CHAPTER 2

REVIEW OF LITERATURE

2.1 Theoretical Perspectives on Language Learning

Language has often been acknowledged as Nature’s unique gift to mankind. Without language man would not have established his supremacy over the other species of the animal kingdom. As an object of inquiry it has always captured the attention of theorists across various disciplines. Naturally, both the East and the West have put many claims and theories about language forward. These include theist as well as atheist claims. For instance, pious Hindus believe that Sanskrit came out from Lord Shiva’s drum. Nobody will demand scientific evidences for a theist belief such as this. Linguists following the Chomskyan paradigm argue that man is genetically endowed with language. This proposition has triggered scientific inquiry on topics such as knowledge of language, language learning and its use. What is the nature of language? Where does knowledge of language come from? Does man have language by birth, or is it a later accomplishment? What are the roles of nature and nurture with respect to language learning? These and related questions have always triggered the fascination of the academic world comprising philosophers, anthropologists, psychologists and linguists. The history of epistemology gives us different accounts on the nature and source of human knowledge. In the following sections we will examine what different schools have proposed about language and language learning. For gaining clarity in exposition we will divide the theoretical perspectives under two major paradigms namely, the behavioural paradigm and the constructivist paradigm.
2.1 The Behavioural Paradigm

The behavioural schools of thought in general conceptualises language as a body of facts that are learned from the speech community. This paradigm is represented by three major schools namely, empiricism, structuralism and behaviourism. We will examine each of these in detail.

2.1.1 The Child’s Mind as a “tabula rasa”

It was John Locke, the pioneer of empiricism, who attributed the term “tabula rasa” to the newborn child’s mind. His monumental work ‘An Essay Concerning Human Understanding’ (1689) considers the sources and nature of human knowledge. By arguing that we have no innate knowledge, Locke determines the limits of human knowledge. According to him, at birth, the human mind is like a blank slate and hence the term “tabula rasa”. Eventually, man becomes knowledgeable by virtue of experience. Ideas, which come from experience, are the materials of knowledge. Whatsoever is the object of understanding when a man thinks may be termed as ‘idea’. We get some ideas only from sensation, some only from reflection and some from both. Man understands about things and processes in the external world through sensation. On the other hand, reflection is concerned with the operations of our own minds. In fact, reflection is a kind of internal sense that makes man conscious of the mental processes he is engaged in.

Locke holds that ideas are either simple or complex. What we get from experience are simple ideas. Since these cannot be created mind has a passive role. However, mind becomes active while combining simple ideas into complex
ones. He explains how this is accomplished. The mind is engaged in three different types of action in forming complex ideas.

1. Simple ideas are combined into complex ones. There are two types of complex ideas: ideas of substances and ideas of modes. Substances have independent existence. These include God, angels, humans, animals, plants and a variety of constructed things. Mathematical and moral ideas and all the conventional language of religion, politics and culture are dependent existences. These are called modes.

2. The mind brings two ideas, whether simple or complex, one by one without uniting them so that it can take an independent view of each at once. This action gives birth to ideas of relations.

3. General ideas are produced by abstraction from particulars. While doing this, the mind leaves out particular circumstances of time and place. Otherwise these would limit the application of an idea to a particular individual. In addition to these abilities there are faculties such as memory, which allows for the storing of ideas.

What has been given above is the general machinery of how simple and complex ideas of substances, modes, relations and so forth are derived from sensation and reflection. Locke also explains how a variety of particular kinds of ideas, such as the ideas of solidity, number, space, time, power, identity, and moral relations arise from sensation and reflection.

Locke acknowledges that issues of language are of considerable importance in attaining knowledge. Abstract ideas and classification are of central importance
in his discussion of language. This is so because abstract general ideas serve as things under which we rank a plethora of particular existences. The intuitive idea we get from Locke’s discussion on language is that words stand for ideas. He distinguishes words according to the categories of ideas. For instance, there are ideas of substances, simple modes, mixed modes, relations and so on. In this context Locke maintains a distinction between real and nominal essences. Since terms are assumed to have an important role in classification, Locke pays more attention to nouns than to verbs. He recognizes that all words do not relate to ideas. For instances, there are words that may be termed as particles which signify the mutual connections that mind establishes between ideas or propositions.

2.1.2 Language as a structural phenomenon

Man lives in the midst of different phenomena. It is natural to ask whether these occur in isolation. The central idea that structuralism has floated is that many phenomena occur in relation to one another and not in isolation. Implicitly, all related phenomena are part of a whole with a definite structure. Nevertheless, it is not necessary that this structure is a well-defined one. Ferdinand de Saussure is the originator of the 20th century structuralism. Though the roots of structuralism are in linguistics, as a school of thought, it cuts across various disciplines. Structuralists in general argue that the structure of a system of phenomena and the changes it may undergo are concerned with the goal of furthering the development of that system.

Let us examine Saussure’s major claims on language, which he has presented in his book Course in General Linguistics (1916):
1. There are two aspects of language, namely, langue and parole. The term langue indicates the underlying system of language whereas the use of language is referred to as parole (talk).

2. How the various elements of language are seen at present is more important than how it has evolved historically. This makes Saussure’s approach essentially synchronic rather than diachronic.

3. Linguistic signs are composed of two parts, a signifier and a signified. The term signifier refers to the sound pattern of a word; the concept or meaning of the word is indicated by the term signified. The signifier exists either in mental projection - as when we silently recite lines from a poem to ourselves - or as actual, physical realization as when we talk.

4. The anatomy and structure of language can be analyzed and studied by focusing on the internal constitution of signs rather than focusing on their relationship to objects in the world.

We get a more specific sense of structuralism from Leonard Bloomfield who was inspired by Saussure. Bloomfield’s ideas are now thought to be too restrictive. Nevertheless we will examine the basic notions that appear in Bloomfield’s Language (1933).

Bloomfield admires the strangeness and beauty of language and acknowledges its importance in human life. Man is in many ways different from animals. Much of what distinguishes man from the animals can be attributed to the effects of language. All his efforts were to establish linguistics as a science for which he dissociated it from contemporary practices. His book hosted a spirit of
confrontation against other approaches, prevailing philosophy, pedagogy, language teaching, and the humanities at large. He was successful in evolving a methodology for the scientific study of language. Let us quote Bloomfield: ‘The methods of linguistics, in spite of their modest scope, resemble those of a natural science, the domain in which science has been the most successful.’

In order to support this claim on linguistics he juxtaposes two theories about human conduct, including speech. One is the mentalist theory and the other is the mechanistic theory. The mentalist theory attributes the variability of human conduct to the interference of some non-physical factor, such as a spirit or will or mind.’ This theory does not follow any cause-and-effect sequences. Conversely, the mechanistic theory supposes that the variability of human conduct, including speech, is by virtue of the fact that the human body is a very complex system. From the mechanistic perspective human actions are construed to be part of cause-and-effect sequences exactly like those we may observe, say, in the study of physics and chemistry. This is how methods of linguistics assume the standards of pure sciences. He does not want to subscribe to any one psychological doctrine lest the findings of the linguist could be distorted by some prepossessions about psychology.

According to Bloomfield mental images, feelings, thoughts, concepts, ideas, or volitions are merely popular names for various bodily movements. Bloomfield conceives sound waves as the bridge between the bodies of the speaker and the hearer. Taking cue from the sciences of physiology and physics he divides the speech-event into three parts:
1. The speaker moves his vocal chords to force the air into the form of sound waves.

2. These sound waves set the surrounding air into a similar wave motion.

3. These sound waves strike the hearer’s eardrums and set them vibrating, with an effect on the hearer’s nerves.

The account given above suggests that Bloomfield has a stimulus-response account of speech and hearing; hearing here acts as a stimulus. Speech is conceived as a set of substitute stimuli alongside practical stimuli such as hunger. We respond to speech sounds just as we do in the case of any other stimulus. Language enables one person to make a reaction when another person has the stimulus. ‘The division of labour, and with it, the whole working of human society, is due to language’, concludes Bloomfield.

Bloomfield proposes that the act of speech occurs between two sets of ‘real or practical events’. The speech-event is worthless in itself. However, it is a means to great ends. ‘The normal human being is interested only in stimulus and response; though he uses speech and thrives by it, he pays no attention to it’, because it is ‘only a way of getting one’s fellow-men to help.’

Bloomfield's account of language acquisition gives due weightage to repetition and habit. He claims that the child learns a language by virtue of critical interventions from the part of parents. The child may be producing certain sounds quite unintentionally. Parents interpret these sounds in their own ways and associate them with certain concrete objects. For instance, when the child produces the sound ‘ma’ the adults interpret it as “mother” and encourage the
child to produce the sound again and again. Due to an inherited trait and under various stimuli, the child utters and repeats vocal sounds. This results in a habit. Whenever similar sounds strike the child’s ears she makes mouth-movements to imitate them. Since the mother uses her words when the appropriate stimulus is present, the child forms a new habit of saying the word for the object ‘in sight’. Through further habits, the child names a thing even when it is not present. This is termed as abstractor displaced speech. This scheme requires no creativity. Bloomfield denies that children ever invent a word. Moreover, ‘to the end of his life, the speaker keeps doing the very things which make up infantile language-learning.’

Bloomfield presents a very complex account of language. He argues that it is difficult to predict whether a speaker will speak or what he will say. Consequently, there are infinite possibilities. Moreover, the chain of consequences is very complicated. As a result, we are incapable of understanding the mechanism, which makes people say certain things in certain situations. If at all we have to foretell a person’s actions we must know the exact structure of his body at the moment. Alternatively, we must know the exact make-up of his organism at some early stage and a record of every change and every stimulus that had affected it. In addition to this we will have to note the effects of ‘private habits left over from the vicissitudes of education and other experience.’ According to Bloomfield ‘the occurrence of speech and the practical events before and after it depend upon the entire life-history of the speaker and the hearer.’
The complexity of Bloomfield’s account of language increases when he enters the realm of meaning. According to Bloomfield the meaning of a linguistic form is not a mental event. It is the situation in which the speech event occurs. Since everyone is both a speaker and a hearer, the situation and the response are closely related. Usually, the speaker’s situation presents a simpler aspect. This provides scope for defining meanings in terms of a speaker’s stimulus. Nevertheless Bloomfield account of meaning makes it extremely complex. He assumes that the study of speakers’ situations and hearers’ responses is equivalent to the sum total of all human knowledge. The situations that prompt people to utter speech include almost anything in the whole world plus the momentary state of the nervous system. This implies that, if we want to give a scientifically accurate definition of meaning for every linguistic form, we must possess a scientifically accurate knowledge of everything in the speaker’s world. This obviously is far beyond human accomplishment. Bloomfield argues that the only way to tide over this problem is to exclude meaning from the scientific study of language. He insists his followers to do the same.

There is yet another reason for excluding meaning from a scientific study of language. Since every practical situation is in reality unprecedented the practical situations that make up the meaning of a speech-form are not strictly definable. Every utterance of a speech-form involves a minute semantic innovation prompted by a novel situation. The degree of novelty is not subject to precise measurement. Furthermore, every person uses speech-forms in a unique way.
Though there are many problems with meaning, Bloomfield admits that to study language is to study the co-ordination of sounds with meanings. A phonetic form, which has a meaning, is a linguistic form. He stipulates that in human speech, different sounds have different meanings. Theoretically we can say that linguistics would consist of two main investigations namely, phonetics and semantics. Phonetics has to do with the study of speech-events without reference to their meanings and semantics will take care of the relation of a speech event to the features of meaning. Bloomfield holds that in practice, this scheme won’t work for two reasons. Our knowledge of the world is too imperfect for us to make accurate statements about the meaning of a speech-form. The other reason is that purely phonetic observation cannot recognize the difference between distinctive and non-distinctive features of a language; we can do that only when we know the meaning. This naturally leads to a dilemma.

To escape this dilemma, Bloomfield advocates that we have to trust our everyday knowledge to tell us whether speech-forms are “the same” or “different”. As pointed out by Chomsky and several other linguists, Bloomfield apparently overlooks the empirical significance of the fact that even children handle meaning with fairly modest stores of knowledge. Though Bloomfield excludes meaning from his scientific study of the structure of the language there are occasions where he has to depend on meaning for identifying a phoneme.

2.1.3 Language as a verbal behaviour

It is a good-old belief that the child learns a language through imitation and repetition. Furthermore, language was looked as a sort of habit formation. These are commonplace assumptions. We don’t have to invoke a theory to uphold
these assumptions. Nevertheless the annals of epistemology highlight a group of psychologists who erected a theoretical framework supporting certain popular beliefs about language and language learning. Today we call these psychologists as behaviourists and identify psychologists like Watson, Pavlov, Skinner, and Thorndike as pioneers of this school of thought. The behaviourists formulated a Stimulus-Response (SR) theory for all kinds of learning, which included language learning. The chief proponent of the behaviourist school of thought was Skinner, who coined the term verbal behaviour for language.

Living organisms manifest various behavioural manifestations. Skinner argues that antecedents control behaviour; the antecedent is the cause and the behaviour is its effect. This generalization includes human behaviour as well as animal behaviour. Since he is not ready to accept the notion of “free will” he does not find any reason for assigning a special status to human behaviour. Skinner’s approach towards understanding and controlling behaviour is very mechanical. According to him what controls the behaviour of a living organism is a set of antecedents and therefore it is not necessary to theorize on what happens internally to the organism. All what we have to do is identify certain antecedents that can be held responsible for a specific behaviour. For instance, “drinking” can be linked to “thirst”. Skinner’s theory handles clearly specified stimuli and their corresponding responses. Stimuli are characteristics of situations that can influence the organism. He does not entertain things such as ideas, fables that are not observable, hypothetical mechanisms such as development, intention, goal or similar mentalist ideas.

Do genetic factors have any role in controlling behaviour? Being a radical
behaviourist, Skinner categorically rejects genetic factors on grounds that there are no organisms that can escape genetic constraints. We can control the behaviour of an organism by intervening in its environment. He disagrees with the idea of converging psychological phenomena to physiological happenings and refrains himself from giving physiological explanations to behaviour. Skinner admits that there can be certain occasions where one will have to invoke physiological considerations for a complete understanding of behaviour. But paradoxically enough, he does not do so but goes on seeking psychological explanations.

Skinner does not follow the deductive method of reaching at conclusions from statistics. Using sophisticated laboratory equipments and experimental strategies he demonstrates how behavioural rules operate on a certain organism. Nevertheless, critics have identified an inherent limitation of Skinner’s methodology. All his findings were based on experiments with the behaviour of animal species lower to man. These cannot be generalized to account for human behaviour.

Skinner distinguishes between two kinds of learning: classical conditioning and operant conditioning. The notion of classical conditioning originates from Ivan Pavlov, who had won Nobel Prize for his significant work on how animals learn. In the early 1900’s, Pavlov conducted a series of experiments with dogs that led to the formulation of the theory of ‘conditioned reflexes.’ His research actually began as a study into the digestive system of dogs. He found that salivation and the workings of the stomach were interconnected processes, which worked in unison by way of the autonomic nervous system. If the dog did not
produce saliva then the stomach would not get the message to begin the digestive process.

In a series of experiments with dogs Pavlov cut holes in their cheeks and inserted tubes to measure the rate of salivation. He would ring a bell immediately prior to serving food to the dogs and measure the salivation rate. He experimented to see if some sort of outside stimulus could produce the same result in the dog. He started by ringing a bell at the same time he served food to the animal. After a while he would ring the bell without serving any food to the dog. Interestingly, he noticed that the dog would produce saliva when it heard the bell ring, even when no food was presented to it. Pavlov concluded that this was a learned response. This was a conditioned response triggered off by the tone of the bell, which serves as a conditioned stimulus. He also found that if the bell were rung too often without the production of food, the dog would stop salivating.

In the 1920’s Pavlov conducted a further series of experiments with dogs. He trained the dogs to associate a tone with a food reward. The experiments showed that the dogs would show no response to the tone (a conditioned stimulus) by itself. But when combined with the food (an unconditioned stimulus), a measurable unconditional response (saliva production) would result. When the tone and the food were repeatedly presented together, the dogs formed an association between the two that is, between the conditioned stimulus and the unconditioned stimulus. Such conditioning is known as Pavlovian conditioning, which became a basis for the developing field of behavioural science.
It was Edward L. Thorndike (1874-1949), who had extensively studied operant conditioning, sometimes called instrumental conditioning or instrumental learning. His most famous work investigated the behaviour of cats trying to escape from various homemade puzzle boxes. When the cats were put in boxes they took a long time to escape from each in the beginning. Eventually, with experience, the cats were able to escape in less and less time over successive trials. This led Thorndike to propose his law of effect. Thorndike theorized that successful responses were “stamped in” by the experience and these occurred more frequently. Unsuccessful responses were “stamped out” and subsequently these occurred less frequently. In short, some consequences strengthened behaviour whereas some consequences weakened behaviour. This effect was (and sometimes still is) described as involving a strengthening of the association between the response and its effect. There is obvious parallelism between Thorndike’s law of effect and Pavlovian conditioning.

The same idea behind the law of effect is described in Skinner’s notion of reinforces. Reinforces are those events that strengthen a response, i.e., whose rate controls the rate of that response. Any event whose presences and absences control how often a response occurs is by definition reinforce for that response. Skinner defines the question of which events would reinforce which responses of which animals under which conditions.

Operant conditioning, as conceived by Skinner, is the modification of behaviour brought about by the consequences that follow upon the occurrence of the behaviour. In simple terms, behaviour operates on the environment producing various effects. Skinner renames Pavlovian conditioning as respondent
conditioning and shows that it can be distinguished from operant conditioning. One reason is that respondent conditioning like the dog’s salivation does not have much effect on the environment; nor is its occurrence changed by its effectiveness or ineffectiveness in the environment. In addition to this there is a conceptual difference between these two types of conditioning: Operant conditioning is explained by its consequences (that is, functionally) whereas respondent conditioning is explained by its antecedents (that is, causally). Alongside this distinction we can find a parallel distinction between involuntary behaviour or reflexes and voluntary behaviour or acts.

Skinner identifies two kinds of reinforcements: positive reinforcement and negative reinforcement. Positive reinforcement occurs when some behaviour (response) is followed by a pleasant stimulus that rewards it. In the Skinner box experiment, when the rat presses a lever it receives a food reward. This is a case of positive reinforcement.

Negative reinforcement occurs when some behaviour (response) is followed by an unpleasant stimulus being removed. In the Skinner box experiment, negative reinforcement is a loud noise continuously sounding inside the rat’s cage until it presses the lever, when the noise ceases. In both kinds of reinforcement, the response or behaviour is increased.

According to Skinner’s theory of operant conditioning, both punishment and extinction can decrease a particular behaviour or a response. Punishment occurs when the addition of an unpleasant stimulus or the removal of a pleasant stimulus follows some behaviour or response. For example, in the Skinner box
experiment, when the rat pushes the lever it receives a painful electric shock directly afterward. Extinction occurs when behaviour (response) that had previously been followed by a pleasant stimulus is followed by no stimulus at all. In the Skinner box experiment, every time the rat pushes the lever it is rewarded with a food pellet. What will happen if the supply of food pellet stops even though it pushes the lever? The rat will learn that there is no food to come and eventually it will cease pushing the lever. Though punishment as well as extinction serves to decrease behaviours, Skinner stresses that extinction is the more powerful of the two. Perhaps both operant conditioning and classical conditioning essentially mean the same because there are theoreticians who argue that the difference between the two boils down to procedures. It is logical to argue that without classical conditioning there cannot be operant conditioning and vice versa.

What are the claims of behaviourists on language? They conceive language learning is a kind of over learning which takes place through continuous repetition. Every instance of learning manifests a stimulus-response relationship and language learning is not an exception. Language is controlled by stimuli that typify specific characteristics of a situation. The child responds to these stimuli in certain specific ways. These responses are reinforced. For instance, a doll is a stimulus for the child who watches it. As a response to this stimulus she says the word, “doll”. When the parents appreciate her saying of the word the response gets reinforced. Similarly, for a child who has been denied milk, the denial of milk is a stimulus. As a response to this stimulus the child says the word, “milk”. If somebody gives her milk, reinforcement of the response takes place. Taking cue from Bloomfield the behaviourists assume that language is generated from a
physical need and is the means to achieve a physical goal. The grown up people have a crucial role in reinforcing the responses of the children.

The impact of Skinnerian notions on language teaching is easily traceable. Teachers have always been carried away by the idea of giving reinforcement to the production of language. That is why they insist on the production of language in accordance with standard norms through reinforcing sounds, words, and sentences of the learners. Behaviourists have absolute conviction that language skills can be developed only through practicing them. Recall Skinner’s experiments with animals. Rewarding the animal with food or denying it are ways of setting the environment in order to control the behaviour of the animal. The same strategy is extended to the context of language teaching because language learning is crucially dependent on the environment. Second language classrooms prevailing in our country are moulded following the behaviourist assumptions. That is why see teachers going for drilling and other practicing strategies, giving models for the learners to imitate and reproduce, administering remedial teaching, imposing punishments and the like strategies.

The behaviourist schools promoted a linearly programmed learning. Programmes instructions proposed by the behaviourists were able to gain acceptance across the world in the context of formal teaching and learning of languages. Here follows a brief sketch on programmed instructions:

2.1.3.1 Learning as Conceived in Behaviourism

Behaviour theorists define learning as a more or less permanent change in behaviour. Learning within this theory entails the accumulation of atomized bits
of knowledge that are sequenced and ordered hierarchically. Each item of knowledge is to be learned independently on the assumption that this makes learning more manageable. All the constituent parts of learning are to be mastered before proceeding to the next part objective in the hierarchy, gradually leading to a complex whole. In this theory, learning is seen as developing associations between stimuli and responses. Motivation involves positive reinforcement of the many small steps in learning and forming good habits. Development is seen as occurring through a series of required stages, in a step-by-step process.

Espousing behaviourist principles in education leads to several teaching outcomes. Because the theory ignores heredity and individual consciousness, these characteristics were downplayed in education too. Learner background, student intelligence, and personal interests were not considered key factors affecting instruction. Rather, teaching was characterized as a chain of environmental stimuli used to shape behaviour. As such, instruction became mechanistic. Proponents of behaviourism focused on steps for learning. Oftentimes these steps centred on instructor roles because they established the learning environment in their classroom and could shape behaviour through reinforcement. Because conditions of instruction are the focus of behaviourist models, instruction is also reduced into component parts.

Behaviourism does not view instruction as a whole event. Rather, the process is broken down into increasingly small units that systematically give rise to target behaviours.
Rote memorization and practice also became key elements of behaviourist philosophy in education. While stimuli can be shaped to elicit certain responses, the likelihood of these responses is affected by repetition; the more the response is elicited, the more permanent it becomes and the likelihood of transferring to similar situations (stimulus generalization) increases (Powell, R. A., Symbaluk, D. G., & MacDonald, S. E. (2002)

The major concerns with this theory are that:

- Learning happens when a correct response is demonstrated following the presentation of a specific environmental stimulus.
- Learning can be detected by observing an organism over a period of time.
- Emphasis is on observable and measurable behaviours
- Uses a "black box" metaphor - the learner is a black box, what happens inside is unknown.
- Emphasis is on relationships between environmental variables and behaviour.
- Learning is broken down into ever-smaller, analytic parts that are no longer integrated to form a whole.
- Learning entails much more than a response to a stimulus.
- Learning is task and context dependent.
- Instruction utilizes consequences and reinforcement of learned behaviours.
• Believes behaviour is guided by purpose.

• Cues are antecedents to behaviour and set the conditions for its occurrence.

  Skinner developed the idea of shaping. If you control the rewards and punishments which the environment gives in response to behaviours, then you can shape behaviour (commonly known as behaviour modification).

2.2 The Constructivist Paradigm

Unlike the behavioural schools of thought, the constructivist schools acknowledge the innate potential of the human child. In general, these schools assume that the child constructs knowledge rather than passively receiving and storing information.

When does a human child learn things? Addressing himself to this question Piaget observes that the learner learns things when she is developmentally ready to do so because learning follows development. This observation is perhaps the starting point of cognitive theories. According to Cognitive psychologists learning is a meaningful process of relating new events or items to already existing cognitive concepts. As regards language acquisition, the procedure is selecting appropriate vocabulary, grammatical rules and pragmatic conventions governing language use. They argue that language acquisition is a holistic process, not analyzable as stimulus-response associations. Language learners pay attention to any aspect of language that they are attempting to understand and produce. Eventually they use certain parts of their knowledge through experience and practice. Let us look into the details of Piaget’s theory of knowledge.
2.2.1 Piaget’s Genetic Epistemology

Cognitive psychology, in Piaget’s times focused on theorizing about topics such as memory, problem-solving, visual imagery and categorizing in adults, without regard to the manner in which these abilities developed. Piaget rejected this practice. The core insight he gives us is that we cannot understand what knowledge is unless we understand how it is acquired. This is not enough. We can understand how knowledge is acquired only through psychological and historical investigations. For this we have to test our hypotheses by collecting data, not only about the thinking of human infants and children, but also about the historical development of scientific ideas. He believed that the development of knowledge was a biological process, a matter of adaptation by an organism to an environment. This is why he calls his theory of knowledge as genetic epistemology.

Piaget compartmentalized the course of human intellectual development into four major stages namely, sensory motor stage, the pre-operational stage, Stage of concrete operations, and the Period of Formal Operations. It was argued that certain cognitive traits start appearing at later stages only. For example an infant is not capable of operational thinking whereas an adolescent can think logically and analyze accurately.

Piaget has made a huge impact on child psychology and the understanding of how children develop, but he is not without criticism. Others, such as child psychologists and developmentalists, have identified a number of criticisms against Piaget’s four stages of child development.
2.2.1.2 Criticism of Sensory Motor Stage

Though Piaget’s outline of cognitive growth in infants has gained general acceptance there are a few developmentalists who disagree with his measures of assessing this growth. The so-called “A B” problem suggests that the child at the sensory motor stage does not have understanding of the permanence of objects. But it is felt that Piaget did not consider the fact that the infants were not motivated to search. Another reason may be that they may do not have the knowledge of how to search. Kagan’s theory of object permanence is that 9-month-old infants show an ability to search for hidden objects because they have had a growth in memory capacity, rather than because they have a new cognitive structure as stated by Piaget.

Piaget believed children showed intellectual development through their actions, but perception researchers believe that infants know more than they can physically demonstrate with limited motor actions. They have found that newborn infants try to look for sounds, grasp objects and respond to human faces, and believe that perceptual learning occurs, particularly aural, before birth. It is now accepted that Piaget may have underestimated early perceptual abilities and cognitive development during the first six months of life.

A fundamental criticism raised by Butterworth (1981) is that sensory perception cannot provide objective information about reality. Moreover, a baby cannot tell the difference between sensory events independent of his own activity and sensory feedback contingent on his activity.
2.2.1.3 Criticism of Preoperational Stage

The three-mountain task that Piaget asked three-year-old children to solve was too complex to test children’s ability to see someone else’s perspective. It is now clear that young children can see someone else’s point of view in a simple way. Similarly, the conservation tests may also have been too complex, and further research has indicated that if a conservation task is presented in a simplified, fun manner, children will be able to understand the concept much more easily. However, it does take maturity and experience before children can fully master logical structures and apply them to daily life.

Vygotsky disagreed with Piaget’s concept of ‘egocentric speech’. Vygotsky believed that social speech develops first with the child being initiated into the culture. This is followed by egocentric speech as audible self-talk, which in turn leads into inner speech and internalized higher abilities.

2.2.1.4 Criticism of Concrete Operational Stage

Bryant (1974) differed from Piaget in the design of the experiments. Bryant uses the scientific tradition of experimental and control groups in order to investigate these problems. He has focused on the attainment of concrete operations and more specifically on conservation tasks. Bryant’s study showed that Piaget had underestimated children’s ability to grasp one-to-one correspondence.

Piaget did not take into account the individual differences of children, or the differences caused by heredity, culture and education. It is felt that he put too much emphasis on the individual’s internal search for knowledge, and not enough
on external motivation and teachings. Piaget did little research on the emotional and personality development of children. Cognitive development is to be viewed as a gradual and continuous rather than as having definite demarcation stages. Piaget’s information processing approach provides a good way of assessing intelligence and gathering information about memory development and other cognitive processes, but does not take into account the importance of creativity and social interaction, (Paplia, Olds, and Feldman, 1998).

Schaffer (1992) points out that the children from 2 to 5 are in social groups most of the time. At home most children are learning in the company of their siblings. From 5 onwards even the only child is in school for much of his time. According to this critique, Piaget’s ideas fit in better with a traditional model of children learning individually in rows of desks rather than the progressive one where children are learning in a collaborative and co-operative environment.

During the 1970’s Donaldson gave much more optimistic message about the abilities of preschool children; most of them are capable of solving problems associated with operational thought if they are given optimal help. She was strongly critical of the way Piaget asked children questions in experimental situations. Donaldson also stressed the importance of natural settings in helping preschoolers understand things. Events are to be embedded linguistically in overall contexts, not only physical but also personal and social. Once a situation is disembedded from a natural one into an artificial one of the laboratory or the classroom, it will be more difficult for preschoolers to cope with.
2.2.1.5 Criticism of Formal Operation Thought

It is believed that Piaget’s last stage of formal operations is not an accurate description of cognitive development. Many adults do not attain the level of formal operations, and not everyone appears to be capable of abstract reasoning. These people are possibly not cognitively immature, but have different aspects of mature thought not covered by Piaget. Piaget’s definition of formal logic is based on his assumption that mathematics and scientific thinking bind cognition. This form of formal logic is not very important in fields such as arts, history, social understanding and personal judgment. It also does not cover other aspects of mature intelligence such as practical problem solving, and acquired wisdom and experience. Piaget’s description of overall cognitive events indicates that once a new stage of cognition has been achieved, individuals will reflect it in all areas of their lives. However, it has been shown that cognitive development may occur in some areas of thinking and not in others. A more accepted view of cognition development is that it is an uneven process, with children arriving at each new stage piece by piece as each new skill and behaviour is acquired (Berger, 1988).

2.2.2 From the Social to the Individual: The Vygotskyan Legacy

In his attempt to reach a satisfactory explanation for the scope and rapidity of human development Vygotsky came to the conclusion that the development of an individual could not be looked at detaching him from his social and material environment. It was with this environment that human beings constantly interacted. Furthermore, the environment is not a constant one; it keeps changing. So how will we trace the history of the development of an individual?
Two things are required for this. Firstly, we will have to take into consideration the history of the group or groups of which an individual is becoming a member and secondly, we will also have to look into the particular social events the individual has successfully participated in over a certain period of time. Ontogenetic development treated as an isolated trajectory will not help us understand about the history of the development of an individual. Vygotsky proposes that ontogenetic development must be considered in relation to a number of other levels. These are:

1. Formative events in which the individual is involved
2. Institutions such as family, school, workplace in which those events take place,
3. The wider culture in which those institutions are embedded (cultural history); and
4. The species as a whole.

Another fundamental feature of his theory is the mediating role of artifacts in activity. Human beings are not limited to their biological inheritance, as other species are, but are born into an environment that is shaped by the activities of previous generations. In this environment, they are surrounded by artifacts that carry the past into the present (Cole, 1996), and by mastering the use of these artefacts and the practices in which they are employed they are able to “assimilate the experiences of humankind” (Leont’ev, 1981). Human development is thus not simply a matter of biological maturation; it is immeasurably enriched and extended through the individual’s appropriation and mastery of the cultural inheritance, as this is encountered in activity and interaction with others.
The mutually constitutive relationship between individuals and the society of which they are members constitute the third key feature of his theory. This can best be understood by considering two interdependent perspectives. First, a society can be thought of as a set of overlapping activity systems with their associated communities of practice which, taken together, are the culture-specific means of producing and reproducing the conditions of human existence (Wartofsky, 1979). In contemporary developed societies, these involve activity systems of education, health care, the arts, law, etc. as well as the multifarious activity systems concerned with the exploitation of material resources for the production and distribution of the products required to support the society’s way of life. Although they change over time, these activity systems have a continuity that is independent of the particular individuals who participate in them; nevertheless, their continued existence depends on the expert contributions of current participants and on a continual recruitment and apprenticeship of new members who will eventually take their place. Seen from this perspective, therefore, a society is maintained and developed by the particular individuals who contribute to its activity systems at any particular point in time.

Seen from the complementary perspective, the formation of individual persons, their identities, values and knowledgeable skills, occurs through their participation in some subset of these activity systems, starting with activities in which they are involved with family members, then in school and on into activity systems of work, leisure and so on (Wells 1999). From this perspective, who a person becomes depends critically on which activity systems he or she participates in and on the support and assistance he or she receives from other
members of the relevant communities in appropriating the specific values, knowledge and skills that are enacted in participation (Lave & Wenger, 1991).

2.2.2.1 Egocentric Speech and Inner Speech

Vygotsky believed language is a tool, which functions to enable people to organize their thoughts. It is of the utmost importance because it carries the concepts of our culture (Vygotsky, 1987). Communication is the primary function of speech and initially speech performs a socializing purpose as it is used to communicate and to carry out social relations with other people. This is the kind of speech children use to express their needs and emotions. Talking aloud to oneself or egocentric speech is the first link between external speech and internal thought. Saying aloud the steps or stages of the task is an example. Typically found in 3 to 7 year olds, Vygotsky believes egocentric speech is characterized by external signs and operations, which are being used to solve internal computations, Vygotsky saw egocentric speech as the key to studying inner speech, as it was the stage that preceded it (Benson, 1995).

Internal speech is similar to internal thought. As Benson explains (1995) vocalization, as found in egocentric speech, usually ceases when the person can think the words rather than vocalizing them. To Vygotsky, ‘(inner speech) is not the interior aspect of external speech - it is a function in itself. It still remains speech, i.e., thought connected with words. But where in external speech thought is embodied in words, in inner speech words die as they bring forth thought. Inner speech is to a large extent thinking in pure meanings.’ (Vygotsky, 1962).
2.2.2.2 The Individual and the Social

In contradiction to Piaget’s conception of development as socialization, Vygotsky says: ‘the earliest speech of the child is essentially social. At a certain age the social speech of the child is quite sharply divided into egocentric and communicative speech. Egocentric speech emerges when the child transfers social, collaborative forms of behaviour to the sphere of inner-personal psychic functions. Egocentric speech, splintered off from general social speech, in time leads to inner speech, which serves both autistic and logical thinking. The true direction of the development of thinking is not from the individual to the socialized, but from the social to the individual.’ [Thought and Language, 1934 Ch.2, in MIT 1962]. Human thought develops not from the individual to the social, but from the social to the individual.

2.2.2.3 Zone of Proximal Development

Vygotsky first mentioned the concept of the zone of proximal development (ZPD) in a lecture only 15 months before his death, stating the idea did not originate with him (Van de Veer and Valsiner 1991). The theory of ZPD has been variously interpreted and re-interpreted throughout the years since 1934 causing Newman and Holzman (1993) to suggest that this may be why so many have incorporated this notion into the paradigms within which they work (cognitive science, interactionist perspectives etc.). Let us quote Vygotsky:

The zone of proximal development defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state. These functions could be
termed the “buds” or “flowers” of development rather than the “fruits” of development. (Vygotsky, 1978).

The Zone of Proximal Development is the difference between the person’s ability to solve problems on her own, and her ability to solve them with assistance. Schütz (2004) explains the “actual developmental level refers to all the functions and activities that a child can perform on his own, independently without the help of anyone else. On the other hand, the zone of proximal development includes all the functions and activities that a child or a learner can perform only with the assistance of someone else.

Prerequisites to assisting someone to work in their ZPD are empathy and judgement about their needs and capabilities when acting alone. The ZPD comes into being when one person acts as the mediator for another person who is not able to execute a particular action alone. It is more usually seen as a positive interaction whereby a person is able to do something with help, which alone would be impossible. This is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1987).

According to Vygotsky, social interaction plays a vital role in the learning process. He emphasizes the role of “shared language” in the development of thought and language, which stands for social interaction. Vygotsky (1962) theorized that two levels determine the learning process; ego-centricity and social interaction. The child’s actual development level is determined by independent
problem solving. The next level is determined through problem solving under adult guidance in collaboration with more peers that are capable. It is the teacher’s duty to try to take each child to the level X+1. The teacher does this by giving optimal help to the children. Perhaps she can give a learner just the cue he needs. This cue provides for the learner a breakthrough he needs. Sometimes the teacher can take the whole class through a series of steps, which help them to solve the problem. Children may differ in their areas of their zones of proximal development. A child with a large zone will have a much greater capacity to be helped by teachers than a child with a narrow zone. However, the teacher still has a duty to help the latter child as well as the former one. Children are to be exposed to social interaction first and it will eventually enable them build their inner resources.

2.2.3 Language as a Genetic Endowment

Why is the theory of imitation now thought unacceptable? If children really acquired all of their linguistic knowledge from what they hear adults say, how could we explain the frequent errors, which occur due to overgeneralization (i.e. systematic application of general rules, even where exceptions should occur)? Examples include the systematic addition of ‘ed’ to put verbs into the past tense, resulting in sentences like ‘she holded the baby rabbits’, a phrase which could obviously never have been copied from an adult’s speech. Indeed, this type of error is also found in young deaf children. They, too, can extract grammar from the language to which they have been exposed, even (as in the case of hearing children) if this information has come to them in patchy and incomplete form.
In the year 1959 Chomsky came out with his Critique on Skinner’s Verbal Behaviour, which shook the foundations of empiricism, structuralism and behaviourism. Even before this he had challenged the claims of Structuralists on language in his Syntactic Structures, a seminal work that was published in the year 1957. By proposing the notion of an innate language system Chomsky presented a new perspective on language and language acquisition, which revolutionized the fields of psychology and linguistics. Chomsky claimed that languages share certain universal properties and that despite the seemingly many differences between languages they arestructurally similar to one another.

Chomsky reminds us that language is not just a stimulus-response relationship. In the case of language, the stimulus usually is not as simple as the denial of milk or the bursting out of a volcano. Consider the response of a person who has watched a picture. The situation here paves way for a variety of possible responses:

‘The picture doesn’t match with the wall.’

‘Never saw something like this before.’

‘Beautiful!’

It is not possible to detect a one-to-one correspondence between the stimulus and the response. Chomsky observes that language is ‘stimulus-free’ and not ‘stimulus-bound’. Even terms such as ‘stimulus’ and ‘response’ are ambiguous. For instance, what does a person mean by the word, “beautiful” when he says it while watching a picture? Many things can make a picture beautiful. Does he mean all these or, only a particular property of the picture?
Reinforcement, to which Skinner attributes much prominence, is equally a problematic notion. Language acquisition does not take place by virtue of the reinforcement of the child’s select responses. It is difficult to say what exactly Skinner means by reinforcement in the environment in which the child lives. Parents do not encourage all correct expressions of the child. Nor do they discourage her incorrect ones. As a matter of fact they never approach the child’s speech errors seriously. Moreover, adults do not go for a meticulous process of correcting the linguistic errors of children.

All of us know that animals learn many things through imitation and reinforcement and such learning are manifested through their behaviour. For example, a parrot picks up particular card from a pack of cards; a chimpanzee rides a bicycle. Behaviourists believe that language learning is a similar process. They overlook the fact that language learning is a unique process, which has no comparison in the realm of learning manifested by animals and birds. Furthermore, language skills cannot be learnt through practice just as we learn cycling or swimming.

Children across the world start speaking language at about the age of two; the process of learning language is almost complete before she is five. Though any language system is extremely complex, she internalizes the system of her mother tongue within an amazingly short period. Without an innate language device this would not have been possible for the child. A human child does not have to be taught how to construct a theory of language. This knowledge is innate for her.
Most of the time children are exposed to fragmentary and disordered utterances. Neither do parents nor outsiders interact with them using full-fledged and polished grammatical sentences. The quantum of linguistic input that the child gets is optimal. Still her language competence is intact. The process of language learning is active from 2 to 12 years. Note that the human brain also matures between at the age of 12, which suggests that there is an organic relationship between the functioning of the innate language system and the maturing of the brain.

Researchers have noticed a curious phenomenon in the language production of children from English-speaking community. They start using words such as ate or saw at an early stage. But as the learning process progresses, they come out with words such as “eated, seed”. At a later stage they return to words such as ate, saw. Why should they produce incorrect words such as “eated” or “seed” even after the positive reinforcement of the correct forms? This suggests that language is not learnt through imitation and reinforcement but through an intuitive theory-construction process.

The Academic world of our own times is aware of the problems that behaviourism, structuralism and empiricism confront with. Today, language learning is conceived as the internalization of knowledge. There is widespread consensus on the concept of man’s innate language. This was not the situation when Chomsky had first proposed his theory on innateness. The controversies that had emerged made the worlds of psychology and linguistics noisy. What provoked the academic world was the realization that the theories on language learning, which were prevailing in those days, could not be retained any longer.
2.2.3.1 Chomsky’s Innateness Theory

- Infants are born with what he termed a **Language Acquisition Device** (LAD). This area cannot be pinpointed in the brain, but is generally presumed to exist through the neurological networks we have developed;

- Exposure is all that is necessary for a child to learn language.

Chomsky’s first conclusion is drawn from the assumption that, as the brain is divided into specialized areas, so the LAD is among them. Like learning to walk or developing limbs, the human facility for language is inherent in our genes, and just as we are designed to walk upright rather than climb trees, so we are designed to talk. Language acquisition, as opposed to language learning (which implies a degree of consciousness in relation to the process), is as natural as human physical growth.

2.2.3.2 The Language Organ

Does human brain contain a language organ? For Chomsky, the answer is in the affirmative. It grows just as any other organ of the body does. This claim might appear very mysterious on its first hearing. Chomsky rejects the traditional contention that language is a social product. The explanation for the notion of language organ is sought by relating language to man’s common heritage.

In order to get ourselves introduced to this notion it will be convenient to relate it to language acquisition. Chomsky views language acquisition as a special kind of learning. It is not like learning about facts or information about geography from outside. Nor is it like learning cycling by learning skills and improving them.
through practice. It is an internal development as the response to very organic external experiences, though these might appear trivial. It is a process similar to that of a seed growing into a tree. The seed can grow only if it gets water, light and minerals needed for its growth. Nevertheless, the potential to grow lies within the seed. Chomsky argues that more than learning language acquisition is a growth. The mind acquires maturity as decided by a pre-set biological clock. This is precisely why Chomsky says that with regard to certain fundamental aspects we really do not learn language, but the grammar grows in our minds; (Chomsky, 1980 a). Language is a part of man’s heritage. It is in our genes.

2.2.3.3 Language as a State of Mind

Chomsky stresses that language makes use of structure-dependent operations. What he means is that the compositional production of utterances is not a question of stringing together sequence of words. Every sentence has an inaudible internal structure, which must be understood by the hearer. Amazingly, all children learning language seem to know automatically that language involves structure-dependent operations. Chomsky suggests that humans may have an innate knowledge of this phenomenon.

Chomsky has consistently argued that UG principles are inherently impossible to learn and that therefore, they must be innate. They make up the “initial state” and as such provide the basis that enables the child to acquire a language. A child has access to an innate system namely, Universal Grammar (earlier known as Language Acquisition Device -LAD) that maps experience into the “steady state”. Therefore language acquisition may be looked at as the progression from this initial state to the steady state.
This in effect has brought theoretical linguistics under the roof of psychology. To what extent UG is structured has scope for controversial claims. Chomsky has posited a rich structure for it. Since the constraints of UG are applicable for all languages these cannot have acquired from any speech community. It appears that the child is born with an expectation that whatever language she is going to hear will have properties in conformity with her innate language system; language acquisition progresses with such amazing precision. The very fact that our knowledge of language is rich explains how language acquisition takes place. This does not mean that our innate knowledge of language is complete. Otherwise children growing in different linguistic environments could not have acquired different languages. Nevertheless, the range of differences between languages is decided by UG.

2.2.3.4 The parameters of Universal Grammar

Chomsky defines UG as a system of principles, conditions and rules that are elements or properties of all human languages (Chomsky, 1976). In other words, it comprises a set of linguistic universals. The moment we begin to speak about the nature of knowledge of language we are bound to explain how this knowledge is acquired. Man’s innate knowledge of language implies the knowledge of principles common for all languages and parameters, which distinguish one language from the other by allowing differences within a boundary that can be clearly defined by UG. To acquire a particular language implies to learn how the principles of UG are applied in that language and to learn the value of each parameter allowed by UG. Each parameter makes certain authentic claims about the speaker’s mind and the nature of language acquisition.
The goal of generative grammar is to identify the principles and parameters that comprise UG and to specify which principles and which parameters are operative in specific languages.

2.2.4 Language: A Biologically Triggered off Behaviour

The foundation of Chomskyan Model of Linguistics is the assumption namely; Language is innate for human beings. The arguments that Chomsky has raised against structuralism and behaviourism have changed the course of development of present day psychology and theoretical linguistics. Today language is looked at not as behaviour but the innate knowledge, which operates behind the manifestation of this behaviour. There are theoreticians such as Lenneberg (1967), who observe that language is a biologically triggered off behaviour which can be treated on a par with similar behaviours like walking or sexual behaviour. By identifying a few characteristics common for such behaviours they hope to strengthen the claim that language is a biological endowment of man. Let us see what these are:

2.2.4.1 Anticipatory Maturation

Language as a behaviour is manifested even before the need for it emerges. This is what implied by “anticipatory maturation.” Parents foster their young ones giving them food and clothes. They take care of all their needs. Therefore children do not undergo a situation where they will have to use language for communication for the sake of living. Nevertheless language develops in them at an early stage in life. This would not have materialized if they were not equipped with an innate language system.
2.2.4.2 No Conscious decision behind speech

The child learns her mother tongue without being aware of it. She does not start speaking it on the basis of a pre-decision to do so on a certain auspicious day; she just speaks the language. Compare this with the case of an athlete who takes a decision to run at a certain speed or to jump over a certain height. Once the decision is taken she can go ahead with her practice till she is able to perform the task. There is a conscious decision behind the performance of the athlete. A decision of this kind cannot be taken in the context of acquiring a language. Nor is language the product of a continuous practice.

2.2.4.3 The Environment

Obviously, the environment has an important role in language acquisition. A child who lives in an environment that is devoid of language cannot acquire it. But to what extent the role of environment is crucial needs to be examined carefully.

2.2.4.4 No External Events to Trigger Language

There are no external events for triggering language acquisition. Though no significant changes take place in the environment every child will have acquired language at a certain age. No one can force her speak the language before she reaches that. This is so not because she does not have the organs for the production of speech. Even a six-month old child can produce many sounds required for the language. But to begin speech she has to wait for at least 18 months. Language acquisition takes place in a predictable way as if the process is tuned in accordance with a biological clock ticking inside.
Scientists have discovered that language acquisition is related to the growth of the brain. A new born child will have about a billion nerve cells (neurons) in her brain. These cells may not be interconnected in the beginning. At the stage the brain weight will be relatively less. Soon several connections will be established between these neurons of the brain. Moreover, there will be a corresponding increase in the brain weight.

2.2.4.5 Adequately Rich Environment

A biological behaviour does not develop in impoverished and unnatural environments. In an impoverished linguistic environment language acquisition will be much retarded. Nevertheless the term “rich environment” demands a closer attention. It does not imply that language acquisition takes place because of the quantum of linguistic exposure that the child gets. Chomsky, Pinker and several others point out that it is not the quantity of input what matters but its quality.

2.2.4.6 Teaching is not intended

Obviously when mothers or caretakers indulge in baby talk they have no intention to teach the child. Moreover they refrain themselves from correcting the errors of the child. Of course, when it comes to promoting language with the child, all experts’ advice is to talk naturally, sing, play games, talks about her needs, likes and dislikes, and most importantly, enjoys the baby. This is what exactly happens in the case of motherese.
2.2.4.7 Teaching and Practicing are irrelevant

There are many skills that can be improved through practice. Cycling, swimming, or, playing tennis, are instances of this. Language cannot be compared with this kind of behaviours. A biologically triggered behaviour cannot be improved or bettered through teaching or practice.

Knowingly or unknowingly parents tend to intervene in the speech performance of their children. In a way, parents are encouraging children to imitate them. Sometimes they will correct the linguistic errors of the young ones. Alternatively, they might expand the fragmentary expressions of the child to make them into full-fledged structures. If at all they correct children’s speech, they correct the truthfulness of the expression.

2.2.4.8 Milestones in Language Acquisition

Biologically triggered behaviours pass through certain definite stages. Take for instance, the case of walking. A newborn infant has all the biological systems (skeletal system, muscular system, nervous system, etc.) required for walking. But no newborn child starts walking the moment she is born. She has to pass through certain stages such as lying on her belly, crawling, sitting, walking on four legs, standing erect before she really starts walking. All these stages are universal milestones to leave behind in the process of learning to walk. There are similar universal milestones in language acquisition.

While speech perception is evident from birth, speech production abilities are not apparent before 6 months. Infants’ first vocalization consists of cries,
vegetative sounds, and isolated vowel-like sounds, occasionally accompanied by some consonant sounds.

An important milestone in linguistic development is the onset of *babbling* at around 6-8 months of age. The sounds produced at the babbling stage are similar to the vowel sounds of language and therefore babbling may be conceived as the precursor to language consisting of syllable sequences like ‘bababa’.

The vowel-like sounds produced at the babbling stage differ from the vowel sounds produced by the adults. When infants start to babble, their phonetic repertoire displays universal features and is not language specific. At least by 8-10 months, linguistic experience starts to modulate infants’ babbling to some degree. Eventually the child starts producing sounds similar to consonants.

The next stage is *changing tones*, a stage where the child experiments with her mouth, lips, tongue and the other organs. A variety of sounds will be produced at this stage. In addition to this she indulges herself in a number of activities such as making bubble using her lips, gargling and so on. At this stage she gains control over the muscles of her speech organs. When she reaches around 9 months she can combine various tones and sounds. Infants try out their articulatory capacities, and they discover and practice the sounds and legal combinations of their language, leading unto the production of words.

During 12-18 months she starts producing *one-word utterances* that eventually leads to the production of *2-word expressions*. By the time she completes 2 ½ years she will have acquired several hundreds of words. Around 3
½ years *grammatically sound linguistic expressions* that will be intelligible even to strangers. The language spoken by a 5-year-old child gives us the impression that her language acquisition process is over which is far from true. She will be ready with mature speech by 10-12 years.

### 2.2.4.9 The Maturation of the Vocal Apparatus

The milestones of language acquisition clearly indicate that human beings are biologically programmed for language. Though man is genetically endowed with language no newborn child starts speaking a language. For this to happen she has to wait till her vocal apparatus gets ready for the production of language. Researchers have found that it is the maturation process of the vocal tract decides the milestones of language. Let us flesh out what researchers have found regarding this.

### 2.3 Humanistic Language Teaching

Humanism is closely related to Humanist Psychology, proposed by Carl Roger and Abraham Maslow, focusing on the ‘whole person’. In the world of language teaching, humanism is signed by the emergence of a magazine called ‘Humanising/Humanistic Language Teaching’, promoted by Mario Rinvolucri in 1999. By the end of the 1990s, the word 'humanist(ic)' had clearly become problematic in the world of language teaching, or at least in certain small regions of the world of language teaching. In the very particular context of English language teaching in Britain in 1999, the use of the word ‘humanising’ could not be associated with ‘humanist(ic)’ approaches to language teaching as they were conceived at the time. The term humanistic describes learning approaches that
assert the central role of the ‘whole person’ in the learning process. Moreover, Kerr (2007) says that some basic tenets of humanistic education include the following

- Personal growth, including realizing one's full potential, is one of the primary goals of education.
- The development of human values is another.
- The learner should be engaged affectively (i.e. emotionally) as well as intellectually.
- Behaviours that cause anxiety or stress should be avoided.
- Learners should be actively involved in the learning process.
- Learners can - and should - take responsibility for their own learning.

Today, the Humanistic Language Teaching (published by Pilgrims) in their website describes this in the following terms:

- Effective teaching and learning engages the whole person - the mind, the body and the heart
- The learner is the central person in the act of learning
- Creativity, involvement and enjoyment are the essential elements for lifelong learning.

Huitt (2009) says that humanism focuses on the development of the child’s self-concept. If the child feels good about him or herself then it is a positive start for him or her to improve or learn/develop, or in Maslow terms, this is called
“self-actualisation”. Huitt adds that in humanistic approach, education is really about creating a need within the child, or instilling within the child self-motivation. While behaviourism is about rewards from others, humanism is about rewarding yourself. This form of education is usually called child-centred or student-centred, and is typified by the child taking responsibility for their education and owning their learning. It seems that the humanistic approach prepares the child for adult life. The humanistic teacher is a facilitator, not a disseminator, of knowledge. According to Huitt, in this concept there are at least three approaches used; open classroom, learning styles and co-operative learning.

Huitt also states that the principles of humanistic education is: a) current and future welfare of students, b) worth and rights of the individuals, c) openness, honesty, selflessness, altruism and d) traditional approach (large numbers, competition for academic success, little time nor energy).

Humanistic teaching values should focus on each person and learner not only as a physical, cognitive human being, but rather as human being that is mainly emotional (the affective factor). By touching the learners’ feelings, involving their interests, experiences and personalities in learning language, it is hoped that they will be encouraged to appreciate themselves through language class.

From the insights from Cognitive psychology, theory of innateness, neurobiology and humanism a philosophy of language pedagogy namely, Whole Language Philosophy has emerged recently. The discussion on the theoretical aspects of language learning will not be complete unless we discuss the claims made by whole language philosophers on language and language pedagogy.
2.4 Whole Language Philosophy

The emergence of the cognitive psychology and the innateness theory of language have had their own impact on pedagogical practices. Several educationists have explored the classroom implication of the assumptions made by the cognitive psychologists in general and also Chomsky’s theory of innateness in particular. The whole language philosophy has emerged from these assumptions.

2.4.1 Whole Language Philosophy - Major Claims

According to Altwerger., Edelsky., and Flores, (1987) the basic principles of Whole Language are the following:

- Language is for making meaning, for accomplishing purposes
- Written language is language - thus what is true for language in general is true for written language
- The cueing systems of language (phonology in oral, orthography in written language; morphology, syntax, semantics, pragmatics) are always simultaneously present and interacting in any instance of language use
- Language use always occurs in a situation
- Situations are critical to meaning making

Newman (1985) sums this up for us when she says:

Learning to read and write would be much easier if we would take the time
to understand how children become language users in the first place and then created classroom environments which supported both oral and written language development. Learning to become a proficient language user requires that children have lots of opportunities to experiment with both oral and written language. Using language from the outset in a whole range of literacy contexts enables children to create the knowledge and strategies necessary for fluent reading and writing in the same was as they have with oral language.

Whole-language educators in a response to fulfilling the child's need for meaningful, interesting, relevant material for reading have rejected the use of basal readers, in favour of literature based, and/or trade book reading materials. They believe that students need to interact with reading material that they perceive as interesting and meaningful to them, and that is compatible with their experiences and knowledge. It is also felt that reading skills can be acquired in much the same manner as learning to speak. Children need to be immersed in good reading and good literature in order to facilitate this process (Holdaway, 1982).

There has been substantial evidence to support the effectiveness of this use of materials in classrooms. It has been recognized in the research on acquisition that the skills involved in reading must reading be taught within an interesting and meaningful context. Early experiences with the richness and variety of real reading materials seem to give children reason to read, teaching them, as Trelease (1985) explains, not only "how to read, but to want to read".

The whole-language teacher is keenly aware of the important role that
social relationships play in the learning that occurs in the classroom, and strives to use social interactions as a supportive mediator and vehicle for language learning and development. Research (Vygotsky, 1978; Holdaway, 1982) has given us clear guidelines regarding the importance of appropriate social and learning environments as a context for the promotion of literacy in schools. Bloome (1985) asserts that reading involves social relationships among teachers and children, and authors and readers. The learning of language and culture are seen as interdependent, since language is itself a cultural phenomenon.

It is recognized that teachers must create environments that permit the sense of collaborative language learning. The interactions that are permitted and encouraged in classrooms make significant differences to the literacy development of our students.

### 2.4.2 Research Findings on Whole Language

There has been an argument that whole language education is not supported by research. However, that is simply untrue. In fact, whole language teaching and learning is supported by three different kinds of research: research into the reading and writing processes themselves; naturalistic studies of how children learn to speak their language and to read and write it; and research comparing children's learning in whole language classrooms with other, more traditional classrooms. Research in learning theory and in learning styles also supports whole language education. Here, comparative research is the focus, since that is the kind most widely understood. (John.W.A.Smith and Warwick.B.Elley .1995) consolidated studies in the field of whole language and arrived in to the following conclusions:
Children in whole language classrooms typically do as well or better on standardized reading tests and subtests Whole Language group, when compared to the skill-based group, demonstrated advances in the following areas: orthographic, semantic and syntactic interpretation of print, and the relationship between sound and symbol (Kasten and Clarke study (1989), In the Manning, Manning, and Long (1989) study.) Result of one case study conducted by Yazmin Elizabeth., Kuball., Sabrina & Peck(1997) shown that Spanish-speaking children receiving Whole Language instruction are able to develop their literacy skills, compositional skills, and self-concept as writers.

Allen (1988) studied how 183 children in whole-language classrooms developed as readers and writers. The researcher prepared anecdotal notes of all the students over the one year period. The researchers found that children grew rapidly as readers and writers, and were able to identify reading as a meaning making activity. Almost all research in the area of Whole Language has been conducted in middle and upper middle class mainstream classrooms. Children in whole language classrooms seem to develop greater ability to use phonics knowledge effectively than children in more traditional classrooms where skills are practiced in isolation. For example, A comparative study conducted by Freppon (1988, 1991 the literature-based whole language group was more successful than skill oriented group, a 53% success rate compared with a 32% success rate for the skills group.

Learners of whole language classrooms seem to develop vocabulary, spelling, grammar, and punctuation skills as well as or better than children in more
traditional classrooms and able to read for meaning rather than just to identify words. (Clarke, 1988). Children in the whole language classroom were more likely to read for meaning while the children in the traditional classrooms tended to focus on words and surface correctness. (Manning, Manning, and Long, 1989). In the document Weaver (1996), after surveying research studies, pointed out that learners in whole language class rooms do as well as better than other students on standardised reading tests, read meaning rather than just identifying words, develop more strategies to overcome problems related to reading, show more independence as readers and writers and develop a stronger sense of themselves as readers and writers.

2.5 The Perspective of the National Curriculum Framework (NCF) 2005 on Language learning

The National Curriculum Framework has given a lot of importance to language learning as it is crucial to not only meaningful learning in all the subject areas but also to the learner’s emotional, cognitive and social development. Educationists have noticed that new entrants with poor language background remain poorer performers in all areas unless specially helped in language skills. Language education has been acknowledged to have the greater potential as a means to develop, progressively through various stages, attitudes and values related to all the core components by incorporating appropriate themes and adopting suitable teaching strategies. The focus Group on teaching Languages makes the following assumptions:

2.5.1. Language Faculty

It is important to realise that all children learn the basic systems and
subsystems of their language, including a substantial part of their sociological correlates (i.e. they acquire not only linguistic but also communicative competence), before they are three years old. Children may be born with an innate language faculty (Chomsky 1957, 1965, 1986, 1988 and 1993).

2.5.2. Language as a Rule-governed System

For linguists who study the structure of language in a scientific way, the grammar of a language is a highly abstract system consisting of several subsystems. At the level of sounds, the languages of the world are closely associated with rhythm and music in terms of their intonation patterns and pitch contours. Similarly, consonantal and vocalic sounds in all human languages are systematically organised.

The level of discourse in society is structured in addition to all the above by a variety of linguistic, sociological, religious, and cultural conventions obtaining in a particular society.

2.5.3. Speech and Writing

The fundamental difference between speech and writing is that written language is consciously monitored and frozen in time; we can return to it whenever we want. Spoken language is far more transient in nature and changes far more rapidly than the written language. One should not, therefore, be surprised to notice discrepancies between the spoken and written languages. There is no intrinsic relationship between language and script.

2.5.4. Language and Society

Even though children appear to be born with an innate language faculty,
individual languages are acquired in specific socio-cultural and political contexts. Every child learns what to say, to whom, and where. Languages are inherently variable and different styles tend to be used indifferent contexts by different age groups (Labov 1966, 1972, John, J.Gumperz., & Hymes.(1972). It is equally important to realise that languages are not ‘discrete objects out there’, almost frozen in time and space, both physical and mental. They are actually constantly changing, fluid systems of behaviour that human beings acquire and change to define themselves and the world around them. Very often languages are treated as entities and people form strong stereotypes about them. We need to be aware of both these aspects of language.

2.5.5. Language, Literature and Aesthetics

There are several functions of language that have been paid lip service by language education planners. Apart from having the quality of unfolding the world, language has many fictional elements. Poetry, prose, and drama are potent sources not only of refining our literary sensibility but also of enriching our aesthetic life, enhancing our aesthetic abilities, and enormously improving our linguistic abilities, particularly reading comprehension and written articulation. Literature also includes jokes, irony, fantasy, story, parody, and parable, which pervade our everyday discourse and in no way constitute an autonomous universe cut off from ‘the world’s business’

2.5.6. Language and learning

As already pointed out, it remains a mystery how children manage to acquire complex linguistic systems at an extremely young age. Many children
become fluent users of not just one but two or three languages by the time they are three or four years old. Not only this, they also know the language they should use in a given context, i.e. they acquire the capacity of keeping their linguistic systems separate and, of course, mix them in legitimate ways when they wish to. This is possible for them by virtue of the innate language system they have. We have already discussed the theoretical assumptions of Chomsky’s Innateness Theory. NCF position paper on language subscribes to the innateness theory and the theoretical postulates of social constructivism. The document states the objectives of language learning as follows:

### 2.5.7 Objectives of Language Teaching

1. **The competence to understand what the learners hear:** A learner must be able to employ various non-verbal cues coming from the speaker for understanding what has been said. She should also be skilled at listening and understanding in a non-linear fashion by making connections and drawing inferences.

2. **Ability to read with comprehension, and not merely decode:** She should develop the habit of reading in a non-linear manner using various syntactic, semantic, and grapho-phonemic cues. She must be able to construct meaning by drawing inferences and relating the text with her previous knowledge. She must also develop the confidence of reading the text with a critical eye and posing questions while reading.

3. **Effortless expression:** She should be able to employ her communicative skills in a variety of situations. Her repertoire must have a range of styles to choose from. She must be able to engage in a discussion in a logical, analytical, and creative manner.
4. Coherent writing: Writing is not a mechanical skill; it involves a rich control of grammar, vocabulary, content, and punctuation as well as the ability to organise thoughts coherently often using a variety of cohesive devices such as linkers and lexical repetitions through synonymy, etc. A learner should develop the confidence to express her thoughts effortlessly and in an organised manner. The student must be encouraged and trained to choose her own topic, organise her ideas, and write with a sense of audience. This is possible only if her writings are seen as a process and not as a product. She should be able to use writing for a variety of purposes and in a variety of situations, ranging from informal to very formal.

5. Control over different registers: Language is never used in a uniform fashion. It has innumerable varieties, shades, and colours, which surface indifferent domains and in different situations. These variations, known as registers, should form a part of a student’s repertoire. Besides the register of school subjects, a student must be able to understand and use the variety of language being used in other domains such as music, sports, films, gardening, construction work, cookery, etc.

6. Scientific study of language: In a language class, the teaching approaches adopted and the tasks undertaken should be such that they lead a child to go through the whole scientific process of collecting data, observing the data, classifying it according to its similarities and differences, making hypotheses, etc. Thus, linguistic tools can and must play a significant role in developing a child’s cognitive abilities. This would be much better than teaching normative rules of grammar. Moreover, this approach is particularly effective in multilingual classrooms.
7. Creativity: In a language classroom, a student should get ample space to develop her imagination and creativity. Classroom ethos and the teacher–student relationship build confidence in the latter to use her creativity in text transaction and activities uninhibitedly.

8. Sensitivity: Language classrooms can be an excellent reference point for familiarising students with our rich culture and heritage as well as aspects of our contemporary life. Language classroom and texts have a lot of scope to make students sensitive towards their surroundings, their neighbours, and their nation.

2.5.8 Some Pedagogical Proposals

Contemporary research on language acquisition has put the learner at the centre of language learning. It suggests that a learner will be able to construct the grammar of a language effortlessly if she is provided with comprehensible input in anxiety-free situations. As Krashen (1985) has suggested, input is likely to become intake only if the affective filter is low, i.e. the attitudes are positive and the motivation is strong.

2.5.9 Towards Appropriate Methods

Here we will try to explain in some detail some of the basic principles that should inform our language-teaching methods. Needless to say, every teacher will evolve his or her own specific method depending on a variety of social, psychological, linguistic, and classroom variables. The new dispensation must empower the teacher to use his or her space in the classroom more effectively and innovatively. Some of these basic principles include:
1. Learner: Whatever is the method used in the classroom, the learner should never be treated as an empty receptacle. She should be at the centre of the teaching-learning process. The teacher will gradually need to explore the cognitive potential and interests of the learner in order to adjust her own language-teaching methodology.

2. Attitude: It is only when the teacher is positively inclined towards all pupils, irrespective of their caste, colour, creed or gender that they will tend to become positively motivated to be involved in the teaching-learning process. Teachers’ positive attitudes will also go a long way in lowering the anxiety levels of learners, which are known to obstruct the learning process.

3. Input: Following Krashen (1981, 1982), we suggest that the input should be rich, interesting, and challenging and should be woven around topics that encourage peer-group learning. Modern technology may help schools in a significant way in this regard. The teacher will gradually need to explore the cognitive potential and interests of the learner in order to adjust her own language-teaching methodology.

4. Multilingualism as a Resource: As we have argued elsewhere in this paper, language-teaching methods can be suitable sites for utilising the multiplicity of languages available in the classroom. A sensitive analysis of the multilinguality obtaining in the classroom in collaboration with children will help in creating a metalinguistic awareness among the teachers and the taught. Translation may prove to be a very powerful tool in this context.

5. Issues of Gender and Environment: It is necessary that modern language-
teaching methods create awareness about gender and environmental issues among children. It should be possible to address these issues implicitly and effectively through careful and sensitive language-teaching methods.

6. Assessment: Every possible effort should be made to make assessment a part of the teaching-learning process. Whenever we break the normal classroom processes for a test or examination, we manage to raise the anxiety levels of the learners, disrupting the learning process in a significant way.

2.5.10 NCF – Guiding principles

We need to plan and pay attention to systemic matters that will enable us to implement many of the good ideas that have already been articulated in the past. Paramount among these are:

• connecting knowledge to life outside the school,

• ensuring that learning is shifted away from rote methods,

• enriching the curriculum to provide for overall development of children rather than remain textbook centric,

• making examinations more flexible and integrated in to classroom life and, nurturing an over-riding identity, informed by caring concerns within the democratic policy of the country.

Cognition involves the capacity to make sense of the self and the world, through action and language. Meaningful learning is a generative process of
representing and manipulating concrete things and mental representations, rather than storage and retrieval of information. Thinking, language (verbal or sign) and doing things are thus intimately inter-twined. This is a process that begins in infancy, and develops through independent and mediated activities.

Attitudes, emotions and morals are thus an integral part of cognitive development, and are linked to the development of language, mental representations, concepts and reasoning. As children’s Meta cognitive capabilities develop, they become more aware of their own beliefs and capable of regulating their own learning.

• All children are naturally motivated to learn and are capable of learning.

• Making meaning and developing the capacity for abstract thinking, reflection, and work are the most important aspects of learning.

• Children learn in a variety of ways—through experience, making and doing things, experimentation, reading, discussion, asking, listening, thinking and reflecting, and expressing oneself in speech, movement or writing—both individually and with others. They require opportunities of all these kinds in the course of their development.

• Teaching something before the child is cognitively ready takes away from learning it at a later stage. Children may ‘remember’ many facts but they may not understand them or be able to relate them to the world around them.
• Learning takes place both within school and outside school. Learning is enriched if the two arenas interact with each other. Art and work provide opportunities for holistic learning that is rich intact and aesthetic components. Such experiences are essential for linguistically known things,

• Learning must be paced so that it allows learners to engage with concepts and deepen understanding, rather than remembering only to forget after examinations. At the same time learning must provide variety and challenge, and be interesting and engaging. Boredom is a sign that the task may have become mechanically repetitive for the child and of little cognitive value.

• Learning can take place with or without mediation. In the case of the latter, the social context and interactions, especially with those who are capable, provide avenues for learners to work at cognitive levels above their own.

2.5.11 Teaching for Construction of Knowledge

In the constructivist perspective, learning is a process of the construction of knowledge. Learners actively construct their own knowledge by connecting new ideas to existing ideas on the basis of materials/activities presented to them (experience). For example, using a text or a set of pictures/visuals on a transport system coupled with discussions will allow young learners to be facilitated to construct the idea of a transport system. Initial construction (mental representation) may be based on the idea of the road transport system, and a child
from a remote rural setting may form the idea centred on the bullock cart. Learners construct mental representations (images) of external reality (transport system) through a given set of activities (experiences). The structuring and restructuring of ideas are essential features as the learner’s progress in learning. For instance, the initial idea of a transport system built around road transport will be reconstructed to accommodate other types of transport systems—sea and air—using appropriate activities. The engagement of learners, through relevant activities, can further facilitate in the construction of mental images of the relationships (cause-effect) between a transport system and human life/economy. However, there is a social aspect in the construction process in the sense that knowledge needed for a complex task can reside in a group situation. In this context, collaborative learning provides room for negotiation of meaning, sharing of multiple views and changing the internal representation of the external reality.

Construction indicates that each learner individually and socially constructs meaning as he/she learns. Constructing meaning is learning.

The constructivist perspective provides strategies for promoting learning by all. The teacher's own role in children’s cognition could be enhanced if they assume a more active role in relation to the process of knowledge construction in which children are engaged. A child constructs her/his knowledge while engaged in the process of learning. Allowing children to ask questions that require them to relate what they are learning in school to things happening outside, encouraging children to answer in their own words and from their own experiences, rather than simply memorizing and getting answers right in just one way — all these are small but important steps in helping children develop their understanding. ‘Intelligent guessing’ must be encouraged as a valid pedagogic tool.
Active engagement involves enquiry, exploration, questioning, debates, application and reflection, leading to theory building and the creation of ideas/positions. Schools must provide opportunities to enquire, question, debate, reflect, and arrive at concepts or create new ideas. An element of challenge is critical for the process of active engagement and learning various concepts, skills and positions through the process. What is challenging for a particular age group becomes easy and uninteresting for the other age group, and may be remote and uninteresting at another stage.

So often, in the name of ‘objectivity’, teachers sacrifice flexibility and creativity. Very often teachers, in government as well as private schools, insist that all children must give identical answers to questions. The argument given for not accepting other answers is that, “They cannot give answers that are not there in the textbook

2.5.12 The Value of Interactions

Learning takes place through interactions with the environment around, nature, things and people, both through actions and through language. The physical activity of moving, exploring and doing things, on one's own, with one’s peers or in the company of adults, and using language to read, to express or ask, to listen and to interact — are the key processes through which learning occurs. The context in which learning takes place is thus of direct cognitive significance. Much of our school learning is still individual based (although not individualised!). The teacher is seen as transmitting ‘knowledge’, which is usually confused with information, to children, and organizing experiences in order to
help children learn. But interaction with teachers, with peers, as well as those who are older and younger can open up many more rich learning possibilities. Learning in the company of others is a process of interacting with each other and also through the learning task at hand.

2.5.13 Basic Capabilities

Children’s basic capabilities are those that form the broad basis for the development of understanding, values and skills.

1. Language and other forms of expression provide the basis for meaning making, and sharing with others. They create possibilities of development of understanding and knowledge, providing the ability to symbolise, codify, and to remember and record. Development of language for a child is synonymous with development of understanding and identity, and also the capability of relating with others. It is not only verbal languages with scripts, but also languages without scripts, sign languages, scripts such as Braille and the performing arts, that provide the bases for making meaning and the expression.

2. Forming and sustaining relationships with the social world, with the natural world, and with one’s self, with emotional richness, sensitivity and values. This gives meaning to life, providing it with emotional content and purpose. This is also the basis for ethics and morality.

3. Capabilities for work and action involve the coordination of bodily movement with thought and volition, drawing on skill and understanding, and directing
oneself to achieve some purpose or create something. It also involves handling tools and technologies, and the ability to manipulate and organize things and experiences, and to communicate.

2.5.14 Home/First language(s) or Mother-tongue education

It is clear that through their innate language faculty and interaction with the family and other people around them, children come to school with full-blown communicative competence in their language, or, in many cases, languages. They enter the school not only with thousands of words but also with a full control of the rules that govern the complex and rich structure of language at the level of sounds, words, sentences and discourse. A child knows not only how to understand and speak correctly but also appropriately in her language(s). She can modulate her behaviour in terms of person, place and topic. She obviously has the cognitive abilities to abstract extremely complex systems of language-from the flux of sounds. Honing these skills by progressively fostering advanced-level communicative and cognitive abilities in the classroom is the goal of first-language(s) education. From Class III, Several studies have shown that bilingual proficiency raises the levels of cognitive growth, social tolerance, divergent thinking and scholastic achievement.

Societal or national-level multilingualism is a resource that can be favourably compared to any other national resource onwards, oracy and literacy will be tools for learning and for developing higher-order communicative skills and critical thinking. At the primary stage, child's languages must be accepted as they are, with no attempt to correct them. By Class IV, if rich and interesting
exposure is made available, the child will herself acquire the standard variety and the rules of correct orthography, but care must be taken to honour and respect the child's home language(s)/mother tongue(s). It should be accepted that errors are a necessary part of the process of learning, and that children will correct themselves only when they are ready to do so. Instead of focusing attention on errors and 'hard spots', it would be much better to spend time providing children comprehensible, interesting and challenging inputs.

2.6 Kerala Curriculum Framework (KCF) on Language Learning

KCF 2007 endorses the ideas that the National Curriculum Framework puts forward regarding language learning. “Every learner is enriched with a certain level of communication that he/she develops as a result of his inborn proficiency and interaction with the social surroundings. By the time he reaches school he must have experimented different forms of language in the form of words, phrases, sentences and pieces of conversation. Children are capable of comprehending and using language according to the context. They can also language to that befits the people whom they talk to, and the situation that they are in. They are also able to arrange the sounds of a particular language from the variety of sounds that they hear. The primary aim of language learning is to develop these skills gradually in the classroom by improving the power of assimilation and communication. From third standard onwards a higher level of language proficiency is to be reached, stressing on developing communicative skills and critical thinking. This is accomplished by means of the written and oral skills. At the primary level, the learner’s proficiency must get accepted. For this fruitful and interesting contexts for the learners are to be created. Then only they
will be able to acquire the skill to use the target language without committing spelling errors. At the same time, care should be taken to prevent him from disregarding his mother-tongue. KCF 2007 acknowledges that errors are a part of learning process. Students will make necessary corrections at the right time. Instead of focusing on the errors that the students commit, teachers ought to create situations that are interesting, challenging and suiting the level of comprehension of the learner.

The domestic language of the learner ought to be given importance. Children come to school are able to understand each other’s idea. Still, they must acquire a higher level of comprehension at school. In familiar contexts – for example, during interaction with their peer group- the basic language skills are sufficient. But, a higher level of language proficiency is essential to prepare a treatise on abstract ideas or during occasions that demand a higher level of comprehension. It is difficult to copy the higher skills from one language to another. Therefore, there is a need to strengthen instruction of languages at schools.

Language is not a mere medium of communication. It is also the social and cultural reflection of a society. Man expresses his thoughts and ideas through his language. He also engages in creative activities and enjoys works of art with the help of language. It is also essential to weave the threads of social life and to understand and analyze the ways of the world. Thus language has had a crucial role in the evolution and development of man.

Instead of banking on the behaviourist school of psychology, KCF aims at
utilizing the innate proficiency of the child to use the language. This method makes use of the child’s ability to use the linguistic skills of the child and enables him to engage in daily activities and express his ideas creatively. The idea of Social Constructivism put forward by Vygotsky and Bruner and the findings by Noam Chomsky in Linguistics form the foundation of this curriculum. Along with this, the experiments carried out in Kerala and abroad which is learner-oriented is also important. Generally, an overall vision developed from Social Constructivism, the ideas of Chomsky on Linguistics, Gestalt Psychology, the concept of learner-centred education and ideas on humanism form the foundation of language learning in our new approach.

2.6.1 A Holistic view of Language

The important aspects on the holistic view of language are given below:

- When there is learner autonomy, learning becomes effective. When the learners engage in learning activities, maintaining discipline will not be a problem. We envision a community of learners who take up activities by exercising self-control

- The holistic approach of language learning approves of the abilities of the children. They are capable to evolve and therefore, the skills that are inherent in them have to be nourished

- Learning gets enriched with social interaction. It is advisable to make the children engage in discussion, share their ideas, and act collectively to solve issues and execute projects
Majority of learning does not take place as a result of direct teaching directly. By identifying the likes and dislikes of the child, when the parents and teachers interact with him, he learns the language unknowingly.

The learner has the ability to understand even the most complex form of ideas. What we need to do is to make them get involved in such complex processes.

It is only when language is employed, do both language and literacy evolve. The learners must get the opportunity improve his proficiency in a natural manner.

Language learning takes place from the whole to the parts. The natural and psychological way is to move from the holistic form of ideas to the elemental form of words.

The theory of Multiple Intelligence also had a tremendous impact on the curriculum revision programme in Kerala just like the holistic view of language. We could realize that the different parts of the brain are related to different abilities of the individual. As brain development takes place at a great pace at a very tender age, the child has to get a variety of experiences during that phase. More research has to be carried out on the application level of Multiple Intelligence.

The new approach approves of the social aspect of learning. The construction of knowledge takes place by means of social interaction and sharing. This is essential to enable the child understand the world that it lives in better, and
to develop the skill to react creatively and effectively. Generally, learning of this kind takes place in a dialectical, collaborative and co-operative atmosphere.

2.6.2 Language learning materials

Though we have tried to establish the fact that there are a lot of learning materials for language in addition to the text book, we are still not able to put it into practice. There should be proper planning to implement this. The school and class libraries ought to provide better facilities. If necessary, reading materials have to be developed in the district level or in the Panchayath level.

At the state level we should prepare a common curriculum, a framework of the course book and the source book for teachers. The course books should be prepared at the district level, taking regional elements also into consideration. As a first step, this could be implemented up to the fourth standard.

Movies that are palatable for children, extracts from newspapers which contain social issues and interactive CDs could be used for language learning. This will be of help in deciding the mode of study of each learner. Once the mode of study is fixed, learning becomes light and enjoyable.

2.6.3 The language Teacher

The new curriculum should be able to develop a new concept on Language teachers. They should be voracious readers who share new arrivals and periodicals with the students. They should also copy down and collect interesting and informative parts of the journals

- They should interact with the students. They should also possess oratorical skills
They should be able to clarify the doubts raised by the students and kindle the spirit of research in them

They should possess a basic idea on performance arts and recitation

They should construct questions that befit the occasion

They should provide constructive ideas and suggestions on the product that the learner has created. They should also possess the ability to engage in Creative Writing

They ought to view the world from a critical perspective and must equip the learners to do the same

The moulding of such a teacher community would result in the creation of a generation that uses language for critical and creative purpose. There should be training programmes in the state that facilitate this. There is a group of language teachers who have not received any kind of in-service training. They should get trained in their concerned field to function better than ever. To ensure that the curriculum is transacted in the best way, a strong monitoring programme should be introduced. Monitoring conducted by bodies of local self-government, education officers, DIET and BRC would help the teacher improve his/her quality

2.6.4 Evaluation

KCF 2007 proposes to carry out a comprehensive and continuous evaluation programme in order to assess the level of achievement of the learner and to plan activities on a regular basis. Practical methods that help us to classify
every learning activity under specific areas of study should be developed. The evaluation programme should gradually upgrade itself by reducing the importance of terminal examination and by making the continuous evaluation process a decisive factor.

2.6.5 Learning the mother tongue

During the phase of language acquisition mother tongue gets strongly rooted in the learner’s mind. It is the best medium for the learner to express his emotions and ideas. Therefore mother tongue enjoys a great position in the curriculum. The mother tongue can perform a great deal of duties in the school curriculum. It is the most suitable element for the construction of knowledge.

The revised curriculum has included a somewhat detailed study of many Indian languages and some of the foreign languages. This is a great achievement. It gives an opportunity for the students to interact with different streams of culture as they learn different languages. This is helpful to attain excellence in different fields of life. But, at the same time, we have not been able to make the study of mother tongue comprehensive and universalized. There is a general lack of interest in this, which has affected the study of mother tongue. It is only in recent times that the negative impact of lack of proficiency in mother tongue has been realized. In all other parts of India, there is every opportunity to learn mother tongue, whereas in Kerala, it is not an essential part of the curriculum. The study of any subject is primarily carried out with the help of language. The best medium for its execution is through the mother tongue. The learners must be given the opportunity to learn their mother tongue in all the phases of schooling. This should be seen as the learners’ right.
From the first to the first standards, except for two hours, most of the time has to be spent for language learning. With the help of an integrated approach that is flexible, we can accomplish this. Mathematics or studies on the environment could only be a part of this.

Language learning at the primary level should be based on the experience of the child. He should learn the language by reacting to his surroundings and by analyzing them in an imaginative manner. Here we create an opportunity for him to interact better in a familiar situation. From the primary stage on we should create an atmosphere that helps one develop a genuine inclination for languages.

2.7 Review of related research studies

In the study “An In-service Teacher Training Process for Improving Constructivist Learning Environments in Thai Small School Classrooms” by Panomporn Puacharearn and Darrell Fisher (2006) describe a teacher training process conducted in Thailand using in class and at-school activities that resulted in changes in teachers’ competencies to improve their classroom environments using a constructivist perspective. The process was conducted nearly one year. The first step process involved three steps: forming teams in schools; working with teachers to improve their competencies; and providing an opportunity for teachers to present their own action research about improving student learning. There were three parts to the second step of this process. These involved: training teachers on instructional innovation (relevance to school needs ensured); and on how to implement instructional innovation in their classes through action research; and holding weekly individual meetings with the teachers concerning
class occurrences and specific techniques that could be used in an attempt to improve student learning.

The overall aim of this research study was to create a networking process for improving in-service-teachers' competencies in teaching to improve their classroom environments using a constructivist perspective.

The findings of the study are:

1. All 23 teachers from three case-study schools successfully implemented instructional innovation in their classes through action research.

2. Teachers’ attitude towards the training by networking process activities and perceptions of self efficacy were changed in a positive direction following use of the networking activities.

These results suggest that the training through networking process in this research was effective in improving in-service-teachers' competencies in teaching.

Luciano Rellin [1949] in his study on ‘Current practices of the in-service education of Philippine Public School Teachers’ found out the following five objectives as most important objectives of the in-service education programmes:

1. To promote professional growth and efficient teaching
2. To familiarize teachers with subject matter and sources
3. To stimulate self improvement among teachers
4. To equip Teachers for leadership in the community
5. To orient new teachers to be effective on their jobs
He found out that the significant methods employed to achieve the objectives were teachers meetings and conferences, demonstration classes, visit to schools and supervisory services like conferences, memoranda and issuance of bulletins.

Carmen A. Llanera [1962] discovered that in-service education was not cooperatively planned based on the need of the teachers. Referring to the success of the programmes she reports that the phases pertaining to objectives, subjects treated, methods and procedures were successful. But the programmes on methods of classroom planning and means of evaluation were not successful.

In a study on ‘the in-service training of primary school teachers in Asia’ Pires [1962] found out that the following objectives were in view in one or the other country, while organizing in-service education programmes:

1. Upgrading the professional knowledge and competence of teachers.
2. Extending the general education of teachers.
3. Enhancing the general education of teachers.
4. Providing opportunities for teachers to obtain increments in salary.
5. Raising the morale of teachers.
6. Improving public relations.
7. Providing training in community living.

Teachers were qualified with high teaching skills, responsibility, interpersonal and social skills, and communication skills had a positive impact on teachers’ work behaviour in schools. Teachers’ job performance could be increased positively when teachers were highly trained with teaching skills and
responsibility. Teachers trained with high responsibility; teaching skills; interpersonal and social skills; and communication skills would increase positively the organisational effectiveness. When teachers have positive self esteem it would increase the impact of teaching skills, on job performance and organizational effectiveness of teachers. Teachers with high responsibility would increase the impact on organisational effectiveness when they have a positive self esteem. (Abdul Ghani Bin Abdullah -2009)

Insung Jung (2001) examines the needs met through the introduction of online in-service teacher training and the strategies that have been employed in the process.

Online in-service teacher training is a form of online education that uses computer network technologies to organize, develop, manage, and administer in-service teacher training. If online teacher training programs are well designed, they can broaden the range of teacher training opportunities and reduce the costs of providing retraining opportunities to teachers by adopting information technology, and sharing educational resources.

Her study reveals that online teacher training is seen to have several benefits:

1. Teachers can access in-service training without leaving their classrooms;
2. Teachers can improve their computer literacy;
3. Teachers are better able to interact with their trainers and other teachers online; and
4. Once a database of online courses has been developed, teachers can access those courses that meet their individual needs.
Research and case studies show that online training via the Internet provides an opportunity to develop new learning experiences for learners by managing self-directed learning, and sharing information and ideas in a cooperative and collaborative manner (Harasim, et al., 1995; Hillman, 1999; Moller, 1998; Thompson & Chute, 1998; Trentin & Scimeca, 1999).

Pattanida Puntumasen in his study on “School-Based Training (SBT) for In-service Teacher Development: A Strategy for the Success of Learning Reform in Thailand reports the guideline for School-Based Training for In-service Teacher Development for basic education in Thailand. The guideline are based on following principles: (Aurapan Pornsima & Pruet Siribanpitak, 2003)

1. The training is in fact a development process based on the real situations and actual needs of both the schools and the trainees, with the ultimate aims of enhancing the trainees’ capacities in organizing the learning process and the students’ capacities.

2. The Training takes place at school (School-Based) or sometimes in the community (Community-Based) with the school being responsible for the training project.

3. The trainees’ capacities are enhanced by the teachers or groups of teachers, who are learning reform leaders. These resource persons are familiar with the learning reform. They have expertise and experience in SBT teacher development. The essential requisites are faith and genuine recognition on the part of the trainees.
4. The Training is on a voluntary basis.

5. Both trainers and trainees join efforts in conceptualization, planning and carrying out line training.

6. The Training involves actual practice, availing of different teaching and learning methodology, training materials, media and activities, which will be applied to real classroom situation.

7. The training is repeated on a continuous basis and avails of a variety of methods, involving regular group meetings and individual consultations with the view to collectively finding solutions to problems and enhancing the students’ learning.

8. For the training, the PDCA process is availed of i.e. Planning, Doing, Checking and Action. PDCA is in fact an on-going process, benefiting from the evaluation outcomes which are used for improvement in the planning.

9. The training involves supervision, monitoring and evaluation. A variety of evaluation methods are availed of and are applied before, during and after the training. The evaluation is based on both the training outcomes as well as achievements of the trainees’ students.

10. The training is part of the trainees’ regular functioning with the ultimate aims of raising the quality and standard of the teaching profession as well as the students’ capacities.
Planning for teacher training includes:

Identification of problems/needs for training through questionnaires/Interviews of trainees Trainers/Trainees, Preparation of training project/plan Trainers/Trainees, Organizing training to provide knowledge and understanding of the content agreed upon: a variety of training models are availed of with emphases on practical work and teaching learning materials, Organizing Trainers/teachers training include, Application of knowledge and appreciation of training content for actual classroom situation Trainers/Trainees and Noting observations of change in classroom, problems or obstacles encountered.

The study highlights that an effective School-Based Training required 10 key factors as follows:

1. Principals/ school administrators provide the necessary support and encouragement as well as facilitate the training to achieve the desired goals. They see to it that the teacher development plan forms part of the annual school work plan. They also assist in obtaining additional resources required for the whole school reform.

2. Training organizers are a group of teachers who fully appreciate the needs for training of teachers and are cognizant with the various problems encountered. They collectively conceptualize the training through identifying the goals and objectives bearing in mind the actual situations and the needs of the teachers as well as the school. They also serve as trainers in some cases.
3. Trainers are teachers endowed with knowledge and outstanding capability of applying the learner-centred approach required for the education reform. Being knowledgeable and creative and with expertise in teacher development, they are accepted and win the respect of their peers.

4. Trainees are teachers who are genuinely interested and volunteer to receive training.

5. Training Period is at the direction of the organizers and the trainers. The training, however, should be long-term and be on a regular basis and continued until achievement of the desired objectives. The training schedule should be flexible and an activity can be organized on the hour/day suitable to trainers and trainees alike e.g. during the holidays, in the morning before class begins, after lunch or after class.

6. Training Content depends on the needs of the school and the trainees. However, it should meet the National Educational Guidelines following Chapter 4 of 1999 National Education Act which focuses on learning reform.

7. Training Venue: The training will take place mostly in the school and even in the classroom itself for authentic situation, suitable learning sources in the community of the school could also be availed of.

8. Budgetary Requirements: The necessary budget for teacher development is included in the annual school work plan. Moreover, individual teachers who apply for training must be provided subsidy for self-development.
9. Evaluation will be made before, during and after the training.

Model of the School Based Training (SBT) for in-service teacher development includes:

- Meeting for collective planning for school based training of teachers by Training Organizers.

- Periodic observation of behaviour of trainees and students in accord with the training programme; preparing a summary of observations by Trainers.

- Collective consultation for analysis of the observations made and problems identified;

- Collective recommendations for improvement of teaching-learning activities by Trainers/Trainees Individual consultation for person-to-person enquiry/conversation at times convenient to both parties; trainers will regularly provide advice/recommendation for enhanced teaching-learning activities.

- Concluding meeting/organizing an exhibition/exchange of learning/discussion to obtain recommendations and evaluation of the training conduction by Training Organizers.

- Analysis and findings; identification of problems and deficiencies. Meeting for improvement which will be beneficial to planning for subsequent training by Training Organizers.

Kumar.K. and Gupta. J.K. (2006) found out through the study on the ‘Role
of Block and Cluster Resource Centres for quality improvement in elementary education’ that BRC Co-ordinator visited each cluster once in a month and discussed their problems and passed on new information to them. Cluster visit is for providing onsite support to trainers. Also s/he conducted monthly meeting with CRC Co-ordinators to review their work, receive monthly reports, and plan activities for the future and to pass on instructions/ directions received from DIETs or State/District Project Office. CRC Co-ordinators organised their meetings/workshops regularly. The problems discussed were largely administrative in nature. They made good use of the modules on classroom transactions, dealing with hard spots in learning, preparation and use of TLM and sharing of innovative activities in their workshops. Many BRC and CRC Co-ordinators felt that paper work was quite time consuming as there were too many records to be maintained and too many forms to be filled and submitted periodically. BRC Co-ordinators as well as CRC Co-ordinators differed greatly in giving estimates of the time they spent on different activities.

Teachers suggested that more attention should be paid to activity based teaching, teaching of hard spots, remedial teaching of weak students and teaching of Science and Mathematics in in-service training programmes. Nearly two fifth (42%) of the schools were visited by members of DIET Faculty in a year.

The study recommends periodic review of modules of classroom transaction to include new material for dealing with problems that teachers faced in classroom transaction; increase in number of schools to be visited by DIET’s faculty; review of the administrative activities carried out by BRCs and CRCs to find out how the records keeping and reporting work could be reduced; filling up
the vacant posts and undertaking a study on ‘Time-on-task of BRCs and CRCs.

Shukla. P. (2003) conducted a Study on the training needs of the primary school teachers with reference to effective classroom activities. Primary teachers from Raipur and Mahasammund districts were covered in this study.

The major Objectives were:

1. To ascertain training needs of primary teachers from urban and rural areas
2. To find out the teaching skills and content knowledge of teachers in Mathematics and Environmental Studies in urban and rural areas
3. To identify the teaching difficulties faced by teachers in urban and rural areas.

The study was conducted by using survey method. One hundred primary school teachers were selected randomly. Data was collected by using Training Needs Scale; Diagnostic tests on Environment Studies and Mathematics and group discussions were conducted to obtain data with respect to teachers’ knowledge and teachers’ skills. Classroom observation was done by using a scale with 14 teaching characteristics.

His study revealed that the training needs of teachers belonging to rural areas were found to be higher in different areas. Their difficulties in teaching were higher and teaching aptitude was low. Teachers from rural areas were found to be less efficient in class-management, control and discipline. They were also less efficient in using black-board and teaching aids. Classroom interaction while teaching was found to be less in the rural area. Their efficiency in teaching during
class inspection as well as knowledge of fundamentals of learning was also lower. Teachers from rural areas were found to be less efficient in teaching Mathematics and Environmental Studies. The basic content knowledge of Mathematics and Environmental Studies was also less in teachers from rural area. All the above aspects need to be focused upon in teachers training especially for the teachers from rural areas.

Patel, M.K. and Patel, L.P. (2006) studied Impact of teacher training on activity based participatory teaching learning process in classroom transaction with the following objectives:

1. To know present status of teachers’ training
2. To ascertain the impact of teachers’ training on activity based participatory teaching learning process with reference to teaching in language, mathematics and Environment
3. To give suggestions regarding the activity based participatory teaching learning process in teaching.

The research study covered 4 districts of Gujarat, namely Patan, Dahod, Jamnagar and Ahmadabad. It was found that in most of the classrooms, seating arrangement needed improvement. Use of creative literature, demonstration by the teachers and participation of experts in teaching learning process was less.

According to the CRCCs, use of self-made charts, pictures, models and students activities like puzzle solving, group work had increased in Mathematics, Environment Science and language classes after implementation of SSA. Teachers complained about the extra governmental work (63%) and over dose of training (56%).

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Suggestions received from teachers and CRCCs were on the development of participatory methodology for teacher training which should include the activity based classroom transactional strategies on different subjects.

Singh, R. (2003) conducted a Study of ‘teachers’ perception of various roles performed by head-teachers of primary schools for school improvement’. In his study the data indicated no significant difference between six dimensions of head-teachers role – as organiser, academician, facilitator of examination process and rapport with students, teachers and community, as per teacher’s perception. Majority of the teachers (20-90%) stated that their head teacher delegated work to all teachers and supervised different activities of the school such as keeping the school records, morning assembly, arrangement of clean drinking water, and maintenance of school property and distribution of food grains under mid-day meal scheme. Majority of head-teachers followed the time table and taught their classes regularly (85%), their subject knowledge was considered good (65%) and they guided and inspired other teachers. However few of them studied books available in the school library or discussed articles published in the newspapers/magazines. Their rapport with students and teachers was satisfactory though their rapport with community needed improvement. However, it was observed that head-teachers in the rural block (56%) took less interest in the organisation of co-curricular activities as compared to their urban counterparts (73%) were also less democratic (66%) in their dealing with teachers than the urban head-teachers 86%)

Most teachers were of the opinion that SSA has contributed to the improvement of overall education and training programmes have improved their
competence. However, it still has not greatly impacted on the quality of teaching and knowledge transfer as is reflected in their responses to children not being able to understand the subject taught (49%) or that all of them are not able to complete their home assignments (44%) or respond to questions in the class (67%). (Sekhar, S. Nair, Prabhakar, K. & Rao, P, 2008)

Central Research Team & TSG-ED.CIL( 2005) conducted a Study of’ Scholastic achievement and literacy level of children at the end of primary stage’. The objective of this study was to find out how various school and teacher variables affect students’ achievement. Sample of the study was schools of Uttar Pradesh, Orissa and Karnataka and the sample was as same as selected for Terminal Assessment Survey (TAS) of DPEP.

Main findings of the study are I) average achievement of children is very poor in Karnataka and Orissa. Only one fourth of students in Karnataka and Orissa were literate. While in Orissa more than half of learners performed well. In the case of numeracy skill more than half of the students scoring below 40% marks in Karnataka and Orissa. Students’ achievement in reading comprehension was higher in all three states than that in reading aloud and writing skill.

Study on effectiveness of Block Resource Centres and Cluster Resource Centres in providing academic support and supervision to elementary schools (2008) was done by Technical Support Group and the objective of the study was to find out the effectiveness of Block Resource Centres and Cluster Resource Centres with regard to the improvement of academic performance in primary and upper primary schools.
The study covered 14 states (Assam, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Kerala, Madhya Pradesh, Mizoram, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal).

Main findings of the study:

The academic structures at the district block and sub-block levels were generally well established for administrative purposes. In two states - West Bengal and Haryana, there were no regular Block Resource Persons. For conducting training they entrusted experienced teachers on temporary base. According to District Project Coordinators the BRCs were overloaded with administrative work. Some of the problems identified at the CRC level included insufficient capacity building of CRC Coordinators, lack of job knowledge and non-acceptance of teachers to adopt innovative teaching methods. As per the guideline SSA promotes decentralized planning and administration system but in reality the power vested with the BEOs undermined the BRCCs’ position. Training given to BRCCs, BRPs and CRCCs was inadequate in all aspects. Across all the states, a significant proportion of teachers appeared to be satisfied with the effectiveness of training. More focus should be given on needs of CWSN and multi-grade teaching methods. In many cases, training conducted for equipping VEC members was inadequate and practically defunct. Some of the problems stated by CRCCs were poor leadership displayed by them in addressing various issues, poor training capability and lack of emphasis on quality. Areas need to be improved were regarding planning, monitoring and supervision, introducing need-based training programmes, developing infrastructure, addressing shortage of staff and need to introduce IT.
Heads of schools reported that periodic review and planning of academic activities, more visits by BRC/CRC functionaries and frequent training activities would improve school functioning. VEC members suggested that frequent interaction by BRC functionaries would help them to discuss and solve problems at grass route level.

A micro level study conducted in Himachal Pradesh to find out the perception of trainees about the teachers’ training programmes and Observe and analyze the changes in classroom situation after implementation of inputs provided to trainees during the training programmes (In–Service Teachers’ Training Programme under SSA in Suni educational block of Shimla district: an Evaluative Study”2003) . Following are the major findings emerged from the study:

- The training component has been judged useful for teachers to a large extent in use of Teaching Learning Material (TLM) in classroom situation and related to activity based teaching and child centred approach followed by subject enrichment.

- The Resource Persons stressed mainly on lecture-cum-discussion approach while

- Communicating with the trainees instead of demonstration techniques, which were rarely used during the training programmes.

- Usefulness of resource material in the actual classroom situation is not as effective as it should have been.
Majority of the teachers serving at primary level in the selected schools are not possessing higher academic qualifications. However 94% possess the desired professional educational qualifications.

Vijayakumar. B. (2005) conducted a study of ‘teacher training under Sarva Shiksha Abhiyan in Kerala’. The prime objective was to acquire information on basic aspects related to teachers’ training. Study was limited to three districts. The districts were Kollam, Thrissur and Palakkad. The main findings of his study are:

In general quality of training given was rated as average. Out of the nine areas of the training programmes (Planning, Management, subject knowledge, evaluation, computer, continuous evaluation (CE) components, co-scholastic activities, Action research and learning materials), highest dissatisfaction appeared to be in the training on Computer and Action research with 85% and 87% of teachers rating it as average followed by co-scholastic activities (75%) and learning material (71%). Only four areas i.e. subject knowledge, planning, using computer and carrying out evaluation were rated as good (50% and above).

Teachers needed training in preparation of study material (73%), art work experience (67%), participatory training (63%) and CE components (53%). Lack of teaching aids, lack of learning material, inadequate site support and non cooperation of parents were cited as some of the major problems at class level.

The major strengths of the training programmes were favourable environment, institutional network, human resources, curriculum, IT at schools, local bodies and support systems.
Lack of co-ordination, improper planning, poor quality training, poor monitoring and fund deployment merged as weaknesses of the programme.

Suggestions in his study include the following:-

The important policy suggestions by experts include co-ordination of various training agencies; year planner for training; training need analysis; procedure for selection of trainers; provision of IT and materials; monitoring; participation of local bodies giving stress on quality; formation of core team; provision of faculty improvement programme; strategy for participatory teaching and promotion of research and development.

As per the findings of Naseema,C. (2008) teacher training was satisfactory in Kerala. But there was boredom due to repetition. In the case of training during vacation, 62.5% opined that venue arrangements and co-ordination, modules, RP’s performance, products, documentation and follow up were satisfactory. 57.3% of the teachers expressed satisfaction with the modules. Majority (75.5%) of teachers opined that enough importance was given to teaching skills. In the opinion of 48.1% teachers, performance of resource persons was efficient.

Cluster training was reported as effective by nearly half (49.4%) of the respondents. The academic support provided through monthly cluster meeting helped (36.3%) them in comprehensive planning, sharing of learning experiences, locating hard spots and in preparation of TLM. Action researches were carried out by a few teachers to find solution of their classroom problems and applying it at classroom level and/or use in teacher training.
Teaching learning process in grades V to VII lacked in effectiveness; participation of students in classroom activities was noted as low. Teachers expressed ambiguity in the process of Continuous and Comprehensive Evaluation.

Vohra, S.N.( 2000) conducted a study of primary teachers’ opinions about the training programmes conducted by DIET, Gujarat. His study revealed that co-operation of teachers increased due to group discussion.

The implications and action points of his study were:

1. Training programmes should be conducted in the light of need-based survey.
2. Training programmes can be made activity based to enhance the teachers’ co-operation.
3. Audio-video aids should be used in the training programme to the maximum extent.

As per the data available from District Information System of Education (DISE), maintained by SSA, Kerala, In Class IV the percentage of learners who passed was consistently 97 and above through the years 2003-04 to 2007-08. In class VII this percentage was 95 and above. The percentage of high achievers in class IV was 56 in the year 2003-04. The increase in the percentage was consistent through the years 2003-04 to 2007-08. There was an increase of 18% in the year 2007-08 when compared with 2003-04. In class VII the percentage of high achievers was only 42 and above during the year 2003-04 to 2007-08.

It is worthwhile referring to Baseline Assessment Study (BAS) and Midterm Assessment Study (MAS) conducted by NCERT during the year 2008-
09. It is stated in NCERT’s BAS and MAS document that Kerala has improved more than 5% point in the case of achievement of students in class V. In language, the State stands in the second rank in MAS in class V

As per Annual Status of Education Report (ASER) 2009, a nation-wide study facilitated by Pratham, it has been found that primary learners in Kerala have made significant achievement in learning mother tongue. 25.7% of the learners in classes 2 in Kerala can read level 2 text (Std 2 text) in mother tongue. The percentage of these category in class 3 is 42.9% and 59.2%, 71.3%, 77.0%, 81.7%, 86.1% in classes 4, 5, 6, 7 and 8 respectively. Considering total students of class one to eight 1.1% could not read anything and 6.5% of children were able to read only letters. Percentage of students who can read words amounts to 14.4 and those who can read standard one text is 58.5%.

Student learning Study (2009) is a bench mark study of student learning. The study focused on learners of class IV, VI and VIII. It was conducted on students on select urban and rural schools in both private and government sectors. This study, conducted by the consultancy Educational Initiatives, shows that the percentage of language skills of children of class IV in Kerala is 70.0. This percentage is above the national average.