CHAPTER II

DESCRIPTION OF THE OBJECT STUDY

2.1. Children Linguistic Intelligence and Competence

Naturally, in a book reviewing a whole spectrum of intelligence, it is not possible to devote sufficient attention to any specific one. Indeed, even to treat a single intellectual competence - like language - with sufficient seriousness. It would require at least one lengthy volume. The most to accomplish is to provide a feeling for each specific intelligence, to convey something of its core operations, to suggest how it unfolds and proceeds at its highest levels, to touch upon its developmental trajectory, and to suggest something of its neurological organization.

There is a universal human temptation to give credence to a word to become attached, perhaps because it has helped us to understand a situation better. Intelligence is such a word; use it so often that have come to believe in its existence, as a genuine tangible, measurable entity, rather than as a convenient way of labeling some phenomena that may (but may well not) exist.

Linguistic competence is, in fact, the intelligence - the intellectual competence - that seems most widely and most democratically shared across the human species.

Thus the poet can serve as a reliable guide, or as an apt introduction, to the domain of linguistic intelligence.

There are four aspects of linguistic knowledge that have proved of striking importance in human society. *First, is* the rhetorical aspect of language - the ability to use language to convince other individuals of a course of action. This is the ability that political leaders and legal experts have developed to the highest degree, but that every three-year-old desirous of a second helping of cake has already begun to cultivate.

Second, is mnemonic potential of language - the capacity to use this tool to help one remember information, ranging from lists of possessions to rules of a game, from directions for finding one's way to procedures for operating a new machine.

Third is aspect of language is its role in explanation. Much of teaching and learning occurs through language - at one time, principally through oral instructions, employing verse, collections of adages, or simple explanation; and now, increasingly, through the word in its written form.

Finally, is the potential of language to explain its own activities - the ability to use language to reflect upon language, to engage in "metalinguistic" analysis.
It has gained a firmer understanding of what language is and how it works, as well as some bold hypotheses about the place of language in the sphere of human activities.

The roots of spoken language can be found in the child's babbling during the opening months of life. Somewhat more controversial, but rather widely accepted, is the claim that linguistic mastery involves special processes of acquisition, ones apart

from those entailed in other intellectual spheres. The most vigorous and most persuasive spokesman for this proposition is Noam Chomsky. He claims that children must be born with considerable "innate knowledge" about the rules and forms of language and must possess as part of their birthright specific hypotheses about how to decode and speak their language or any "natural language". Chomsky's claims grow out of the fact that it is difficult to explain how language cab be acquired so rapidly and so accurately despite the impurity of speech samples that the child hears, and at a time when children's other problem - solving skills seem relatively underdeveloped. Other scholars, such as Kenneth Wexler and Peter Culicover, have made the further claim. Children would not be able to learn language at all if they did not make certain initial assumptions about how the code must - and must not - operate, such assumptions presumably being built into the nervous system.

Future writers are those individuals in whom the linguistic intelligence has flowered through work and, perhaps as well, through the luck of the genetic draw. Other individuals, less happily, may exhibit peculiar difficulties with language. Sometimes the costs are not severe; Albert Einstein is said to have begun to speak very late; but if anything, his initial reticence may have allowed him to view and conceptualize the world in a less conventionalized way. Many children, otherwise normal or close too normal, demonstrate selective difficulties in the learning of language.

In normal right-handed individuals, language is intimately tied to the operation of certain areas in the left hemisphere of the brain. Generally, if areas as

large as an entire hemisphere of the brain are removed during the first year of life, a child will be able to speak quite well. Apparently, early in life the brain is sufficiently plastic and language sufficiently important that language will develop in the right hemisphere, even at the cost of compromising those visual and spatial functions that would normally be localized there. Specifically, individuals dependent upon the analytic mechanisms of the right hemisphere proceed almost entirely from semantic information: they decode sentences in the light of meanings of the principal lexical items, while proving unable to utilize cues of syntax. Only those children whose language exploits left hemisphere structures prove able to pay attention to syntactic cues such as word order. Thus both left and right hemidecorticates are able to understand sentences whose meaning can be inferred simply from knowledge of the meaning.

In defiance of "gradual evolution" some eminent scholars, such as the linguist Noam Chomsky, and the anthropologist Claude Levi Strauss, believe that all of language had to be acquired at a single moment in time. It seems more likely that human linguistic competence results from a coming together of a number of discrete systems, whose evolutionary history dates back many thousands of years. There may also be certain formal or structural features that reflect or build upon musical capacities of the sort evinced by far more remote species, such as birds. Such cognitive abilities as classification of objects and the capacity to associate a name or sign with an object also seem of ancient origin: these may facilitate that provocative

mastery of language like systems recently reported in a number of chimpanzees systems recently reported in a number of chimpanzees.

The principles in Piaget's theory of cognitive development can be applied to children education. First, the foremost issue in education is communication. In Piaget's theory, a child mind is not a blank slate, to the contrary, the child host of ideas about the physical and natural world, but these ideas differ from those adults. Second, the child is always unlearning and relearning in addition to acquiring knowledge. Children come to school with their own ideas about space, time, causality, quantity, and number. Third, the child is a knowing creature, motivated to acquire knowledge. The best way to nurture this motivation for knowledge is to allow the child to interact spontaneously with the environment education needs to ensure that it does not dull the child's eagerness to know by providing and overly rigid curriculum that disrupts the child" rhythm and pace of learning.

Hypothetical-deductive reasoning is Piaget's formal operational concepts that adolescents have the cognitive ability to develop hyphoteses, or best guesses, about ways to solve problems, such as an algebraic equation. They then systematically deductive conclude which is the best to follow in solving the problem.

Another characteristic of adolescent thought is adolescent egocentrism. David Alkind(1978) believes that adolescent egocentrism has two parts : an imaginary audience and a personal fable. An imaginary audience is an adolescence belief that others are as preoccupied with her as she is. Attention getting behavior, common in

adolescence, reflects egocentrism and the desire to be on staging, noticed and visible. A personal fable is an adolescent's sense of personal uniqueness and indestructibility. Neo – Piagetians still believe that children's cognitive development contains some general properties. (Flavell 1992). They stress that there is a regular, maturation, based increase with age in some aspects of the child" information-processing capacity, such as how fast or efficiently the child processes information (Fisher & Bidell, 1997). As the child's information processing capacity increases with increasing age, new and more complex forms of cognition in all content domains are possible because the child can know hold in mind and think about more things at once. Canadian developmentalist Robbie Case (1985) argues that adolescents have increasingly more available cognitive resources then they did as children because they can process information more automatically, they have more information-processing capacity, and there are more familiar with a range content knowledge.

In Vygotsky's view, a child's mental or cognitive structure is made of relations between mental functions. He relation between language and thought is believed to be especially important in this regard. Vygotsky said that language and thought initially develop independently of each other but eventually merge. Vygotsky believed that children who engage in a large amount of private speech are more socially competent than those who do not use it extensively are. He argued that private speech represents an early transition in becoming more socially communicative. According to Vygotsky, young children talk to themselves to govern

their behavior and to guide themselves. In contrast, Piaget stressed that young children's egocentric speech reflects social and cognitive immaturity.

Children developing power of thought opens up new cognitive and social horizons. Their thought becomes more abstract, logical, and idealistic. Children are more capable of examining their own thoughts, others' thoughts, and what others are thinking about them, and more likely to interpret and monitor the social world. Formal operational thought come into play between the ages of 11 and 15. Formal operational thought is more abstract than a child's thinking.

Children are no longer limited to concrete experience as the anchor of thought. Instead, they may conjure up make believe situations, hypothetical possibilities, or purely abstract propositions and reason about them. Children increasingly think about thought itself. Accompanying the abstract nature of children thought is the quality of idealism. Children begin to think about ideal characteristics for themselves and others and to compare themselves and others to these ideal standards. In contrast, children think more in terms of what is real and what is limited. During children, thoughts often take fantasy flights into the future. It is nor unusual for children to become impatient with these newfound ideal standards and to be perplexed about which of many ideal standards to adopt. At the same time as children begin to think more abstractly and idealistically, they also begin to think more logically. Children begin to think more as a scientist thinks, devising plans to solve problems and systematically testing solutions.

One of the most important features of the organization of the brain is its division into two halves or hemispheres. These two parts are connected by a set of nerve fibers called the *curpus callosum*, not only are the hemisphere anatomically different but they control different functions.

The right hemisphere is involved in the processing of spatial information, non-speech sounds such as music, and face recognition. For example when brain damage is concentrated on the right side of the brain, people become spatially disoriented their drawing skill are impaired, and they have trouble following a map. The processing of emotional information is also under the control of the right hemisphere.

2.2. Reading Process and Comprehension

The literate second language reader is a product of a culture, which may have very different ideas about reading from those that the unwary teacher takes for granted. The rapid silent reading of many different kinds of texts, some of which the reader has selected for himself. The most of us regard, as normal reading behavior for the serious student may, for example, be completely (and literally) foreign to the reader from a culture. The reading means reading aloud, with appropriate expression, from a limited number of pre selected texts, chosen for they're agreed upon religious or cultural significance.

The bad is that: no one can *teach* anyone how to read or even how to read more effectively. Reading is a complex cognitive skill (no one fully understands it)

which we cannot break down into s series of steps that a teacher can take into classroom and teach. But the good news is that: anyone can *learn* to read, and/or to read more effectively. Human beings are preprogrammed to perform language acts. Like listening, speaking, reading and writing, and if provided with real opportunities, and a minimum of guidance, in stimulating, non-threatening context, they can learn to do these things with relative ease. Some students will of course make better readers than others, but everyone can learn and everyone can improve.

The first point to be made about the reading process is that reading comprehension is not essentially different from other kinds of comprehension. The mental tasks involved are not peculiar to reading but fundamental human cognitive acts. Comprehension of any kind depends on knowledge. Comprehension means relating what we don't know, or new information, to what we already know, which is not random collection of facts but "theory of the world" (Smith 1982:84) in each of our heads called "cognitive structure." To draw new information from a page of script or print, we must of course have learned to identify the categories and relationships. It represented in the visual forms on that page (that knowledge must be a part of our cognitive structure), but there is nothing especially unusual about learning to identify, and to interpret visual forms in the world around us. As Frank Smith has observed (1975:1) reading is simply one of the many ways in which human beings go about their basic business of "making sense of the world." The point of all this for the reading teacher is that no matter how well a student may know a language. He cannot read in that language with good comprehension if the subject of the text is one he

knows absolutely nothing about and therefore can have no real interest in. Comprehension is always directed and controlled by the needs and purposes of an individual and therefore crucially depends on that individual's having acquired what William Grabe calls a "critical mass" of information on the subject of his inquiry, that is, an adequate amount of what is sometimes called "background information" or more technically. "schemata". Thus reading comprehension is most likely to occur when students are reading what they want to read, or at least what they see some good reason to read.

Learning to read is one of the central rites of passage in our society. It separates young children from the world of older children and adults. At a general level, the development of reading skill can be viewed as occurring in five stages (Chall, 1979). The age boundaries are approximate and do not apply to every child-for example, some children learn to read quite fluently before they begin to school. Nonetheless, the stages convey a general sense of major developments in reading and about hen they usually occur.

Stage 0. In this stage, lasting from the birth to the beginning of first grade, children master several prerequisites for reading. Many learn to identify the letters of the alphabet, quite a few learn to writer their names (more or less correctly), some learn to read a few words that appear on signs.

Stage 1.in first and second grade, children acquire the ability to sound out words, that is, to translate letters into word. They also complete their learning of letter names and sound during this stage.

Stage 2. In second and third grade, children learn to retrieve individual words and to read somewhat more fluently. However, at this stage, reading is still not used much for learning. The demands of the mechanics of reading on children processing resources are great enough that they do not have much left over for processing the content.

*Stage 3.*In fourth through eight grade, children become increasingly able to obtain new information from print. As Chall put it. " In the primary grades, children learn to read; in the higher grades, they read to learn" (Chall, 979, p. 46). They still are limited in the degree to which they can do this, however.

Stage 4. During the high school years, children fully competent readers. Their ability to understand material told from many perspectives makes possible much more sophisticated discussions of literary works, as well as discussions of history, economics, and politics, than previously. It is no accident that great novels are presented for the first time in high school. This is partly due to the fact that adolescents' increasing life experience makes possible for them to understand the themes of such works more deeply than they could have earlier, but it is also partly due to their increasingly advanced reading comprehension.

Reading is primarily a cognitive process, which means that the brain does most of the work. In reading, the remarkable instrument must, almost simultaneously, take in the information provided by the eyes. It relate to what it already knows about the subject, and thereby construct a full meaning for the text which then becomes a part of what it knows about the subject and can thus in turn be used to make sense of

what comes next. The brain of the reader makes use of the *minimum* number of visual cues required to convert printed text to information, just as it does in identifying other objects of vision, like streets, or buildings, or people that it knows. In Smith's concise little aphorism, "what the brain tells the eye" is much more important than ,"what the eye tells the brain" (1971), provided that the brain has acquired some skill in converting printed language into real languages.

Efficient use of the eyes in reading is not a matter of seeing some quantity of forms but of seeing what is there automatically, in a series of fast and accurate fixations. Once we have as readers acquired a fair degree of this so-called "automatically", we have most of what it takes to read an appropriate text fluently. Good readers read for meaning -- they do not decode as a computer would – which means that they do not actually look at all of every sentence or of every phrase, let alone every word, or letter, or punctuation mark.

A complex process includes two major sub processes. The first is simple *identification*, determining rapidly and accurately just what the text says. Good readers know the language in its printed form and convert print to language skillfully. They recognize words and phrases on the printed page for the most part automatically, with fewer errors and more quickly than weaker readers do. Most readers can recognize words more accurately and more rapidly in context, but as noted, even in context-free-situations, good readers. Smith defines *information* as simply "the reduction of uncertainty" (1982:14). It is this level he is mainly thinking does make sense to think of reading at this level as a kind of information processing,

the transferring of specific "bits" of information (Smith 1982: 195) from one system to another, much as this is done is systems of artificial intelligence.

There are actually three kinds of memory – a so-called *sensory store* in which the visual image itself is held for a split second for processing. A *long-term memory* in which vast amounts of information can be stored perhaps indefinitely, and a functionally crucial *short-term* mediates between the other two and in which new information must be processed, some for just a few seconds, and some for transfer into long term memory. Because its capacity is limited, and because new information quickly pushes out old, short-term memory represents a major potential bottleneck in reading.

The information processing approach is not really a theory of cognitive development; it is an approach to studying thinking and remembering-a set of questions and some methods of analysis. Theories who study cognitive power ask how well a child does intellectual tasks compared to others. Those who study structure ask what type or structure of logic the child uses in solving problems and how those structures change with age. The information processing theories ask what the child is doing intellectually when faced with a task, what intellectual processes she brings to bear, and how those processes might change with age.

In fact the basic metaphor underlying the entire information processing approach has been that of the human mind as computer. Like a computer, we can think of the "hardware" of cognition (the physiology of the brain, the nerves and connective tissues) and the "software" of cognition (the program that uses the basic

hardware) to understand thinking in general. We need to understand the processing capacity of the hardware and just what programs have to be "run" to perform any given task.

In studies of children's thinking, there are at least two branches to the information processing family tree. On one side is a group of researches and theories with a somewhat Piagetian flavor who have given up the notion of stages but are still committed to the notion of qualitatively changing sequences of development. On the other side are researchers with a strong intellectual-power flavor, who have been looking for those basic information processing capacities or strategies that may help to explain or underlie differences in IQ.

CHAPTER III

PRESENTATION AND ANALYSIS OF THE DATA