the modern linguistic theories.
2. Identify and exemplify with about three structures the proficiency stage in the language learning stages, contrasting the structural examples with the likely initial stage in the language acquisition process.

4.0 CONCLUSION

This unit discussed the three main linguistic processes involved in human language usage, i.e comprehension, production, and language acquisition. It was found that the comprehension processes is the most widely discussed in the literature because it can easily be seen in the reaction of the interlocutor to stimuli. However, the discussion of the production processes indicated that the seeming errors made by onlyhow the human mind engages in producing speech. The child's innate ability enables it to move to the symbolic stage of communication. He creates new words to meet particular communicative needs. Such as exchanging ideas.

5.0 SUMMARY

This unit presented the three main processes involved in the language usage by the human. It discussed the language comprehension processes and how human beings have been able to capture the essence of language through interpreting the intended meaning of the speaker. It discussed the ability of man to produce speech through some systematic linking of thoughts to result in language. It shows how such involuntary acts like the slip of tongue reveal the processes involved in human beings bringing together their thoughts to communicate. It discussed the language acquisition process engaged in by individuals in acquiring or learning a new language. It argues for the innate ability of the human species to acquire language. It exposes the processes involved in this task and the important three stages that the human being must pass through in order to attain proficiency in language learning.

6.0 TUTOR MARKED ASSIGNMENT

1. State the three processes involved in psycholinguistic inquiry.
2. Briefly discuss the comprehension process.
3. Carefully outline the processes involved in the production of speech.
4. Explain the language acquisition process and the essential function of Universal Grammar in the whole process.

7.0 REFERENCES/FURTHER READING

Adeyanju, T. K. In Omachonu, G. S (2011: 225-239). *NSUK Texts in General Linguistics* (vol.1). Rossen Publication Ltd. Nigeria.

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UNIT 3 CURRENT ISSUES IN PSYCHOLINGUISTICS

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- 3.0 Main Content
 - 3.1 Nativism
 - 3.2 Modularity
 - 3.3 Structure
 - 3.4 Process
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- 7.0 References/Further Reading

1.0 INTRODUCTION

In the previous Unit, you learnt about the difference between psycholinguistics and psychology of language. It shows that the focus of psycholinguistics is language while that of psychology of language is focused on the mapping of the mind. This Unit will bring to the fore the current issues in psycholinguistic inquiry. It discusses such topics like nativism, modularity, structure and process as issues of concern to psycholinguists. Carefully look through the discussion below and look at the controversial issues and determine your own stand.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

1. Identify the current issues in psycholinguistics.
2. Discuss these controversies.

3.0 MAIN CONTENT

3.1 Nativism

Nativism is an idea that Reber (1987) describes as anti-learning. He sees Chomsky as the introducer of this kind of psycholinguistics which sees language as inborn and language behaviour as merely the result of adapting to the environment. To Chomsky, the actual worry is the idea that language is innate and thus not really influenced by environment factors. Chomsky's believe in language as in-born is also referred to as the nativist theory.

Aitchison (1989) has argued against this Chomskyan position that language capacity is in-born rather than being dependent on the environment.

Chomsky (1965) presents the argument that the language is based on the innate competence of native speakers who can self-correct and thus give faultless performance in that language. Transformational Generative Grammar, developed by Noam Chomsky, is based on the native speaker's 'competence' to recognise incorrect sentence structures in 'performance' (1965). He claims that such grammatically irrelevant interference like memory limitations, distractions, attention and interest shift, and errors do not affect the knowledge a speaker-hearer has about their language.

SELF-ASSESSMENT EXERCISE

Discuss your understanding of the nativist theory as put forward by Noam Chomsky.

3.2 Modularity

The modular structure of language actually interacts to give definite grammatical structures. Case and θ -theories are said to be related while government and binding theories have implications for each other when they interact in a structure.

Criticisms have been levelled against TGG. From its earliest history of existence, it is claimed that Generative Grammar has always been controversial. According to Yule (1996: 103) "Unfortunately, almost everything involved in the analysis of generative grammar remains controversial."

Nonetheless, the main issue that scholars have had with Chomsky's delineation of the theory remains that of the fantastic native speaker as well as the prescriptism that has remained its hall mark in terms of linguistic description. Natural language has a modular structure and form. The more recent linguistic description within this tradition is the Minimalist Program.

SELF ASSESSMENT EXERCISE

Describe clearly the interactive modules that operate in the principles and parameters theory.

3.3 Structure

Structure is essentially about the putting together of lexical units to form a whole. This whole is usually about making meaning. Linguists have over the years, tried to describe this structure in order to communicate. Nonetheless, as shown above, structures are usually deeply seated in psychological processes. This is one of the strong points made by Chomsky (1965) and in his subsequent development of the theory. Even Halliday (1971) reveals this important fact in his discussion of the ideational function of language. He proves that the way a language is used has to do with what is going on in the user's mind. Daniel (2008) confirms this position in her analysis of the newspapers' linguistic expressions of women, either pictorial or linguistic. She found that women's psychological disposition actually determines their linguistic choices. When you look at yourself too, ask yourself why did you say what you said. If you choose to wear clothe that bares your body, are you not actually trying to make a statement? If you choose to speak down at someone, is it not a sign that you feel superior to the person? Your answer to these questions or teasers should actually help you to see that the way the mind and language interact is very close.

In addition, Aitchison (1990) suggests that the confusion have always been whether structure and process are closely related or not. The fact that there is a close link has been established above. Nonetheless, our focus in this section is the structure and this is what we will discuss.

The fact that structure could be called the phonetic output of the linguistic process that becomes physically available to us has been mentioned above. It is thus clear that structure is what can be regarded as the Spell Out stage in the Minimalist Program. It is the actual production. It is the actual output. How does the structure play out as the representation of the production of a linguistic piece? It is obvious that a situation of "em...em..." in a speech event may actually mean a lot more than mere fillers as they most probably will be described as by linguists. They could actually suggest indecision or lack of communicative competence by the speaker. In essence, these fillers could actually be negative. However, they could also be positive. You may ask how. If a politician is trying to show that they have 'arrived', they would likely be using these fillers to impress, to show that they are now what is usually referred to as 'big man'; no gender prejudice intended. This goes to show that structure is actually a revealer of the mindset of the speaker or their communicative competence, beyond linguistic competence, that is.

In addition, when a structural element is elided, it could actually be with the intention of making a point to the receiver of the message. It may also be to show ones social position or even to indicate the

communicative competence of the speaker. But more often than not, it may actually be a sign of linguistic competence in the user. In this way, Chomsky's argument of the ability of a speaker being able to self-correct becomes relevant here. As such, proper or grammatical structural forms are actually a psycholinguistic result of not only properly processing the language but also making the correct linguistic choices to produce the grammatical structure that is obtained in the process.

SELF-ASSESSMENT EXERCISE

State the connection between linguistic processing and the linguistic structure that results.

3.4 Process

Hawkins (1994) reveals to us a lot about the issues surrounding linguistic processing. Nonetheless, as other scholars such as Vygotsky (1962), Lang (1994) and others have shown previously, linguistic processing is very deeply rooted in the mind and manifests in linguistic behaviours that get realised as linguistic productions. Aitchison tries to argue for this link as noted above and it is obvious that this link actually exists as we have also tried to show above. The reality is that linguistic processes – whether towards comprehension or for the purposes of production – necessarily undergo the same processing but in different orders. This is why it is seen in the communicative process that it is when the language of the speaker (writer) is correctly decoded and interpreted that we can say that communication has actually taken place. As such, such example of hesitant speech as noted above could actually be communicatively meaningful. Nonetheless, except there are actually such structural forms that can clearly convey them, it may be difficult to decipher the intention of the speaker. This is why the example of the nonsensical sentence given by Chomsky (1965) as an example of a correct structure that does not make sense makes a whole lot of sense here; the fact is that the sentence is actually nonsense and does not have any communicative content that could be interpreted. This is why one still thinks that meaning content eventually becomes the reason for the communicative act in the first place, no matter what contrary view may be held by some generativists (cf. Gray, 1978).

Aitchison (1990) asserts that the link between process and structure is an issue of contention among linguists. Our view is that this need not be so. The reality before us is that without a psychological base, language will have no form. Processing of the language determines its production content just as the processing of the linguistic raw material given by a producer provides the basis of interpretation by a receiver of the

message. As Kress (1990) duly notes, none of these processes is idle; they are all very active and very involving for all the parties involved.

SELF ASSESSMENT EXERCISE

Discuss the role of linguistic processing in showing a user's linguistic competence.

4.0 CONCLUSION

This Unit outlines current issues in psycholinguistics. These are identified as nativism, modularity, structure and process. In discussing each of these issues, a deep link between them is identified within the literature. The fact that comes out clearly is that they are interrelated. It is thus obvious that the source of the human language is related to its universal form as a modular structure. The physical structure and processing of the human language are linked.

5.0 SUMMARY

This unit discusses four current issues in psycholinguistics. The issues identified are nativism, modularity of language, structure and processing in language. These are duly discussed and the points of difference and unity integrated in the unit. The interplay of the issues and how they link together are discussed here.

6.0 TUTOR MARKED ASSIGNMENT

1. Identify each current issue in psycholinguistics discussed in this unit.
2. Discuss in full nativism, modularity, linguistic processing and structure and also provide your views on each of them.

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UNIT 4 CONTROVERSIES IN PSYCHOLINGUISTICS

CONTENT

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 General Overview
 - 3.2 Issues in Psycholinguistics
 - 3.3 Integrating the Issues in Psycholinguistics
 - 3.4 The Inner Processes of the Human Mind
- 4.0 Conclusion
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1.0 INTRODUCTION

In the previous unit such current issues in psycholinguistics like nativism, modularity, processing and structure were examined. In this unit, we shall look at the controversial issues in psycholinguistics. The field is full of many topics that have been debated for ages. These areas have influenced language studies and development and more data are still being assembled to learn more about human language behaviour. This unit thus discusses the stand of the cognitivist/mentalistic and the behaviourist schools of thought. While the former holds that language is innate, the latter believes that it is environmental. We will try to draw a middle line between them. We shall also assess the species – specific trait of man in possessing language. Some have argued whether animal communication like the ‘dance language’ of the bees actually constitutes language in the same sense like that of the human language. The unit will also give an insight into the controversy regarding the relationship between language and thought and we shall see whether children actually imitate adult in their speech or they possess creative instinct to generate what has been labelled as ‘child grammar’.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- examine the cognitivist/mentalistic and behaviourist theories of language acquisition
- describe the role of imitation in language learning
- explain the Critical Age Hypothesis (C. A. H.)
- discuss how thought interrelate with language
- distinguish between human language and animal communication

3.0 MAIN CONTENT

3.1 General Overview

The field of psycholinguistics is varied and complex. The issues being discussed range from the most profound to the most trivial. Topics being debated include: How do we acquire language? Is language related to thought? Do children imitate adults when learning to speak? Do animals possess language in the same sense as we talk of human language? All these and many more have generated a lot of controversies that researchers have come to the conclusion that more still needs to be done to determine what really happens when psychology, sociology and philosophy come in contact with human language. Kayami (2001) expresses deep concern when he says that “the topic of human language acquisition implicates the most profound questions about our understanding of the human mind and its subject matter, the speech of children, is endlessly fascinating. But the attempt to understand it scientifically is guaranteed to bring on a certain degree of frustration.”

Controversies abound in psycholinguistics because it deals not only with language study but also with the psychological aspects involved. These include language acquisition and behaviour as well as the psychological mechanisms responsible for them. Implicit in the explanations are questions to be determined. Since psycholinguistics has to do with the human mind, a lot of assumptions must be scrutinized to avoid arriving at the wrong conclusions. Psycholinguists want to know how language structures are acquired by children and how they are used in the process of speaking, understanding and remembering.

3.2 Issues in Psycholinguistics

Perhaps, there is hardly any field of language study that entertains so much controversy like psycholinguistics. This is not unexpected because it is an area that examines in full detail, the relationship between language and the mind. Many areas combine together to furnish it with a corpus of data that still require much scrutiny. These include but not limited to psychology, sociology, philosophy and biology. Carroll (1994) explains that controversial issues abound in psycholinguistics because it has a rich heritage that includes contributions from diverse intellectual tradition of how best to describe language study and language process. Some pertinent questions we ask are:

1. What knowledge of language is needed by human beings to use language?
2. What cognitive processes come to play in language behaviour?

Attempts to answer questions like the above, among others, require an interdisciplinary approach, which psycholinguistics offers. The two main schools of thought involved in this debate have been labelled as the cognitivist/mentalist and the behaviourist theorists. The mentalists argue that children are born with a mental biological structure that is genetically wired to process language. Chomsky (1965) terms this the Language Acquisition Device (LAD), which is a property of the child's brain that endows it to aggregate linguistic information. During language acquisition, children pick up a number of words spontaneously and combine them into a structured sequence by assigning each word its natural role. There is thus no need for any explicit instruction as propounded by the behaviourist school of thought. This is also called the mentalist view of language acquisition, which proposes that what the child needs is a tacit knowledge of a language as they begin to formulate endless sentences of its own. Thus language acquisition is inborn peculiar to humans.

On the other hand, we have the behaviourists who hold that language learning depends wholly on the environment and that imitation is central to language learning. The key expert in this was B.F. Skinner in *Verbal Behaviour* (1957). However, the controversy here should not be seen from an extremist position. The assertion by the cognitivists like Noam Chomsky does not really rule out environmental input. Their assertion is that language acquisition requires environmental input to trigger and stimulate its development. An example is given that deaf children cannot acquire language because when they cannot experience speech, they cannot possess spoken language. It is not possible for children's language acquisition to take place in a vacuum. During language acquisition, exposure and stimulation by their caregivers are important factors in language enrichment. Mentalists also support their position by citing the creativity of human language. How come children produce utterances they never heard before? Even the preceding ten lines of this write-up have probably never been written by these authors. Almost every sentence that you hear or speak every day is a brand new event not previously experienced. Yet, you create them effortlessly from your mental faculty without imitating or depending on anybody. The environment merely serves to stimulate and not to create those bits of language for you. Everyone who knows a language knows a relatively small number of principles, a small number of sound put together to create words and a large but finite vocabulary. This finite knowledge provides the person who knows a language with infinite creativity (Fernandez & Cains, 2011).

The relationship between language and thought also constitutes a veritable source of controversy in psycholinguistics. We have one school of thought that says thought depends on language and another

school says that thought is independent of language. Whorf (1956) claims that we dissect the world through our particular language and those speakers of different languages perceive the world differently in what is usually referred to as linguistic relativity theory. With the increasing complexity of the modern world, we have realized that the Whorfian hypothesis is seriously flawed.

Pinker (1995) argued that Whorf's assertion is extremist because, as far as cognition is concerned, children can think before they talk. It has been shown that people think, not only in words but also in images. Studies in semantics and pragmatics have shown words having more than two meanings but still perfectly understood in various contexts. For example, the word 'spring' can be understood to mean (weather, sudden jump, pool and a metal object). There are also individuals who can think but cannot communicate through language. These are people suffering from neurological disorder and language impairment like 'aphasia'. This occurs where there is damage to the left hemisphere of the brain responsible for language processing.

Fodor (1975) also argues that general intelligence is the system responsible for generating the language of thought, which in turn is translated into speech by our linguistic system. This implies that any thought can be conveyed in any human language, thus contradicting the Whorfian position. Current studies, like Leva (2011), however, suggest that language and thought are integrated and therefore cannot be processed separately. Studies reveal that how people talk changes how they think and learning new colour words enhances a person's ability to discriminate colour. Learning new ways of talking about time imparts a new way of thinking about it (Leva, 2011).

Jones (2010) counters that speakers of a certain language do understand a concept even if it is not in their language. For example, the German word "schandenfreude" which has no equivalent in English is still understood by English speaker, to mean "rejoicing from the bad luck of others." He however concedes that language influences and enforces our thought process.

Ogbulogo (2005) explains that as the environment changes, culture and language typically respond by creating new terminologies to describe it. The terminologies used by a culture primarily reflect that culture's interests and concern. While Indians in Canada's Northwest Territories have 13 terms for different types and conditions of snow, the non-skiing native Southern Californians make do with only 2 terms. These are 'ice' and 'snow'. Nevertheless, they also have other terms in English for different stages of frozen water. These include: blizzard, frost, sleet, slush, etc. In Nigeria, we only talk of dry and wet seasons, which in

Yoruba means 'o gbele ' and 'o ginninti n' respectively. But do you know that the Yoruba language has other weather terminologies like 'kurukuru' (fog), 'oye ' (harmattan), etc? Cassava variants in Nigerian ethnic terminologies include 'akpu', 'e ba ', 'gari ', 'oka', 'abacha', kpakpo etc.

Encarta (2012) says the evidently close connection between language and thought does not imply that there is no thought without language. Pre-linguistic infants and higher primates can solve quite complex problems involving spatial memory, which indicates thinking. Artistic and musical thoughts do not require specific linguistic expressions, which may be purely visual or auditory.

We can deduce from the foregoing arguments that all thoughts require representation of one kind or another but are not solely dependent on it. However, there is enough evidence that any representation, linguistic or otherwise, is immensely increased by the use of language.

The role of imitation in language behaviour still constitutes an area of controversy in psycholinguistics. Some linguists believe that imitation plays a critical role in language behaviour while others claim otherwise. The major issue is, to what extent does imitation affect language learning and development?

Studies have shown that what is called imitation is just exposure to the adult model while will guide the child to formulate their own sentences and create novel utterances. Psycholinguists based their idea of universal grammar (UG) on the assumption that children do not imitate blindly the adult language forms. All children everywhere no matter the race, colour or location are born with a brain ready to equip them with language. As the child grammar develops, it has all the universal properties similar to all other languages elsewhere. The linguistic components of the child grammar at the phonological, syntactic and lexical levels are complete and conform to the rules of the speakers.

When you observe a child acquiring language, there is a systematic unfolding of linguistic complexity from one-word stage to multi-word level. When sufficient exposure is given to the child, they will be attuned genetically to produce their own speech independently.

You may be surprised that language is not taught to children. Researchers have revealed that it is only the encouragement from the caregiver interaction and the peer group relationship from the environment that trigger the child's language production. This interaction will engender their linguistic creativity. When you attempt to

correct the child's error, it will be of little or no effect since they will learn the correct pattern on their own without imitation.

McNeil (1966) reports of a child who was corrected to say 'ate' when he was saying 'eated' due to generalization of the 'ed' past tense form. The effort proved futile as the child made no attempt to imitate the adult model. Therefore children's errors often go unnoticed and even when noticed are not corrected because the correction does absolutely no good.

Fernandez and Cairns (2011) argue that the word 'imitation' cannot actually be used to describe what goes on in child/caregiver interaction. He contends that "imitation occurs where a child repeats what an adult has said or at least produces a child's version of it immediately an adult has said it." Where a caregiver says: "This is a big blue ball" and the child responds "Blue ball", we cannot actually term such as imitation because there seems to be a great deal of individual variation in the production of such an utterance. A good illustration that imitation plays little or no role in a child's language acquisition is reported in Fernandez and Cairns (2011) where an adult and a child engaged in this conversation:

Child: Want other one spoon, Daddy.
 Adult: You mean, you want the other spoon.
 Child: Yes, I want other one spoon, please, Daddy.
 Adult: Can you say "the other spoon"?
 Child: Other ... one ... spoon
 Adult: Say "other".
 Child: Other.
 Adult: Say "spoon".
 Child: Spoon
 Adult: Other ... spoon
 Child: Other ... spoon. Now can I have other one spoon?

It is obvious that the 'teacher' has only succeeded in wasting his time as the child still repeats what he said from the beginning.

Another area of controversy is the one that says that at certain age language learning and language acquisition will begin to decline. Some psycholinguists hold that a learner reaches their linguistic plateau whereby attempt to learn a language becomes more difficult. Studies still continue whether such an assertion is true or not.

Slobin (1972) posits that by the time a child is five years old, all the basic structures of the language are in place while fine-tuning will continue till late childhood. This corroborates Lenneberg's (1967)

assertion of a critical stage when language acquisition is crucial. Known as the Critical Age Hypothesis (CAH), it presents the optimal period for first language acquisition as at “the early teen years after which a fully complex linguistic system will not develop.” This appears plausible because placidity of the brain is being put to test after a certain age. At a certain critical period, the brain cannot properly process cognitive demands of the language in the same way that it did during infancy. Researches also confirm that some wild children who acquire language very late after childhood found it difficult to learn well. A case was reported of Genie, a Californian girl locked in a closet for the first thirteen years of her life by an abusive father. She acquired words and the ability to communicate verbally but she never acquired the full morphological and syntactic system of English despite the efforts of her rescuers who were from the University of California in Los Angeles. Samples of her speech include:

Genie, full stomach
 Want Curtiss play piano
 (Curtiss, 1988)

In addition, whereas a child experiences little difficulty in acquiring more than one language, older learners do not find it easy or they possess little proficiency in such language when diligently learnt. This is easy to explain because children do not have a language to lean on whereas a second language L2 learner can interact in one language and merely use the second one as a back-up. Furthermore, the language learning circuitry of the brain is more elastic in childhood than that of an adult learner who speaks with a foreign accent when they pick up a second language.

3.3 Integrating the Issues in Psycholinguistics

It cannot be denied that there are many issues that are involved in the development of psycholinguistics. There is therefore need to integrate these issues. The controversies surrounding the development of the field as well as the issues that continues to dog its academic steps. Some of these issues that have been raised in the previous units include the nativistic source of language as well as the confusion about the processing and structural form of the natural language. It is obvious that modularity appears to be a commonly held view about language. Nonetheless, the functional approach appears to inflame passions just like the nativistic postures do too (cf. Reber, 1987). Nonetheless, as argued by recent scholars (Aitchison, 1989, 1990; Daniel, 2008; Steinberg, Nagata & Aline, 2001; Yule, 1996), the fact of the matter is that language is meant to be used to function by bringing to light the human thought. This function is based on the psychological state or

posture of the individual at a particular time and under a particular circumstance. In addition, it has also come to reality that some of these functions get impaired due, sometimes, to biological accidents. This is where the issue of aphasia comes from.

Another important issue that has remained controversial is that of language acquisition and language learning. What really is the difference? The general consensus had usually been that the language learnt is that which is a person's second language or subsequent language whereas the first language is usually acquired. This means that as you are growing up, you just find yourself speaking the language of those around you. Wikipedia (2013) actually describes this as an unconscious process. This language is also technically referred to as Mother Tongue or L1. The question of whether a language is learnt or acquired does not seem to us like an issue that should carry as much controversy as it does. The important thing is that, whether learnt or acquired, linguistic competence of the speaker should be a target of the teacher or instructor, as the case may be.

In the same vein, communicative competence and linguistic competence have remained at logger heads (cf. Adejare, 1995; Daniel, 2008; Ogunsiyi, 2004). Nonetheless, the fact is that psychological disposition has a lot to do with the kind of competence a speaker demonstrates most times. The truth also is that there is need for the speaker to have linguistic competence in order to make sensible constructions that are meaningful. On the other hand, the speaker must speak within correct context for the meaningfulness of the structure to actually manifest. You can check out your words as you speak them to determine this. When you are speaking to your lecturer, do you address them as if you are speaking to your mates in the class? I'm sure your answer is no. Why do you think it is so? This is because in your mind, you know that you have to respect your lecturer. Therefore, your choice of expression as concerns your lecturer has to be respectful. This is not about the correctness of your grammatical expressions but the relationship between the participants in this context: you and your lecturer. So, communicative competence influenced by your psychological disposition determined your choice of expressions.

Another issue is also the critical age hypothesis. Is it really such that when a child passes an age into puberty that it can no longer learn language? There has been argument for and against this position. Nonetheless, one wonders about the adults that are still able to master a foreign language at a later date in their lives if it is impossible for a person to learn language at a particular time of life. Moreover, the experiments of scholars such as that of Genie in the US where the child was denied linguistic contact until about the age of her teens and she

was still able to marginally master the language that was later introduced to her, one begins to wonder if such a notion is actually scientific in outlook. One could therefore state that physical disposition to speech is more likely to determine if one can speak or not. The fact also remains that when through an accident, a person loses the ability to speak properly; this is when the issue of the ability to speak may begin to rare its ugly head.

Nonetheless, one must not deny that among psycholinguists, the issue of psychological base of language is non-negotiable. Most communication engaged in is informed by the psychological disposition of the speaker.

In addition, it is also true that cognition of the language user has a lot to do with ability of the speaker to make coherent linguistic expressions that are found meaningful. A person suffering from a medical condition that makes it impossible to make sensible communication possible will likely be unable to communicate effectively. This has been found to be the case with aphasia patients. Even those that suffer a condition of paralysis tend to also lose their power of speech. Crystal (1982) actually insists that there is such a large disparity in the speech of this set of people that more data will be required to ascertain the ability of these ones to speak at their level of communication. He asserts that more data will likely expose this disparity than the assumption that the aphasic patients tend to speak in the same manner. Let us ask you a personal question: Have you ever seen a mad person that is speaking in a sensible manner? If yes, then be sure that that fellow is no longer insane but has the mind restored. You can experiment with this on your own. I'm sure that many people you even assume are sane may surprise you. This is to show you that cognition is a practical part of what psycholinguistics exposes in the user of language.

SELF-ASSESSMENT EXERCISE

Discuss how four salient issues in psycholinguistics relate to one another.

3.4 The Inner Processes of the Human Mind

The human mind is very deep. However, it is the base of thoughts that give life to language. The human mind is where the thoughts are conceived and then realised as linguistic elements. Aitchison (1990) argues that the human mind is only reflected in terms of thought made tangible by language. The processing of language is seen as a major work that thoughts perform. As such, language reflects thoughts. The processing of thoughts is what language reflects (Aitchison, 1989, 1990; Steinberg, Nagata & Aline, 2001; Yule, 1996). It is thus normal

for children learning or acquiring a language to process it within their cognitive and environmental experiences. It is thus within the limit of the things they have experienced that they use language to express themselves. It is therefore necessary to note that linguistic processing is determined by the environmental experience of the user of the language. The person that is yet to make use of a computer may not be able to describe that experience with language. It is clearly not far-fetched to imagine that this person may not be able to process the thoughts concerning this phenomenon in the mind. The ability to comprehend and produce language can thus be related to environmental factors.

Steinberg, Nagata and Aline (2001) argue that the basic mental entities used by the child acquiring the language are actually derived from the physical world. As such, the child may be able to account for the words such as 'drink milk' essentially from the experience of having been given milk to drink by the caregiver. Aitchison (1989) notes that the idea of Chomsky that children come already loaded with language in their minds is unacceptable. The more acceptable idea seems to be that of children being able to process language to express what their environment have enabled them to experience. This second option appears more reasonable and acceptable. She uses many examples of children processing language to prove her point. As such, when children assert statements like 'Daddy car' or 'Mummy comb', it is because they can relate to these experiences in their physical environment. Children that do not have a daddy or their daddies do not have a car may not be able to make such assertions. In addition, these children are able to transfer such experiences into similar new experiences to produce new structures that can relate those new experiences. This is an important element of language, its dynamism, which Yule (1996) identified.

4.0 CONCLUSION

In the unit, we discussed some controversial issues in the field of psycholinguistics. These range from very serious issues to those of simple assumptions. We now know that psycholinguistics is an interdisciplinary field consisting of linguistics, psychology, and philosophy and speech science among others. A lot of questions need to be answered in such a plethora of studies. Controversial issues that have arisen include whether language is acquired or learnt. What is the role of environment in language learning? Do human beings possess a mental mechanism that predisposes them to acquire language seamlessly? We have examined to what extent the mentalists and the behaviourists can hold their grounds and that the two schools of thought should find a middle point. The study also explained the debate regarding the relationship between language and thought. We have seen

the extremist position of the Whorfian hypothesis and that animal communication cannot be on the same platform as human language. We also mentioned the role of imitation in language behaviour and conclude that children are not blind imitators. Finally, we talked on the Critical Age Hypothesis (CAH) debate and explained that at a certain age, learning a language becomes a challenge because the plasticity of the brain function better during childhood for easier language acquisition and learning.

5.0 SUMMARY

In this unit, you learnt about the complex nature of psycholinguistics and why it is a field steeped in controversy. Many debates are still ongoing in the field because the issues involved have to do with the human mind and various themes in linguistics, sociology, psychology, biology and even speech science. Such a multi-disciplinary field of study requires many researches to make conclusions on language behaviour and language development. In this unit, we tried to explain the controversy between the cognitivist/mentalist and the behaviourist theorists with a view to finding a common ground. The unit also looked at the debate whether language depends on thought and vice versa. You also learnt that animal communication differs considerably from human language because the elements of creativity and species-specificity which characterize human language are absent in that of animal. The unit further examines the role of imitation in language behaviour and we now know that children do not imitate the adult model wholesale. The unit was rounded off by talking of the Critical Age Hypothesis (CAH) debate which holds that there is a critical age after which language acquisition becomes difficult. You are now better informed that children learning a language can do it better because their brain is still better predisposed to language acquisition than older learners.

6.0 TUTOR MARKED ASSIGNMENT

1. Examine the controversy of the Mentalist and the Behaviourist schools of thought.
2. 'Psycholinguistics is an interdisciplinary field of study steeped in controversy.' Discuss.
3. Discuss the relationship between language and thought.
4. Distinguish between animal communication and human language.
5. Explain the Critical Age Hypothesis (CAH).

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