THE PSYCHOLINGUISTICS OF ENGLISH LANGUAGE IN NIGERIA

Wale Adegbite

KRAFT BOOKS LIMITED

Foreword

In the early 90s or so, the National Universities Commission caused Nigerian Universities to review their curricula in line with what it referred to as the Minimum Standards. In relation to language programmes, a number of linguistics courses were recommended for language departments. They included among others, sociolinguistics and psycholinguistics which were not found in many universities English language programmes. The introduction of these courses in the departments of English motivated the need to design new courses with content reflecting issues that are of significance to the Nigerian environment. One major outcome of this development also has been for teachers to write textbooks to cater for the needs of the Nigerian students.

The book – *The Psycholinguistics of English Language in Nigeria* – is one of such efforts at meeting the needs of students taking courses in psycholinguistics, second language learning and English language teaching in Nigeria. Apart from providing the general theoretical background to the relationship between language and the human mind in terms of general principles of learning as well as learning a language, the book identifies and elaborates on the psycholinguistic bases of performance and usage of the English language in Nigeria, focusing on the factors that influence the Nigerian learners and the problems they encounter in the process of learning the language.

This book is written in an accessible language with copious illustrations. It is particularly student-friendly as questions are provided for each chapter to guide students in their review of the topics treated. I like to recommend it to students of psycholinguistics, psychology of language as well as teachers of English as a Second Language.

Oladipo Salami, D. Phil.
Professor of Linguistics

Introduction

The study of language as linguistics follows two major approaches of study: descriptive and applied linguistics. The former investigates language as an autonomous subject, focusing on the internal patterns as structures and systems. The levels of language such as phonetics (sounds and phones), phonology (patterns of sounds), graphology (patterns of graphs/letters), orthography (rules of writing and spelling), morphology (word formation), syntax (formation of phrases, clauses and sentences), lexis (word lists, co-occurrence and relationships) and semantics (meaning) are described with or without recourse to the extra-linguistic world and the context of language use. In contrast, the latter studies language for practical problem-solving purposes in connection with other branches or disciplines. In order words, it investigates the interface between language and other subject areas such as sociology (sociolinguistics), culture (ethnolinguistics or ethnography of communication), literature (stylistics), philosophy (pragmatics), psychology (psycholinguistics), education (applied linguistics, in the narrow sense), computer science (computational linguistics) and neurology (neurolinguistics), among others. Psycholinguistics, as an interface of linguistics and psychology, is thus a branch of applied linguistics, in a wider sense. It is thus an aspect of linguistics that can enable scholars to understand better the interaction of language with the human personality.

Psycholinguistics is a core course in the linguistic programme in universities and colleges of education in Nigeria because of the vital information and knowledge that it provides on how human personality and behaviour impart on language acquisition and learning processes. Useful as the course is in, especially, the English programme, suffice it to say, however, that students dread it at both the undergraduate and postgraduate levels. The situation is not helped at all by the dearth of books that are accessible to readers on the subject. Students are generally frightened by the numerous terms and ideas they encounter in books and journals written in terse, highly technical and abstract language. Apart from this, the information they encounter derives from theoretical, empirical and experimental research done in either native English or English

as second language in host environments.

This book presents a more reader-friendly text for beginners on the basic concerns of psycholinguistics, as they pertain to the learning and teaching of English language in diverse contexts. Starting from an explanation of basic concepts and issues of central concern to the subject, the discussion progresses, using adequate examples and ample illustrations, into the description of principles and procedures of language acquisition, learning, teaching and use in the native language as well as second language host and non-host English contexts. Although the book is primarily intended for students in universities and colleges of education, the target audience may probably extend beyond that. It is hoped that at the end of the work, readers would have gained an insight into what psycholinguistics is as well as the implications of this branch of language study for English studies in Nigeria.

Wale Adegbite

Contents

The Concept of Psycholinguistics

From its word structure, we can see psycholinguistics as an interface between 'psychology' and 'linguistics.' Basically, psychology is the study of human behaviour, while linguistics is the scientific study of language. There are compelling reasons for psychologists to be interested in studying language as a means of gaining access into the minds of individuals, on the one hand, and, on the other hand, for linguists to use insights from psychology to comment on and illuminate issues in linguistics, particularly how the **human mind an**d behaviour are reflected by or through language.

We can understand what should be the content of psycholinguistics better by surveying the topics of concern in the respective studies of language and psychology that are relevant to this interface. Part of the content of language study is presented vividly as follows:

a. Language structure: This is investigated in terms of the rules for stringing together units of different sizes such as morphemes, words, phrases or groups, clauses and sentences into patterns of speech or writing.

b. Language system: This refers to choices made from different options of items or structures to express our ideation or cognitive knowledge of the world: our thoughts and experiences of participants (people, concrete and abstract objects), processes (actions, relations and behaviour), circumstances (place, time, manner, reason, etc) and qualities (sizes, shapes, colours, etc.).

c. Language skills: The basic skills of language are listening, speaking, reading and writing. Listening and reading are referred to as receptive skills, while speaking and writing are productive skills. Alternatively, listening and speaking are called oral or oral-aural skills, while reading and writing are called literacy skills. Central to the acquisition of all these skills is the concept of comprehension, which is the goal of language acquisition/

learning altogether. Also associated with the skills are the two terms 'competence' and 'performance' which manifest in the covert and overt mastery of the skills.

In psychology, the following topics are relevant.

a. Thought/thinking: Two major concepts relevant here are 'brain' and 'mind'. The former is the seat of the human senses – sight, hearing, smell, taste and touch. It also controls all the other motor skills pertaining to movement.

b. Cognition: Words associated with cognition include learn, know, comprehend, remember, forget, memory and intelligence.

c. Behaviour: Words connected with behaviour are motivation, attitude, desire, consciousness, intention, attention, disposition and feeling

All the terms, concepts and topics mentioned above, among others, feature prominently in psycholinguistics study. In essence, psycholinguistics is concerned with the study of the acquisition, production and reception of language as a reflection of the human mind and behaviour. It integrates the body of knowledge of theories, empirical studies and experiments from different fields such as psychology, linguistics, cognitive studies, artificial intelligence (computer simulation) and neurology to achieve that goal. Psycholinguistics may be related to other cognate fields such as 'the psychology of language' or 'the linguistics of psychology', but we must be careful to distinguish areas that mark the different interests of scholars. The topics that will be presented and explicated in this book are: language learning and acquisition; language and the brain; language, thought and cognition; language development in children; language production and reception; and language teaching. The implications of the study for learning and teaching English as a second language in the host and non-host environment will be examined, with emphasis on the latter.

Language, Thought and Cognition

2.1   Introduction

The term 'cognition' is variously called 'representation', 'denotation' and 'ideation' in psychology, philosophy and linguistics. The *Longman Dictionary of Contemporary English* (2007) simply defines it as "the process of knowing, understanding and learning something". Halliday (1970:143) also describes it in the sense of 'ideation' thus: 'the speaker's experience of the real world including the inner world of his own consciousness'. Looking at it from another perspective, we can say that cognition is embodied in thought, whereas thought is a complex phenomenon that encompasses the knowledge that emanates from the mind or brain, either by reason or sense experience.

Although thought can be connected directly to cognition, language cannot be connected to it directly. Instead, language relates to cognition indirectly via thought, as aptly shown by the triangle of signification or 'semiotic triangle' (Ogden and Richards 1923), presented below:

Fig. 1: The Semiotic Triangle

Meaning (Concept)

Word

Form   Referent (World)
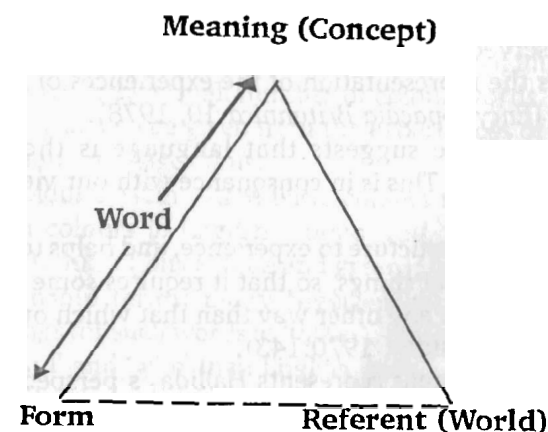
The diagram shows that (i) there is a direct link (see the straight line) between all things in the world that we experience or think about (the objects, actions, events, qualities and circumstances) and our thoughts (concepts/meaning); (ii) the word (language) represents our thoughts directly via its form or structure; and (iii) there is no direct link between the word/language structure and the world. In short, we first think about the world and represent the thoughts in language. Thus, while language may represent our experiences, thoughts and feelings accurately (excluding deliberate deceit), it may, sometimes, not represent the world accurately.

Meanwhile, the relationship between language and thought has been expressed in various ways by scholars. Let us examine some of their views.

i. Thinking is talking to oneself; thought is silent speech (Sapir, 1921).

The implication of the above utterance is that 'language is thought' and 'thought is language'. Not many scholars agree with this observation. Many have argued that there is no a priori relationship between language and thought. Although language represents thought, it is possible to think without language and vice versa. John Locke, some centuries ago, claimed that language and thought are independent but that language derives from thought. Other arguments against the idea include the claims that understanding precedes production in speech, people with speech disabilities do think, a person can be talking one thing and thinking the other and that a person whose speech muscles were paralysed was still observed to be able to think at that same time.

ii. 'Speech is the representation of the experiences of the mind' – Aristotle (*Encyclopaedia Britannica* 10, 1978).

The claim above suggests that language is the means of expressing thought. This is in consonance with our view and that of many scholars.

iii. Language gives structure to experience, and helps to determine our way of looking at things, so that it requires some intellectual effort to see them in any other way than that which our language suggests to us (Halliday, 1970:143).

The above statement represents Halliday's perspective on the relationship between language and thought/experience, which can be understood within the framework of two contending hypotheses presented below.

2.2 Linguistic Relativism and Linguistic Universals

The connection between language and thought has raised crucial issues in language study which can be summarized in two hypotheses: linguistic relativism and linguistic universals. Linguistic relativism implies that the world in which different societies live are distinct worlds based on the different languages of the people. The popular Sapir-Whorf hypothesis makes a strong claim that language conditions our world view and that different speakers view the world along the lines laid down by their respective languages (Carrol 1956). This means that language determines thought; thus different languages necessitate different thoughts. Whorf asserted that the ideas of speakers of different languages would differ, from slightly to greatly, depending on how different the languages were. According to the hypothesis, a speaker of Japanese, for example would have very different ideas from a speaker of English because the grammars of the two languages are very different, while a speaker of German would have similar ideas to the speaker of English because the grammars are less different.

Scholars have presented various illustrations to demonstrate that people using different languages perceive the world differently. Whorf's research with the American Hopi Indians convinced him that their language forced them to see the world in a completely different way from speakers of European languages. For example, the Hopi lack the concept of time because they use fewer words relating to time. They never use spatial terms to refer to time, such as 'before noon', because they do not see time as a continuum. Other examples given are that the Inuit (Eskimos) have a large number of words describing snow than the English; and that some languages have only a small number of colour words.

Examples can also be given from the experiences of speakers of some Nigerian languages thus:

(i)   The colour system: three basic colours in Yoruba represent several colours in English – pupa (red, purple, orange and brown); dudu (black, blue and green); funfun (white, grey).

(ii) The kinship terms: many Nigerian languages have wider meanings for such words as 'father', 'mother, 'brother', 'sister', 'husband' and 'wife' than English does.

(iii) The following sentences indicate the way speakers of the languages view their relationship with the world:

a. Yoruba
Ebi n pa mi. (Translation) Hunger [progressive marker] kill me.
Otutu n mu mi. (Translation) Cold [progressive marker] catch me.

b. Igbo
Aguru na agu m. (Translation) Hunger [progressive marker] beat me.
Oyi na tu m. (Translation) Cold [progressive marker] catch me.

c. Hausa
Ina jin yunwa. (Translation) I [progressive marker] feel hunger.
Ina jin sanyi. (Translation) I [progressive marker] feel cold.

d. English
I am hungry. OR I feel hungry.
I've caught cold. OR I have (a) cold.

The observation from the four languages above is that while the phenomena of 'hunger' and 'cold' affect Yoruba and Igbo speakers by controlling them, it is the Hausa and English speakers that control the phenomena.

The hypothesis of relativism above has been criticized by different scholars on the grounds that the practice of inter-lingual translation does not support the fact that societies, as linguistic groups, live in different worlds. At the extreme of this other position is the linguistic universals hypothesis, which states that the world in which human beings live is the same and that it is the labels of things that differ, (Chomsky 1965). In this respect, translation between languages should involve just a substitution of labels from one language with another. Scholars argue, for example that although the Hopi language does not have a formal tense, it contains a whole series of expressions of time which appear as adverbs and prepositions. English also uses non-tense expressions such as "I leave tomorrow". It is further argued that the fact that people have limited colour words does not make them incapable of distinguishing among different colour brands; instead, they will not give a name unless there is a good reason to do so.

Linguistic universalists are more concerned with describing and predicting features which languages have in common rather than those which separate them. Some observations in this direction are as follows:

(i) languages tend to use pitch of voice to distinguish questions from statements;
(ii) languages have a predilection for certain sounds over others, e.g. there is the vowel /æ/ in all languages, and front consonants are acquired before back ones;
(iii) languages manifest a class of 'thing' words that may be called 'nouns' and 'process' words that can be called 'verbs';
(iv) languages manifest the sequence of Subject, Verb and Object as either SVO, SOV or VSO in declarative sentences.

However, in spite of the abundant evidence which exists in support of linguistic universals, the enormity of translation problems, which does not show that translation is a mere substitution of forms, provides a basis for the argument against it. While the extreme positions of both hypotheses above are rejected, the middle ground seems to be that human beings live in a broadly similar world and share certain basic experiences, but their social experiences are realized differently in the linguistic systems of different societies.

2.3 Language and the Expression of Ideation/Cognition

According to Halliday (1970, 1985), one of the functions which language is used to perform is the ideational function. This is done via "the expression of content: that is, of the speaker's experience of the real world, including the inner world of his own consciousness" (Halliday 1970:143). According to him (ibid. 145), we use language to represent our experience of the processes, persons, objects, abstractions, qualities, states and relations of the world around us and inside us. Here, we shall present how language represents experience in English under four categories and also show how the experience is realized in the English clause structure.

a. **Participants:** Human and non-human beings, animate and inanimate, concrete and abstract, count and non-count objects function as actor, goal, affected or beneficiary. These are codified in the clause as nouns and pronouns and occur as Subject (S) or Compliment (C). The S or C is optional in the clause; but nouns come up very early in the acquisition/learning of a language.

b. **Processes:** Material (physical or action – *jump*), mental (cognition – *know*, perception – *see/hear*, and affection/reaction

– *like/hate*), relational (attributive – *is/looks*, equative – *equals*, and possessive – *have*), verbalized (saying – *say/speak*) and behavioural (e.g. *cheat/trick*) processes are codified as verbs and they occur as Predicator (P) in the clause. The P is specified as the only obligatory element of the English clause and verbs come up very early in language acquisition/learning.

c. Circumstances: Information about place (*at home*), time (*tomorrow*), manner (*quickly*), reason (*because of –*), means (*by air*) and instrument (*with a spoon*) are codified as adverbs and they occur as Adjunct (A) in the clause.
The A is optional and it provides additional information on the scope of the verb in the clause.

d. Qualities: Information about size (*big, small*), colour (*black, white*), length or distance (*long, short*) and attributes (*beautiful, good*), and comments (*remarkable, eventful*) are codified as adjectives which qualify nouns in the S or C in the clause.

3

Language Learning and Acquisition

There are three main avenues through which scholars study language development in human beings: (a) by studying animal communication signs and behaviour, (b) by studying child language, and (c) by studying pathological speech disturbances (Marshall 1970). In this chapter, relevant concepts and topics pertaining to the theories of learning and acquisition of language from different perspectives (linguistic and psychological and cognitive) will be examined.

3.1 The Distinction between Language 'Learning' and 'Acquisition'

A broad distinction might be made between 'language acquisition', which refers to a subconscious process (i.e. implicit learning) whereby children develop ability in their first language as a result of natural and largely random exposure to language and 'language learning' which refers to a conscious process (i.e. explicit learning) whereby 'adults' develop ability in a second language through structured exposure in a classroom (Wilkins, 1974; Krashen, 1982). But the explanation is not as simple as that. Scholars (see *AILA REVIEW*, 1994) have criticized the vagueness of the term 'conscious' in the literature, because it is unempirical to investigate 'consciousness'. vanPatten (1994) opines that the problem in understanding 'consciousness' arises from the conflation of process, product, context and focus (or purpose). According to him, many scholars in Second Language Acquisition circles have interpreted consciousness to be synonymous (ibid. p. 29) with explanation, grammar practice, knowing the rules and drills, while sub-consciousness has come to be equated with input, communication and communicative activities. Relevant key terms that are vital to the discussion of language learning and acquisition and distinguishing between them include explicit/implicit instruction, knowledge or memory, awareness, incidental/intentional learning,

focal attention and noticing/peripheral attention, controlled/
automatic processing and grammatical/communicative
competence (Schmidt 1994).

3.2   Human Language and Animal Communication

Following Hockett (1963), with some modifications and additions,
Field (2003:51) presents some properties and features of language
under some major categories thus:

Channel
1. Use of a vocal auditory channel: speech is based primarily on
    sounds.
2. Interchangeability: the same person is able to transmit and to
    receive messages.
3. Complete feedback: while speaking, we can monitor what we
    are saying.

Semantic features
4. Semanticity: we use symbols to refer to a class of objects or
    actions in the real world.
5. Arbitrariness: there is no direct connection between a word
    and what it refers to.
6. Discreteness: language is based upon a vocabulary of
    independent, movable units.
7. Displacement: we use speech to refer to things in other times
    or places.

Learning
8. Cultural transmission: one generation transmits speech to the
    next.
9. Learnability: we can learn additional languages from those who
    speak them.

Structure
10. Creativity: we can form an infinite range of utterances, many
    of which we have never heard or said before.
11. Duality of patterning: smaller units (e.g. phonemes) are
    combined into larger ones (words).
12. Structure dependence: all known languages have a hierarchical
    phrase structure.

Use
13. Control: speech is used intentionally, unlike many involuntary
    sounds.
14. Specialisation: the forms of speech (sounds, words) serve no
    other purpose.
15. Spontaneous usage: speech does not need to be premeditated.
16. Turn taking: we speak and then allow the other speaker to
    respond.
17. Prevarication: we can use speech to tell lies (and can use it
    figuratively).
18. Reflectiveness: we can use language to comment on language.

In contrast to the features of human language above, we present
some types of animal communication and the general
characteristics below (cf. Marshall 1970).
1. Aggressive exchanges between hermit crabs involve stereotype
    postures and movements of the chelipeds and ambulatory legs.
2. Visual displays are found in fish – the sight of the red belly and
    throat evoke deterrent behaviour.
3. Acoustic signals: alarm cries and mating calls of birds; vocal
    signals of higher primates (monkeys) appear to convey quite
    specific information – different calls are evoked by the sighting
    of different predators and each elicits a different form of escape.
    Parrots learn chunk of human speech and repeat them even
    with the intonation patterns in contact.
4. Chemical signals: scent trails are exuded by fire ants when
    returning to the nest on the location of a food source.
5. Tactile signals: honey bees execute complex dances during
    which tail wagging occurs, to code the distance and direction
    of food source; another view claims, however, that
    communication of bees may be primarily acoustic and olfactory.

In all, animal communication takes place via sign stimulus, in
which part of animal appearance or behavioural repertoire elicits
response from another animal of the same specie. Animal
communication is specie-based and genetic. Also, the
communication is fixed, non-productive and static. It is
stereotypical, being under the control of independently specifiable,
external stimuli and internal motivational states. Lastly, it rarely
shows displacement.

3.3 Knowledge, the Mind and Sense Experience

The concept of the mind features prominently in the discussion of philosophers in the 17th and 18th Centuries. Mind and matter are said to be created substances. While mind is the thinking substance, matter is the extended substance. The mind, believed to be synonymous with reason, is argued to be the seat of knowledge. But how does knowledge get to the mind? This question has raised a crucial issue for debate among two philosophical schools of thought: rationalists and empiricists.

3.3.1 Rationalism

Rationalism is a movement which began in the 17th Century. It represents the conscience of the age of reason which post-dated the age of speculations. Some of the major proponents of the movement are Rene Descartes, Gottfried Leibniz and Baruch Spinoza. The rationalists claim that knowledge derives from the mind and that it can be got by innate predispositions and by insight. They argue that knowledge is not got via experience nor is knowledge perception. Instead, it can be reached by the intellectual through the mind. The mind is the true source of knowledge. Knowledge got through sense experience can deceive us. Unlike propositions of sense experience which can be doubted, statements of reason cannot. According to Descartes, the only indubitable proposition is "Cogito ergo sum" – "I think, therefore I am".

Rationalists claim that while knowledge got through reasoning is certain, knowledge got via sense experience cannot be. The latter knowledge is always probable and never conclusive. Propositions based on reason are self-evident and are known 'a priori' – before experience – e.g. propositions of logic, mathematics and geometry. The truths of the axioms of these propositions are necessary, deductive and do not depend on any observation for the verification of the truth value.

Rationalists believe that by virtue of God's creation of certain innate abilities in us, ideas are innate in us; ideas are not got through experience. The innate abilities and principles are native to the human mind and are utilized in grasping sense experience. Such predispositions enable human beings to form ideas, organize concepts in a certain order and even, more importantly, state these ideas in a propositional form. Hardly can the nature of knowledge and the process of acquiring it be understood unless they are traced to the mind.

3.3.2 Empiricism

The empiricists' philosophy represents the conscience of the scientific age of the 18th Century. It contrasts sharply with the rationalist idea that knowledge by innate ideas is the true source of knowledge. In line with the mood of the age, empiricists claim that experience is the source of knowledge. Perception takes place via the senses: smell, sight, touch, hearing and taste. In the words of George Berkeley, "Esse est percipi" – "To be is to be perceived". In its most extreme form, John Locke claims that the brain at birth is like a clean table – "tabularasa". The child acquires experience about the world via his/her senses. Locke argues that there are no innate ideas; otherwise, idiots and children should understand propositions of logic. Francis Bacon wants us to observe nature without prejudice and he believes that this can be done via laborious experiments and observations and formulations of scientific hypotheses. David Hume believes that knowledge is based on cause and effect – a relation which depends on series of observations from the past by which we try to observe the future. According to him, no scientific statement can ever be certain because we are not sure about the future and we cannot infer from the observed to the unobserved.

Though empiricists admit that statements based on empirical experience can only be probable, they claim that such statements relate to the world and are verifiable. They are 'a posteriori' statements about matters of fact. On the contrary, statements of reason are mentalistic, subjective, unverifiable, often tautologous and do not teach us anything new about the world.

3.4 Language as Behaviour

The philosophical argument in the 17th century between rationalists and empiricists on whether the source of knowledge is reason or sense experience further extends to psycholinguistics. A parallel controversy arises in psycholinguistics between behaviourists who claim that language learning proceeds empirically in human beings and innatists who claim that the capability for language acquisition is inborn in human beings.

Growing out of empiricism, 20th Century behavioural as well as experimental psychology founded its interest not on the human mind (except tangentially and to use it as counter argument to justify its own approach) but on human behaviour. Behaviour is

observable and conclusions from it can adequately explain the process of the acquisition of what is behaved in.

The concern of behaviourists with language and behaviour can be identified in two respects: language learning as a behavioural process and language structure as a reflection of human behaviour. In both respects, behaviourists have made appreciable contributions regarding theories of language learning and language structure.

Several theories of learning exist which differ in terminology, content and definition: trial and error, association, gestalt, etc. In separate experiments, two behaviourists, Pavlov and Skinner study the learning behaviour of animals as a basis for gaining insight into how human beings learn. Pavlov sets out to observe the reflex tendency of behaviour in animals. In his experiment, the dog salivates when it sees food (natural reflex); here the food is the 'stimulus' while 'salivating' is the response drawn from the animal. Later in the experiment, the presentation of food is accompanied by the ringing of a bell, so that the dog soon learns to associate these two actions. A time then comes when, following the substitution of the ringing of bell for food, the ringing alone makes the dog to salivate (conditioned reflex). Thus, via association, substitution and conditioning, the dog's behaviour is observed to have changed.

Skinner's (1957) formulation for learning is particularly influential because of its implications for second and foreign language learning and because Chomsky's criticism of its philosophical and psychological basis marks the birth of modern psycholinguistics. As Adeniran (1991) puts it, Skinner's operant conditioning or instrumental learning describes a more active learning process than Pavlor's (1927) stimulus and response (SR) model from which it is derived.

A learning task is set and a reward is attached but the subject must perform the task correctly to earn the reward. For example, the rat in Skinner's experiment has to press the bar in the experimental box before the food pellet drops for it to pick up. The obligation is not immediately realized but after several efforts, accidental pressing of the bar soon becomes a habit especially as each occasion is rewarded with a food pellet. As subsequent needs for food arise, it presses the bar more accurately and with greater facility, i.e., learning has been effected.

From the experiment above, certain essential elements in the

learning situation can be identified with regard to language. The first is that learning can produce errors which can be corrected through practice, self-correction and modification of previous responses. Second is that language learning is mechanical and it requires the active participation of the learner through repetitive actions of elimination and association of features. Reinforcement is also an essential element in the learning situation. A correct response must be reinforced or rewarded promptly before any other behaviour intervenes. The listener reinforces correct verbal behaviour as he nods in agreement or gives verbal response, but in certain circumstances the speaker is his own listener and he/she reinforces his/her own behaviour. Reinforcement can help to increase the learner's motivation. Fourth, the features in the environment of learning are crucial to the whole learning process. The learning task is set contingent on the environment; and, by performing the task, the learner is working on both himself/herself and the environment. In this regard, a knowledge of the features of the situational context is necessary for predicting (understanding) the utterances that will occur in a verbal interaction.

Operant conditioning applies to all learning, including language learning. According to Skinner (1957), language is acquired by behaving in language, and verbal responses, as a subclass of responses, can be explained by the general laws governing the establishment of connections between stimuli and responses (Greene, 1972). A particular set of words is directly relatable to an identifiable external event. Therefore, given a context, an appropriate utterance is predictable, all one needs is to identify the controlling variables in the particular environment and the ensuing dialogue becomes predictable. According to Skinner (1957), verbal responses are directly attached to stimuli without any need for intervening variables such as meaning, ideas or grammatical rules.

Further behavioural approaches to bridging the gap between human beings and other animals communication-wise have included attempts to teach subparts of natural languages to animals; for example, the instruction of chimpanzees in American Sign Language (Gardner and Gardner 1972, Steinberg 1993). Although some measures of success have been reported of scholars' ability to get animals to speak sign language and engage in abstract

communication and displaced speech, the output of such experiments still fall far short of the standard of human language.

Reactions to Behaviourism

Skinner's exposition on language learning has undoubtedly been widely acclaimed and it has greatly influenced the learning of languages, particularly second and foreign languages. Nevertheless, it does not represent a comprehensive theory of language learning because of its failure to recognize the occurrences of certain features of innate predispositions in language acquisition. A highly critical discussion of Skinner's theory has been undertaken by scholars, especially Chomsky, before the latter's presentation of his innate theory of language acquisition.

Chomsky (1959) contends that if it is true that all the child's knowledge of language derives from the environment, then how is it that children commit 'virtuous' errors which they never come across in the speech of adults? This is because the inherent facility for rule formation in children generates sentences which sometimes clash with adult sentences because of errors of overgeneralization and rule restriction. Moreover, occasions arise whereby a child first of all does something correctly and then with every appearance of systematicity later proceeds to do it wrongly (Campbell and Wales 1970). The child very often engages in self-communication during which he plays with sounds and structures without any interference from the environment. The child is thus involved intellectually as he/she participates actively in language acquisition.

The human brain is more than a computer. It does not function just mechanically like a computer that will reproduce only the information coded into it. From a meagre sample input, the child's language output features all the characteristics of the performance of adult language in quantity and quality.

Skinner's exposition is further vitiated by his denial of any roles to meaning and grammatical rules in language use. Many linguists and psychologists believe that meaning and grammar play crucial roles in language acquisition and use as they help to stabilize interpretation in the face of relativism of perception and displacement of objects.

Lastly, the training of animals to speak human language still goes on unabatedly, despite the fact that past efforts in this

direction have been failures (cf. Marshall 1970). Can eventual success be ruled out?

3.5 Innatism: The Innateness of Language

Innatists generally claim that no creature other than the human being possesses and uses a vocalized system of symbols of communication. The knowledge of language and the ability to use it are inborn in Homo sapiens. This opinion is held by Noam Chomsky, a renowned linguist who after heavily criticizing Skinner's (1957) behaviourist presentation (Chomsky 1959) gives an exposition on the innatism of language. His exposition will be stated here in two parts.

In the first part, Chomsky (1965) recognizes two major properties of language – creativity and rule-governance – which make it special to human beings. His view on language creativity is that on the basis of very limited data, the quantitatively finite language teaching a child is said to have received from his/her environment, he/she is able to work out, produce and understand an infinite number of sentences, most of which s/he has never heard or produced, not having been in situations where such utterances were appropriate.

Granted that learning of some sort can be done via habit formation, association, practice and conditioning, that mode of operation also restricts subsequent performance as the learner will only be able to perform parrot-like only the specific skills learnt. Related variants of the skill and connections between such variants and their manipulations are likely to be beyond his/her capacity. Not so, with language, from a meagre sample input, the child's language output features all the characteristics of the performance of his teachers in quantity and quality. He/she is able to react linguistically to novel situations as they arise. The amazing thing about this creative property of language is that it begins to be manifested from early childhood. A child begins to show the characteristics of adult performance from about the third year of a whole life expectation, well ahead of experiences, which according to behaviourism, create and teach language. The enabling foundation for creativity in language must therefore be in the child as a human being.

Chomsky also claims that language is rule-governed. It is not merely the stringing of words together; every sentence of a

language has a recognizable internal structure. A sequence of words not conforming to the prescribed structure is by that token a non-sentence. Thus rule governance or structure dependence defines grammaticality, which in turn, in its widest sense, language.

Language structure is not monotypic; every language reveals a variety of structures or sentence types which are related or differ from one another in form, e.g. active and passive, indicative (declarative and interrogative) and imperative, marked and unmarked and emphatic and non-emphatic. The structures mentioned above indicate that the structure is highly abstract and complex. At the underlying level (which Chomsky calls 'deep structure'), there is a set of rules which generate structural types. The deep structures so generated have no direct connection with the structures represented at the surface level (surface structure) but are related to the surface structures by a long chain of operations or rules of a second order (transformational rules) which are very specific and unique in character. Furthermore, the underlying structures and the processes by which they are related to the surface structures exhibit highly restrictive conditions.

Without any formal instruction, native-speaking children complete the mastery of this highly abstract organization (grammar) of their respective languages at a pretty early stage. This again underscores the thesis of predisposition and suggests that the child has some pre-knowledge of his/her language which is closely interwoven with its acquisition.

In the second part of Chomsky's claim, he credits the child with an innate endowment of· Language Acquisition Device (LAD) which enables him/her to acquire language. LAD is made up of three features: creativity (earlier mentioned), Hypothesis Making Device (HMD) and Universal Grammar (UG). The child takes in all utterances as they informally invade his auditory sense, some grammatical, others not so grammatical, half-finished sentences and phrases. But he/she processes all of them and comes out with a grammar of his/her language. The child's construction of grammar shows his/her possession of an inborn HMD. Thus, confronted with such imperfect and organized data that invade his/her auditory sense, HMD enables the child to make hypotheses concerning what principles might underlie whatever regularities he/she has observed in the data.

Chomsky (1965:27-30) postulates the existence of linguistic

universals as characteristics which all natural languages have. Linguistic universals subdivide into 'substantive' and 'formal' universals. Substantive universals (e.g. phonemes, lexemes, syntagms, semantemes) are each a type or fixed class of items from which the characteristics of the formal universals are derived. Chomsky credits children with, next to HMD, the knowledge of these universals, referred to as Universal Grammar (UG). The knowledge (of UG and substantive) helps children to learn language fast. The child has a universal repertoire of languages and can learn any language he/she is exposed to. Also, this universal grammar enables the child to evaluate and make the right choice from all alternative grammatical descriptions of his/her language.

The possession of a LAD, the creative ability of the child, his/her knowledge of the grammar of his/her language (HMD) and ability to evaluate grammars because of his knowledge of UG all combine to form the LAD. LAD is thus the most invaluable innate endowment of the child which enables him/her to acquire language.

$$LAD = Creativity + HMD + UG$$

Questions and Reactions against Innatism

i. Is Chomsky's exposition on the role of innate ideas in language acquisition infallible?
    The exposition has a far-reaching implication for language acquisition, but does not present an adequate framework for describing the process.

ii. To what extent can we say that habit formation, association and conditioning are lacking in language acquisition?
    These concepts are essential but not the sufficient ingredients of language acquisition. They should complement the principle of innatism.

iii. Can we really do without a consideration of the learning environment (situation) in language acquisition?
    No. The environment plays a major role in language acquisition. **There is thus the need to specify contexts before one can** describe the range of grammatical structures a child is capable of producing at a particular stage of development. The philosopher, Herodotus, gave a story about how King Psammaticus of Egypt, in an attempt to trace the origin of

language, ordered that a new baby be taken into the bush and isolated from the community for some time. The purpose was to observe what language it would produce. It was reported later that the first utterance of the baby was "bekos", which was interpreted as the Phrygian word for bread. This result was, of course, regarded as a speculation by scholars. Gardner (1985) makes a distinction between formal and informal contexts of language acquisition, even though both may some-times overlap. An example of a formal context is the classroom where a primary purpose is for pupils to learn to be linguistically competent and functionally bilingual. Drill and practice, audio-visual methods, translations and grammar exercises are examples of a formal, manifest and directed approach to language teaching. Informal contexts are where language learning is not the primary aim. Entertainment needs, affiliation and social interaction may be the purpose of communication and not language learning. Practising skills and becoming more functionally competent may be a valuable incidental outcome but not a reason for such communication.

iv. To what extent can we accept the data to which a child is exposed as limited?

If a child were to encounter a language in the various forms of its usage for about 18 hours a day, the amount of hours that he/she would be exposed to in 3 years will be quite enormous, not limited.

v. **There is evidence to show that efforts are made by parents** towards correction and comprehension of their children's language and that the children often respond to such corrections.

vi. Chomsky's innatist theory of language acquisition gives an account of linguistic competence and not linguistic performance. It effectively describes language as a system of rules and not as a system of communication.

3.6   Innatism and Behaviourism: A Synthesis

Generally, psycholinguists (and scholars whose works have bearing with the field) are of the consensus opinion that both the extreme views of innatism and behaviourism cannot work with language acquisition and learning. Instead, a synthesis of relevant observations and suggestions from both viewpoints is essential.

Investigations have shown that acquisition of language by

children indeed show that they have a pre-formed capacity for language. Some of the very many pieces of evidence which scholars give in support of this observation are stated below (cf. Lenneberg 1967, Bolinger 1975):

a. Irrespective of their race, colour or even the language of the natural parents, normal children learn any languages with ease.

b. The organs and features of language exhibit the same temporal and physical characteristics in all babies.

c. The stages of speech are relatively clear-cut and are found in children all over the world.

d. Speech (which requires relatively precise and swift movements of the tongue and lips, all well-coordinated with laryngeal and respiratory motor systems) is all but fully developed in children when most other mechanical sensory motor skills are far below their levels of future accomplishment.

e. Children of deaf parents, or whose parents have speech defects go through the same stages of pre-vocalization as other children do, even though their parents do not respond.

f. Deaf children vocalize in the early stages of childhood as much as hearing children do.

g. Certain diseases, such as muscular atrophy, affect other motor skills but do not necessarily delay language.

h. At least, in the early stages, progress from one stage to the next does not require practice. Children who have been prevented from babbling (for example, through surgery) will babble spontaneously as other children do, once the physical damage is repaired.

Some psycholinguists, however, caution that the fact that a feature is universal does not necessarily make it innate in us; according to them (cf. Campbell and Wales 1970), behavioural repertoires are acquired as a function of complex interactions between innate principles of organization and learning processes whose content is determined by particular environments. Below are a few comments which show that both the verbal and situational contexts of communication play a major role in language acquisition.

a. If a child is never observed to produce passive sentences during a particular period of development, would the child's inability to do this be attributable to the lack of capacity to produce the structure or to the absence of occasions for its production?

For example, comparative expressions occur much more frequently in competitive situations where two or more children are vying with each other in various tasks.

b. Expressions containing 'more' are understood in the same way as the corresponding expressions containing 'less'. Children confronted with two model trees on which model apples can be hooked tend to respond in the same way to the instruction 'Make it so that there are less apples on this tree than on this one', as they do to 'Make it so that there are more apples ...' In a classification task, it has been observed that expressions containing 'the same ... as' are interpreted in the same way as the corresponding expressions containing 'different ... from'.

c. **Parents' approval or disapproval and subsequent correction** of child's speech are most often based on semantics or phonology, not on morphology or syntax, hence it is not syntax that propels the child from immature to mature forms.

d. Certain psycholinguists have claimed that the major source of linguistic information open to the child is the corpus of utterances to which he/she is exposed and that this set of utterances is meager and fragmentary. Evidence has shown that this source has been overvalued, to the extent that feedback from both the parents and children are neglected. For example, it has been observed that some parents attempt to simplify input data for the child.

Some Related Concepts to Language Learning/Use

Some concepts related to discussions on language learning/use can be identified thus:

i. Attention and facility. Under a normal speech set, the speaker has his attention chiefly on the content. Attention, however, can be shifted to a particular sound, word, phrase or sentence depending on habits, attitudes and will. The facility necessary for language use includes knowledge of phonemes, morphemes, **words, phrases and sentence types.**

ii. Recall and memory span. To bring into use something (words, phrases, sentence patterns) after it has slipped out of attention or use is recall. To hold something under prolonged attention or to reproduce it immediately involves memory span. A speaker must keep under attention or under immediate recall a length of sentence in order to be able to complete it properly.

iii. Motivation and will. The need and urge to communicate

through language to fulfill the complex needs of a human being are a constant stimulus to use language. When there are conflicting motivations from urges, desires, wants, needs, ideals and values, the will selects some to act upon and combats others through inhibition of practice.

iv. Fluency and monitor function. Fluency means speaking at normal conversational speed under a speech set. Monitor function refers to the capacity to notice errors (distortions of speaker's speech) in expression even though correct use proceeds below the level of awareness.

3.7 Some Theories on Learning, Cognition and Language Use

The Learning Process

The process of learning described below is based on Robert Gagne's presentation in the 1970s, which identifies nine arbitrary stages with the channel of learning.

A. The *environment* sends out stimuli in form of sound waves. The learner is in the centre. B. The *receptor(s)* would receive the stimuli, which are coded in form of neurological information, and pass the information exactly into the *sensory register*. The receptors refer to the six senses: sight, hearing, smell, touch, taste and feeling. C. In the sensory register, what is retained is within a split second. During this period, part of the information is lost. Whatever remains passes on to the *short-term memory*. D. At the short term memory, perception is then selective. It is organized in patterns. Selection is made according to experience or environment. Whatever information received here stays for about twenty seconds before it goes on to the next stage of E. the *long-term memory*.

The transition from short to long-term memory is very critical as one is now coding the information. At the long-term memory, perception becomes conceptualized as the information assumes meaning. The information is stored in a particular form where it is systematized. What has been stored at E can remain in E or be retrieved and go back to D. the problem of *forgetfulness* is a matter of retrieval of information. To remember a feature is to be able to retrieve (or recall) it from long term memory; the inability to recall refers to forgetfulness. The information at this stage is free. It can stay permanently here, or it can pass on to the next stage.

Information from both D and E pass on to F. the *response generator*. Some response is generated here which helps us to be in readiness for an action. It is this readiness that ensures that an action occurs. G. *Effectors* account for the action that comes after someone has been kept alert. The action that comes out here is expected to go back to the environment.

H. *Expectancies* (Affective). At this stage are represented human attitudes and other things that are affective: interest, motivation, emotions, etc. These affect one's perception or interpretation of information and can influence one's response to the mention of a hotel could be as a result of a pre-disposition. I. Executive Control. This stage accounts for the strategy for coding or retrieving information that is sent in or out. The choice of the cognitive content is realized here. If one receives information and relates to it with the six senses, it is more reinforced. Anything that is not properly learnt cannot be stored.

Events of Instruction

Based on the model above, Gagne (1970) develops nine events of instruction to influence the process of learning effectively and efficiently. The events are presented along with the learning processes in Table 1 below.

Table 1: Events of Instruction and the Learning Process

Events	Processes of Learning
1. Stimulation to gain attention	to ensure the reception of stimuli
2. Informing the learner of the learning Objective	to establish appropriate expectancies
3. Reminding learners of previously learnt content	for retrieval from long-term memory
4. Clear and distinctive pre-sentation of Materials	to ensure selective perception
5. Guidance of learning	by suitable semantic coding
6. Eliciting performance	involving response generation
7. Providing feedback	about performance
8. Assessing the performance	involving additional response feedback occasions
9. Arranging variety of practice	to aid future retrieval

The above events can be adapted to suitable instructional techniques that can be utilized for efficient and effective learning outcome in any teaching-learning environment.

Fig. 1: The Learning Process
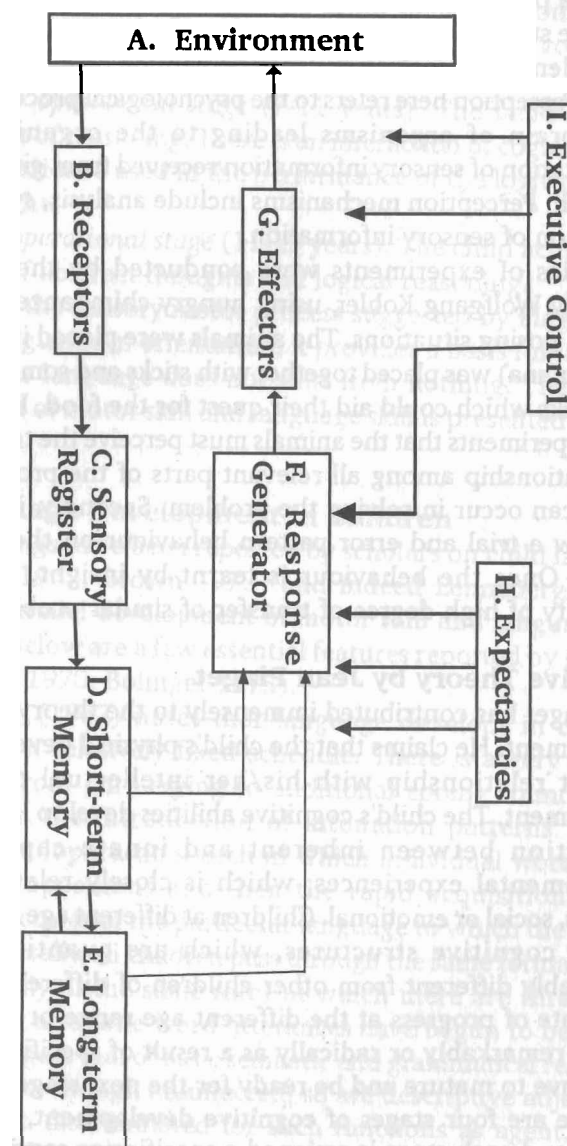
Gestalt Theory of Learning

Gestalt is a German word for 'pattern', 'shape', 'form' or 'configuration'. Gestaltists believe that we perceive and think of wholes rather than in tiny pieces like those of a Jigsaw puzzle. They believe that we react to patterns of our own perceptions when we face a problem, based upon the condition in the environment. When we struggle with a problem, the solution may come to us all of a sudden. This quick response in perception on our part is called *insight*. Perception here refers to the psychological process occurring in the brain of organisms leading to the organization and interpretation of sensory information received from given stimulus or stimuli. Perception mechanisms include analysis, synthesis and integration of sensory information.

A series of experiments were conducted by the gestaltists, especially Wolfgang Kohler, using hungry chimpanzees placed in problem posing situations. The animals were placed in a cage and food (banana) was placed together with sticks and sometimes boxes with sticks which could aid their quest for the food. It was shown in the experiments that the animals must perceive the total situation and relationship among all relevant parts of the problem before insight can occur in solving the problem. Secondly, insight tends to follow a trial and error pattern behaviour on the part of the animal. Once the behaviour is learnt by insight, there is the possibility of high degree of transfer of similar problems.

Cognitive Theory by Jean Piaget

Jean Piaget has contributed immensely to the theory of cognitive development. He claims that the child's physical development has a direct relationship with his/her intellectual or cognitive development. The child's cognitive abilities develop largely due to interaction between inherent and innate capacities and environmental experiences, which is closely related to other changes, social or emotional. Children at different age range usually exhibit cognitive structures, which are quantitatively and remarkably different from other children of different age range. Their rate of progress at the different age range or stage cannot change remarkably or radically as a result of specific instruction. They have to mature and be ready for the next stage.

There are four stages of cognitive development, according to Piaget, and each stage is assigned a specific age range thus:

a. *Sensory motor stage* (0 – 2 years). This is the period when a child employs the capacities he/she is born with primarily through reflex action. Six different sub-stages are associated with this period.
b. *Pre-operational stage* (2–7 years). This is a very important period for mental development. The child achieves conquest of symbols. It is during this period that language and vocabulary are developed.
c. *Concrete operational stage* (7-11 years). The child achieves conquest of reasoning. There is an interaction of cognitive skills and experience used in the performance of the logical process of thought.
d. *Formal operational stage* (11-15 years). The child achieves the nature of abstract thoughts and logical reasoning.

Although the sensory motor process suggested by Piaget is not primarily linguistic in orientation, it provides a basis for language formation, as language does not start from nothing. The parallel development of motor skill and language skill is presented in Table 2.

3.8 Language Development in Children

A lot of findings have been reported by scholars on child language (Lenneberg 1967, Brown 1973) and indeed Lenneberg (1967) shows the parallel development of motor skill and language skill in children. Below are a few essential features reported by scholars (cf. Marshall 1970, Bolinger 1975).

Lenneberg (1967) notes that language develops in children according to a relatively fixed schedule. There is a very orderly progression from pure crying to additional cooing sounds, then babbling and the introduction of intonation patterns. This is followed by holophrastic speech in which individual words seem to convey propositions and then the rapid acquisition of the syntactic structures of the particular language to which the child is exposed. Generally, all children pass through the same formal stages (not necessarily at the same rate) of which there are three if we start counting after one-word utterances have begun to be used.

The first stage is that of basic semantic and grammatical relations. Verbs are there, though uninflected; so are descriptive adjectives; and nouns are discriminated for such functions as agent, direct object and indirect object. This is basically a stage of two-word

utterances; e.g. *No play, Allgone Dada, Mummy food.*

The second stage brings in the elements most conspicuously lacking in the first, those essential grammatical morphemes with which meaning is modulated: inflections of the verb and noun, articles, prepositions and auxiliary verbs.

In the third stage the child advances to a complex grammatical interplay of which the best illustration is the ability to use tag questions correctly. At the second stage, a child could express a tag question but only with some such stereotype as *hunh*, e.g.: *You like it, hunh?* At the third stage the proper selection is made.

Talking about functions, Skinner (1957) identifies three kinds of utterances of the child-echoic, mand and tact – which dominate his/her communication at progressive stages of development. 'Echoic' utterances merely imitate and repeat adult speech. 'Mand' utterances express children's intentions but it is not easy to say whether such intentions are wishes, questions, demands, etc. e.g. *Eke, Daddy file.* Thus, the child's intention may have to be divined or guessed according to the occasion, sometimes correctly and sometimes incorrectly. 'Tact' utterances appropriately express intentions in a straightforward manner. An interrogative corresponds to a question directly, an imperative corresponds to a command or request, and an indicative corresponds to a statement giving information. In adult utterances, a form does not necessarily correlate with a function, e.g. the interrogative *When are you going to leave?* may mean *You have a long distance to go* (statement) or *Leave immediately* (command).

Lastly, another feature of child language is his/her inability to produce certain sounds like adults at the initial stage due to maturational factors. It is noted that some sounds, e.g.: */p/, /b/, /t/, /d/* and */m/* are learnt earlier and produced more easily than, others, e.g.: */g/, /h/* and */r/;* thus a child may produce */ti:/* instead of */ki:/* for 'key' and */dædə/* instead of */gæðə/* for 'gather'. (Oyebade 1990, Parker and Riley 2000, Surakat 2007).

In his description of the strategies of phonological development in children, Surakat (2007) observes that children use certain processes in constructing their own unique sound system, e.g.: a. deletion or simplification of sounds or syllable structure (*poon* for spoon, *han* for hand); b. substitution of sounds (/t/ for /θ/ in thief, /j/ for /r/ in drink); c. addition of sounds (*piggy* for pig and *doggie* for dog); d. syllable deletion (*nana* for banana); and e.

blending, assimilation and reversal of sounds (*aminal* for animal, *aks* for ask). Surakat avers that children tend to acquire first those universal sounds which are common to languages of the world, e.g.: /a/, /e/, /i/, /o/, /u/, /p/, /b/, /m/, /s/, /t/, and /w/ before those phonemes that are relatively rare and language specific, e.g.: /æ/, /ʌ/, /θ/, /ʒ/, /ð/, /ʃ/ and so on. According to him (ibid), children's pronunciation (between the age of 12 and 30 months) is limited compared to the pronunciation of older children and adults and he attributes this to the undeveloped nature of their perception, even though their perception is much better than production.

Table 2: Developmental Milestones in Motor and Language Development

At the Completion of:	Motor Development	Vocalization and Language
12 weeks	Supports head when in prone position; weight is on elbows; hands mostly open; no grasp reflex.	Markedly less crying than at 8 weeks; when talked to and nodded at, smiles, followed by squealing-gurgling sounds usually called cooing, which is vowel-like in character and pitch-modulated: sustains cooing for 15-20 seconds.
16 weeks	Plays with rattle placed in hands (by shaking it and staring at it); head self-supported; tonic neck reflex subsiding	Responds to human sounds more definitely; turns head; eyes seem to search for speaker; occasionally some chuckling sounds.
20 weeks	Sits with props	The vowel-like cooing sounds begin to be interspersed with more consonantal sounds: labial fricatives, spirants, and nasals are common acoustically, all vocalizations are very different from the sounds of the mature language of the environment.
6 months	Sitting: bends forward and uses hands for support; can bear weight when put into standing position, but cannot yet stand without holding on. Reaching unilateral. Grasp: no thumb apposition yet; releases cube when giving another.	Cooing changing into babbling resembling one-syllable utterances; neither vowels nor consonants have very fixed recurrences; most common utterances sound somewhat like *ma, mu, da,* or *di.*
8 months	Stands holding on; grasp with thumb apposition; picks up pellet with thumb and finger tips.	Reduplication (or more continuous repetitions) becomes frequent; intonation patterns become distinct; utterances can signal emphasis and emotions.
10 months	Creeps efficiently; takes side-steps, holding on; pulls to standing position.	Vocalizations are mixed with sound-play such as gurgling or bubble-blow; appears to wish to imitate sounds, but the imitations are never quite successful; beginning to differentiate between words heard by making differential adjustment.
12 months	Walks when held by one hand; walks on feet and hands – knees in air; mouthing of objects almost stopped; seats self on floor.	Identical sound sequence is replicated with higher relative frequency of occurrence, and words (*mama* or *dada*) are emerging; definite signs of understanding some words and simple commands (*Show me your eyes*).
18 months	Grasp, prehension, and release fully developed; gait stiff, propulsive, and precipitated; sits on child's chair with only fair aim; creeps downstairs backward; has difficult building tower of three cubes.	Has a definite repertoire of words – more than three, but less than fifty; still much babbling but now of several syllables, with intricate intonation pattern; no attempt at communicating information and no frustration at not being understood; words may include items such as *thank you* or come here, but there is little ability to join any of the lexical items into spontaneous two-item phrases; understanding progressing rapidly.
24 months	Runs, but falls in sudden turns; can quickly alternate between sitting and stance; walks stairs up or down, one foot forward only.	Vocabulary of more than fifty items (some children seem to be able to name everything in environment); begins spontaneously to join vocabulary items into two-word phrases; all phrases appear to be own creations; definite increase in communicative behaviour and interest in language.
30 months	Jumps up into air with both feet; stands on one foot for about two	Fastest increase in vocabulary, with many new additions every day; no babbling at all; utterances

Age		
	seconds; takes a few steps on tiptoe; jumps from chair; good hand and finger coordination; can move digits independently; manipulation of objects much improved; build tower of six cubes	have communicative intent; frustrated if not understood by adults; utterances consist of at least two words—many have three or even five words; sentences and phrases have characteristic child grammar—that is, are rarely verbatim repetitions of an adult utterance; intelligibility not very good yet, though there is great variation among children; seems to understand everything said within hearing and directed to self.
3 years	Tiptoes 3 yards; runs smoothly with acceleration and deceleration; negotiates sharp and fast curves without difficulty; walks stairs by alternating feet; jumps 12 inches; can operate tricycle.	Vocabulary of some one thousand words; about 80 percent utterances intelligence even to strangers; grammatical complexity of utterances roughly that of colloquial adult language, although mistakes still occur
4 years	Jumps over rope; hops on right foot; catches ball in arms; walks line.	Language well established; deviations from the adult norm tend to be more in style than in grammar.

3.9 Language Structure and Behaviour Actual/Potential

According to Halliday (1970), it is possible to study the language component of the actual behaviour of speakers (what speakers do). But in order to gain an insight into this actual behaviour, it is proper to have knowledge of their behaviour potential (what speakers can do). What a speaker can do via language is considered in terms of the meaning potential (what speakers can mean), constituted by a large number of interrelated options (of meaning). The system of available options in a language constitutes the grammar of the language. In the process of communication, a speaker or writer selects from within this system of options in the context of speech situations.

The various social needs which human beings serve with language during communication (e.g. direct, inform, woo, curse, praise, teach, argue, express joy, disappointment, love, etc.) are merged into three basic functions: ideational, interpersonal and textual. In performing these functions, options are selected from the grammatical system, as appropriate, within the situational context. Language in the ideational aspect serves to express the speaker's experience of the real world, including the inner world of his/her own consciousness (i.e. people and objects, processes, states, qualities, circumstances, etc.). Grammatical options from the system are selected to represent participants (peoples and objects) as actor, goal, beneficiary, instrument, etc.; to represent processes as action, mental, relation, verbalized and behavioural; and to represent circumstances as place, manner, time, reason, etc.

In its interpersonal aspect, language serves to establish and maintain human relationships and express social roles (i.e. asking or answering questions, greeting and getting things done). Grammatical options are selected to represent participants' utterances as questions (interrogatives), information (declaratives), commands and requests (imperatives), obligations, necessities, contingency and other modalities (modal verbs).

Lastly, language in its textual aspect serves to make links with itself and with features of the situation in which it is used (i.e. cohesion and coherence). Grammatical options selected for this function indicate theme, presupposition, postponement, etc.

CHAPTER
4

Language, Competence and Performance

Psycholinguists seem to agree that the ultimate goal of psycholinguistics is to produce a theory that will adequately describe the knowledge that speakers have of their languages, i.e. the ability of speakers to produce and understand sentences correctly. But what the nature of this theory should be is controversial and there are three broad perspectives of this controversy: (a) the theory of knowledge as competence, (b) the theory of knowledge as performance, and (c) the theory of knowledge as competence and performance. Chomsky's formulations are conceived in terms of 'a' above. In this regard, he conceives 'linguistic' competence as 'grammatical' competence. According to him, competence is the knowledge that people have of the grammar of their language and, as such, it is the goal of linguistics to describe this competence. In the meantime, we shall briefly describe Chomsky's accounts of grammatical competence below.

## 4.1 Linguistic Competence as Grammatical Competence

Unlike Skinner (1957), the behaviourist, who denies any role to grammar and meaning in language learning, and some other behaviourists like Osgood who recognize only semantics to play an intermediary role between stimulus and response in language learning (Osgood 1971, Rivers 1964), Chomsky places grammar (or syntax) in a central position in his study of language acquisition. Although in his initial formulation of syntactic structures, Chomsky (1957) does not assign any role to meaning in his description of grammar, he later does this in his subsequent formulations. Chomsky later assigns a primary role to syntax and a secondary role to meaning (Chomsky 1965, 1980), but some linguists insist that syntax ought to play a secondary role to semantics in

language description (Fillmore 1977, Lakoff 1971, Langacker 1987).

In *Syntactic Structures*, Chomsky (1957) describes language as a system of rules: phrase structure rules, transformational rules and morphophonemic rules. Phrase structure rules analyze sentences in terms of their syntactic constituents. The rules rewrite sentences by means of symbols. All sentences which are assigned the same phrase structure are said to be structurally similar, whereas a sentence that generates two phrase structures is said to be ambiguous. Consider the two structures of this sentence in 'a' and 'b' below: *They are flying planes.*

(a)   1. S $\longrightarrow$ NP VP
        2. VP $\longrightarrow$ V NP
        3. NP $\longrightarrow$ Pro, N
        4. Pro $\longrightarrow$ They
        5. N $\longrightarrow$ flying planes
        6. V $\longrightarrow$ are

The tree diagram representation of the structure above is presented thus:

```
              S
           /     \
         NP       VP
         |       /   \
        Pro     V     NP
         |      |      |
         |      |      N
         |      |      |
        They   are  flying planes
```
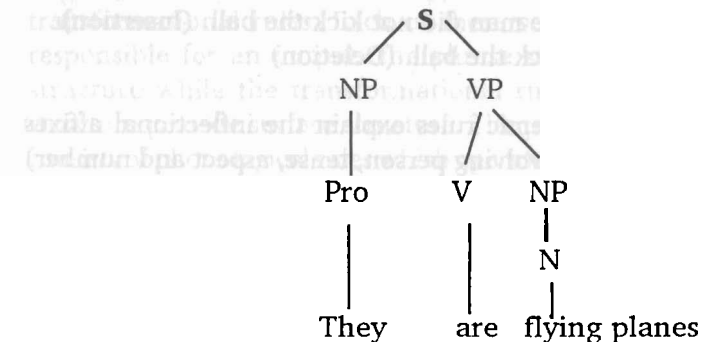
(b)
1.   S $\longrightarrow$ NP VP
2.   VP $\longrightarrow$ V NP
3.   NP $\longrightarrow$ Pro, N
4.   Verb $\longrightarrow$ Aux V
5.   Pro $\longrightarrow$ They
6.   Aux $\longrightarrow$ are
7.   V $\longrightarrow$ flying

Below is the tree diagram:

```
              S
           /  |  \
        NP     VR
       /      /  \
     Pro   Verb    NP
      |    /  \     |
      |  Aux   V    N
      |   |    |    |
     They are flying planes
```

Transformational rules operate to derive surface from deep structures. For example, the following rules show the different surface realizations of sentences which are related to a basic structure: *The man kicked the ball.*

a. T question → Did the man kick the ball? (Re-ordering)
b. T passive → **The ball was kicked (by the man). (Structural** change & insertion)
c. T emphatic → The man did kick the ball. (Insertion)
d. T negative → The man did not kick the ball. (Insertion)
e. T imperative → Kick the ball. (Deletion)

Lastly, morphophonemic rules explain the inflectional affixes and inflected forms (involving person, tense, aspect and number) in sentences, e,g.

(i) Their + mother – S + have + en + be + ing + cook their + food.

person aspect tense

(ii) Their + mother – have + s + be + en + cook + ing -their + food.
(iii) Their + mother – has + been + cooking – their + food.

The fact that Chomsky did not assign any role to semantics in *Syntactic Structures* was seen as a great omission by scholars. In *Aspects of the Theory of Syntax* (1965), Chomsky integrates semantics into his grammar thus:

```
                        S
       _____|_____
      |                |                |
 Phrase Structure (Base) rules      Lexicon
      |_____|_____|
                       |
                       ↓
                 Deep Structure

             Transformational Rules
                       ↓
                Surface Structure
       _____|_____
      |                                 |
 Phonological Rules              Semantic Rules
 (Phonetic interpretation)    (Semantic Interpretation)
```

Fig. 2: Chomsky's Standard Theory Grammar

The grammar consists of various components: the syntactic, semantic and phonological. Of these, the syntactic component which is central consists of two types of rules – the base rules and transformational rules. Each of these sets of syntactic rules is responsible for an output: the phrase structure provides deep structure while the transformational rules operating on deep structure provide surface structure. The phonological component consists of phonological rules which operate on the surface structure to provide the phonetic interpretation of a sentence, while the semantic component consists of semantic rules which operate on the same surface structure to provide the semantic interpretation of a sentence.

Again, the above formulation was criticized by scholars (Fillmore, 1977; Lakoff, 1971; Langacker, 1987) who believed that the semantic component ought to be generative (Generative semantics) and not the syntactic component (Generative syntax) as Chomsky claimed. The proposal goes thus: given the logical semantic representation of a sentence, with its complex propositional structure of arguments and predicates, transformational rules would apply to provide the surface syntactic form and phonological rules would convert the surface structure to the appropriate phonetic representation. Consider the following figure:

Fig. 3: Generative Semantics Grammar

Logical Semantic Representation

↓

Transformational Rules

↓

Surface Structure

↓

Phonological Rules

↓

Phonetic Representation
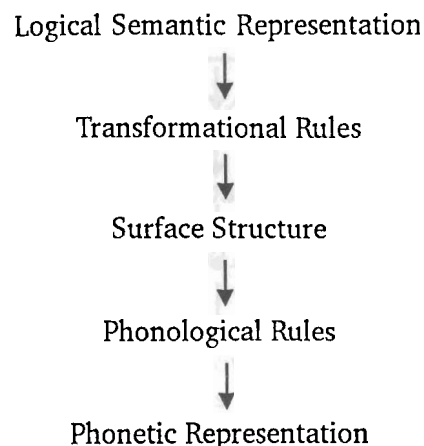
Still insisting on the centrality of the syntactic component to grammar, Chomsky (1981) again formulates The Government and Binding (GB) theory. 'GB' grammar involves a continuous interaction among components and sub-theories embodying different principles and parameters. D-structure requires a description of the phrase structure and this is achieved by the X-bar syntax, which integrates the lexicon with the syntax of lexical categories (noun, verb, preposition, etc.) and properties. The projection principle, which projects the characteristics of lexical entries onto the syntax, connects D-structure to S-structure and the lexicon to the logical form of the sentence by specifying the possible contexts in which a lexical item can occur. The functional relationship between the parts of a sentence is specified through theta roles (agent, initiator, affected, etc). Government ensures that a word is assigned to the proper case, while Binding defines the structure and references of the item. Below is a diagrammatic representation of the description above.

Fig. 4: A Schema of Chomsky's 'GB' Grammar (see Steinberg 1993)
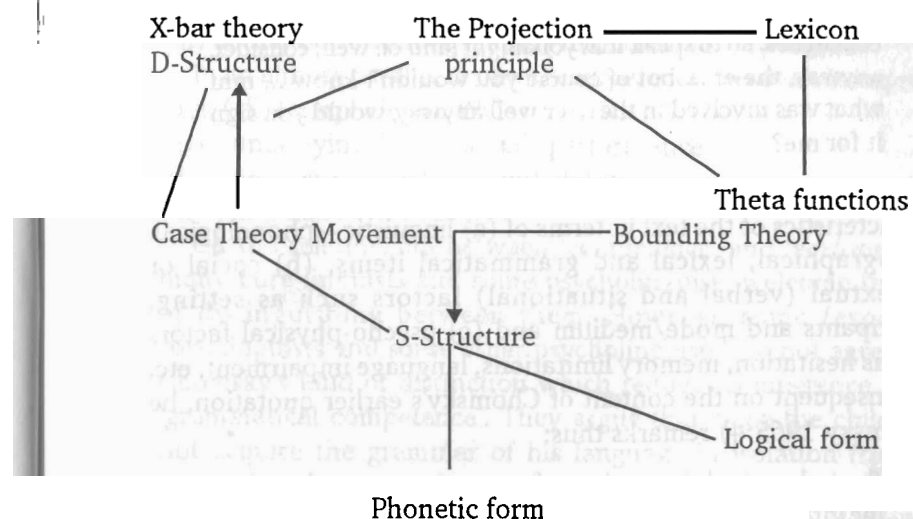
4.2 Linguistic Competence as Communicative Performance

Chomsky (1965:3) states the concern of linguistic theory thus

> Linguistic theory is concerned primarily with an ideal speaker-listener in a completely homogenous speech unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance.

Many linguists consider the conception above too narrow for both linguistics and psycholinguistics. Psycholinguistics is concerned with, not only the study of linguistic knowledge, but, also, with some, all or, even, more than those features (of linguistic performance) which are excluded from the above quotation. Precisely, the field is interested in studying how features of both linguistic competence and performance enable us to understand human language behaviour. Take, for instance, the following extract

of a performance text (Quirk, 1968:180):

> Well, I was ... er ... wondering if you at least, if you not yourself, then you know sort of one of your mmm ... colleagues, so to speak that you might kind of, well, consider, anyway, the er ... but of course you wouldn't know ... mm what was involved in the ... er well anyway, would you sign it for me?

A communicative linguist would be interested in analyzing the characteristics of the text in terms of (a) linguistic – phonological, orthographical, lexical and grammatical items, (b) social or contextual (verbal and situational) factors such as setting, participants and mode/medium and (c) psycho-physical factors such as hesitation, memory limitations, language impairment, etc.

Consequent on the content of Chomsky's earlier quotation, he (Chomsky 1965:4) remarks thus:

> To study actual linguistic performance, we must consider the interaction of a variety of factors, of which the underlying competence of the speaker-hearer is only one. In this regard, study of language is not different from empirical investigation of other complex phenomena. We thus make a fundamental distinction between competence (the speaker-hearer's knowledge of his language) and performance (the actual use of language) and performance (the actual use of language in concrete situations).

Linguists have reacted to the distinction made above in various ways; but two kinds of reaction are essential to us here. One kind is observed in the interpretation of the terms themselves while the second kind pertains to the nature of the relationship between them.

On interpretation, at least three meanings have been given to each of the terms. Performance has been described thus:

(i) observable linguistic behaviour, i.e. actual performance: features of actual performance include those pertaining to linguistic knowledge (knowledge of grammatical rules or 'grammatical competence'), linguistic ability for use (knowledge of social rules or 'social competence') and linguistic capacity (knowledge of production and reception rules – memory limitations and other low sensory capacities);

(ii) underlying linguistic behaviour, i.e. potential performance:

model rule or systems for describing actual linguistic knowledge + ability + capacity (i.e.grammatical competence + social competence + sensory capacity);

(iii) actual performance minus grammatical competence.

In an almost parallel manner, 'competence' has been interpreted thus (cf. Campbell and Wales, 1970):

(i)   underlying (or potential) performance
(ii) linguistic knowledge and ability
(iii) linguistic knowledge

On the relationship between 'competence' and 'performance', many pure linguists and some psycholinguists welcome the idea of distinguishing between them. However, some (especially sociolinguists and some other psycholinguists) do not agree with Chomsky's kind of distinction which reduces competence to just 'grammatical competence'. They argue that since the child does not acquire the grammar of his language in isolation from the sociocultural context of communication, but rather simultaneously acquires rules or systems of grammar and social rules, describing competence in terms of grammatical competence will fail to represent the true nature of human language. They then postulate the concept of 'communicative competence' which should account for both the underlying rules of grammar and social rules of language behaviour.

Communicative competence, they contend, is the main focus of applied linguistics and the interest of the applied linguist should be the study of how native speakers acquire and utilize communicative competence in a language, why certain speakers fail to acquire it and how non-native speakers can acquire and utilize it. The various conceptions of communicative competence can be summarized thus:

i.   (underlying/potential) grammatical competence + social competence;

ii. (underlying/potential) grammatical competence + social competence +sensorial capacity;

iii. (underlying) linguistically possible + feasible + appropriate + done (Hymes 1972).

4.3 Language Production and Reception

The discussion in this section will come in four parts: speech production, reception and perception of sentences, information

theory on speech decoding, memory and the meaning of sentences and knowing a word.

Speech Production

Two presentations on this topic will be made here. The first presentation derives from the ideas of previous scholars (Laver 1970, Bolinger 1975). There are five functions relevant here: ideation, storage, programme planning, articulation and monitoring.

The ideation process initiates the approximate semantic content of any verbal message the speaker wishes to communicate. The semantic structuring of the content initiated serves both to activate particular areas of the memory store and choose the most relevant of the individual items that have been activated. The linguistic information in the storage system includes the inventory of phonemes and words, stock phrases and expressions and the rules for forming words and sentences. The word is, however, the most typically-stored unit, since it can be retrieved easily. Alongside words are vast amounts of information stored in order to aid their retrieval and guide us in their use. These include meanings, phonological information, synonyms, translation equivalents, and appropriate syntactic contexts. The store has series of associative systems based on these kinds of information. Part of the storage system includes the memory span which serves to keep something under attention. Items are kept in the short-term memory for immediate use and recall, while items not immediately needed are kept in the long-term memory. The processes of acquisition, retention and use of the memory store in speech are subject to the same factors of learning, recall, confusion and forgetting.

The programme-planning process constructs an appropriate neurolinguistic programme for the expression of an idea. In retrieving items from the memory store, the process activates more items than it finally selects for inclusion in the programme, hence slips of the tongue (or rather, 'slips of the mind/brain') as '*He behaves as like a fool*' (... like a fool) or '*I want to get a cash checked*' (... get a cheque cashed). The programme is not performed on a sound-by-sound or word-by-word basis, but rather as a single continuous programme which corresponds to the tone group. The smallest neural units in the programme for articulation have been posited by linguists as either the phoneme or syllable.

Articulation is a dynamic process involving many coordinated articulatory processes generally described in terms of both properties and movement of organs of speech and properties of sounds produced by the organs. For a long time, studies on the description of speech organs and the process of articulation have had the limitation of describing articulation of speech as if it consists of momentarily static postures of the speech organs, linked by glides from one posture to the next. 'A word is not a united compound of a definite number of independent sounds, of which each can be expressed by an alphabetical sign; but it is essentially a continuous series of infinitely numerous sounds, and alphabetical symbols do no more than bring out certain characteristic points of this series in an imperfect way' (Paul 1886). The dynamic view of speech is now enhanced by the invention of instruments and introduction of instrumental analytic techniques.

The monitoring system allows for the detection and correction of grammatical or semantic which can disturb accurate communication in the production of speech. Monitoring an utterance for errors such as slips of the tongue is an automatic process which normally operates outside awareness. Slips can be detected covertly before or during articulation.

The second presentation by Steinberg (1993) presents a parallel description of the speech production process, which differs from the above mainly in terms of his inclusion of pragmatic features. The components of the presentation are briefly discussed below.

Thought Process. This is a universal process which uses knowledge and a stock of concepts to create thoughts. It is stimulated by various mental and environmental influences.

Purpose and Proposition. Proposition refers to the essential thought which a person wishes to communicate to someone. It is conceptual and non-linguistic in nature. The purpose involves the intention of speakers, e.g.: questioning, asserting, denying and warning.

Pragmatics and Semantic Structure. Pragmatic factors such as politeness and persuasion will influence what the final meaning of the sentence will be. It is the semantic structure that will get realized in speech either directly or through the syntactic and phonological rules.

Basic Strategies. This component identifies certain properties of the semantic structure and assigns searches to be done of the

stored items and rules. Immediate recovery of aspects is possible without conversion to the syntactic structure.

Phonetic Structure and Acoustic Signals. The phonetic structure is a psychological (non-physical) level which represents the pronunciation of the sentence. It consists of speech sounds and prosodic features. On the basis of the phonetic structure, movements of articulators of speech are controlled so as to provide physical speech which appears in the environment as the acoustic signal.

Reception and Perception of Sentences

The discussion below benefits a lot from the ideas of Fry (1970) and Johnson-Laird (1970). They claim that as the speaker, in generating his/her message, is working on a number of different levels at the same time, so the listener has to work on all the levels at the same time in reconstructing it. This means that the listener is forming the phoneme string, segmenting it into morphemes, and forming the morpheme string, reconstructing the word sequence and thus building up sentences all at the same time. Corrections may be made at any point in the message where the speaker makes an error. The parallel working of the decoding apparatus requires a great deal of short-term storing of items at each level. The correction of errors again demands that the immediate past history of the message at each level should be held in store for retrieval at a point well before the one the speaker has actually reached.

In the decoding process, the sentence (also main clause) has for a long time been recognized as a major syntactic unit. Thus, if the end result of decoding a spoken message is that the sentence is arrived at through syntactic analysis, then certain syntactic properties of the sentence ought to be understood properly in speech perception.

The perception of sentences is more preoccupied with grammatical analysis than with monitoring incoming sounds. In analyzing the grammar, the knowledge of parts of speech (nouns, verbs, etc) and transitivity (transitive, intransitive) is important as it assists in parsing sentences and predicting structures based on the occurrences of words in the sentences.

In perceiving a sentence, meaning is also mediated by understanding the functional relations within constituents (agent,

action, goal, etc) or between constituents (e.g. active and passive, affirmative and negative, declarative, interrogative and imperative and ambiguous sentences).

Perception of a sentence is enhanced by (a) meaningful words, (b) meaningful combinations, (c) simple surface structure and (d) expected syntactic pattern. On the contrary, a sentence may be perceived with lack of comprehension if (a) its vocabulary is obscure, (b) its syntax is intricate, or (c) it violates certain restrictions on the use of words. Apparent ambiguity, vagueness or obscurity, however, directs the listener to relevant aspects of the context for resolution.

Information Theory on Speech Decoding

In order to facilitate our understanding of the speech decoding process, certain facts about information processing ought to be understood. These facts pertain to some properties of language and communication, user's knowledge of the language system and statistical information about language (Fry 1970).

Language is a multilayered system. It is made up of elements, each type existing and operating at many discrete levels, phonemes at the speech medium and letters of the alphabet at the writing medium, and compositions of higher or larger units of utterance (word, group/phrase, clause and sentence). This property of multilayeredness is crucial to speech production and reception and it gives us some idea of how speech is processed in the brain.

Information theory also presents us with the property of redundancy in language use. This property varies between languages and between texts in particular fields of discourse. It is of a general order of 70 to 80 per cent, though English has been found to be just about 50 per cent while specialized registers, say in technical and scientific journals, display upwards of 85 percent as a result of the smaller stock of words in their fields of discourse. The existence of redundancy means that of every 100 letters, phonemes or words of which a text is composed, one can correctly guess between 70 and 80 of the particular elements if one knows the language or one is familiar with the particular field of discourse (Adeniran 1991).
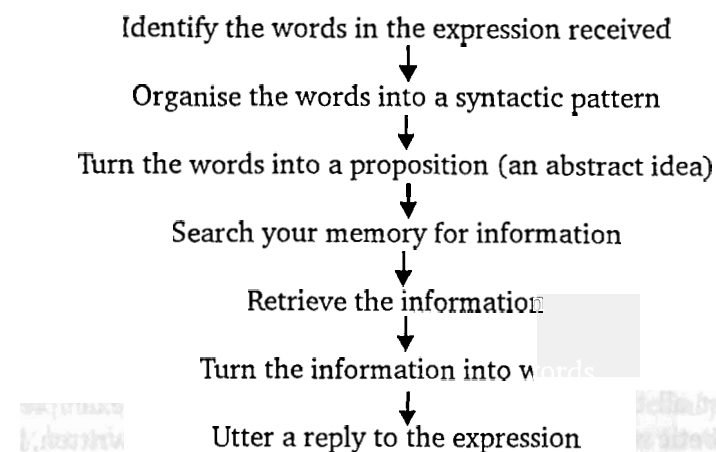
Concerning the language user, he/she should first have knowledge of the language system. A person carries in his/her

cortex a vast store of information about the language he/she uses, though there are some parts of the store which are used much more for one purpose than the other. For example, an individual's store of words contains a greater number of items which he/she will recognize when he/she hears than of items he/she is likely to use spontaneously in his/her own speech. The knowledge of language system is always at the user's disposal and is employed during both speaking and listening.

When we take in a spoken message, it is necessary for our ears to receive sound waves originating with the speaker. If the message is in a language we do not know, we can go no further in the process of decoding, although our ears are exposed to the same sound waves as those of a listener who knows the language. These sound waves and the information that the brain is able to extract from them form no more than a rough guide to the sense of the message, a kind of scaffolding upon which the listener constructs or reconstructs the sentences originating in the speaker's brain. He/she is able to perform this feat of reconstruction because of the store of a priori knowledge about language with which his/her brain is stocked. This knowledge plays a vital role at the different stages of the reception process.

Secondly, the language user has at his/her disposal a very wide range of statistical information about the language. Information theory (Shannon and Weaver 1949) has it that using a language involves knowing a great deal about what is likely to follow at any point in a spoken message; that is, a knowledge of sequential probabilities on all levels of the language. When a message is being generated, the speaker is not free at any point to continue in any way whatsoever, for he/she is constrained by what immediately precedes. The 'making sense', about a message constrains the speaker at every moment and is invoked by the listener in receiving the message. The latter does not depend solely upon the sounds he/she hears in speech, he/she uses his/her knowledge of sequential probabilities to predict the continuation of the message and so his/her decoding is essentially a process of determining 'what the message must have been'. This factor is so strong that whenever there is conflict between what the listener thinks is likely and what actually reaches his/her ears, it is most frequently the former that wins the day.

Fig. 5: Information Processing Approach: Speech Reception and Production (cf. Field 2003)

Identify the words in the expression received

↓

Organise the words into a syntactic pattern

↓

Turn the words into a proposition (an abstract idea)

↓

Search your memory for information

↓

Retrieve the information

↓

Turn the information into words

↓

Utter a reply to the expression

Memory and the Meaning of Sentences

A sentence has structure and meaning and this makes it easier to remember than the same set of words in random order. But a sentence is a small element of discourse in real life and if we remember anything about it at all, we remember its sense rather than its syntax. Only for a very short interval of time is the syntax recalled with complete precision; during this time we can also recall the original intonation of the sentence. No one knows how meaning is represented within memory, but there is no evidence to show that any form of syntactic structure is directly involved. It is most probable that the elements from which meaning is composed - the semantic markers (+ human, adult, + male, alive, etc.) are utilized in cognitive processes other than language; hence, their organization would not be specifically oriented towards language.

The sentence is not the largest unit normally involved in the recall of language. It is quite possible that from the meanings of sentences in a connected discourse, the listener may set up a model of narrative that is much abbreviated and not especially linguistic.

Lastly, it is noted that recalling items from the memory is not a mechanical process; but it is guided or impeded by affectivity (interest, hate, motivation) which, in turn, is subject to factors that are only in part controlled by the will and the conscious mind. For example, a pupil may remember the song in a whole album by

heart, or be able to recite the longest speech of Antonio in Julius Caesar, yet he/she may not remember the words in two sentences expressing a mathematical equation.

Writing Systems

Writing is an attempt to represent speech graphically. There are basically three systems of writing, viz.:

a. **alphabetic (or roughly phonemic orthography)**
b. syllabic (where each consonant – vowel combination has a separate symbol)
c. word-writing (or ideogrammatic, where each word or morpheme has a separate symbol)

Alphabetic writing is the form commonly used in English, French, German, Yoruba, Igbo and other European and African languages. Almost all the words on this page may serve as an example of alphabetic writing. Some languages are alphabetically written, but with a different script or set of symbols; for example, Russian, which uses Cyrillic letters, and Greek. Compare the following:

> Roman alphabet (English) aspirin
> Cyrillic alphabet (Russian) а с π и/рин
> Greek alphabet (Greek) б σ λ ι ρ ι ν

Syllabic writing uses symbols to represent whole syllables. Vowels and consonants are not represented by separate symbols but are represented together in a single symbol. This method is sometimes used in English. For example, when we write the word *okay* as *OK*, the two syllables /o/ and /ke/ are represented by the single symbols *O* and *K*, respectively. Other examples in English are

> *X – Ray   Bar-B-Q   U-Turn   T-Square   A-Frame*

where single letters are used to represent syllables.

Syllabic Writing today is used in Japanese, and among so-called Hamito-semitic languages, such as Arabic and Hebrew (although the latter are to some extent alphabetic). A syllabic writing system is possible and efficient only for a language which has a simple syllable structure. This is true in Japanese, where every syllable conforms to the formula "(C)V". Because the syllable is simple,

there are only 76 different syllables possible, so that there are 76 different symbols. A word such as *kimono* (a kind of long robe) has three syllables, i.e. *ki-mo-no*, and so is written with three symbols. *Datsun*, the make of car, would be written also with three symbols as follows:

da
tsu
n

(read top to bottom)

Arabic uses a semi-syllabic system that mainly represents the consonants only. The vowels following the consonants in the same syllable may be understood without being written or special points may be added to indicate the vowels. This is efficient in Arabic, because many times related words differ only in vowels, so that writing the consonants alone shows the relationship clearly. Example:

ب ر ق	ب ر ق	ب ر ق
Q R B	qaruba	qarraba
	be near	*make near*

(read right to left)

Word-writing uses symbols to represent whole words or ideas. A single symbol representing an idea is called an 'ideogram'. When it represents a physical object directly, it is called a pictogram. Many road-signs are pictograms. There are many ideograms in common usage. For example, ₦ represents the 'Naira'; 1 and 2 represent the words 'one and 'two', respectively. Other examples are:

> 3   4(etc.)   &   H2O   +   –   =   %

Word-writing is the system that was used in ancient times. For example, one might write 'two eyes' or 'sea serpent' as follows:

'two'   'eyes'   'sea'   'serpent'

Such a system was used by the Ancient Egyptians in early 'hieroglyphic' writing, and also by the Ancient Sumerians in their 'Cuneiform' writing. It was noted that words that meant different things often sounded alike. For example, the word 'eye' sounded the same as the word 'I'. The word 'sea' sounds the same as the word 'see'. They then could use the picture or symbol representing one word for the other word that sounded the same but had different meaning. This is called the rebus principle. For example, 'I see' could be written as

'I'   see

Later the symbols became simpler and stylized, and became letters representing only syllables, consonants and vowels.

Word-Writing is still in use in Chinese. This is suitable to Chinese because every Chinese word is simple in structure. It is a simple isolated syllable, given by the formula 'CVVN', i.e. there may be a consonant, followed by one or two vowels, followed by a nasal consonant. Examples:

βϛ $\underline{\text{mên}}$ 好子 $\underline{\text{hao}}$
door,   good

The Writing Process
The writing process consists of several parts. Baker (2007) identifies six stages that are relevant for teaching the skill and mentions some tasks/activities that take place at each stage, thus:

Stage 1: Pre-writing
a.   Brainstorming (alone or with others).
b.   Making a list of all words, phrases, facts and theories at one's disposal.
c.   Reading what others have already written.
d.   Questioning.
e.   Talking to a partner or teacher, where and when possible.
f.   Plunging in with free writing, drawing or telling someone else.

Stage 2: Writing
a.   Change all the pronouns to nouns – he/she to names, it to noun.

b.   Add examples, descriptions, reasons, dialogue or research citations or quotes.
c.   Read it: What did you leave out?
d.   Ask who, what happened, when, where, why, how and other questions.
e.   Do research to learn more.

Stage 3: Revision
a.   **Read it out loud.** This is very helpful and can be done privately or publicly.
b.   Find the original ideas in the writing and make these into topic sentences.
c.   Rearrange the writing so that each idea has support and is fully explained.
d.   If there is no idea, try to create one.
e.   Ask others to read it and see what they do not understand. Try to make them understand it/them.
f.   Write a revised draft.

Stage 4: Editing
a.   **Deal with p**aragraphing first and make sure each expresses an idea.
b.   Check the spelling, grammar and other errors.
c.   Cross out repetitions and correct ambiguous or confusing utterances.
d.   Make sure ideas other than your own are properly quoted or acknowledged.

Stage 5: Publishing and Sharing
a.   **Get your writing published or sent to the addressee or displayed to a reading audience.**
b.   Keep a copy for your records.

Stage 6: Assessment
An assessment of the writing can be done by self, peer or a teacher.

The process of writing presented above is based on interactive and shared writing, which is considered more inclusive than a non-interactive writing process.

Knowing a Word

The word is generally recognized as the basic unit of expression stored in the brain, but it has not been so easy to define it. In writing we recognize the word as a unit of meaning occurring between two spaces and in speech we recognize it as a moveable unit of meaning that cannot be broken down into free-standing units (Field 2003). In the description of the vocabulary of a language, it is more precise to refer to the word as a lexical item. For example, each of the expressions *die* and *kick the bucket* will be regarded as a lexical item in a technical sense, as a unit of meaning, but the latter word may be seen as three words when looked at in an ordinary sense of orthography. Some other problems encountered in word definition pertain to the concepts of homonymy, when words with different meanings sound alike (homophones), e.g. *son/sun* or spell alike (homographs), e.g. lead /liːd/ and lead /led/; or when words that have different meanings have the same spelling or pronunciation (polysemy), e.g. *bank* (a financial institution, a river side, the turning of a plane, a place for blood storage, etc.).

In psycholinguistics, studies of the knowledge of words and their usage (vocabulary) fall into three areas: lexical entries, lexical storage and lexical access (Field 2003). We shall briefly discuss these areas.

The Lexical Entry

The lexical entry represents the vocabulary knowledge of a competent user of a language. This knowledge is what dictionaries attempt to represent in their volumes. Another name for the dictionary is the lexicon. The illustration below shows the entry of the word *bar* in the *Longman Dictionary of Contemporary Dictionary of English* (LDCE):

bar[1] [S1] [W1]/ baː $ baːr/ n [C]
1.   **PLACE TO DRINK IN a)** a place where alcoholic drinks are served; → **pub**: *The hotel has a **licensed bar**.* | a **cocktail bar b)** *BrE* one of the rooms inside a pub: *The **public bar** was crowded.* → see picture at STAY

2.   **PLACE TO BUY DRINK** a COUNTER where alcoholic drinks are served: *They stood at the bar.*

3.   **a wine/coffee/snack etc bar** a place where a particular kind of food or drink is served.
4.   **a breakfast bar** *BrE* a place in your kitchen at home where you eat breakfast or a quick meal.
5.   **BLOCK SHAPE** a small block of solid material that is longer than it is wide: a **chocolate bar** | **a candy bar** | [+of] **a bar of soap**; see picture at BLOCK[1]
6.   **PIECE OF METAL/WOOD** a length of metal or wood put across a door; window etc to keep it shut or to prevent people going in or out: *houses with bars across the windows.*
7.   **behind bars** *informal* in prison: *Her killer was finally **put behind bars.***
8.   **Music** a group of notes and RESTS, separated from other groups by vertical lines, into which a line of written music is divided; *a few bars of the song*
9.   **bar to (doing) sth** *written* something that prevents you from achieving something that you want: *I could see no bar to our happiness.*
10. **the bar a)** the group of people who are BARRISTERS **b)** *AmE* an organization consisting of lawyers
11. **be called to the bar a)** *BrE* to become a BARRISTER **b)** *AmE* to become a lawyer
12. a long narrow shape along the sides or at the top of a computer screen, usually containing signs that you can CLICK on: *the main menu bar at the top of the screen* | *the toolbar* **SCROLL BAR**
13. the long piece of wood or metal across the top of the goal in sports such as football: *The ball hit the bar.*
14. **PILE OF SAND/STONES** a long pile of sand or stones under the water at the entrance to a HARBOUR
15. **COLOUR/LIGHT** a narrow band of colour or light
16. **UNIFORMS** a narrow band of metal or cloth worn on a military uniform to shoe rank
17. **HEATER** *BrE* the part of an electric heater that provides heat and has a red light.   **Bar**[2] **v barred, barring [T] 1** to officially prevent someone from entering a place or from doing something: **bar sb from (doing) sth** *They seized his passport and barred him from leaving the country.*   **2** to prevent people from going somewhere by placing something in their way: *She ran back, but Francis barred her way.* | *A locked gate barred*

my entrance to the wood. **3** also **bar up** to shut a door or window using a bar or piece of wood so that people cannot get in or out **Bar³** *prep* **1** except: *We had recorded the whole album, bar one track.* **2 bar none** used to emphasize that someone is the best of a particular group: *He's the most talented actor in the country,* bar none. **BARRING**

The first information got from the entry pertains to the classes of the word *bar*; that is, there are three classes of the word as a *bar¹* (noun), *bar²* (verb) and *bar³* (adjective). Thus, the knowledge of a word includes the knowledge of the class it belongs to.

Next is to provide information about the meaning of each class of the word. For example, *bar¹* has seventeen different meanings; *bar²* has three meanings and *bar³* has two meanings. While the three classes indicate that the words are homonymous, the different meanings in each class of words show that the word in each class is polysemous. Each meaning of the word is then demonstrated in phrases or sentences to give examples of its usage in various contexts.

There is also knowledge of the frequency of the word in usage. The word *bar* is entered into the dictionary in the red colour to show that it is among the 3000 commonest words in English (see information guide to the LDCE). Words that are shown in blue are said to be among the 2000 most common words in English. The symbols [S1] and [W1] indicate that the word is used very frequently in both spoken and written forms.

There is also the information about the pronunciation of the word, showing the difference in BrE and AmE pronunciations, i.e. /ba:/. The pronunciation is represented in between two slanting lines, to show a phonemic transcription of the word.

The symbols *n, v, [C]* and *[T]*, when used after a word, indicate the syntactic information that the word is a noun, verb, count noun or transitive verb respectively. The information that the word is count means that the word can be singular or plural.

Morphological information is also provided on the word; e.g. the inflections *–ed* and *–ing* indicate the past and continuous tenses in *barred* and *barring*.

Lexical association and relationship are also indicated. The word *pub* is, for example, a synonym of *bar¹*. Also information is provided about collocation by mentioning collocates with which the word co-occurs, e.g. *public* bar, *chocolate* bar, a bar *of soap*, *behind* bars,

bar *of*, bar *from*, bar *up*, bar *none*, etc. The collocation is either non-fixed, e.g. *bar of soap* or fixed, e.g. *bar up* or *behind bars*. The latter examples are also called idioms in English.

Meanwhile, it is important to distinguish between 'content words' and 'function words'. The former, also called 'lexical' words refers to nouns, verbs, adjectives and adverbs which carry the kind of meaning that we can look up in the dictionary. The latter, also called 'form words' or 'grammatical words' do have a clear meaning but contribute to the syntactic structure of a sentence. These, are pronouns, articles, auxiliary verbs, prepositions and conjunctions.

Lexical Storage and Lexical Access

Lexical storage refers to how words are stored in our minds in relation to each other, while lexical access refers to how we retrieve a word when we need it. It is believed that the way words are stored assists the retrieval. It is believed that no word is stored in isolation, but that words are stored close to one another in terms of some association or relationship.

The first type of association is based on lexical set relationship. Assume a speaker is seeking a word for a type of furniture; the speaker might retrieve a set of furniture such as table, chair, stool, bed, wardrobe, bench and coffin. If the context of the expression has to do with a 'corpse', the set is further reduced to bed, coffin and perhaps bench. The deletion of words continues as the context further narrows down selection until the word needed is selected.

The storage and retrieval of a word sometimes depend on world knowledge of the speaker. For example, if the topic of communication is 'house', all items pertaining to a house are activated from long term memory and stored together at short term memory for immediate retrieval, e.g. door, window, furniture, rooms, garden, roof, flat, curtains and balcony (nouns); build, live, rent, mortgage, sleep and clean (verbs); and big, dirty, clean and wash (adjectives). Items related to each other, which can be activated in relation to a topic are sometimes referred to as a 'frame' or 'schema', which refers to a set of interrelated features which we associate with an entity or concept (Bartlett 1932). Our knowledge of the world is said to be stored in schemas or 'schemata' and items are retrieved in schemas in the course of communication. Field (2003) gives a rough idea of the schema for 'table' in Figure 6 below.

Fig. 6: A Schema for the Concept of Table
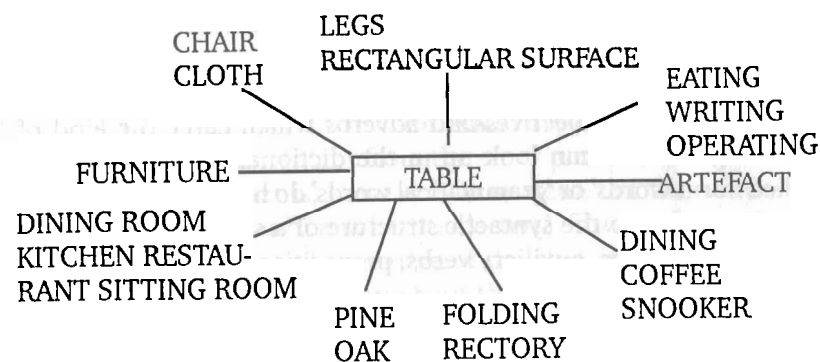
It is also quite possible while exploring the meaning of a word through meaning sets that the speaker associates the sound or structure of the word with similar sounds or structure. For example, when searching for the name of the fruit *pear*, words with similar sounds may be activated:

bear – care – dare – fare – rare – share – tear – wear

In an attempt to pronounce or try to remember the word *reprieve*, the words retrieve, receive, believe, bereaved, re-print, etc. may be activated. The implication of all the examples above is that words are not really stored and retrieved in isolation, but, instead, are linked by a network of forms and meanings.

CHAPTER 5

Language and the Brain

The brain is a major constituent of the nervous system. It features prominently in the study of human anatomy and physiology and receives the greatest emphasis in the field of neurology. It coordinates (controls, integrates and regulates) all activities of the senses and of the body. It is the seat of consciousness, sensations, emotions and other higher mental processes. Nativists argue that a human infant must have some kind of genetically transmitted language faculty to acquire it rapidly and successfully. While the mind represents the vital object of knowledge to the rationalist philosophers, the brain provides the basis of experience in the view of empiricists. In psycholinguistics, however, both the mind and brain become relevant factors. This topic highlights some essential information from previous studies (e.g. Bolinger 1975, Steinberg 1993) pertaining to (i) hemispheric lateralization, (ii) language lateralization, and language disorder/ impairment.

5.1 The Human Brain
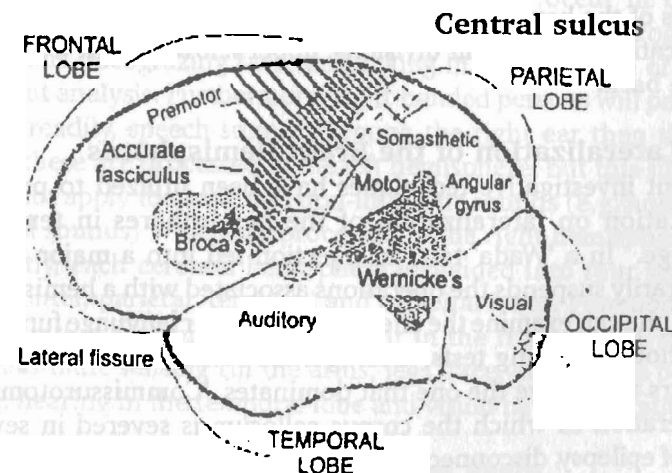
Fig. 5: The brain hemisphere

The brain is divided into three parts, for convenience of our description: (i) the brain stem, consisting of the medulla oblongata, pons varolii, mid-brain and diencephalon, (ii) the cerebellum and (iii) the cerebrum. The cerebrum is a greatly expanded portion, lying superior and almost completely covering the brain stem and the cerebellum. It is the aspect that relates most to language in human beings. Other areas are concerned with essentially physical functions such as heartbeat, breathing, coordinating of movement, involuntary reflexes, digestion, emotional arousal, etc. In comparing the brains of lower vertebrates with those of higher vertebrates and primates, the most noticeable difference is in the part of the brain which developed last in the course of evolution, the cerebrum or cerebral cortex. Unlike that of the animals, the human cerebrum has increased in size and complexity to become the largest part of the brain.

The cerebrum is much bigger and more developed in human beings than in animals, which may be attributed to the language functions that it performs.

The cerebrum is divided by a fissure into two parts: right and left hemispheres. Each hemisphere has four parts, divided into lobes and given names according to the bones of the cranium that house them: frontal, parietal, temporal and occipital. A simple description of parts of the hemisphere for language functions will require the specification of three pair divisions: upper v. lower, right v. left and front v. back.

5.2   Lateralization of the Brain Hemispheres

Different investigative techniques have been utilized to provide information on lateralization of the hemispheres in terms of language. In a 'Wada' test, an injection fed into a major artery temporarily suspends the operations associated with a hemisphere so that one can examine the effect on a particular language function. In 'dichotic' listening tests, messages are fed simultaneously into two ears to observe the one that dominates. 'Commissurotomy' is an operation in which the corpus callosum is severed in severe cases of epilepsy, disconnecting the two hemispheres. Furthermore, 'radio brain scanning' is a process of scanning specific locations of the brain.

The brain controls the body by a division of labour, although

they do not do so evenly. The left hemisphere of the cerebrum controls the right side of the body and the right controls the left side. A stroke in the right hemisphere of the brain will leave victims affected on the left side of the body. Thus, they can lose control over the muscles in the left hand, left leg and the left side of the face (including that side of the tongue and mouth), with the result that their ability to move the left arm and leg and to speak clearly will be affected. For right-handed individuals, the left hemisphere generally dominates the right hemisphere in performing bodily functions, but it does not so dominate it in left-handed individuals. Majority of left-handers have left hemisphere dominance but it is much less marked than right-handers. About 40% of them have right hemisphere dominance, which is believed to be a factor contributing to speaking problems and to various reading and writing dysfunctions such as reversal of letters and words when reading and writing. Some studies further suggest that females normally have a thicker left hemisphere (which specializes in general sensory functions) than males, while males have a thicker right hemisphere (which specializes in visual and spatial functions).

The brain assigns certain functions to the left and right hemispheres. For example, language, logical and analytical operations and higher mathematics generally occur in the left hemisphere, while right hemisphere is superior at recognizing emotions, recognizing faces and taking in the structure of things without analysis. Furthermore, right-handed persons will perceive, more readily, speech sounds through the right ear than the left, since these are processed in the left hemisphere, but this situation does not apply to music and non-linguistic sounds (e.g. noises and animal sounds) which are processed in the right hemisphere.

Lastly, each cerebral hemisphere is divided into four sections: the frontal, parietal, temporal and occipital lobes. Functions such as cognition (to some degree) occur in the frontal lobe, general somaesthetic sensing (in the arms, legs, face, etc.) in the parietal lobe, hearing in the temporal lobe and vision in the occipital lobe.

5.3   Language Localization in the Brain

Research has shown that language centres predominate in the left hemisphere in right-handed people and sometimes in the right hemisphere for left-handed people. The main language centres in

the left hemisphere are the Broca's area, in the front of the brain, Wernicke's area, towards the back, and the angular gyrus which is even further back. The Broca's area is near that part of the brain which involves the muscles that control speech. It is adjacent to the region of the motor cortex which controls the movement of the muscles of the tongue, lips, the jaw, soft palate and vocal cords. In contrast, the Wernicke's area is near the part of the brain which receives auditory stimuli. Both areas are connected by tissue (the arcuate fasciculus) and are not found in the right hemisphere.

Speech Production: The basic structure of the utterance is thought to be generated in the Wernicke's area and is sent to Broca's area for encoding. The programme is then passed on to the adjacent motor area, which governs the articulatory organs.

Speech Comprehension: The signals arrive in the auditory cortex from the ear and are transferred to the adjacent Wernicke's area where they are interpreted.

Reading Aloud

The written form is first received by the visual cortex and then transmitted via the angular gyrus to Wernicke's area, where it is thought to be associated with auditory representation. The utterance structure is then sent on to Broca's area for production.

A lot of evidence abounds to support the localization of   guage in the areas of the brain mentioned.

1. A stroke in the right hemisphere of the brain will leave victims affected on the left side of the body. They can lose control over the muscles in the left hand, leg and face, including the side of the tongue and mouth, with the result that their ability to move the left arm and leg and speak clearly will be affected. However, a stroke does not affect vision and hearing in the same way.

2. Infants at birth have a bulge in the left hemisphere, where language is typically located, but not in the corresponding area of the right hemisphere (Wada).

3. In a group of 100 normal humans, Geschwind and Levitsky (mentioned by Steinberg 1993) have demonstrated that Wernicke's area in the left hemisphere is generally larger than the corresponding area in the right hemisphere. Such asymmetry of the brain is even present in the foetus, appearing by the 31st week.

4. Right-handed persons will perceive more readily speech sounds

the right ear than the left, as shown in dichotic listening experiments.

5. Split-brain persons through severance of the connecting tissue – corpus callosum – could use speech and writing if information is provided to the right visual field. But the right hemisphere has no such capacity if information is provided to the left field.

6. When tactile (touch) information was passed to the left hemisphere, split-brain patients were completely capable of verbally describing objects and talking bout things they had just touched. If, however, patients experienced things only with the right hemisphere, they could not talk about the experience at all. The right hemisphere was also incapable of imagining the sound of a word, even a familiar one, and patients failed rhyming tests. But the right hemisphere was better at spatial tasks such as matching things from their appearance, e.g. being able to correctly reassemble halves of photographs. While females normally have a thicker left hemisphere than males, one specialization which involves general sensory functions, males have a thicker right hemisphere, one specialization of which involves visual-spatial functions. Language, logical and analytical operations and higher mathematics, for example, generally occur in the left hemisphere, while the right hemisphere is superior at recognizing emotions and faces and taking in the structures of things globally without analysis.

8. During infancy, both the left and right hemispheres are implicated in language acquisition. If the left is damaged, the right is capable of supporting language skills and mediating further language learning. However, if the left hemisphere has not been injured, a progressive decrease in the involvement of the right hemisphere takes place in the adult. Thus, after puberty, the prognosis for recovery from dysphasia becomes steadily worse.

How the brain works is more a problem of fluid than ordinary mechanics. A function may appear to be located in one part, but if that part is injured, another part may take over. Some linguistic functions are more or less localized, particularly the ones that involve the perception of sounds and the muscular control of speech (e.g. articulation). But the cognitive functions – understanding, planning and organizing – cannot really be pinned down to specific areas.

It is probably no coincidence that propositional language and right-handedness are housed in the same half of the brain. Tool using and verbal problem-solving may well be the same at the bottom. It is as if all human activity were roughly divided between 'holding' functions and manipulative ones, lateralized in separate halves of the brain. Each of us is perhaps not one spirit but two: the clever, talkative, intellectual, maze threading, problem-solving genie sits on the left hand, and the artistic, intuitive, whole-seeing, and wordless but passionate genie sits on the right. But since for lack of words he/she is unable to tell us about himself/herself, the genie on the right remains largely a mystery.

5.4   Language Impairment

Language impairment or disorder refers to the various difficulties encountered in the process of communicating with people, which can impede communication (Salami 2005, 2008). An impairment of communication may be through signs, speech or writing (Crystal 1992) and some scholars have viewed it from the perspective of articulation (Lass 1979). Citing Curtis (1978), Salami (2005) identifies five neural systems that are involved in communication as (i) sensory system, (ii) analyzing system, (iii) language system (iv) motor command system and (v) neuro-motor system. Damage to one of these five systems may result in five problems which include sensory impairment – agnosia (confusion among auditory or visual stimuli); aphasia and dysphasia – language disability; apraxias – bizarre behaviour; and dysarthrias – inability to articulate speech sounds.

Aphasia is presumed to have as its cause some form of damage to some specific site in the hemisphere where language is located. Steinberg (1993) reports that aphasias are generally classified into two basic groups: Broca's aphasia and Wernicke's aphasia. The groups indicate the respective areas of injury in the brain.

Broca's aphasia is characterized by meaningful but shortened speech and also occurs in writing. Grammatical inflections are often lacking, such as the third person present tense '-s' (*Leo want biscuit*) and the auxiliary 'be' (*Daddy coming*), as are articles, prepositions and other function words. The speech is similar to that of children at the 'telegraphic' stage of speech production.

Broca's aphasia has also recently been discovered to affect speech comprehension. For example, a patient could understand the sentence *The mango that the girl is eating is unripe*, particularly

with regard to who is doing the eating. However, when presented with the sentence *The boy that the girl is looking at is fat*, the patient gets confused because of the syntactic relations 'a boy can look at a girl', and vice versa.

Wernicke's aphasia is characterized by speech which often resembles what is called nonsense speech or double-talk. It sounds right and may be grammatical, but it is meaningless. For example:

> I have been checking for last month's salary but they have stolen my property and children. I am happy for them because they don't need forgiveness ...

Also, patients commonly provide substitutes for words on the basis of similar sounds, associations or other features, e.g. 'chair' for 'shair' (sound), 'table' (association), 'throne' (related meaning) 'wheelbase' (cannot be categorized), 'You sit on it' (circumlocution) or 'It's a?' (word loss). Both Broca's and Wernicke's aphasia can cause a severe loss of speech understanding, although the hearing of non-verbal sounds and music may be unimpaired.

Other forms of impairment have also been identified. In 'pure word deafness', a patient may be able to sing the words of a song correctly, but may not be able to say the words ordinarily. 'Conduction aphasia' is characterized by a poor ability to repeat words despite relatively good comprehension, e.g. the patient may say 'puppy' for 'purple'. He/she may also have difficulty with pronouncing a three-syllable sentence such as 'Li is here', even though he/she can produce a four or five digit sequence '5-4-3-8-1' correctly. 'Anomic aphasia' involves problems in finding the proper words for spontaneous speech, e.g.: 'Give me some uh ... uh ... uh ... thing over there'. 'Global aphasia' refers to a terrible condition in which many or all aspects of language are severely affected. 'Dyslexia' is a form of reading or writing disability in which the patient reads or writes backwards ('pin' as 'nip') or confuses the orientation of letters 'b' for 'd', 'p' for 'q' and 'u' for 'n'). Speechlessness is a common symptom of stroke or apoplexy. Along with the inability to speak, some form of paralysis on the right side of the body often occurs.

Salami (2005) describes the pronunciation and comprehension problems of aphasia of a speaker of English as a second language. His observation that the stroke patient exhibited some unusual pronunciation of English words as well as lack of comprehension confirms what has been described earlier as Broca's aphasia.

CHAPTER
6

English Language Learning in Nigeria

In this chapter we shall discuss some of the factors affecting the learning of English in Nigeria under seven sub-headings: the status and roles of English, the learner, the data, the environment, aptitude and attitude, transfer, language skills and learning and use.

6.1   The Status and Roles of English

English serves an official language in Nigeria, being an ex-colonial language that has been retained for official communication in offices, courts, sophisticated commerce and as the main language of education in the country. It serves the purposes of inter-ethnic and international communication. Although meant to be complemented with some other languages as the language of conducting business in the national and states Houses of assembly, it has, to a great extent, continued to enjoy the monopoly of usage at the deliberations. In the current era of globalization, the continued existence and dominant use of English for accommodation, participation and vertical and horizontal social mobility has endowed the language with considerable social prestige above the indigenous languages. The people have a positive attitude towards the language and its status is promoted by the elite mostly to their own advantage and to the disadvantage of the masses. Generally, the roles which English plays in Nigeria can be mentioned as follows:

1. It serves educational and administrative purposes.
2. It complements the indigenous languages which serve as mother tongues of different people as a further means of perceiving, recording and exploring the world.
3. It enables the learner to know more people and understand information about other people's cultures.
4. It serves some vital economic roles: providing opportunities for gainful employment, requirement for admission into tertiary institutions and opportunities for speakers, writers and media

practitioners and artistes to gain access to a wider audience.
5. It is used for personal and social communication and interaction at the local, inter-ethnic and international levels.
6. The knowledge of English confers social advantage and an enhanced social status on an individual.
7. It helps to project the indigenous language culture internationally.
8. It is an international language; hence, it is used for external communication outside the country.

Considering the above functions assigned to English in Nigeria, English is tagged, technically, as a second language (ESL) in Nigeria and each speaker would wish to learn it in addition to his/her mother tongue. As a second language, the characteristic features of learning it are expected to be different in some respect from native speakers' English and also foreign learners' English. For example, unlike the English as Mother Tongue (EMT), which is acquired, ESL will have both acquisition and learning attributes. It is also essential at this point to distinguish the learning and use of English in a non-host (lacking native speakers) environment like Nigeria from a host environment (partly inhabited by native speakers) like the United States of America. The focus of discussion below is on the non-host community.

Despite the high status accorded the English language in Nigeria, competent speakers of the language remain few (about 5-10%) and majority speaks or writes it badly. Records of poor performances and usage are given at all levels of education and strata of communication in the society (Adegbite 2008) and the problems can be attributed to linguistic, psychological and socio-politico-economic factors. Some of these factors are discussed below from the perspective of psycholinguistics.

6.2   The Learner

One crucial characteristic of the learner to mention here is age. The process of language acquisition of the first language (L1) begins in infancy, at birth; and the child achieves competence at about five years. In contrast, learning English as L2 begins at childhood, for many children at nursery school age of two to three years and, for majority at the primary school, at age five; but children may or may not achieve full mastery at adulthood. Unlike the L1 speaker who learns language fresh, an L2 learner is a 'linguistic

adult' who already has some mastery of L1 before learning the L2.

Scholars (Krashen 1983, Mclaughlin 1987, Afolayan 1995) generally believe that both native and non-native learners of English are endowed with similar human capacities, e.g. the Language Acquisition Device, which operates in both children and adults, and the Universal Grammar, which constrains the development sequence. There are in existence universal deep grammatical features as well as different degrees of variations in the surface realizations of these features in individual languages of the world (Afolayan, 1995:117). During the process of acquisition, an infant undergoes maturation and growth in terms of biological and intellectual development. Although various stages of language development can be correlated with maturational factors, the capacity for language is in-built in the child and intellectual ability has little effect on the process. For the L2 learner, however, the capacity for learning is not automatic; learning is dependent on several other factors like personal experience, motivation, reinforcement, etc. Intellectual ability also has a major role to play in such learning.

With respect to maturation, it is generally believed, though not well-supported empirically, that children learn faster and are generally better than adults at acquiring native-speaker pronunciation in a second language. Since pronunciation is a motor skill where speech articulators such as the vocal cords, tongue and mouth are controlled by muscles, an adult's difficulty in acquiring native-speaker pronunciation in a second language may probably be part of the overall decline in motor skills which occur around puberty. Although L2 adults may start earlier than children, the children overtake them at a certain point and achieve higher levels of proficiency. It should be noted, however, that apart from biological factors, cognitive, affective and social factors may enable learners from different age groups to employ different learning strategies.

Furthermore, children are observed to learn a second language better than adults in the natural (non-formal) situation because their social activities expose them to massive amounts of language data. Adults undergo a marked decline in the quality and quantity of social interaction conducive to good language learning.

Psychologically too, children find it easier to learn the

grammatical rules implicitly from raw data than adults because they have a better memory and are more prepared to experiment with language. The children's ability to control their organs of speech is greater and they possess more flexibility in motor skills than adults. However, adults will learn English better than children in explicative processing because they have sufficient maturity to meet the rigours of a formal learning environment, where concentration, attention and even the ability to sit still for a long time are required.

Lenneberg (1967) claims that damage to language areas in the left hemisphere of very young children is compensated for with the right hemisphere taking over the reacquisition of language functions. He sets puberty as the age or time beyond which this kind of recovery would no longer occur. But Krashen (1973) states that the age limit of recovery is approximately five years. With normal children, who are deprived from language exposure for some time, it is observed that language acquisition could still occur in later years.

Unlike age, which contrasts L1 and L2 learning, sex runs parallel in both learning situations. For example, it is claimed generally that females do talk earlier in L1, they learn the L2 faster and better too and do more talking in their lifetime than males do.

Maturation Problems of the Nigerian Learner of L2

For the Nigerian learner of L2, the problem of maturation is two-sided. First, he/she does not mature fully in the mother tongue before his/her attention is shifted to English, which is strange to him/her at school. As soon as he/she starts nursery school, he/she is alienated from both his/her home and native language. His/her experiences at home are seldom reflected in the classroom lessons and his/her mother tongue is not given any attention. Indeed, for a long time, the use of the native language was banned in the school environment by over-enthusiastic school administrators and teachers who believe that children would learn English fast and better by doing so. This alienation blurs his/her vision of experiences in his immediate environment and at the same time hinders his/her L1 development. Consequently, the learner begins to know less and feel less about his/her own society. Also, because his/her skills (listening, speaking, reading and writing) are not sufficiently developed to enable him/her communicate properly

in the L1, he/she begins to lose interest in the use and utility of the language.

At school the child is expected to learn English, which is new to him/her, and at the same time learn other subjects through it. In other words, the child is expected to learn things in a language he/she does not know. Added to the defects in the conditions of learning English in the L2 environment (limited data, agents of exposure, materials and necessary infrastructure; absence of a well-formulated and implemented language policy, inadequate motivation of learners, etc.), the learner may not fully master English, unless he/she has spent numerous years learning and using it in formal education or visited and sojourned in an L1 or host L2 English environment where the language is well-reinforced.

6.2   Language Data
Before a learner can successfully achieve mastery of a language, there has to be available language data. In L1 acquisition, there is abundant 'raw' language data surrounding the child in natural settings, at home, at play, among peers, during sleep, everywhere. The data is described as raw because it comes to the child directly from actual communication through comprehensible input and the performance of communicative tasks. In L2 learning, the child is exposed to limited data in his/her own environment. Much of the data cannot be described as raw but artificial, stilted, occurring principally through formally-structured teaching of mainly grammatical rules at school. If, hypothetically, a child is exposed to L1 data for about 20 hours a day, both formally and informally, and another learner is exposed mainly formally to L2 data for 4 hours at school, one can guess the disparity in the outcome of learning of both children. How much time would it take an L2 learner to achieve the competence of a five year old L1 child?

6.3   The Learning Environment
The role of the environment in providing the data input cannot be underestimated as this largely influences the final learning achievement. L1 acquisition takes place in a native-speakers' environment. The environment is saturated with linguistic data made available via several agents of exposure – parents, relations, peer group, teachers, books, mass media, public notices, inscriptions and advertisements. Thus, apart from self-involvement, all of the

above have great influence on the acquisition of language by the child.

In an L2 environment, agents of exposure are mainly those associated with formal education, viz. the teacher and textbooks, supported by the mass media. Except in the case of L2 immigrants in native speakers' communities, the agents of exposure in a non-host English environment are mostly non-native speakers whose competence in the language may be in doubt. For L2 learners who are immigrants in a host ESL environment, a natural setting conducive for learning the L2 exists for the learner. But for the L2 learner in a non-host environment, an artificial and less conducive environment is encountered.

In Nigeria, English is learnt mainly through formal instruction in the classroom with limited reinforcement outside the classroom. This context for learning English in a second language environment contrasts in certain respects from the context whereby second language learning takes place in English as mother tongue environment.

Although English serves both personal and public needs of individuals in both L1 and L2 communities, the use of the language is unrestricted in the former environment, while it is restricted in the latter, where the language shares roles with other languages in the community. For example, it has been noted that, even though they may claim otherwise, when they pose that they use English more or most of the time, majority of the learners do not speak or write the language as much as they should outside school.

6.4 Aptitude, Attitude and Motivation
Aptitude
These are regarded as two major and relatively separate influences on language learning. Some cognitive ability is required as well as a positive attitude. For Lambert (1974), attitude relates to motivation; bilingual proficiency is based on the extent of aptitude and the relationship between, and extent of, attitudes and motivation. Chomsky (1967) says that different degrees of intelligence do not affect acquisition and intelligence itself is irrelevant to the acquisition of language, but Gardner (1985) says that intelligence plays a major role in bilingual proficiency because it determines how well or how quickly individuals understand the nature of any learning task or any explanations provided. In the

learning of L2, there is no doubt that intelligence will play a major role in both the reception of comprehensible input and learning of grammatical rules.

Attitude

Attitude refers to the opinions and feelings that a person has about something. It is determined by cognitive, affective and active factors. In other words, a positive or negative attitude towards a person or object may be based on knowledge of some information about the person or object or feelings about it. These may influence our predisposition to act on the object, in this case, learning English.

The attitude of Nigerians towards English has generally been described as positive, attributable to several factors such as colonialism, elitism, ethnicism, mobility and job prospects (Adegbija 1994, Bamgbose 2001, Oyetade 2001, Adegbite 2003). But the attitude that recognizes as normal the continued use of English in all advanced sectors of life in a non-native environment smacks of linguistic imperialism (Ansre 1975, Bamgbose 1985). Oyetade (2001) observes that many elite parents send their wards to fee-paying primary schools where the medium of instruction is English. This is predicated on the belief that the earlier a child begins learning the language, the higher his/her chances of better mastery of the language. This will ultimately guarantee good performance at subsequent levels of education and eventually a good job. Some parents in the elite group go to the extent of banning their children from using their mother tongue at home, even though both parents speak the language. In certain schools, indigenous languages, pejoratively called vernaculars, are highly prohibited in preference for English.

This attitude of the elite has made the masses in the society no less positively disposed towards English than the elite themselves. Everybody easily recognizes the perceived importance of English as a prerequisite for a better condition of life. Thus, all parents have the desire to ensure that their wards are educated and speak English for their personal and family aggrandizement (Oyesakin 1992).

Motivation

Motivation refers to the urge or determination to do something; i.e. the arousal of one's interest in order to achieve a goal.

Motivation can be strong or weak, positive or negative or rather indifferent. Positive motivation aids learning, while negative motivation hinders learning. Motivation is a crucial factor of language learning.

Two types of motivation are identified in the literature: intrinsic and extrinsic motivation. Intrinsic motivation comes out of self conviction in learning something; the urge to continue is internal and there is readiness and willingness to persist even when the task becomes very difficult and challenging. Some of the factors that liven up intrinsic motivation include curiosity, emotional urge, conscious desire to learn, mental stimulation, inquisitiveness and ambition. Obviously, the motivation for learning the L1 is strong and integrative and various sources of motivation provide stimulation for the child – parents, siblings, peer group, entertainment, teacher, the media, text and non-text materials, environment, etc. (Allwright 1977). According to Gardner and Lambert (1972), in integrative motivation, the aim of the learner is to become a member of the target language community, speak and communicate properly with speakers of that community.

Extrinsic motivation, on the contrary, refers to the effect of external factors on the stimulation of learning. Such external factors may be referred to as instrumental. The aim of the learner in instrumental motivation is for commercial, educational (passing examinations or obtaining a certificate) and such other reasons as seeking employment or travelling (Gardner and Lambert 1972). Learning English in Nigeria is based on such factors as are mentioned above. Of course, the motivation for learning a secondary language obviously cannot be as strong as that of learning a primary one. Extrinsic motivation can sometimes be integrative if the L2 learner learns the language for the purpose of acculturation or identification with the native speakers of the language. Nigerian users of English who migrate to Britain, for example, may desire to speak English like the native speaker to avoid stigmatization.

6.5   Transfer of Knowledge and Skills

A person who wants to learn an experience similar to the one he/she has acquired previously does not start from scratch. He/she has to transfer knowledge, skills and aptitude from the previous experience to the new one. In learning an L2, a learner transfers

features from his/her L1 to L2. Transfer refers to the process in which the knowledge of a language influences the learning of another language either positively or negatively (Lado 1957). If the knowledge of L1 helps or facilitates the learning of L2, then there is a positive transfer, which is known as 'facilitation'. If, however, the knowledge of L1 inhibits the learning of L2, then there is a negative transfer, which is known as 'interference' (Weinrich 1953). In facilitation or interference, skills in listening, speaking, reading and writing or features of language (phonology, syntax, lexis and semantics) are transferred from one language to the other. The transfer is bilateral, rather than unilateral, between L1 and L2, even though existing research seems to have been dominated by the influence of L1 on L2 and not vice-versa (see, however, Banjo 1986, Ekundayo 1987, Adegbite 2008a). Interference is regarded as a major source of errors by second language learners, though many errors attributed to this factor may actually result from what Steinberg (1993) calls first or second language strategy, which is applied when relevant second language knowledge is not yet known or is incompletely learnt.

Facilitation is supported by the concept of language universals – the concept of the general similarity in language structures (Section 2.2). In this regard, a Yoruba learner of English, for example, would not need to learn all the sounds of English from scratch. He/she would only need to check his/her linguistic reserve for similar sounds to the L1 and learn the different sounds in L2. A learner would, from previous experience, know that some categories, e.g. noun, verb, adjective and adverb, represent objects, processes, qualities and circumstances in his/her L1. This knowledge will enhance his/her ability to learn, relate and utilize such categories faster in L2.

Unlike facilitation, interference is supported by the concept of linguistic relativism – the concept of individual differences in language structures (Section 2.2). It is assumed that areas of contrast between L1 and L2 will present problems of learning L2. Interference may occur at any level of linguistics – phonology, grammar, lexis and semantics. Several examples of this can be observed in the use of English by L2 learners (cf. Akindele and Adegbite 1999):

* i. ai neva rialaiz hau fuɔ za man wɔz
✓   ai nevə riəlaiz hau puɔ ðə man wɔz

* ii. I met one animal in the bush which I have never seen it

before.
"I met an animal in the bush which I had never seen before.

iii. How do you like taking eba with ogbono soup early in the morning.
(The above only reflects local colour (culture). There is no error here.)

* iv. I salute you my fathers for your concern about my wives.
(The item *salute* is a wrong word; *thank* would be more appropriate here. However, the items *fathers* and *wives* are not errors but relevant cultural items.)

6.6 ESL Language Skills

Generally, there are four basic skills pertaining to language learning and use: listening, speaking, reading and writing. In a sense, listening and speaking are called oral or oracy skills, while reading and writing are called literacy skills. In another sense, listening and reading are called receptive skills, while speaking and writing are productive skills. The mastery of these four skills is crucial to efficient communication in L1 and L2.

Normally, in acquiring L1, listening and speaking come first in the order mentioned, while reading and writing come later in a child's life. In learning L2, however, both the skills of the L1 earlier acquired and the L2 skills become relevant and the sequencing of the skills for efficient learning becomes an issue. This issue will be discussed in the next chapter.

Meanwhile, it suffices to say that no planned sequencing is done in the teaching of English as L2. Thus, the language skills are not learnt properly.

6.7. Theories in Acquisition/Learning

According to McLaughlin (1987), theories serve three functions. First, they allow us to understand and organize the data of experience. Second, theories transform our thinking about phenomena and enable researchers to use empirical data to draw conclusions that are not evident from the data taken in isolation. Third, theories guide prediction and stimulate research. The theories that pertain to ESL are linguistic, psychological, socio-psychological and neurolinguistic. Some linguistic and psychological theories have already been presented in the early sections of this book (Chapter 3), while neurolinguistic theories

have been treated in Chapter 5. A few other theories/hypothesis that are relevant to L2 learning will be described briefly in this section.

Linguistic Theories

The innate theory of language acquisition has already been presented. Here, we shall present the 'monitor' and 'input' theories.

The Monitor and Input Theories

Two ways by which learners gain productive competence in L2 are via 'acquisition', which is a sub-conscious process not dependent on the teaching of grammatical rules, and 'learning' which refers to the conscious study and knowledge of grammatical rules, which results in the conscious representation of pedagogical rules. Both the formal and informal learning environments contribute to different aspects of second language performance – the informal is conducive to acquisition, while the formal has the potential for both acquisition and learning (Krashen 1976).

In his presentation of the monitor theory, Dulay, Burt and Krashen (1982:58) claims that conscious internalization of rules is available to the learner only as a monitor. The monitor is

> ... the part of the leaner's internal system that appears to be responsible for conscious linguistic processing. When a person tries to learn a rule by reading about it in a grammar book or by attending a class session while the teacher explicitly describes the rule, the person is engaged in conscious language learning.

It is only available as an editing device. It can neither lead to acquisition nor aid it. Learning is thus a peripheral process in an attempt to acquire competence in L2. The only recognized function of learning is to edit what has been initiated by the acquired system.

Acquisition is the process identified by the Monitor theory for gaining productive competence in a language. It is a sub-conscious process through which learners internalize the target language rules implicitly. Acquisition requires meaningful interaction in a natural communication setting in which speakers are more concerned with the message rather than the form of their utterances. The process is similar to that used by children acquiring their first language. The theory further suggests that acquisition proceeds along fairly

predictable stages for all acquirers of the language. In this regard, Krashen (1977:154) claims that

> Errors that result from performance based on the acquired system alone will be consistent across learners/ acquirers, regardless of first language, as acquisition is guided by universal principles.

whereas

> Errors that result from situations in which monitoring is possible will be idiosyncratic as they will reflect each learner's conscious mental representation of linguistic regularities in the target.

Krashen (1979) claims that language acquisition occurs when the acquirer understands input language. He (Ibid. p. 79) thus suggests the input hypothesis thus:

> if an acquirer is at stage i. he or she can move to state i + 1, by Understanding input of the i + 1 level (with the aid of context or Extra-linguistic information)

He adds that the role of a second language classroom should be the provision of intake for learner's acquisition through the provision of comprehensible input to learners. Classroom activities can either focus on grammar exercises (learning) or communicative exercises (acquisition). The classroom is a place to give students the input they need for language acquisition via communicative activities that the students are interested in and that involve the language they can understand and use for further acquisition.

Though both the monitor theory and input hypothesis have positive implications for second language acquisition, they have been criticized by scholars for many reasons, especially for the minor role which it attaches to grammar in language acquisition (McLaughlin 1987, Okanlawon 1997). First, the theories are said to be based on the conditions of English learning in a host environment. In a non-host environment, much of the learning of the language takes place in the classroom and grammar places a major role in this process. Despite the concentration of grammar exercises, some learners still achieve mastery of the language. It is thus important that both communicative and grammar exercises are crucial to achieving competence in L2.

Socio-psychological Theories

The theories of pidginization and creolization are relevant here. A number of explanations have been provided for the development of pidgins and creoles (Todd 1974, Bickerton 1983, Elugbe 1995, Wardhaugh 1985 and Stockwell 2002), but we shall adopt Todd's (1974:1) definition that

> a marginal language which arises to fulfill certain restricted communication needs among people who have no common language.

Stockwell (2002: 18) explains that when the contact between groups of people is prolonged, a hybrid language can develop, known as pidgin. These tend to occur in situations where one language dominates and there are two or more other languages at hand. Elements of the syntax and lexis of each language are simplified and combined as speakers struggle to make themselves understood by accommodating towards each speech community.

A pidgin becomes a creole as soon as it is learned as the first language of a new generation. In these circumstances, pidgins rapidly develop a wider range of phonemes, a larger vocabulary, more complex syntax and a greater range of stylistic options to the point at which the creole can be used in every context and to express every requirement of the speaker.

Elugbe (1995:285) claims that it is accepted that a pidgin-like stage probably exists as a universal in the learning or acquisition of a second language and that some scholars now talk of a 'pidginization' theory of second language acquisition (Klein 1986). He asserts further that the theory of decreolization, the observation that a pidgin becomes more and more like the language on which it is based if they exist side by side, also supports the possibility that a pidgin stage is a universal of L2 learning (Romaine 1988).

Some Hypotheses of Second language Learning

Mclaughlin (1987:154-155) lists ten hypotheses which summarize leading second language research. We shall mention them here for the benefit of readers.

1. There are predictable sequences in the acquisition of a second language such that certain structures have to be acquired before others can be integrated. (Lightbown 1985).
2. The learner creates an interlanguage, which is often characterized by the same errors as are made by children learning the same language as a first language, as well as others which appear to be based on the learner's own native language – transfer (Lightbown 1985).
3. Interlanguage development occurs as the product of the learners Universal Grammar, which makes some rules easier to learn than others (Ellis 1985).
4. Second language learning is an active process in which learners discover how the input is segmented, how the segments are used to represent meanings, how units are assembled structurally and what principles speakers use to achieve communication goals and intentions. This active process requires a host of cognitive strategies and skills, as well as social knowledge (Wong Fillmore 1985).
5. At any one stage of development the learner's interlanguage comprises a system of variable rules (Ellis 1985).
6. Knowing a language rule does not mean that one will be able to use it in communicative interactions (Lightbown 1985).
7. Situational factors are the primary causes of variability in the interlanguage and are indirect determinants of the rate of learning and the level of proficiency achieved (Ellis 1985).
8. Good input to second language learners has their social needs in mind. It is selected for content and modified in form and presentation. It tends to be structurally simpler, more redundant and repetitive and is characterized by greater structural regularity than is found in normal usage (Wong Fillmore 1985).
9. Learners have to realize the need to learn the target language and must be motivated to do so (Wong Fillmore 1985).
10. Some personality or cognitive style characteristics that affect second language learning include the willingness to take risks, pattern recognition abilities, tolerance of ambiguity, skill in social interactions, attitude toward the target language and motivation (Wong Fillmore 1985).

6.8   English Learning and Use

The process of learning can be explained in four stages: exploration, conceptualization, recognition and recording. The stage of exploration involves finding out about one's environment and familiarizing oneself with the features of events happening in the world – persons, objects, processes, qualities and circumstances.

These features are coded in linguistic categories of particular languages as follows: persons and objects as nouns, processes as verbs, qualities as adjectives and circumstances as adverbs (see Sections 2.3 and 3.9). A learner acquires substantive items that will realize these formal categories and combines them to construct utterances.

Following exploration is the stage of conceptualization, which is achieved via the discrimination and association of features that are observed in the world. Language sometimes represents the world by referring to concepts. Thus, as features of the world, represented as concepts of thought, are expressed through language items, language learning should involve learning to discriminate those items of language – sounds, words and other structures – that represent concepts. Language items are discriminated and associated by comparing or contrasting them and then classifying them via the similarities or differences in their properties.

The conceptualization of things makes it easier to recognize them in consequent perceptions. But it is equally important to recognize those language items that represent particular concepts. The ability to recognize such items is facilitated by imitation, repetition and habituation of language in speech events.

Lastly, the stage of recording fixes a thing in one's memory where it can be recalled for use another time. Recording has two parts: conventional and individual. The conventional side, which is an abstraction, has been recorded by the society using a language; it serves as the model against which individual (real) perception is measured as either correct or deviant.

Generally, the L1 enables a learner to explore, conceptualize, recognize, record and express experience. The child acquires language from scratch by going all through experiencing the processes of exploring, conceptualizing and recording experiences. But the L2, unlike the L1, is never learnt from scratch because previous learning experiences serve as input which may facilitate or hinder the learning. The L2, at best, provides the learner with another means of experiencing his/her experience; thus it may not fully cater for all activities in the learning stages. The secondary importance of English to the Nigerian learner, among several negative factors, inhibits the proper learning and use of the language.

English Learning and Use: the Competence/Performance Distinction

Competence is assumed for a native speaker of English whose knowledge of the language is largely implicit or for a second language speaker who has spent considerable time in a native English-speaking environment. Lapses and errors in communication of such speakers are identified with performance factors. However, for a learner of English in Nigeria whose mastery of the language is largely explicit, competence may be assumed after considerable exposure to English and consistent quantitative and qualitative performance in it. Thus, the learner's performance output is crucial in the evaluation of his/her level of competence. The learner/user is competent if he/she performs well and is not competent if he/she does not.

English in the Brain of the Nigerian Learner

Appel and Muysken (1987) report three views of scholars regarding the organization of languages in the brain of a bilingual. In the first one, the 'extended system' hypothesis, two languages form one internalized system and the elements of the two languages are supported by the same neural mechanisms. This supports the model of compound bilingualism. The compound bilingual has an identical meaning for two equivalent words because the words refer to similar concepts/objects in the same environment. The second view, the 'dual system' hypothesis, holds that the two languages are located in the same area, but that different neural mechanisms support each of them. This supports the coordinate bilingual model. The coordinate bilingual assigns the equivalent words with slightly different meanings or references to different concepts. The bilingual functions as if it were two monolinguals put together.

In the third view, the languages are stored in a 'single extended' system, but the elements of each language form separate sub-systems within the larger system. This supports the subordinate bilingual model. In the subordinate bilingual, one language is dominant and the words in the non-dominant language are interpreted through the words in the dominant language. The mental representation of two languages is presented by Weinrich (1953) who distinguishes three types of bilingualism: coordinate, compound and subordinate bilingualism.

In Nigeria, bilingual speakers exist with varying degrees of competence in their native languages and English. Coordinate bilinguals have good mastery of the basic skills of oracy and literacy in the two languages. Members of this group are less than 5% of the bilingual population and they constitute mainly of adult graduates and "undergraduates of those days" who had the double advantage of first being well grounded in their native language before going to school to learn both languages under conducive circumstances. It is doubtful whether younger tertiary students of nowadays can be classified into this category (cf. Adesanoye 2004).

Subordinate and incipient bilinguals make up the second and third groups of bilinguals and these are made up of secondary and tertiary students for the former and some brilliant primary school students for the latter group. Members of this group have mastery of one of the languages and understand the other language partially, with the former being slightly higher on the bilingual competence ladder. Normally, children of the low class have adequate exposure to their native language orally at home before going to school but fail to achieve literacy in the language as well as master any skill in English at school because of several constraints. In contrast, children of elite parents never mature in their native language before going to school and thus lack both oral and literacy competence in it. Some of them, however, eventually succeed in gaining mastery of English via adequate exposure to it at home and in their elitist schools. For this category of students, English replaces the parent's language as native language of the child.

The two groups above used to constitute the bulk of the bilingual population, until the recent past two or three decades there was an emergence of a fourth category of bilinguals, 'limited' bilinguals (Baker 2001) or 'semi-linguals (Dada 2006), which is fast becoming a threat to the phenomenon of bilingualism altogether (Adegbite 2008b).

Lastly, a distinction can also be made between 'simultaneous' bilingualism, where children acquire the native indigenous language and English at the same time, and 'sequential' bilingualism, where children mainly learn English later at school after an initial acquisition of the native language. The latter type is dominant in Nigeria.

English Learning and Cognitive Development
Most scholars seem to agree that bilingualism is not detrimental to cognitive development, although researches to justify its advantage have been largely inconclusive (Steinberg 1993, Baker 2001). Bilingualism is said to be beneficial to speakers if it is additive and can be detrimental if it is subtractive. In additive bilingualism, the second language is learnt with little or no pressure to replace or reduce in importance the first language; whereas, in subtractive bilingualism, the second language is learnt with pressure to replace or demote the first language. The latter type results in the loss of cultural identity, severing of one's roots in culture and traditions and alienation from one's first reference group. Because many children are encouraged to learn English without giving due regard to their mother tongue, the children end up failing to achieve mastery of either language. Furthermore, the overbearing use of English as medium of instruction in early formal education encourages rote learning of content of subjects to the detriment of comprehension and critical thinking.

Furthermore, there is the need here to move beyond the goal of attainment of surface fluency in English language learning to advanced competence in the language. Cummins (1981) distinguishes between the acquisition of 'Basic Interpersonal Communication Skills (BICS) and acquisition of 'Cognitive Academic Language Proficiency' (CALP). The former indicates the ability to use a language to communicate and interact freely in non-intellectually demanding situations, while the latter indicates the ability to engage in high cognitive demanding academic encounters that require, for example, complex narration and description; and expository analytical techniques such as definition, analysis, classification, justification, exemplification, argument interpretation of data, outlining, summarizing and theorizing. It has been remarked that a consequence of the straight for English programme embarked upon in Nigerian nursery and primary schools, apart from rote learning is the ultimate attainment of BICS and deficiency in CALP (Adegbite 2003). Both levels of achievement would be possible in a well-planned additive and sequential bilingual educational policy.

Problems of Learning and Use of English in Nigeria
The problems encountered by learners/users of English in Nigeria

are manifold: linguistic, psychological, sociological, political and administrative and pedagogical (Akindele and Adegbite 1999). The linguistic problems are revealed in (i) the intra-lingual errors committed by learners (through overgeneralization or ignorance of rules restriction, incomplete application of rules and the building of false systems or concepts) in the use of the language (Richards 1985); and also in (ii) interlingual errors (e.g. interference). Such errors which occur at various linguistic levels have been analyzed via the perspectives of several theories, prominent among which are contrastive analysis, error analysis and inter-language/transitional competence.

Apart from physiological problems which learners may have, errors attributable to psycholinguistics can be linked mainly with the factors of motivation and attitude. The fact that most Nigerian learners of English have instrumental motivational reasons for learning the language shows their low level of achievement in it. Despite the apparently positive attitude of many users to it vis-a-vis their mother tongues, the impersonal and distant communicative role which English plays in the lives of individuals and the society as a whole keeps the standard of the language low. For the other remaining reasons, one can identify the lapses in formulation and implementation of policies by the government, deficiencies in the language curriculum, lack of adequate competent teachers, the poor administration of the school system and the lack of genuine concern by the parents.

English Language Teaching in Nigeria

In this final chapter, we shall discuss briefly four issues considered relevant to English language teaching (ELT) in Nigeria, from the perspective of psycholinguistics. The issues are: (i) the philosophy of ESL; (ii) the variety for ESL; (iii) the discipline of ESL; and (iv) theories, approaches and methodologies of ESL.

7.1 The Philosophy

A basic philosophy of teaching the English language in Nigeria is that it is taught as a second language. Thus, English as a second language (ESL) stands for a philosophy of learning, teaching and use of English in Nigeria. The conceptualization of ESL rests on three major principles: (a) promotion of efficient bilingualism-biculturalism, (b) the assignment of complementary roles to indigenous languages and English, and (c) the primacy of the mother tongue (Afolayan, 1988).

The first principle above sets the basic development-oriented linguistic (or lingua-cultural) goal for every individual in the country. It seeks to achieve societal bilingualism-biculturalism in each citizen for effective participation in the local (immediate community) and national life (external community). The second principle ensures that adequate roles are assigned to the mother tongues and English in the nation. The national policy (i.e. the constitution) on politics, education and language ought to assign adequate and appropriate roles to mother tongues and English at the tiers of government, and also at different forms and levels of education. The third principle expresses the importance of a mother tongue for a proper cognition of positive self-image, cultural identity and national pride by every citizen as a prelude to projecting self or gaining access to the world through a second language.

7.2 The Variety for ELT in Nigeria

Varieties of English in Nigeria have been identified from different

viewpoints: ethnic, social, registeral and functional lines. From the functional perspective, the three recognized varieties are English as mother tongue (EMT), English as second language (ESL) and English as foreign language (EFL). Of these three varieties, the ESL variety is considered as a suitable institutional variety to be promoted for the development of Nigeria (Afolayan 1991, 1995).

The perception of the ESL variety here is not that of an interference variety that is full of errors or a conglomeration of varieties that cannot be deciphered. Instead, it is a variety that has its standard and non-standard forms all of which can be investigated and described in their own right. However, the standard form, which emerges from the appropriate codification of educated usage, should be the model for education and it should aim at international intelligibility, while accommodating appropriate local features.

7.3 The Discipline of ESL

As a discipline in the school system, ESL should be planned as a subject and as a medium of instruction in complementarity with the indigenous languages. In the meantime, though English will be presented as a subject in the curriculum at levels of education, its role as a medium of instruction must be properly considered at each level based on the capacity of the indigenous language(s) available to play such roles efficiently. In terms of objectives, the discipline should be developed as (i) a means of inculcating the spirit of nationism in learners, (ii) a means of gaining access to modernism and (iii) a tool of internationalism.

The components of the ESL discipline are: (i) Practice of English Language/ Use of English (to acquire the knowledge and skills of the language), (ii) Description of English Language (to learn about the language, i.e. learning the rules and metalanguage) and (iii) Literature in English.

Practice in English emphasizes the efficient mastery of the four skills of listening, speaking, reading and writing. This aspect should constitute the major focus of the English programme in primary and secondary schools. At the university undergraduate level, after which it is assumed that students have gained sufficient mastery of English skills, the description of rules should be focused. The postgraduate level of the programme should focus on the theories underlying both the practice and description of English language.

The Literature in English component contains any record of human experience, oral or written in English or translated into it in any of the literary genres of prose, poetry and drama. The subject matter may be fictional or non-fictional and the context may be African or non-African, though the African context ought to be emphasized. While literature may be integrated into the extensive reading subcomponent of English language practice in primary education, it should be taught as a compulsory subject separate from English language in the secondary school curriculum.

The Use of English component is a feature of tertiary education in Nigeria. It denotes the various programmes for the practice of English at this level. Technically, three areas may be identified in the component within the framework of ESL (Hutchinson and Waters 1987): (a) Remedial English (RE), (b) Developmental English (DE) or English for academic purposes (EAP) and (c) Vocational English (VE) or English for occupational purposes (EOP). While the RE is designed to cater for the deficiencies of learners in the learning of English at the earlier levels of education, the DE course caters for the demands made by learners on English as a medium of instruction in their various academic courses. The demands require the level of students' mastery of English to be raised to an appreciable standard that will enable them to engage gainfully in study skills and activities encompassing advanced listening and reading comprehension, note taking, advanced writing and summary work and library studies. Both RE and DE are crucial for all new entrants to tertiary institutions. Lastly, the VE is tailored to meet the specific needs and interests of learners who want to engage in specific professional or occupational assignments such as engineering, tourism, business and commerce.

7.4 Theories, Approaches and Methodologies of ESL
7.4.1 Theories

Four theories of teaching that are dominant in ESL studies are Contrastive Analysis (CA), Error Analysis (EA) and Interlanguage (Transitional Competence).

Contrastive Analysis

Contrastive Analysis is concerned with the comparison of two or more languages so as to show in a systematic way the differences and similarities in their phonological, syntactic and lexical

structures (Lado 1957, Olagoke1983). The psychological learning theories of 'transfer' and 'interference' are applied to L2 learning based on the following assumptions:

a. That, in learning L2, the primary cause of difficulty and errors is interference or transfer of features from the learners' L1 to L2.
b. That a scientific and structural analysis of the L1 and L2 is necessary to predict the errors and difficulties a learner will encounter.
c. That where there are similarities between the L1 and L2, learning will not present any problem as there will be facilitation, but where there are differences, learning will be difficult or impeded; that is, there will be negative transfer.
d. That the more different the languages are, the more difficult learning the L2 will be.
e. That what the learners need to learn and the teacher has to teach is the sum of the differences between the languages.

However, it has been observed in some studies that many errors predicted by CA do not occur in the performance of the L2 learners, while countless others not predicted do occur. Thus many people have been led to conclude that a priori prediction of errors or difficulties is unrealistic and impracticable and that, instead of hypothesizing errors which might not occur, it might be more fruitful to collect errors that have actually occurred in learners' performance, analyze them and account for them linguistically.

Error Analysis

Errors are unwanted forms or deviations from the norms or the rules of a given language in phonology, grammar, lexis or usage. Corder (1973) distinguishes between systematic and fundamental errors and random errors or mistakes, slips of the tongue or pen. Even native speakers can make slips, false starts or experience lapses because of memory limitations, distractions or other physiological or psychological causes, but they are assumed to know the rules of their language. In EA, errors are collected and classified according to their relative frequencies and seriousness. Thus, a fair insight given unto aspects of L2 which learners find difficult can provide a fairly reliable basis on which remedial materials can be constructed and remedial teaching done. For errors that are due to interference (i.e. inter-lingual errors), error

analysis will rely on contrastive analysis for its applicability, but for intra-lingual errors and learning/teaching errors, error analysis will be applied. Richards (1985) identifies intra-lingual and developmental errors of different types as: overgeneralization, ignorance of rule restriction, incomplete application of rules and the building of false concepts.

However, there is the danger of paying too much attention to learners' errors to the general neglect of the positive aspects of the learners' performance (cf. Headbloom 1979, Olagoke 1983). Teachers may tend to become so critical and error conscious as to inhibit fluent speech and free communication. Too much emphasis on errors committed may make many learners afraid or reluctant to use the language readily for fear of making mistakes.

Interlanguage

Interlanguage represents a change of attitude towards errors and the producers (Olagoke 1983). Instead of looking at errors as unwanted forms, which must be drilled out of existence, interlanguage views making of errors as an inevitable and necessary part of the process of learning L2. In trying to perform in a language which they have not yet mastered, learners gradually, slowly, tediously, through trial and error, further practice and training, move closer and closer to the system used by native speakers of the language. Errors thus give a useful indication of learners' stages of linguistic development at that moment. Moreover, as learners are rational human beings, reacting intelligently and creatively to the language they are learning, errors provide useful evidence of the strategies of learning they develop and how they are reacting to the target language data to which they are exposed. An understanding of the process will enable the teacher to devise appropriate and effective measures to overcome the problems.

7.4.2 Approaches and Methodologies

Two approaches come quickly to our mind in terms of their relevance to ESL teaching in Nigeria. First is the sequential bilingual approach which underlines the complementarity of the mother tongues and English as well as the relatedness of the skills acquired and learnt in both languages (Adegbite 1993). In this approach, the acquisition of mother tongue and learning of English should be sequenced in such a way that skills acquired earlier in both

languages facilitate the acquisition of later skills. For example, it has been shown (Cummins 1984, Royer and Carlo 1991) that:

(i) the knowledge of oral skills facilitate the acquisition of literacy skills in a language;

(ii) the acquisition of literacy skills in L1 facilitates the learning of literacy skills in L2.

In this regard, the following proposal is made:

a. that nursery education should emphasize oracy in the teaching of L1;

b. that primary education should emphasize literacy in the L1 and oracy in L2;

c. that secondary education should consolidate literacy in L1 and promote both oracy and literacy in L2; and

d. that tertiary education should consolidate both oracy and literacy in L2.

This means that L1 and L2 skills should be introduced in Nigerian education as follows:

L1 listening and speaking – Nursery
L1 reading and writing – Primary onset
L2 listening and speaking – Primary onset
L2 reading – Primary 2
L2 writing – Primary 3.

We may also consider the following integrated model suggested by McLaughlin (1987) useful as a guide to second language teaching:

Table 3: An Integrated Model of Second Language Teaching

Input from instruction and exposure	Practice and internal processing	Assimilation and accommodation	Spontaneity and fluency

in the above model, instruction, exposure, practice and internal processing all interact to lead to the assimilation and accommodation necessary for spontaneity and fluency in a second language.

Some other approaches, despite the different limitations, may be relevant for different contexts of English language teaching and learning and can also complement each other in the programme; for example, the Grammar-Translation, Audio-Lingual, Direct Method, Natural (or Communicative) Approach,

Communicative Language Teaching (CLT) and Task-Based Instruction (TBI) approaches and the cloze procedure (cf. Cook 2003).

Grammar-Translation

This approach was based on traditional grammar. English language teaching was Latin-based. Grammatical categories described were those of Latin, featuring moods (e.g. the subjunctive) and cases (e.g. the dative) which did not obtain in English teaching proceeded by notional definitions of categories and learners were made to memorize the definitions and were drilled in them. Rules of propriety and correctness were prescribed but, more often than not, the rules misrepresented facts of the English language. The method encourages the rote memorization and drills in the mastery of grammar rules and the analytical translation of selected texts, but abandoning the speaking and reading practice.

Audio-lingual Method

The constituent structure of sentence types is taught as order of succession (or hierarchical ordering) among form classes within sentence frames with copious lexical and phrasal substitution counters provided for use in pattern practice.

Based on Skinnerian behaviourism, drills are methodologically essential to underscore the conception of language as habit, which has to be learnt, in fact, overlearnt, in order to ensure permanent mastery. The grammar also emphasizes the formal relationship between elements of structure, hence the ubiquitous exercises in parsing and clause analysis.

Infrastructural support for the method came in readily from electronic engineering and nearly every school teaching English and French had, at least, tape recorders and recorded cassette tapes of models of teaching. The method is characterized by imitation and memorization of basic conversational sentences as spoken by native speakers; description of the distinctive elements of intonation, pronunciation, morphology and syntax on the basis of the sentences memorized; and massive practice in listening and speaking rather than in writing and translation.

Direct Method

This method is based on another version of structural linguistics,

pioneered by British Firthian linguists. The theory holds that the main concern of descriptive linguists is to make statements of meaning; therefore, language teaching should be contextualized for expressing intra and extra-linguistic meaning relations. The method is applied to L2 or foreign language teaching by emphasizing the presentation of words and sentences in ways that will show their meaning without translation or grammatical analysis. In other words, structures are informally taught using exercises which stimulate discussion rather than formal patterns and rule learning.

The Natural (or Communication) Approach

The approach is based on the notion that an adult learner can repeat the route to proficiency of the native-speaking child. The idea is that learning would take place without explanation or grading and without correction of errors, but simply by exposure to 'meaningful input'. The natural was essentially psychological, based on the idea, derived from first language acquisition, that attention to meaning would somehow trigger the natural cognitive development of the language system.

Communicative Language Teaching (CLT)

The approach is primarily and necessarily social and is concerned with the goal of successful communication. It represents a shift of attention from language system as an end to the successful of that system in context, i.e. shift of emphasis from form to communication. Language learning success is to be assessed neither in terms of accurate grammar and pronunciation for their own sake, nor in terms of explicit knowledge of the rules, but by the ability to 'do' things (i.e. participate in communicative activities) with the language, appropriately, fluently and effectively.

Task-Based Instruction

The approach rests on the opinion that learning is organized around tasks related to real world activities, focusing the student's attention upon meaning and upon successful task completion. It argues that the keys to acquisition are attention to meaning rather than form, negotiation with another speaker and the motivation created by real world relevance.

Total Physical Response

Children may also be fascinated more by the Total Physical Response (TPR), which exercises the physiological features of their body. Consider the following nursery rhyme used to teach parts of the body:

My head, my shoulder my knees my toes
My head, my shoulder my knees my toes
My head, my shoulder my knees my toes
They all belong to God.

Cloze Procedure

The word 'cloze' was coined from the Gestalt school of psychology and applied as a testing devise for determining the reading ability of native speakers of English. The technique has, however, been applied to L2 reading comprehension and language proficiency. The cloze procedure is not only useful as a devise for language testing, but it can also be used for teaching a language, e.g. English, as L2.

In a cloze passage, some spaces are omitted which learners are asked to fill, e.g.:

Long, long ago, _1_ when the world was very young, _2_ lived two great friends. _3_ names were Mr Monkey and Mr Python. They _4_ with their mothers in _5_ a jungle, where the _6_ trunks _7_ very big.

Approaches to Course Design

Some approaches to course design have been identified, e.g. the language-centred (which emphasizes linguistic features), skills-centred (which emphasizes skills to be taught), learner-centred (which emphasizes learners) and the learning-centered approaches (Hutchinson and Waters 1987). It is suggested here that the learning-centered approach which focuses on the learning process be adopted in the English language classroom in Nigeria. In this regard, all the factors relevant to the learning process are taken into consideration, e.g. learners, teachers, other human resources, materials, infrastructural facilities and the socio-political and cultural contexts. The diagram in Fig. 6 by Hutchinson and Waters (1987:74) illustrates the approach.

Presentation of ESL in the Classroom

Lastly, in this chapter, we should mention the presentation of

English, which refers to the usual activities carried out in the language classroom, e.g. teaching, discussion, interaction and assessment at the individual, group and class levels. Various methods applicable to diverse contexts have been suggested and are being utilized in the ESL classroom in Nigeria. But, as much as possible, the participatory and collaborative teaching and learning should be encouraged, while appropriate technological equipment and teaching aids are utilized to stimulate and sustain learners' interests and efforts.

Fig. 6: The Learning-Centred Course Design Process

```
                          Identify learners

Theoretical      Analyse           Analyse          ...eoretical
views of         learning          target           vie
language         situation         situation        language


Identify attitudes/wants/          Identify skills and
potential of learners              knowledge needed to
- - - - - - - - - - - - - -        function in the target
Identify needs/potential/          situation
constraints of learning/
teaching situation


                         Write syllabus/materials to
         Evaluation  ←   exploit the potential of the   →  Evaluation
                         learning situation in the
                         acquisition of the skills and
                         knowledge required by the
                         target situation
```

Questions for Practice

Chapter One

1a. What is psycholinguistics?
 b. Account for its inclusion in the language programme of a Nigerian tertiary institution.
2. Discuss the contribution of psycholinguistics to the English language learning situation in Nigeria.
3. Describe the major concerns of a psycholinguistics course in English language.
4a. Define psycholinguistics.
 b. Account for it as an interdisciplinary field of language studies.
5. List four major topics in psycholinguistics and explain briefly the content of each topic.
6. Write brief notes on any four of the following topics:
 a. cognition b. behavior c. language system d. language structure e. language skills
7. To what extent would you agree to psycholinguistics as an integrated study of language?
8. How would you differentiate psycholinguistics, linguistic psychology and psychology of language as different areas of study with overlapping concerns.
9. Psycholinguistics is basically the study of language, thought and cognition. Do you agree?
10. Why is psycholinguistics regarded as a branch of Applied Linguistics?

Chapter Two

11. Provide adequate linguistic evidence to justify the theories of 'linguistic relativism' and 'linguistic universals'.
12. Describe clearly the role of language in the expression of ideation.
13. "Language serves for the expression of content: that is of the speaker's experience of the real world, including the inner world of his own consciousness." (Halliday 1970: 143)
 Using copious examples from English, describe how language expresses human experience through the categories of the sentence.
14. Describe the roles of the categories of participants, processes

and circumstances in the representation of human experience.
15. Write brief notes on any three of the following:
a. ideation   b. linguistic universals   c. translation   d. Sapir-Whorfian hypothesis
16. How does the semiotic triangle help to explain the relationship between language, thought and cognition?
17. Explore the characteristic features of two languages in Nigeria which make them similar and dissimilar.
18. Identify the socio-cultural features that will create difficulties for translation from your native language into English, and vice-versa.
19. Show clearly why it will not be so difficult to translate from your native language into English.
20. Exemplify 'linguistic relativism' with vocabulary items from two languages of different people.

Chapter Three
21. Using the claims of two schools of thought, show how the field of philosophy connects with psycholinguistics.
22. Distinguish between animal communication and human language?
23. "Granted that learning of some sort can be done via habit formation, association, practice and conditioning, that mode of acquisition also restricts subsequent performance as the learner will only be able to perform parrot-like only the specific skills learnt..."
a. Identify and present briefly the claims of the approach being criticized here.
b. What in your own opinion are the benefits and shortcomings of the approach?
c. Present briefly the approach that the speaker of the quotation goes ahead to propound.
24a. Explain briefly the concepts of (a) innatism and (b) behaviourism.
b. In what ways can the approaches denoted by the concepts be synthesized for efficient English language learning in Nigeria?
25. Give a critique of either Skinner's theory of 'behaviourism' or Chomsky's theory of 'innatism' in relation to language acquisition/learning.

26. What are the constituents of the Language Acquisition Device? List and explain them.
27. Discuss either of the classical or instrumental conditioning experiment with its implication for language learning.
28. Explain the Gestalt theory of learning and show its relevance to learning English in Nigeria.
29. Describe the implications of Gagne's presentations to language acquisition/learning in Nigeria.
30. Assess the contributions of cognitivism to the learning of English in Nigeria.
31. Discuss with ample illustrations the characteristic forms and functions of child language.
32. In what ways are the phonological strategies of children unique to them?
33. Describe with ample examples Lenneberg's adaptation of Piaget's approach to the stages of language development in children.

Chapter Four
34 a. Distinguish between 'competence' and 'performance'.
b. Examine the implications of the concepts for learning English as a second language in Nigeria.
35 a. Define 'linguistic competence' and 'communicative competence'.
b. Of what relevance are the two concepts to language acquisition/learning?
36. Outline the contributions of information theory to English language learning and use in Nigeria.
37. With adequate examples from English, identify the different stages of speech production.
38. List and explain the factors involved in speech reception and decoding.
39. Carefully analyze the role of grammar and semantics in speech comprehension.
40. "Knowing a word implies processing some information about it." Discuss.
41. Give an account of the factors involved in lexical storage and retrieval.
42. Write brief notes on the following:

a. memory in speech decoding   b. alphabetic writing   c. schema theory   d. the dictionary and the word

43   a. Describe writing systems.
b. Which of the systems are utilized in the orthographies of your native language and English?

44.   To what extent can an understanding of the process of writing lead to efficient writing in English?

Chapter Five

45.   Describe the human brain and its functions.

46.   a. What makes the human brain special?
b. In what ways is the human brain special from those of other animals?

47.   "Like the chemist who seeks to understand the physical structure of chemical elements, the linguist would be happiest if he could catch a specimen of talking man with a transparent skull and feed him with tracers that would impart a glow to the speech centres of the brain and make each transmission from neuron to neuron visible to the eye ..."
a. Give two reasons why you think the linguist should be interested in studying the brain.
b. What findings are available on the relationship between language and the brain?

48.   What findings are available on the relationship between language and the brain in respect of the following?
a. A human infant   b. human female and male sexes   c. left and right handedness   d. human brain damage

49   a. Distinguish between language laterization and localization.
b. What evidence from research supports the two phenomena above?

50.   Discuss the evidence that supports different language functions of the two brain hemispheres.

51.   Broca's and Wernicke's areas are very crucial to the understanding of language localization and functions in the brain. Discuss.

52.   Explain language disorder/impairment and identify its different types and manifestations.

53.   Account for the different occurrences and symptoms of aphasia in the human brain.

54.   Describe the processes in the brain that take place in the following:

a. Reading aloud   b. speech comprehension   c. writing a name d. speaking   e. singing

55.   Write briefly on the following:
a. cerebrum   b. the brain hemispheres   c. speechlessness   d. stuttering

56.   Identify different types of language impairment and describe their symptoms.

Chapter Six

57.   a. Contrast the concepts 'language acquisition' and 'language learning'.
b. Identify five factors that influence language learning and discuss any three of them.

58.   There is no clear-cut distinction between language acquisition and learning. Discuss.

59.   Using adequate illustrations, describe the major differences between acquisition and/or learning English as L2 in a non-host and host communities.

60.   Describe the learner as a major factor in ESL learning and use.

61.   Critically discuss the effect(s) of the 'critical age' on language acquisition and learning.

62.   'Motivation' is crucial to learning a second language. Discuss.

63.   Write brief notes on any four of the following topics:
a. Agents of exposure in ESL learning
b. Maturation in ESL learning
c. Explicit and implicit learning of English
d. Acculturation and accommodation in ESL learning
e. The monitor theory in ESL learning

64   a. What are learning theories?
b. Discuss the relevance of TWO learning theories to ESL learning in a non-host environment.

65.   Examine the role of theories in second language acquisition/learning.

66   a. Describe one major theory of language acquisition or learning.
b. What are the prospects and limitations of the theory to English language learning in Nigeria?

67.   In what way(s) does a socio-psychological theory explain the learning/use of English in Nigeria?

Chapter Seven

68. What is the philosophy of English language in Nigeria?
69. Explain clearly the philosophy, principles and components of ESL in Nigeria.
70 a. Explain the concept of ESL.
    b. What does the ESL concept say about the roles of English vis-à-vis indigenous languages in Nigeria?
71. 'Nigerian English' is a variety of the language that has standard and non-standard forms. Do you agree with this statement?
72. To what extent would you agree that ESL is a bona fide variety of English?
73 a. Explain the concept of 'English as a discipline'.
    b. Suggest appropriate components for the discipline at the different educational levels in Nigeria.
74. Identify the roles and components of English in the Nigerian educational curriculum.
75. Outline the major issues that are relevant to English Language Teaching (ELT) in Nigeria.
76. Examine the strengths and weaknesses of Contrastive Analysis (CA), Error Analysis (EA) and Interlanguage to ESL teaching in Nigeria.
77. "Errors are scaffolding to learning". How true is this statement in relation to the models of acquisition/learning of ESL?
78 a. Define the concepts of 'additive bilingualism' and 'sequential bilingualism'.
    b. Construct an additive sequential bilingual approach to teaching language skills in an indigenous language as L1 and English as L2 in Nigeria.
79. List five hypotheses on L2 learning and show their relevance to the topic.
80. How does McLaughlin's (1987) Integrated Model give insight to teaching English as L2 in Nigeria?
81 a. Sketch McLaughlin's (1987) Integrated Model of second language teaching.
    b. Draw a plan/scheme of how you would apply this model to teach the mood system of English to a Senior Secondary School class in Nigeria?
82 a. List five major theories that can be applied to ESL teaching.
    b. Comment on the relationships between theory and

methodology in ESL.
83. Every methodology of ESL has an original basis in a theory. Discuss.
84. Critically examine three methodological approaches and observe their relevance to ELT in Nigeria.
85 a. Enumerate different approaches to syllabus design.
    b. Why do you think a learning-centred approach would be desirable for syllabus design in an ESL context?
86. Construct a lesson for the presentation of the English past tense to a class of Junior Secondary School pupils in Nigeria.

References

Adegbija, E. (1994) The Context of Language Planning in Africa: An Illustration with Nigeria. In Putz, M. (ed.) *Language Contact, Language Conflict*. Amsterdam, Philadelphia: John Benjamins, 139-63.

Adegbite, W. (1993) Towards an Efficient Bilingual Programme for Teaching Language Skills in Nigerian Primary Schools. *Literacy and Reading in Nigeria* 6:337-50.

_____. (2003) Enlightenment and Attitudes of the Nigerian Elite on the Roles of Languages in Nigeria. *Language, Culture and Curriculum* 16, 2: 185-96.

_____. (2008a) The Limitations of Yoruba-English Bilingual Undergraduate Students in the Expression of Yoruba Greetings. In Ndimele, O. M., Udoh, I. I. and Anyawu, O. (eds.) *Critical Issues in the Study of Linguistics, Languages and Literatures in Nigeria: A Festschrift for Conrad Max Benedict Brann*. Port-Harcourt: M & J Grand Orbit Communications Ltd. and Emhai, 165-184.

_____. (2008b) Macro-language Policy and Planning and Lack of Proficiency in Language Learning and Use by Nigerian Students. *Forum on Public Policy*, Urbana, Illinois. http://forumonpublicpolicy.com/archivespring08adegbite/pdf.

Adeniran, A. (1991) Psycholinguistics: Its Development and Implications for Language Learning and Language Teaching in Nigeria. *RELS MONOGRAPH*. Ibadan: Sam Bookman.

Adesanoye, F. (2004) The English Language in Nigeria: The Case of a Vanishing Model. In Owolabi, K. and Dasylva, A. *Forms and Functions of English and Indigenous Languages in Nigeria*. Ibadan: Group Publishers, 507-22.

Afolayan, A. (1988) Teaching English as a Second Language to Adult Learners. In Akinpelu, J. A., J. T. Okedara and M. A. Omolewa (eds.) *Language and Adult Education: Essays in Memory of S. H. O. Tomori*. Ibadan: Ibadan University Press.

_____. (1991) The Concept of English as a Second Language (ESL) as an Applied Linguistic Policy for Development, *Journal of English as a Second Language (JESEL)* 3, 6-21.

_____. (1995) Ineffectiveness in the Presentation of English in Nigeria: Sources and Remedies. In Bamgbose, A. A. Banjo and A. Thomas (eds.) *New Englishes: A West African Perspective* Ibadan: Mosuro, 113-29.

Akindele, F. and Adegbite, W. (1999) *The Sociology and Politics of English in Nigeria: An Introduction*. Ile-Ife: Obafemi Awolowo University Press.

Allwright, R.L. (1977) Motivation: The Teacher's Responsibility? *ELT XXX1*, No. 4, 131-60.

Ansre, G. (1975) Four Rationalizations for Maintaining European Languages in Education in Africa. *African Languages* 5, 2:10-17.

Appel, R. and Muysken, P. (1987) *Language Contact and Bilingualism*. London: Edward Arnold.

Baker, C. (2001) Foundations of Bilingual Education and Bilingualism. Clevedon: Multilingual Matters.

Baker, J. K. (2007) Writing to Learn Materials. Teacher Toolkit. judithbakr@aol.com

Bamgbose, A. (1985) Barriers to Effective Education in West African Languages. In Williamson, K. (ed.) *West African Languages in Education*. Wien: Beitrage Zur Africanistik Band 27, 22-38.

_____. (2001) Language Policy in Nigeria: Challenges, Opportunities and Constraints. Keynote Address at the Nigerian Millenium Sociolinguistics Conference, University of Lagos, August 16-18.

Bartlett, F. (1932) *Remembering*. Cambridge: Cambridge University Press.

Bickerton, D. (1983) Creole Languages. *Scientific American* 249,1: 116-22.

Bolinger, D. (1975) *Aspects of Language*. New York:Harcourt Brace. Jovanovich.

Brown, R. (1973) *A First Language: The Early Stages*. Cambridge, Mass: Harvard University Press.

Campbell, R. and Wales, R. (1970) The Study of Language Acquisition. In Lyons, J. (ed.) *New Horizons in Linguistics*. Harmondsworth: Penguin. 240-262.

Carrol, J. B. (1956) (ed.) *Language Thought and Reality: Selected Writings of B.L. Whorf*. Mass: MIT.

Chomsky, N. (1959) Review of Skinner's Verbal Behaviour. *Language*. 35. 26-58.

_____ . (1965) *Aspects of the Theory of Syntax*. Cambridge, Mass: MIT.

_____ . (1967) The Formal Nature of Language. In Lenneberg, E. (ed.) *Biological Foundations of Language*. New York: Wiley

_____ . (1980) *Rules· and Representations*. New York: Columbia University Press.

_____ . (1981) *Lectures on Government and Binding*. Dordrecht: Foris.

Cook, G. (2003) *Applied Linguistics*. Oxford: Oxford University Press.

Corder, P. (1973) *Introducing Applied Linguistics*. Harmondsworth: Penguin.

Crystal, D. (1992) *An Encyclopedic Dictionary of Language and Languages*. Oxford: Blackwell.

Cummins, J. (1981) *Bilingualism and Minority Language Children*. Ontario: Ontario Institute for Studies in Education.

_____ . (1984) *Bilingualism and Special Education*. Clevedon: Multilingual Matters. *Encylopaedia Britannica* 10, 1978 .

Curtis, J. F. (ed.) (1978) *Processes and Disorders of Human Communication*. London: Harper and Row.

Dada, S. A. (2006) Language Contact and Language Conflict: The Case of Yoruba-English Bilinguals. In Ndimele, O., C. Ikekeonwu, and B. M. Mbah (eds.) *Language and Economic Reforms in Nigeria*. Port Harcourt: M & J. Grand Orbit Communications Ltd. and Emhai, 68-85.

Dulay, H., Burt, M. and Krashen, S. (1982) *Language Two*. New York: Oxford University Press.

Ekundayo, S. A. (1987) English in Suppressive Interference. *Ife Studies in English Language (ISEL)* 1, 1 and 2, 5-14.

Elugbe, B. (1995) Nigeria Pidgin: Problems and Prospects. In Bamgbose, A., A. Banjo and A. Thomas (eds.) *New Englishes: A West African Perspective*. Ibadan: Mosuro, 113-29.

Ellis, R. (1985) *Understanding Second Language Acquisition*. Oxford: Oxford University Press.

Encyclopaedia Britannica 10, 1978.

Field, J. (2003) *Psycholinguistics*. London and New York: Routledge.

Fillmore, C. (1977) The Case for Case. In Cole, P. and J. Saddock (eds.) *Syntax and Semantics: Grammatical Relations*. New York: Academic Press, 59-81.

Fry, D. B. (1970) Speech Reception and Perception, In Lyons, J. (ed.) *New Horizons in Linguistics*. Harmondsworth: Penguin, 29-52.

Gagne, R. M. (1970) *The Conditions of Learning*. London and New York: Holt, Rinehart and Winston.

Gardner, R. C. (1985) *Social Psychology and Second Language Learning*. London: Edward Arnold.

Gardner, R. A. and Gardner, B. T. (1972) Teaching Sign Language to a Chimpanzee. In Adams, P. (Ed.) *Language in Thinking*. Penguin.

Gardner, R. C. and Lambert, W. E. (1972) *Attitudes and Motivation in Second Language Learning*. Rowley, Mass: Newburn House.

Greene, J. (1972) *Psycholinguistics: Chomsky and Psychology*. Penguin Education.

Halliday, M.A.K. (1970) Language Structure and Language Function. In Lyons, J. (ed.) *New Horizons in Linguistics*. Harmondsworth: Penguin, 140-165.

Headbloom, A. G. (1979) Error Analysis and Theoretical Considerations in Second Language Learning. In Ubahakwe, E. (ed.) *The Teaching of English Studies*. Ibadan: Ibadan University Press, 27-45.

Hulstijn, J. H. and Schmidt, R. (eds) (1994) Consciousness in Second Language Learning. *AILA REVIEW* 11.

Hockett, C. F. (1963) The Problem of Universals in Language. In Greenberg, J. H. (ed.) *Universals of Language*. Cambridge, MA: MIT.

Hutchinson, T. and Waters, A. (1987) *English for Specific Purposes. A Learning-centred Approach*. Cambridge: Cambridge University Press.

Hymes, D. (1972) On Communicative Competence. In Pride, J. B. and J. Holmes (Eds) *Sociolinguistics*. Harmondsworth: Penguin, 269-293.

Johnson-Laird, P.N. (1970) The Perception and Memory of Sentences, Lyons, J. (ed.) *New Horizons in Linguistics*. Harmondsworth: Penguin, 261-70.

Klein, W. (1986) *Second Language Acquisition*. Cambridge: Cambridge University Press.

Krashen, W. (1973) Lateralization, Language Learning and the Critical Period: Some New Evidence. *Language Learning 23*, 63-74.

_____, S. (1976) Formal and Informal Linguistic Environments in Language Acquisition and Language Learning. *TESOL Quarterly* 10, 157-68.

_____. (1977) The Monitor Model for Adult Second Language Performance. In Burt, M., Dulay, H. and Finocchiaro, M. (eds) *Viewpoints on English as a Second Language*. New York: Regents, 152-161.

_____. (1979) A Response to McLaughlin, 'The Monitor Model': Some Methodological Considerations. *Language Learning* 29: 151-67.

_____. (1982) *Principles and Practices of Second Language Acquisition*. Oxford: Pergamon Press.

_____. (1983) Newmark's Ignorance Hypothesis and Current Second Language Acquisition Theory. In Gass, S. and L. Selinker (eds.) *Language Transfer in Language Learning*. Rowley, MA: Newbury House, 135-52.

Lado, R. (1957) *Linguistics Across Cultures*. Michigan: Ann Arbor.

Lakoff, G. (1971) On Generative Semantics. In Steinberg, D. O. and L.A. Jackobovits (eds.) *Semantics: An Interdisciplinary Reader in Philosophy, Linguistics and Psychology*. New York: Cambridge.

Lambert, W. E. (1974) Culture and Language as Factors in Learning and Education. In Aboud, F. E. and R. O. Meade (eds) *Cultural Factors in Learning and Education*. Bellingham, Washington: 5th Western Washington Symposium of Learning.

Langacker, R. W. (1987) *Foundations of Cognitive Grammar*. Stanford, CA: Stanford University Press.

Lass, N. J. (ed.) (1979) *Speech and Language: Advances in Basic Research and Practice*, Vol. 2. London: Academic Press Inc.

Laver, J. (1970) The Production of Speech. In Lyons, J. (ed.) *New Horizons in Linguistics*. Harmondsworth: Penguin, 53-75.

Lenneberg, E. H. (1967) *Biological Foundations of Language*. New York: Wiley.

Lightbown, P. M. (1985) Great Expectations: Second Language Acquisition Research and Classroom Teaching. *Applied Linguistics* 6, 173-89.

Longman Dictionary of Contemporary English (2007) Essex: Pearson Education Limited.

Lyons, J. (ed.) *New Horizons in Linguistics*. Harmondsworth: Penguin, 261-70.

Marshall, J.C. (1970) The Biology of Communication in Man and Animals. In Lyons, J. (ed.) *New Horizons in Linguistics*. Harmondsworth: Penguin, 229-241.

Mclaughlin, B. (1987) *Theories of Second Language Learning*. London: Edward Arnold.

Ogden, C. K. and Richards, I. A. (1923) *The Meaning of Meaning*. London: Routledge and Kegan Paul.

Okanlawon, B. O. (1997) The Monitor Theory and English Language Learning/Teaching in a Non-host ESL Environment. *Ife Studies in English Language* 4, 23-29.

Osgood, C.E. (1971) Where Do Sentences Come From? In Steinberg, D. O. and L.A. Jackobovits (eds.) *Semantics: An Interdisciplinary Reader in Philosophy, Linguistics and Psychology*. Cambridge: Cambridge University Press.

Olagoke, D. O. (1983) Contrastive Analysis, Error Analysis and Interlanguage. Seminar paper presented at the Department of English, Obafemi Awolowo University, Ile-Ife.

Oyebade, F.O. (1990) Language Acquisition: The Phonology of a Yoruba Child. *Research in African Languages and Linguistics* Vol. 1, No 1, 17-34.

Oyesakin, A. (1992) Who Is Afraid of the Mother Tongue? Paper presented at a seminar in honour of Prof. Ayo Bamgbose, University of Ibadan, Ibadan, January 9-11.

Oyetade, S. O. (2001) Attitude to Foreign Languages and Indigenous Language Use in Nigeria. Igboanusi, H. (ed.) *Language Attitude and Language Conflict in West Africa*. Ibadan: Enicrownfit, 14-29.

Parker, F. and Riley, K. (2000) *Linguistics for Non-linguists*. Boston: Allyn and Bacon.

Paul, H. (1886) *Principles of the History of Language* (Translated by H. A. Strong 1988) London: Halle.

Pavlov, I. P. (1927) *Conditioned Reflexes* (Translated by G. V. Anrep) London: Oxford University Press.

Quirk, R. (1968) *The Use of English*. London: Longman.

Richards, J.C. (1985) *The Context of Language Teaching*. Cambridge: Cambridge University Press.

Rivers, W.M. (1964) *The Psychologist and the Foreign Language Teacher*. Chicago and London: The University of Chicago Press.

Romaine, S. (1988) *Pidgin and Creole Languages*. London: Longman.

Royer, J. M. and Carlo, M. S. (1991) Transfer of Comprehension Skills from Native to Second Language. *Journal of Reading* 34:6.

Salami, O. (2005) Language Disorder: An Introduction. In Olateju, M. and Oyeleye, L. (eds.) *Perspectives on Language and Literature*. Ile-Ife: Obafemi Awolowo University Press, 37-52.

_____. (2008) Tongue Lesion and Articulation Disorders in English as a Second Language. *Papers in English and Linguistics* 9, 1-8.

Sapir, E. (1921) *Language: An Introduction to the Study of Speech*. New York: Harcourt Brace and World.

Shannon, C. and Weaver, W. (1949) *The Mathematical Theory of Communication*. Urbana: University of Illinois Press.

Schmidt, R. (1994) Deconstructing Consciousness in Search of Useful Definitions for Applied Linguistics. *AILA REVIEW* 11, 11-26.

Skinner, B. R. (1957) *Verbal Behaviour*. New York: Appleton Century Crofts Inc.

Steinberg, D. O. (1993) *An Introduction to Psycholinguistics*. London and New York: Longman.

Stockwell, P. (2002) *Sociolinguistics*. London: Routledge.

Surakat, T. Y. (2007) The Acquisition of English Sounds by a Bilingual Nigerian Child. Paper presented at the 24th Annual Conference of the Nigeria English Studies Association held at the University of Uyo, Uyo, Nigeria, September 18-21.

Todd, L. (1974) *Pidgins and Creoles*. London: Routledge and Kegan Paul.

van Patten, B. (1994) Evaluating the Role of Consciousness in Second Language Acquisition: Terms, Linguistic Features and Research Methodology, *AILA REVIEW* 11, 27-36.

Wardhaugh, R. (1985) *Introduction to Sociolinguistics*. Oxford: Blackwell.

Weinrich, U. (1953) *Languages in Contact: Findings and Problems*. Mouton: The Hague.

Wilkins, O. A. (1974) *Second Language Learning and Teaching*. London: Edward Arnold.

Wong Fillmore, L. (1985) Second Language Learning in Children: A Proposed Model. In Eshch, R. and J. Provinzano (eds.) *Issues in English Language Development*. Rosslyn, VA: National Clearing-house for Bilingual Education.

Index