

Chapter 1

Introduction

Teaching in general, language teaching in particular, is directly related to **the** teacher's perceptions on human beings and their mental processes. This explains the direct influence of psychology on teaching. Therefore any enterprise in teaching should begin with a due consideration of its psychological foundation. This is especially so in the case of language teaching as language learning is different from any other type of learning. The facility **for** language is what makes human beings unique. And down the ages researchers have been trying to unravel the secret of our language learning ability. Researches in neurosciences and psychology implicitly as **well** as explicitly influence the teacher's approach to students, and **the** process of teaching and learning. Two of the most important psychological theories underlying almost all mainstream English Language Methodologies are Behaviourism and Cognitivism. It is therefore well in place to discuss **the** salient features of these theories and identify how these two important theories in psychology influence our teaching-learning programmes.

Behaviourism

Behaviourists interpret 'behaviour' in terms of stimulus and response. They believe that behaviour can be conditioned by manipulating the bond between stimulus and response. There are primarily two ways in which this conditioning can be done. The first one is classical conditioning. In classical conditioning, a new pattern of behaviour is formed by replacing one stimulus with another stimulus by way of association. It is explained in terms of the

famous experiment carried out by the distinguished Russian psychologist Ivan Petrovich Pavlov (1849-1936) involving a dog. The second type of conditioning is called operant conditioning. Here a new pattern of behaviour is created and sustained by positive reinforcements. This is explained by Burrhus F. Skinner (1904-90) through his famous experiments with a pigeon.

This change from one pattern of behaviour to another caused by external intervention is what we call *conditioned learning*. The difference between classical conditioning and operant conditioning is that in the former, the organism plays a *passive* role whereas in the latter the organism plays an *active* role, i.e., it operates upon the environment to bring about the desired result. Classical conditioning relies on *the frequency* of the learning experience for it to be effective. But operant conditioning emphasizes the effect or the *result* of conditioning.

Thus, according to the Behaviourists, repetition, reward, punishment, attention and motivation are the components of effective learning. And they equated learning with observable behaviour. They did not take into consideration any learning which was not in the form of observable behaviour.

Critiquing Behaviourism

Gregory Bateson while studying the behaviour of dolphins conducted a series of experiments similar to those of Skinner. And he noticed that after a point the reinforcement reward did not work. The Dolphins were becoming bored. Therefore trainers had to give the dolphins extra fish to keep up the relationship. Bateson called the additional reward 'relationship reward.' And then he made an amazing discovery. As a result of the relationship reward the

dolphins became very excited and came up with a whole new set of new and original tricks and behaviours.

According to Bateson, this means that the second reward “was not so much a reinforcement **for** the behaviour, but rather a message to the dolphin about its relationship with the trainer. The trainers’ sensitivity to the relationship with **the** animals [dolphins], and consequent actions in giving an extra fish, were critical to the success of the relationship and the experiments” (Churches and Terry, *NLP for Teachers* 41).

What we see here is Bateson breaking away from the Behaviourist tradition in and **through** the famous archetypal Behaviourist experiments. He calls for a consideration of the relational aspect of the context in which **the** learning takes place. The ‘unearned fish’ acts as a message about the relational aspect of the context. This implies that “sticking too closely to the rules of reward and consequence earlier on in the process may have communicated (at a ‘meta’ level) **that** the trainers were unconcerned about their relationship with the dolphins” (Churches and Terry, *NLP for Teachers* 40). The relationship rewards generated motivation and more learning than had been anticipated or expected in the Behaviourist paradigm. Through the experiments Bateson demonstrates an important truth: although **the** trainers had influence they were not in control as such. All these discoveries nullify many of the key concepts in the Behaviourist model of learning such as the primacy given to environment, reward and consequences, and repetition as well as their neglect of the unobservable aspects of human nature, the power of rapport in learning, and our innate powers of creativity.

According to B. F. Skinner, human beings are blank states, totally controlled by outside **influences**, i.e., conditioned by the environment. He denies that the individual has free **will**; and he places the environment in its place. In other words, in the Behaviourist scheme of things human beings are reduced to the status of dull machines shaped by the environment with no intrinsic needs other than physiological satisfaction (Cogswell 67).

Noam Chomsky refutes Skinner by saying that Skinner's arguments amount to denying that human beings have will, impulses, feelings, purposes and **the like**. According to Chomsky, we are not *tabula rasa* but are born with an innate knowledge of grammar; we are also inclined by nature towards free creative enquiry and productive work (Cogswell 67).

And Behaviourism considered language learning similar in principle to any other kind of learning. It was subject to the same laws of stimulus and response, reinforcement and association. Chomsky argued that such a learning theory could not possibly explain how humans learn a language. For a major part of our language use is not the result of imitation, repetition and reinforcement, but is created anew with the help of our innate grammar. "Sentences are not learned by imitation and repetition but 'generated' from the learner's underlying 'competence'" (Richards and Rodgers 66).

Cognitivism

Cognitivism is inspired by the insights from Gestalt psychology and Charles Darwin's insights into biological evolution and is the direct result of the pioneering research made by Noam Chomsky on human language.

The **Cognitivists** argue that there is a faculty in human beings (known as the “cognitive function”), which permits the learner to monitor and evaluate the different stimuli. That is, it helps them to regulate, co-ordinate, reject and to frame responses to those stimuli which are accepted. Thus, learning seems to involve a process of constant reappraisal of the environment by the learner, and the consequent readjustment to it. And it is clear that the Cognitive function makes **the** learners the controller (unconsciously, very often) of the learning process rather than a passive recipient (PGCTE 17).

Thus like the Gestalters, the Cognitivists hold that learning depends on perception and insight formation. They feel that all learning is in the nature of problems solving. The new experience constitutes the problem, which the learner tries to “solve” on the basis of previous learning.

These ideas of **Cognitivism** contradict the conclusions of Behaviourism, which hold that learning takes place only through imitation and trial and error.

The Cognitivist view seems to be more plausible as an explanation **of the** process by which learning takes place in human beings. And such a view puts the learner at the centre of the learning process.

Language Learning in the Light of Cognitivism

These discussions make it clear **that** Cognitivist theories of language learning differ rather widely from Behaviourist views: the former stresses the rule of insight, hypothesis formation and learning through discovery, while the **latter** attaches more importance to practice leading to the formation of automatic habits of behaviour.

However, there is something which the two schools have in common: the belief that learning takes place through exposure to experience. If one is deprived of **this** exposure, there will be no learning. The child learns a language because it is constantly exposed to it. **But** if a child was placed in an environment in which there was no language at all, it would not learn the language. In other words, human beings, though born with a language faculty, need constant reinforcement from others in the environment. And as new information is pouring in from different branches of knowledge we are gaining new insights into the **vastness** and complexity of the subject we are dealing with.

Cognitive Psychology has helped us appreciate to some extent the marvellous intricacy and complexity of the human cognitive systems. It is no less intricate than human intelligence or complex bodily organs. And as Krishnaswamy and **Krishnaswamy** suggest, “we need to think **of an** integrated model, integrating cognitive sciences, anthropology, natural sciences like **neurosciences** and biology, and sociology to gain a better understanding of language pedagogy” (50).

It is in this context that using insights from Neuro-Linguistic Programming (NLP) in language learning gains relevance. It is said **that** NLP “wears seven-league boots and takes therapy or personal growth far, **far** beyond any previous notions” (McHugh 251). That is how the practitioners of NLP see its status in the field of psychology. What is interesting about NLP is that it is not attached to any single theoretical system. Rather it is an eminently practical system of methods and techniques drawn from *what works* in the different areas

of human experiences. Insights from the Hypnotherapy of Milton Erikson (Bandler and Grinder, *Structure I*), Gestalt Therapy of Fritz Peris (Grinder and **Bandler**, *Structure II*), Family Therapy of Virginia Satir (Grinder and Bandler, *Structure II*), Cybernetic Epistemology of Gregory Bateson (Grinder and Bandler, *Structure II*), Buddhism (Elias), Linguistics of Noam Chomsky (Bandler and Grinder, *Structure I*). General Semantics of Alfred Korzybski (Bandler and Grinder, *Structure I*), Philosophy of Vaihinger (Bandler and Grinder, *Structure I*), Theory of Logical Types of Bertrand Russell (Grinder and Bandler, *Structure II*), Brain Studies and Neurology (Dilts, *Roots of NLP*), Information Theory (Dilts, *Roots of NLP*), and so on form the basic assumptions on which NLP works. And recent researches in Neuro-Sciences and Brain Studies are confirming most of these assumptions (Churches and Terry, *NLP for Teachers*). Before we get to discuss what NLP has to offer to ELT, let us quickly have an overview of the existing ELT approaches and methods used in our classrooms.

Earlier Methods

Grammar Translation Method (GTM)

Grammar Translation Method aims at studying a language **first** through a detailed analysis of its grammar rules, and then by applying this knowledge to translate sentences and texts into and from this language. Learning a language, therefore, means memorizing the grammatical rules and other related facts so that **this** translation is possible. In this method, the second language is taught and learned **with** reference to the first language. GTM, as it is popularly known, dominated European foreign language teaching and learning scene for over a

century, i.e., from the 1840s to the 1940s. The beliefs behind the popularity of this method were:

- Studying the intricate grammatical system of the classical languages (Greek and Latin) was best for mental and intellectual discipline and training including memory.
- Learning these languages was an integral part of a truly liberal education.
- Teaching and learning a language means being able to read full texts in the target language. (Tickoo 349-50)

Therefore, the GTM gives importance to reading and writing (translating) and neglects listening and speaking. The learners had to memorize a complex set of grammatical rules. As it focused more on translation, the actual use of the target language was the minimum and that of the mother tongue was the maximum. Too teacher-centred a method, the GTM focused more on teaching *about* the language rather than how to put it into everyday use.

Direct Method

The Direct Method was the result of a reform movement to correct the flaws of GTM. The reform movement was founded on three basic principles: the primacy of speech, the centrality of the connected text instead of individual sentences as the kernel of the teaching-learning process, and priority for the oral methodology and the exclusive use of the target language in the classroom. The method aims at establishing a direct link between a foreign word and the concept it contains without the help of an intermediary word in a known language (Weiuhua 176).

According to the Direct Method all classroom instructions are to be given only in the target language. Speech and listening comprehension are given primacy. Only day-to-day vocabulary and sentences are to be taught. Oral communication skills developed through question-and-answer exchanges between the teacher and learners in small interactive classes. Concrete vocabulary is to be taught through demonstration with the help **of objects**, pictures and the like; and abstract vocabulary is to be taught through association **of ideas** (Weiuhua 176).

The Structural Approach and the Audio-Lingual Method

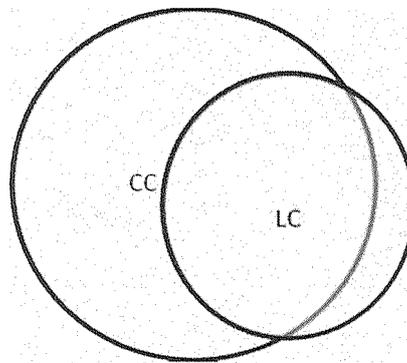
The Structural Approach advocated a more planned or structured approach to all aspects of language teaching. The syllabus, the teaching and testing materials, and the classroom teaching were all planned carefully on the basis of frequency counts of words and structures, using the principles of selection, gradation, and presentation in a systematic manner. Several methods emerged within this approach ; and the most popular of them is the Audio-Lingual Method (Krishnaswamy and Krishilaswamy 67).

The Audio-Lingual method is based on the Behaviourist model of learning. They believe that language is behaviour and behaviour is a matter of habit. Language learning is a mechanical skill and no intellectual process is involved in **it**; since language learning is mechanical, linguistic behaviour can be conditioned. So, **in** the teaching of a language, the teacher should follow the **stimulus-response-reinforcement** pattern. And there should be controlled, spaced repetition in language teaching (Krishnaswamy and Krishnaswamy 68).

Recent Methods

Communicative Language Teaching (CLT)

Communicative Language Teaching arose in the 1970s from the general dissatisfaction **that** Situational Language Teaching and the Audio-lingual Method had **not** led to a satisfactory level of communicative competence in most cases. The questions which were asked at this juncture were: What should be the language teacher's major purpose? "Are we teaching *language*? Or, are we teaching *communication*?" (Allwright 1977). The answer could be found in the relationship between communicative competence and linguistic competence. It is best explained with the help of a diagram used by Richard Allwright:



CC — Communicative Competence LC - Linguistic Competence

As per this diagram, linguistic competence, in general, is part of communicative competence. But some areas of linguistic competence are irrelevant to communicative competence. This implies that a comprehensive focus on linguistic competence will leave out a large area of communicative competence. But an equally comprehensive focus on communicative competence will necessarily include all but a small part of linguistic competence. **This**

suggests that communicative competence should be the major aim of language teaching (168).

A similar concept of the primacy of communicative competence is put forward by an American linguist, Dell Hymes. According to him, Chomsky's concept of linguistic competence was inadequate to explain one's communicative competence. Chomsky's linguistic theory refers to one's abstract ability to produce grammatically correct sentences in a language. According to Hymes, it was a sterile view of linguistic competence. And he argued that language is part of communication and culture. And therefore, linguistic competence should be seen as part of communicative competence. The latter takes into consideration not only the grammaticality of an utterance but also its appropriateness, usage, and functionality (Hymes 281). This concept of communicative competence was further developed by British applied linguists like D. A. Wilkins, Christopher Candlin, Henry Widowson, Christopher Brumfit, Keith Johnson and others.

Communicative competence thus became an umbrella term with four competencies under its fold. They are 'grammatical competence', 'sociolinguistic competence', 'discourse competence', and 'strategic competence'. Grammatical competence refers to knowing the rules and vocabulary of a language, i.e., the knowledge of "what is 'formally possible'". In Chomskian terms, this refers to linguistic competence. Sociolinguistic competence refers to knowing the social context of communication. This includes the relationships and shared information of the people involved in communication as well as the purpose of communication. Discourse competence is the ability to interpret the elements of the message "in terms of their

interconnectedness" as well as **in** terms of the representation of meaning "**in** relation to the entire discourse". Strategic competence is the entire strategies that we use "to initiate, terminate, maintain, repair and redirect **communication**" (Richards and Rodgers 160).

Such a view of communicative competence brought about a real shift in the goal of language teaching. Developing the communicative competence of the learners became the goal **of language** teaching and learning. The shift was from knowing the rules of a language to performing different social roles and linguistic functions.

According to CLT, "language is a system for the expression of meaning. [And] **the** primary function **of** language is.. interaction and communication. [It holds that] the primary units of languages are not merely its grammatical and structural features, but categories of functional and communicative meaning as exemplified in discourse" (Richards and Rodgers 161).

It was the work of the anthropologist Bronislaw Malinowski and his colleague and linguist John Firth, which first highlighted the importance of communicative and contextual factors in language use. They stressed the importance of studying the use of language in its socio-cultural contexts which include the speakers' behaviour and beliefs, the purpose of the use of language and the choice of words (Richards and Rodgers 158).

Another powerful influence on CLT and its theory of language was the influential linguist **M. A. K.** Halliday and his theory of the seven functions of language:

1. **The Instrumental function:** using language to get things
2. **The Regulatory function:** using language to control the behaviour of others
3. **The Interactional function:** using language to interact with others
4. **The Personal function:** using language to express personal feelings and meanings
5. **The Heuristic function:** using language to learn and discover
6. **The Imaginative function:** using language to imagine
7. **The Representational function:** using language to communicate information. (Halliday 11-17)

This theory of the language functions meshes in well with **Hymes's** theory of communicative competence. And for many CLT writers like OJ Brumfit and **K Johnson**, Halliday's theory of language functions and **Hymes's** theory of communicative competence together form the principles on which CLT is based.

According to Richards and Rodgers there are three principles underlying the learning theory of CLT:

1. **The Communication Principle:** activities that involve real communication promote language learning.
2. **The Task Principle:** activities in which language is used for carrying out meaningful tasks promote learning.
3. **The Meaningfulness Principle:** Language that is meaningful to the learner supports the learning process. (Richards and Rodgers 161)

Stephen **Krashen's** discussion of acquisition versus learning too provides a strong basis for CLT's language learning theory, though he is not directly connected with CLT. Acquisition, according to Krashen, is the unconscious development of the target language resulting from exposure to it. There is no conscious attention to language form in this process. This is the basic process in the development of language proficiency as exemplified in the way children develop their first language. It is the acquired system **that** generates utterances during spontaneous language use. Learning, on the other hand, is the conscious development of the formal rules and conventions of the language resulting from instruction and practice. According to Krashen, acquisition is a far superior process than learning. It is the acquired language comes in handy for "natural, fluent communication". And learning cannot lead to acquisition. The latter develops through a communicative use of the language rather than through practice and instruction (**Lightbrown** and Spada 38). Thus CLT emphasizes use over usage, fluency over accuracy, and acquisition over learning.

All these point to the centrality of the learner in the CLT paradigm. CLT is learner-centred second language teaching. Learners are not taken as a group but individually. Individual learners are seen as possessing unique interests, styles, needs and goals. Such a view of the learner necessarily gets reflected in the design of procedures for classroom processes. CLT practitioners believe in developing learning materials which would cater to the particular needs of individual students (Applebee 150).

There is no single model **of** CLT that is universally accepted as authoritative. For some it is an “integration of grammatical and functional teaching.” For some others it means the use of problem-solving tasks in groups and pairs. There are some others who see it as experience-based second language learning. According to them, experience is the best teacher; **and** therefore they suggest that appropriate experiences be selected and arranged **into** a Coherent curriculum. What is common to **all** of these different models is that students get involved in some transaction or interaction in pairs or groups (Richards and Rodgers 155, 158).

As **for** the teaching and learning activities **in** CLT, any type of activity is admissible if it fulfills the following fundamental criteria, according to Richards and Rodgers: it should engage the learners in real communication using “such communicative processes as information sharing, negotiation of meaning, and interaction” as well as “enable learners to attain the communicative objectives of the curriculum” (165).

According to Breen and **Candlin** the two main roles of teachers in the CLT paradigm are communication facilitator and **participant** in the classroom tasks. As a communication facilitator the teacher has to facilitate communication between “**all** participants **in** the classroom, and between these participants and the various activities and texts.” And the second role is a necessary result of the first. And these **two** roles together require that the teachers assume certain other roles such as organizer of resources, guide, researcher, and learner (99).

In addition to this. Richards and Rodgers identify three more roles for the Communicative Language Teacher: need analyst, counsellor, and group process

manager. As CLT approaches learners individually, it is important to assess their language needs, learning styles, learning strengths and weaknesses, learning goals and their motivation in learning the language and respond to such needs; and hence **the** role of the **rieed-analyst**. In their counsellor role, teachers borrow **the** processes used **by** psychological counsellors such as paraphrasing, confirmation and feedback. These processes go a long way in reducing the gap between the speaker's intention and the listener's interpretation. As group process manager, the teacher monitors, encourages, and resists the temptation to help students with supplying vocabulary, grammar and suitable strategies during an activity. However, s/he notes the difficulties **faced** by students in such areas and takes them up for commentary and practice during the debriefing session at the end of the activity. The teacher, as group process manager, leads the debriefing session. S/he comments on the difficulties faced by students, points out alternatives and possibilities and helps them in self-correction (Richards and Rodgers 168). And it goes without saying that all these various roles unsettle teachers who are well set in their traditional roles of preparing the students for examination. And they need special training to carry out these roles.

And the students assume the role of a negotiator — between the self, learning process, and the object of learning- and a joint negotiator within the group and within the classroom procedures. Students are primarily expected to interact with each other rather than with the teacher, very often without the help of a formal textbook, and without the teacher frequently intervening to correct errors or systematically present grammar rules. Thus what CLT promotes is cooperative learning rather than individualistic learning. Communication, from

the CLT perspective, is a joint responsibility of the **speaker, and** the listener. Failed communication is the responsibility of neither the speaker nor the listener alone. And **successful** communication is a joint achievement as well. This implies that the learner “should contribute as much as he gains and thereby learns in an interdependent way”, (Breen and Candlin 110).

According to CLT, instructional materials have the power to influence the quality of classroom interaction and language use. Therefore, **instructional** materials have a primary role **in** the CLT classroom. Richards and Rodgers categorize materials into three: text-based materials, task-based materials and realia. A typical text based on the communicative approach does not contain the usual grammatical lessons, sentence patterns, conversational pieces, or drilling exercises. Rather they contain visual cues, taped cues, pictures, and sentence patterns to initiate conversation. And a typical CLT lesson consists of description of a situation, analysis of the tasks (e.g. understanding the message, asking questions for clarification, asking for more information, taking notes, and ordering and presenting information), a presentation that would help the learners to initiate the task, comprehension questions, and paraphrase exercises. The task-based materials are typically in **the** form of exercise handbooks, cue cards, activity cards, pair communication practice materials, and student-interaction practice booklets. They come in handy for the variety of games, role-plays, simulations, and task-based communication activities that CLT makes use of. As for realia, CLT makes use of materials from real life such as signs, symbols, maps, graphs, charts, pictures, magazines, advertisements, newspapers, and

different kinds of objects. And communicative activities are designed using these varieties of realia (Richards and Rodgers 168-70; Krishnaswamy and Krishnaswamy 72-73).

Critiquing CLT

When we think of CLT apart from its theoretical aspects, and focus instead on actual classroom processes, we may find that there is nothing revolutionary about it. The activities and the way in which they are implemented in the classroom are not exclusive to CLT. They could be observed in the Situational and Audio-lingual classrooms as well. In response, CLT practitioners say that CLT procedures are evolutionary rather than revolutionary. CLT does not reject traditional procedures; rather it reinterprets and extends them.

CLT experts concede that the different roles that teachers are supposed to play in the classroom are likely to unsettle teachers especially in a non-native setting. And it may not be digestible to teachers who consider minimizing and correction of errors and preparing the students for different types of tests as their primary duties. In response CLT advocates propose that teachers need to be trained in the special skills that CLT demands of them. They also call for a radical rethinking about teacher roles in the second language classroom.

Another slippery area in CLT practice has been pair work and group work. Many practitioners are wary of its benefits. They feel that more than facilitating effective communication between students, they could lead to confirming student errors and imperfect modelling. And to ensure that students do use the target language rather than their mother tongue especially in a large

class calls for **interpersonal** and intrapersonal skills **in** the students as well as in the teachers such as motivation, rapport, confidence, self-esteem etc. These are extra linguistic skills that students as well as teachers need to be trained in. In response CLT¹ practitioners agree that these are standing issues to be solved; however, they' also point to some actual CLT classroom data, which contradict **the** notion that students are not good conversational partners for each other (Richards and Rodgers 168).

Finally, how to implement CLT principles at the level of classroom procedures has been a bone of contention still to be resolved. For example, scholars like Littlewood say that learners should master linguistic skills such as pronunciation, vocabulary, and grammar before being initiated into communicative tasks (Littlewood 86). Others like Savignon reject this and advocate the use of communicative practice from the very beginning of classroom instruction (127). And Richards and Rodgers feel that only classroom data can help us arrive at solutions to these and similar difficulties, and not theory.

Notwithstanding these difficulties, CLT has dominated the ESL/EFL teaching scene across the globe, since its inception in the 1970s. Almost all new approaches and methods that came after CLT could be seen as its descendants as they incorporate CLT principles. They are different in the sense that they focus on the different aspects of the teaching-learning process. Let us now make a quick survey of some of these new approaches and methods.

Task-Based Language Teaching (TBLT)

Many practitioners consider Task-Based Language Teaching as a logical development of Communicative Language Teaching since it draws on the three principles of CLT's theory of learning namely the communication principle, the task principle and the meaningfulness principle. It is called TBLT because it uses tasks as the core unit of planning and classroom process. And David Nunan defines task in the ELT context as "a piece of classroom work which involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is principally focused on meaning rather than form. The task should also have a sense of completeness, being able to stand alone as a communicative act in its own right" (Nunan 10).

TBLT assumes that engaging learners in meaningful tasks activates the learning processes better than form-focused activities. According to TBLT, language learning depends on "immersing students not merely in 'comprehensible input' but in tasks that require them to negotiate meaning and engage in naturalistic and meaningful communication." They consider vocabulary as central to language learning and conversation as the key to language acquisition. And their focus is on the process rather than the product (Richards and Rodgers 223-28).

In addition to CLT's learning principles, some additional learning principles play a central role in TBLT theory. According to Richards and Rodgers, these are:

- “Tasks provide both **the** input and output processing necessary for language acquisition”.
- “Task activity and achievement are motivational” (228-29).

Tasks can be classified in many ways. Pica, Kanagy, and **Falodun** provide a very useful classification based **on** the type of interaction that occurs in task accomplishment: jigsaw, opinion exchange tasks, information-gap tasks, problem solving tasks, and decision-making tasks.

Learners are expected to assume a number of roles in TBLT and some of the important learner roles as listed by Richards and Rodgers are group participant, monitor, risk-taker and innovator, group participant, and selector and **sequencer of tasks**.

They also feel that many of the aspects of TBLT such as categorizing task types, sequencing tasks, and evaluating task performance, however, are yet to be justified on the basis of sound classroom practices. Even its central assumption that tasks form a better and more effective basis for language teaching still remains in the realm of ideology.

Cooperative Language Learning (CLL)

Cooperative Language Learning, also known as Collaborative Learning, is an extension of some of the principles of CLT. Its focus is on promoting learning through communication in pairs or small groups. According to Olsen and Kagan, in the CLL paradigm, language is learned through “socially structured exchange of information between learners in groups”. And each learner in the group is held accountable for their learning. They are also motivated to help other members learn (8).

CLL provides opportunities **for** naturalistic second language acquisition through interactive activities in pairs and groups. Some of these activities listed by Richards and Rodgers are: Team working on common input for mastery of facts and skill development, jigsaw group working on differentiated but predetermined input for evaluation and synthesis of facts and opinions, cooperative project in which topics and resources are selected by students, three-step interview, round table, thinking and sharing in pairs, solving and sharing in pairs etc.

The primary role **of the** learner in CLL is that of a team person, i.e., they are to collaborate on tasks with other members of the group. For this they have to learn teamwork skills. They are also the “directors of their own learning”. **For this** they have to learn to plan, monitor, and evaluate their own learning. They also adopt the roles of “tutors, checkers, recorders, and information sharers” (Richards and Rodgers 199).

As for teacher roles, Richards and Rodgers have identified two roles as the most important: organizer of the learning environment and facilitator of learning. As an organizer, the teacher sets goals, plans and structures activities, divides students into groups and assigns them roles, and oversees the physical arrangement of the classroom . And as facilitator of learning, the **teacher** interacts, teaches, refocuses, questions, clarifies, supports, gives feedback, manages conflicts, supply resources, encourages, celebrates and empathizes.

An important criticism levelled against CLL is its use of pair or group work with learners of different proficiency level. Only some learners are likely to

gain advantage from this. CLL has also been questioned on the enormous demands it places on teachers.

Content-Based Instruction (CBI)

In Content-Based Instruction, second language teaching is organized around the content that the students are supposed to acquire rather than around linguistic elements. It has also descended from CLT because it is based on **the** CLT principle that classroom processes should focus on real communication and the exchange of information. And CBI proposes that that the ideal situation in the ESL/EFL classroom to realize this principle would be one where the content is presented in the target language. And the student acquires the language as a by-product of learning the content.

According to Richards and Rodgers, CBI is based on two important principles. They are:

1. People learn a second language more successfully when they use the language as a means of acquiring information, rather than as an end in itself.
2. Content Based Instruction better reflects the learners' needs for learning a second language [as they are compelled to learn various academic contents through the second language],(207)

An important corollary of the first, principle is that “people learn a second language more successfully when the information they are acquiring is perceived as interesting, useful and leading to a desired goal” (Richards and Rodgers 209). When students focus on ideas, issues and opinions which interest them, language learning too becomes motivating.

In CBI, learners are expected to be active interpreters of the content; they must be willing to seek multiple interpretations of the text. They are also expected to become autonomous by taking charge of their learning and to be mutually supportive and collaborative in learning (Richards and Rodgers 213).

According to Stryker and Leaver teachers in the CBI classroom are expected to possess various skills such as the ability to vary the format of classroom process, the skills for team-building and for managing group work, the ability to help students develop coping strategies, the ability to use appropriate error correction techniques, and the ability to develop and maintain a high level of student esteem (293).

CBI has been a predominant approach adopted in the ELT classrooms across India. Though it is hailed as one of the most successful approaches in England, its practice in India leaves much to be desired. There is a wide gap between CBFs expectations on learner roles and teacher skills. Strictly speaking, these issues fall outside the language-learning scene. That is why CBI makes such bold assumptions about learners and teachers. However, if CBI has to yield its projected results, these issues are to be addressed as part of ELT in India.

Total Physical Response

Total Physical Response (TPR) is a language teaching method built around the co-ordination of speech and action; it attempts to teach language through physical activity. It is developed by James Asher, Professor of Physiology at the San-Jose State College in California.

Asher draws on three influential learning hypotheses to base his theory on:

1. There exists a specific innate bio-programme for language learning,...
2. Brain lateralization defines different learning functions in the left and right brain hemispheres.
3. Stress ... intervenes between the act of learning and what is to be learned; the lower the stress, the greater the learning. (Richards and Rodgers 74)

Asher holds that as in first language learning, the foreign language learner should begin learning the target language through listening exercise. Physical movement should accompany listening. Speech and other productive skills come later (Tickoo 367).

According to Asher, Total Physical Response is right-brain learning, while most second language teaching methods are left-brain-oriented. Asher holds that the children acquire language through motor movement - a right hemisphere activity. This suggests that right hemisphere activities must occur before the left hemisphere activities can process language for production (Richards and Rodgers 75).

According to Richards and Rodgers, TPR sees the absence of stress as pre-requisite for successful language learning. This is evident from the first language-acquisition environment. But the Second Language-learning environment often causes considerable stress and anxiety. "By focusing on meaning interpreted through movement, rather than on language forms studied in the abstract, the learner is said to be liberated from self-conscious and stressful situations and is able to devote full energy to learning" (75),

Neuro-Linguistic Programming (NLP)

According to Steve Andreas, one of the early developers of Neuro-Linguistic Programming, the question “What is NLP?” is as complex or strange as asking, “What is Physics?” because there are so many possible ways to answer it. And as NLP arose from the field of Psychology, a quick glance at how NLP came into being and how it is different from mainstream Psychology would help one appreciate NLP better.

NLP was born out of the efforts of Richard Bandler and John Grinder who were not psychologists by profession. Bandler was a student of Mathematics with interest in Computer Programming and Gestalt Psychology. And Grinder was a linguist. He was Assistant Professor of Linguistics at the University of California, Santa Cruz. These varied and non-psychological backgrounds must have helped them think radically out of sync with mainstream thinking in Psychology. For instance, as Bandler contends, a major part of mainstream Psychology believes that finding out the causes provides insights into the problems and this insight will somehow solve the problem by itself. And it spends most of its energy in finding out insights into the problems of human beings. By its very nature it is past oriented. It lives in the past. And according to Bandler the contention that gaining insight will solve the problems by itself is poorly supported by results, though it is the assumption on which psychoanalysis works. And Freud was its godfather. Some others believe that they can solve psychological problems by medication and as a result we have the branch of psychiatry. There are others who follow B. F. Skinner and believe in ‘conditioning’ people’s behaviour by reward or punishment. Yet all these

different approaches **fail** to produce the desired result commensurate with the time and effort they invest in. There is something very interesting about these various branches within mainstream psychology: they focus on ‘problems’; their basic questions are: ‘what is wrong?’ and ‘**why?**’ (GW *the Life* xix-xxii). They look at their clients as ‘cases’, an example of a certain problem. And the people they deal with are mainly these ‘problem’ people. In fact that was one **of the** major criticisms against Freud: that he formulated his theories of the human mind, especially the unconscious, and his theories about human motivation on the basis of his experiences with sick people.

It is into such, a scenario that NLP was born. It was born in the 1970s in the University of California, Santa Cruz. And in a matter of 35 years, according to Steve Andreas, NLP has accomplished what mainstream Psychology tried in vain for over a hundred years: “a practical way of understanding our thinking and our behavior that can be used to make rapid and useful changes in our lives” (“What is NLP?”).

What enabled this radical change in the field of personal change was **the** different orientation that the originators of NLP had. Unlike mainstream psychologists, the originators of NP were not interested **in** one’s problem as such. They did not look for ‘what was wrong’ or ‘why was something wrong?’ Rather they looked for *what worked*, no matter how. So they took a different approach from the conventional psychological approach to help people to solve their problems. Instead of studying sick people, they studied people who got over their sickness **with** or* without the help of the experts. They studied what they did to get over their problems. They went further—they studied the experts who helped

people get over their problems. They carefully observed how they helped their clients. They paid particular attention to their unconscious behaviours including their language patterns. Then they *modelled* these unconscious behaviours by themselves to produce the same results with people having similar problems. They began to observe people who achieved excellence in different fields and modelled them and achieved similar results. In the words of Richard Bandler, he has “studied and modelled unconscious behaviour, not just of psychotherapists and hypnotists and great communicators, but of experts in sports and many other fields, as well as of people who made profound changes in their lives with or without psychotherapists—people who were great learners, great inventors, great innovators” (*Trance-formation xv*).

Thus we come to the very backbone of NLP—learning by modelling. NLP is all about modelling and learning—learning anything. It could be a behaviour pattern, a response pattern, a language, a concept, a skill, etc. NLP holds that if someone can do something, anyone can learn to do it if one is able to understand the structure of that behaviour and model it. And, as Bandler says, “if you learned to do something one way you can learn how to do it totally differently and better” (*Trance-formation xviii*).

According to Bandler, human beings are great “language learning machines” as well as “behaviour learning machines”. We are able to learn a language because we are born with the language-learning software. In the same way, behaviour-learning software is installed in us. Some of the behaviours that we learn are good and some others are bad. “But the fact that we are able to learn something means that we can learn something else which may be more useful,

quicker, and better” (*Trance-formation xvii*). If one has learned to be diffident, one can equally learn to be confident.

Contrary to our usual understanding, NLP holds that it is not what happens outside of us that creates problems for us, but *what we do with what happened* that creates trouble (*Get the Life xxiv*). It is not that some students irritate us, but we have *learned* how to be irritated by some students. And if we have learned to be irritated, we can learn to be *unirritated*.

Bandler also holds that learning a new behaviour “doesn’t have to take time and hard work. In fact, human beings learn best when they learn fast and when they learn to make things unconscious so that the behaviour **can run automatically**” (*Trance formation xvii*). This is one of the unique claims of NLP and which makes it very attractive.

Learning, thus, is the cornerstone of NLP. As Bandler sees it, “learning is the way to personal freedom.” For the chains that bind us are in our minds. “Your **fears**, doubts, confusions, habits and compulsions are the **by-products of** how you’re thinking, and how you’re thinking dictates how you’re feeling, behaving and living your life.” Thinking differently and actively, thus, is the key to new learning. And according to Bandler, NLP is a tool to make thinking and learning easy and fun (*Trance-formation xviii*).

As mentioned above, NLP has developed all its techniques by closely studying and modelling experts who achieved excellence in different fields. Foremost among them are Milton **Erikson**, the world famous hypnotherapist; Virginia Satir, an extraordinary family therapist, and Fritz Peris, the most important figure in Gestalt therapy. And they have found out that there was an

amazing similarity in **the** unconscious behaviour and language pattern of these and other successful people. All the theoretical foundations of NLP have been formed from modelling the mental processes, including the language habits, of highly effective people. For example, the NLP assumptions on the unconscious is derived not from the ‘scientific’ knowledge put forward by Freud and other mainstream psychologists, but from the assumptions underlying the hypnotic practices of Milton Erikson. who was not part of mainstream hypnotherapy, but who is credited with a hundred per cent success with his clients.

This means that NLP is not as much concerned about mainstream academic knowledge as with *what really works*. In NLP, practice comes first. Later, when the practice is successful, it is corroborated by theoretical inputs from different sources. That is why we see the influence of a variety of systems of knowledge in NLP. In this sense, many of the NLP assumptions are not absolutely original. But they are original in the sense **that** it has created a whole lot of highly effective tools based on these assumptions, which facilitate rapid and effective change **in** any realm of human activity. Attempts are now being made **to** relate the major theoretical assumptions of NLP with the latest researches **in** Neurosciences, Brain Studies, Information Sciences, Linguistics (Churches and Terry, *NLP for Teachers*’, Tosey and Mathison, *Fabulous Creatures*).

The basic orientation of all the NLP techniques is to enable one to study the structure of one’s own internal experiences, to uninstall the unhealthy structures, and then to install the mental processes of others who succeeded in similar situations. In other words, NLP studies very closely the unconscious

processes people use to build their unique maps or models of the world. And it offers practical techniques to develop and expand those maps. Therefore, according to Steve Andreas, NLP is “the study of the structure of human subjective experiences, the inner workings of our minds, and how to use that knowledge to enrich our choices. Much of this structure is typically unconscious, or preconscious. However, much of this structure can become conscious, be altered, and then be allowed to become unconscious and automatic again.”

NLP is also seen as an approach to communication. For, when our maps of the world are expanded, “effective communication can become a matter of conscious choice.” In this way “NLP is an approach to communication that produces the widest range of choices and the ability to change in order to achieve desired results” (McHugh ix).

And this is the ultimate objective of NLP: to increase the behavioural choices available to us. A presupposition in NLP is that “the more choices and possibilities we become aware of and make available to ourselves, the more we will become aware of and be able to fulfill our desires” (McHugh ix).

Three Different Aspects of NLP

According to Steve Andreas, there **are** three main aspects **in NLP, similar** to those found in the physical sciences:

1. A theory or* a set of ideas about the nature of reality, which give rise to procedures and techniques for dealing with reality.
2. A practical technology with specific applications in the real world.

3. An epistemology, how we know what we know,- a way of deciding what evidence to use to determine what is true or valid as we test both, the technology and theory. (“What is NLP?”)

Theory

Though the originators of NLP have gone on record saying that they had no idea about the ‘real’ nature of things and that they were not particularly interested in what was ‘true’ (Bandler and Grinder, *Frogs* 7), NLP has a coherent set of theories that can be used to get a better insight into the nature of reality as well as to better understand the wide-ranging applications of its technology. In fact, most of the early works of Bandler and Grinder were quite formal and conceptual in nature (Bandler and Grinder, *Structure I*; Bandler and Grinder, *Patterns*, vol. 1; Grinder and Bandler; Grinder, DeLozier, and Bandler). **Their** apparent dislike of theory could be understood as their keen interest in “theory in use” and their utter disregard for “abstract **intellectualizing**” (Tosey and **Mathison** 7). And as mentioned earlier **in** this chapter, NLP draws heavily on diverse fields of knowledge and is eclectic in its theoretical orientation. And Tosey and Mathison see this eclecticism accounting **for** the “apparent internal inconsistencies in NLP’s contents and practices” (7).

As early creators of NLP were primarily interested **in arriving** at “descriptions [of reality] which are *useful*” (Bandler and Grinder 7), no formal effort was made **to** make coherent theory out of the various systems of thought behind NLP, until recently. What generally passed for the theory of NLP was a set of presuppositions in the form of aphorisms and using various types of logic.

Though they appear to be mere slogans, they, in fact, reveal the systemic nature of NLP (Tosey and Mathison 8).

Presuppositions of NLP

There are a number of presuppositions used by various authors all of which, according to Dilts, could be reduced to two:

1. The Map is Not the Territory.

As human beings, we can never know reality. We can only know our perceptions of reality.

2. Life and 'Mind' are Systemic Processes.

The processes that take place within a human being and between human beings and their environment are systemic. Our bodies, our societies, and our universe form an ecology of complex systems and sub-systems all of which interact with and mutually influence each other. (“What is NLP?”)

Modalities

The first presupposition—“Map is not the territory”—is based on the theory of Modalities which draws heavily on the General Semantics and Philosophy of Alfred Korzybski and the Philosophy of Hans Vaihinger. According to the latter, “... the object of the world of ideas as whole [the map or model ..] is not the portrayal of reality - this would be an utterly impossible task - but rather to provide us with an instrument for finding our way about more easily in the world” (15, square brackets in orig.). And in his *Science and Sanity*, Korzybski says: “A map is not the territory, it represents, but, if correct, it has a similar structure to the territory, which accounts for its usefulness...” (58-60).

Following these ideas, Bandler and Grinder developed the theory of **Modalities** as follows:

... there is **an** irreducible difference between the world and our experience of it.

We as human beings do not operate directly on the world. Each of us creates a representation of the world in which we **live**-- that is, we create a map or model which we use to generate our behaviour. Our representation of the world determines to a large degree what our experience of the world will be, how we will perceive the world, what choices we will see available to us as we live in the world. (*Structure 17*)

And according to Steve Andreas “all our experience consists of either sensory-based experience in the moment, or internal representations of sensory-based experience **that** are remembered from the past or forecast into the future.” These representations will always include one or more of the five sense modalities: visual, auditory, kinesthetic, olfactory, and gustatory. And the first **three** modalities account for most of our thinking and responding.

And Andreas calls the sensory modalities as “the building blocks, or the ‘atoms’ of all our experience”. Even the most abstract words and conceptualizations we use are some combinations of images, sounds or feelings, either simultaneous or sequential. According to Michael Flail, they are the “programming language” of our experience; understanding this language enables us to “understand, model and transform experiences” (18). In other words, “we

can learn how to voluntarily rearrange these “atoms” of experience in order to resolve problems, and reach the outcomes that we want” (Andreas).

Submodalities¹

The theory of Submodalities is the result of further enquiry into the nature of Modalities. Submodalities are “the **subclassifications** of external and internal experiences” (Bretto, Glossary 6). For example, a picture has brightness, distance, depth, size, shape, colour, and so on. Sounds have volume, location, tone, pitch, duration, rhythm, harmony, and so forth. Kinesthetic feelings have location in body, temperature, pulse rate, breathing rate, pressure, weight, and the like. Olfactory and Gustatory feelings are sweet, sour, bitter, aromatic, fragrant, pungent, and so on. Steve Andreas **beautifully** differentiates between modalities and submodalities as follows:

If modalities are the ‘atoms’ of our experience, submodalities are the ‘subatomic particles’ of experience that make the atoms of experience have significantly different properties.... Modalities offer [five] alternative ways to represent experience, offering choice. Submodalities offer hundreds of different alternatives, which can be combined in various ways to create hundreds of thousands of alternatives, for even more choice. (“What is **NP?**”)

NLP’s claim to transform our experiences with the help of modalities is actually accomplished at the level of submodalities. **According** to Richard P. McHugh submodalities in each modality “together comprise structure of an

¹ For a detailed discussion, see Bandler, *Using Your Brain for a Change* 21 -35, 160-61.

individual's experience. Changes in internal **SB Ms** [submodalities] can produce external changes and vice versa” (McHugh 251). For example, a happy memory is visually represented as bright, colourful, close, and big. And if we deliberately alter these qualities to dim, black and white, distant and small, the memory loses the happiness associated with it. It thus becomes clear that the real power in a person lies with his/her submodalities.

To possess the ability to change one's state of mind is a big step towards producing what one wants, when one wants it. According to McHugh, “people usually do not lack resources. What they lack is control over their resources” (251). Getting to know how to use submodalities leads one to this control over one's immense resources. It helps one to change one's feelings, emotions and behaviour to one's own benefit. Many experts, therefore, feel that “the work with SBMs [submodalities] is further proof that NLP has made an important leap in psychology” (McHugh 251).

Technology

Inspired by the theories mentioned above and a host of other influences, the early masters of NLP have embarked on creating a large number of specific tools, skills, patterns, procedures, and techniques that can be used to help people to achieve specific outcomes. And it is in this area that NLP keeps evolving the fastest. The key to this achievement lies in NLP's ability to make changes in our experience—in our perceptions, our thinking, our actions, and our feeling responses to events, at the submodality level. In fact NLP is known not for its theory, but for its ability to make powerful, lasting, and quick changes in a variety of areas in our personal and professional areas such as counselling,

psychotherapy, health, education, law, management, creativity, sales, leadership, and parenting. Right from its inception, NLP's focus was on developing patterns which are 'useful' and not on finding out the 'true' nature of reality. The development of theory was just a corollary to this. That is why NLP is popularly known as the leading-edge technology for change in the twenty first century.

Some of the most popular tools that NLP has developed are anchoring², pacing and leading³, reframing⁴, the swish⁵, the meta-model⁶, Milton Model Language Pattern⁷, belief change, new behaviour generator, core transformation⁸, circle of excellence⁹, Satir Categories¹⁰, perceptual positions" and so on. All such techniques could be made use of to make lasting and quick change in any field just mentioned.

² "Anchoring is ... the associative capacity of the mind to link a given **stimulus** to a given response and to bring this stimulus/response **unit** online instantly **in** similar situations, whether perceived consciously or unconsciously" (Elias 144). And NLP has created systematic steps to install these processes consciously.

³ Pacing is "gaining and maintaining rapport with another by joining their model of the world by saying what fits with and matches their language, beliefs, values, **current** experiences" And Leading is "changing your own behaviours after obtaining rapport so another follows, an acid test for high level of rapport" (Hall 369, 368).

⁴ "... presenting an event or idea from a different point of view so that it has a different meaning . . ." (Hall 370)

⁵ An NLP technique based on the theory of submodalities, which niakes use of direction and speed of the brain to generate a new pattern in the place of an unwanted habit or pattern.

⁶ "A m o d e l . . . that identifies categories of language patterns that can be problematic or ambiguous" (Bandler, *Trance-formation* 302)

⁷ "Hypnotic language—specifically the language patterns of Milton Erickson. These work as the opposite of the meta-inodel by [making use of] generalizations, distortions, and deletions" (Churches and Terry. *NLP Toolkit* 243)

⁸ It is a process that takes us "**into** universally sought-after states of consciousness that evoke a sense of oneness and peace" (Andreas and Andreas xi).

⁹ An NLP technique which anchors desirable behaviour patterns and mental states or *states of excellence* into the body and which we can use at will in all aspects of our lives.

¹⁰ "The five body postures and language styles indicating specific ways of communicating; leveler, blamer, placater, computer, and distracter, developed by Virginia Satir, Family Therapist" (Hall 371).

¹¹ "A particular **perspective** or point of view. In NLP there are three basic positions one can take in perceiving a particular experience. First position involves experiencing something through our own eyes, associated in a first person point of view. Second position involves experiencing something, as if we were in another person's shoes. Third position involves standing back and perceiving the relationship between ourselves and others from a dissociated perspective" (Churches and Terry, *NLP Toolkit* 244). ■

Some of the specific educational applications of NP include the spelling strategy, foreign language strategy, memory technique, creating a resourceful slate to learn easily and with interest and so on.

And some of the most popular and powerful applications of NLP in Communication are: rapport-building, goal-setting, resolving conflicts, negotiations, using language denotatively and connotatively, setting effective boundaries, and becoming intimate when one wants, and so on and so forth.

Epistemology

According to Steve Andreas, the epistemology of NLP is fundamentally the same as that of physics, and all of science—experimentation and testing. “Every pattern or method in NLP includes ways to test whether each step has been successful or not. using nonverbal response as the primary feedback, along with verbal report” (“What is NLP?”). However, NLP has not yet been rigorously tested in controlled experiments. The test has been done only in the case of those people who made changes in their lives using NLP strategies. However, as Andreas observes, this is true of other therapeutic procedures including, to some extent, medical interventions;

Relevance of Using NLP in CLT and Allied Approaches

The central objective of CLT and allied approaches has been communicative competence. And NLP too, as we have seen, is an approach to communication. Whereas CLT provides various procedures for developing communicative competence, NLP examines the various sub skills that are necessary to make the CLT procedures work and provides for strategies that

would develop these sub skills without which the CLT procedures simply fall apart.

We have also seen that according to CLT, the effectiveness of communication is a joint responsibility of the speaker as well as the listener. NLP, while not negating this view, greatly expands the responsibility of the speaker and empowers him/her with the necessary tools to make the listener responsible too. According to NLP, 'the meaning of your communication is the response you get;' and 'when what you do does not work, do something else, do anything else.' These NLP maxims undoubtedly point to the responsibility of the speaker in the process of communication.

CLT and allied approaches put a heavy premium on learner-centred classroom. And this anticipates and presupposes a host of skills on the part of learners as well as teachers. For example, teacher roles such as need-analyst, counsellor, organizer of resources, facilitator, group process manager etc., simply cannot be played effectively by teachers unless they are properly trained. NLP, with its variety of strategies in rapport building, motivating, goal-setting, languaging¹², developing self-esteem and self-confidence, overcoming blocks, resolving conflicts, correcting mistakes, encouraging, and celebrating, can help the CLT practitioner to effectively play the roles of a friend, philosopher and guide.

Learners are also expected to play various roles in the CLT paradigm. But classroom experiences suggest that learners fall way behind the expectations of the CLT theorists. They need to be trained to identify their own needs,

¹² Using language "for communicating with precision, clarity, and empowerment" (Hall 189).

learning strengths, and weaknesses. They also need to be trained in pair work and group work, in negotiating meaning, in giving feedback, in supporting and encouraging, in resolving conflicts, in becoming accountable to themselves and others etc. CLT has nothing to offer its learners on any of these fronts. And NLP specializes in these fields and has a host of strategies to develop these skills and sub skills.

NLP's insight into learning, communication, and the accurate use of language is a very powerful tool that could guide the preparation of instructional materials.

Conclusion

The present study arose out of the three important factors in the researcher's experience as a college lecturer: (1) The general lack of effectiveness of the general English classes as evidenced by the relatively large number of failures in English in university exams; (2) The inadequacy of existing methodologies and approaches in meeting this challenge, and (3) The conviction about the usefulness of NLP in meeting this challenge. The foregoing discussion of the dominant learning theories, ELT approaches and methods, and NLP suggests that NLP does not reject any of them but perfect them. Alternately, we can also say that NLP takes whatever is useful in them and creates *a system that works*. The following chapters describe how the researcher went about creating such a system and how it worked in actual classrooms.