Chapter 4

Universal Grammar and second Language Acquisition:
Logical and Developmental Problems in SLA

4.1 Introduction

This chapter; the core of the present study seeks to focus on two very important interrelated elements i.e. UG in SLA and the Logical and Developmental Problems. Like the previous chapters, there is no theoretical discussion on UG and SLA. Rather, there are data based findings that have been presented explicitly. Some experiments have been made on the second language learners of undergraduate level, and the data collected through this process have been analyzed before their final figurative presentation. The data analysis will try to prove already established fact that UG does play a significant role in SLA. The specific case of some select students will differentiate this study from the other similar studies in the series. The logical and developmental problems of Hindi L1ers learning English as L2 will be explicitly analyzed and presented so that the findings of this study can be useful in making the path second language acquisition easier in ELT classrooms.
The theoretical approaches in second language acquisition have made it quite clear that the process of second language acquisition is a result of different internal processes acting on meaning bearing input where input processing is the first stage in the acquisition process. The input, whether random or targeted, is processed in human mind and converted into intake which remains available for further processing before it finally comes into the form of implicit linguistic system. The complete process of getting linguistic competence is also shown by the figure given below:

![Language Acquisition Model](image)

Figure-4.1 Language Acquisition Model

The figure shows that working memory in human beings is a mingled mass of matters or the storehouse of raw material for building up linguistic competence. Developing implicit linguistic system (DILS) arranges the random/targeted input into some implicit linguistic fragments for the final setting of limited number of rules which will be used to generate unlimited number of sentences of the target language. This model can give a perfect method of acquiring a second or third language provided everything remains smooth during performance. But this never happens as the performance theory
finds abnormalities. It has attracted the attention of the scholars and the researchers to a great deal because the performance which always matters in SLA has never been smooth, uniform and within the limits of input the learners receive. The input does not mean that every learner received the same linguistic corpus in the same amount from the same amount of input supplied. It can never happen with the learners of heterogeneous social, cultural and educational backgrounds. This statement could be the most appropriate solution to the problem of lack of uniformity in performance of the learners if the problem was caused by the input only. Input system is neither a complete device of language acquisition nor is it a complete solution for the problems afterwards. Van (2007) has already talked about developing a more useful mechanism as input system is-

...only concerned with initial data gathering…learners must develop processing mechanism in the L2, they don’t start with them- and what they start with may not be processing mechanisms that can make full use of syntactic processes in sentence interpretation the way native speakers can. (Van, 2007, p. 115-135)

The performance of the learner surpasses the linguistic competence which gives rise to the logical problem how a learner can acquire complex linguistic knowledge from limited input. It supports the idea that mere input cannot set the parameters for linguistic performance. The term ‘logical problem
of language acquisition’ was coined by Lightfoot in his book ‘Explanation in Linguistics: The Logical Problem of Language Acquisition’ (1981) which he coauthored with Hernstein. In addition to this problem, Felix (1984) also noticed another problem of language acquisition. Drawing the attention of the researcher towards the process of acquisition which is mostly natural, he raised the question "why natural languages are acquired in the way they are i.e. how regularities that have been observed in real-time acquisition process can be explained." (Felix, 1984, p. 87-112.) This shows that there must be something else beyond mere input that sets complex pattern out of simple input and maintains the regularity. Linguistics can deal with the change in patterns from simple to complex but finding its root cause falls under the domain of psycholinguistics which does accept the availability of UG in the mind of the L2 learners. This chapter will throw enough light on the question whether the logical and developmental problems are due to the presence of UG or not.

4.2 The Logical Problem of Second Language Acquisition

The logical problem—performance far beyond input and linguistic competence—comes into existence in the language learning classrooms when the trainers/teachers find enormous gap between the input/knowledge acquired and the specific data the learner displays during performance. Today, we are living in a multi-lingual and multicultural era where people not only speak different languages in different contexts but also keep on creating new
languages by mixing two or more languages together. A child of well educated parents finds a multi-lingual atmosphere both at home and outside. Hence, such child finds no difficulty in acquiring a second language. During the course of this study, the learners selected for experimentation were the adult learners both from rural and urban backgrounds. In fact, most of them belonged to rural background where even their mother tongue Hindi is not spoken with its standard dialect. After three-month teaching of English to the undergraduate level students, the following observations were made:

I. The Logical Problem Varies from Learner to Learner

The logical problem of the students who are from well-educated and elite social background is different from those who are having less educated or half-educated social background. For instance, some select students when given a simple structure and asked to make sentences from the words related to their routine. Despite the same input (I wake up early +time), a remarkable difference was noticed in their outputs as they were from different socio-cultural backgrounds i.e. most of the students from educated family background spoke and wrote the following sentence:

1. (a) I wake up early in the morning at 6 O’ clock.

But the students from rural/less-educated/half educated social background spoke and wrote the following sentence:
1. (b) Sir, I wake up in the morning at 6 am.

The logical question that arises out of 1a and 1b is who told them to add ‘early in the morning at 6 O’ clock’ or 'in the morning at 6 am’ while they were taught only ‘I wake up at 6?’ The learners from well-educated family background know that am/pm is not used with time if morning/evening is already given. After reading their complete routine, This particular finding give way to come the to conclusion that the sources of unconscious input to both the categories of the learners were different. When investigated, it was found that the learner, who is very familiar with e-mails, facebook, FM, and internet surfing, goes far beyond the targeted input in SLA classrooms. Since this study is based on the learners whose L1 is Hindi, the logical problem is faced very frequently simply because today’s Hindi language is very much full of English words and phrases. Even a small shopkeeper in extremely undeveloped rural area uses words of English language so fluently as if they were the words of his own mother tongue. For example, ‘Condemn’, ‘rates’, ‘kilo’, ‘bargaining’, etc. are some of the frequently used words of English language which have replaced their Hindi equivalents.

II. UG is not a Theory of Acquisition

UG is not a theory of acquisition. Rather, it is a theory of competence which becomes the part of Language Acquisition Device. In fact, Chomsky’s
idea of competence has been misinterpreted in several ways. The term 'Competence' in his theory does not mean 'the ability to do something.' Rather, it shows linguistic ability. Everybody who has something to do with language teaching and research knows that man's ability to speak and write changes according to the circumstances one faces. Then, how can competence be regarded as ability? Chomsky’s idea of competence is about the linguistic capacity that seldom changes. Once shaped, it keeps on assisting the person generate as many utterances as one wants. During this study, the L2 learners of English have showed a clear-cut mismatch between their competence and ability to speak and write. The reason for this gap is the unconscious input through mass media or other sources which does not remain universally same. Hence, it is worthless to expect similar performance with the same logical problem?

III. Learnability conditions cannot be applied to SLA

There are some researchers who characterize a critical period for language acquisition. E. H. Lenneberg proposes that "the age from 2 to 13 year is the most suitable period for language learning both for L1 and L2." (Lenneberg , 1967. p. 180.)³ Within this period, biological linguistic development and potential of the learner should be developed to a certain stage. He claims that capacity of learning is lost if this period passes away without significant development. Several other researchers like S. Oyama (1979),
Immelman and Soumi (1981) also find this period as the period of "heightened sensitivity or responsiveness to specific types of environmental stimuli or input, bounded on both sides by states or lesser sensitivity." (Oyama, 1979: p. 83-102.)

The observations in this thesis, based on the study on adult learners of undergraduate level, clearly show that learnability conditions cannot be applied to the adult learners. To support this idea, there are two strong arguments in favour of this observation:

a) The so called critical period (between the age 2 and 13) has passed away as they are all beyond 16 years age.

b) The failure in them is not uniform. This can be represented through a very simple mathematical equation as zero added to thirteen will be equal to thirteen (13+0=13). It clearly shows that no addition to the linguistic competence of the learner till the age of thirteen will result in thirteen and not in a zero as their innate competence will always be there with them. Although the factor of the age of learners cannot be denied, yet the age alone is not responsible for enhancing the innate competence. In case of the adult learners, the equation given above doesn’t work. During this study, it was noticed that L2ers of age 16 and above when taught together for three months the equation became 16+3=13/16/19/21…. The strangest part of the equation was that 16+3 resulted in 13. After the uniform instruction for three months, their
innate linguistic competence suffered from partial loss, or it can be said that there was a kind of transition which always starts from a partial loss of the set patterns due to the introduction of some new trends. Some of the learners who were familiar with bilingual use of Hindi and English languages found three months instructions as a sort of enhancement to their linguistic competence. In case of such learners, the equation became $16+3=19/21\ldots$. This experiment highlights the fact that the learners who find enhancement in their competence have already passed through the transitional phase. UG that was innate and worked very well in acquiring L1 transferred to L2 acquisition also and provided the learners a cultivated ground after a temporary loss of set patterns.

The claim that Learnability conditions cannot be applied to SLA is based on the fact that failure of the learners is not uniform after passing the so-called critical period of learning. The logical problem in case of such learners not only lies in the fact that their performance goes beyond input but also in the fact that their failure is not uniform. If learning is possible only in the critical period of learning, the failure must be uniform. But the fact found with adult L2ers is different from all speculations. Despite uniform instructions for three months, the L2 learners of age 16 years and more could not give a uniform performance. The transitional phase between shifting of L1 patterns to L2 grammar confused some learners to the extent that their performance was dominated neither by L1 nor by L2 grammar. The sentences given below show
the root cause of the error that does not lie in the mother longue, but in the L2 itself.

2. I am busy.

After listening to or reading this sentence in English, the learner commits the error by applying the same pattern to the following sentence also.

3. I am agree.

Sentence 3 marks the loss of innate competence though for a short period of time. Hence, 16+3 in this case will be equal to 13. The fact that is worth mentioning here is that the sentences ‘mein vyast hun’ and ‘mein sahmat hun’ are having the same pattern into their mother tongue Hindi as both the words ‘vyast’ and ‘sahmat’ are adjectives in Hindi and they can be used easily after a be-verb in Hindi language. But, grammar of English language does not allow any verb in its base form to be used after a be-verb. Still the error is not rooted in Hindi because the series of sentences like ‘He is fat’, ‘He is fit’, ‘He is busy’, etc. has allowed the L2ers use ‘agree’ after a be-verb. This loss of pattern of L2 could not go long because some of the learners also used sentence 3 in the following ways:

3. (a) I am agree with you.

3. (b) I agree with you.

Sentences 3a and 3b may be the cases of transfer of UG from L1 to L2 but it is clearly shown in the sentence structures that UG has not been
transferred with its complete structure. The most remarkable fact that occurred during this study is that UG is transferred to L2 but the route of transfer is via L1. The learners whose vocabulary of L1 is not sound can hardly perform like their counterparts having sound L1 vocabulary closer to the standard variety. Thus, imposition of Learnability Condition on L2 acquisition will consider learning a readymade process that always functions with a set pattern upto certain age limit. According to this condition learning is a mechanical activity as explained in the figure below:

Figure- 4.2 (A) Learnability Condition Model for L1 and L2 Acquisition for age group 2-13 years

Figure- 4.2 (B) Learnability Condition Model of L2 Acquisition for the L2ers above 16 years age.

IV. L2 Competence is both Modular and Non-modular
Just before this observation, it has been discussed that the concept/theory of Learnability condition is confined either to the acquisition of the mother tongue or to the L2 learners from 2 to 13 years of age. But the fact about the Learnability Condition is that it is available to the learners even after the critical age i.e. from 2 to 13 years. After the age of 13 years, every human being starts acquiring worldly knowledge approved by some logics associated to every piece of information. It is the time when the concept of ‘should and shouldn’t’ (The idea that logically tells us Dos and Don’ts of anything) is fully developed out of the seed which is sown in the mind of the child with the first meaningful utterance. It seems to be true that L1 and L2, if not acquired upto the age of 13, become the part of learning process. Like the learning of mathematical calculations, scientific facts, and other fields of knowledge, L2 learning also becomes logic-based as the learner starts raising question starting from the words ‘why’, ‘how’, and ‘what’.

There is group of scholars that believes that L2 learning is not based on a module or a rule based system which is proposed by the linguists. Rumelhart, Mc Clelland and the PDP Research group (1986) are the staunch supporters of anti-modular approach to language learning. They also favour the connectionists’ model who

...see learning as the relative strengthening of associations, or connections, between interconnected units or nodes. The rules
or principles proposed by linguists are simply epiphenomena, in this view, they have no non-metaphoric existence whatever, and this plays no role in language acquisition.
(Schmidt and Gasser, 1990: p. 179-199.)

Soon after its rise in the late 1980s, connectionism was put under analyses and a strong criticism rose against it. The major flaw in this model is that it is completely silent on the logical problem of extraordinary output. Commenting on non-modular approach, Carroll and Meisel (1990) say that the non-modular approach or the connectionists account does not deal with the logical problem that human mind, during performance, goes far beyond the unstructured input. The connectionists may have one argument to make that there is no connection between the irregular verbs and their past tense endings, but this argument is not having a strong reason in favour of connectionism. It is a well known fact that certain forms and structures are arbitrary in all languages and there is no formula to learn them except making lot of conscious efforts and practice. The second major problem with the connectionists model is that their giving up ‘structural system of mental representations is also questionable.’ Language acquisition is more related to brain than mind. Therefore, to explain language acquisition there should be the inquiry of brain at neurolinguistic level. Although mind is instantiated in the brain yet it does not have capacity to go beyond the input nor does it have cognitive system in it.
The modular approach in L2 acquisition, on the other hand, talks about the presence of a module of linguistic knowledge in the mind of the learner. This fact may be a solution to the logical problem of language acquisition because it is almost impossible to assume that brain can generate complex structures without presence of certain modules. K. R. Gregg(1996) accepts that UG does play a significant role in L2 acquisition as he writes:

The L2 modularity literature, both polemic and empirical, can largely be seen contributions to one of two opposing positions: (1) UG is not involved in L2 acquisition; (2) UG is a causal factor in L2 acquisition, just as or more or less as, it is in L1 acquisition. (Gregg, 1996b: p. 34-59.)

Both the assumptions of Gregg can be understood through theism and deism about the role of UG in L2 acquisition.

Theism in L2 acquisition is based on the idea that L2 acquisition is somehow similar to L1 acquisition. The same was put under discussion and tested through experiment by many scholars. Some of them came out with hypotheses regarding the transfer of principles and parameters of L1 to L2 and access to UG in SLA. Platjack (1996), for instance, advocates of No Transfer/Full Access Hypothesis and proposes that some week functional features of the target language grammar are assumed at initial state both by L1 and L2 learners. But this hypothesis cannot be confirmed in case of Hindi
L1ers learning English as L2. White (2000:136) also points out the same thing through her studies on adverb placement by native French learners of English. I have taken up the case of Hindi and English languages. In Hindi, adverb is generally placed before verb but in English general sentence pattern is SVOCA. Adverb in this pattern is placed at the end of the structure as given below in 4a and 4b.

4. (a) Mein kal ik patra likhunga.
   S   Adv   O   V

4. (b) I will write a letter tomorrow.
   S   V   O   Adv

The adult native Hindi learner of English shows evidence of verb movement to functional category. At initial state of learning, they produce sentences in English like 4c which is having the structure similar to their mother tongue.

4. (c) I tomorrow write a letter.
   S   Adv   V   O

This happens only at initial stage of learning. They start developing and using the standardized L2 pattern as the process of learning proceeds. During this study, It was found that some learners were able to use the original L2 pattern even at the initial stage. This happened because they studied English upto 12th standard and had achieved certain level of proficiency in L2 writing. This enabled them in developing and using correct patterns. But even such
learners could not perform well in speaking as no proper attention was paid to this skill till 12th standard.

Full Transfer/Full Access hypothesis is the strongest form of theism which assumes that the L1 final state grammar plays an important role in making up L2 initial state grammar. The supporters of this hypothesis find no difference between L1 and L2 acquisition as far as the role of UG is concerned. White (1985b, 1989) was the first who started believing in the approach of UG access by L2 learners. This approach was later refined by Schwartz and Sprouse (1994, 1996) and both agreed on the fact that linguistic principals and grammatical patterns of L1 are transferred to L2A and they are accessed by the L2ers. Like any other hypothesis, this hypothesis is also not free from criticism. Many researchers believe that L2 acquisition is not exactly the same as L1. They produce some counterevidence related to phonological principles. According to some researchers, the L2 learners start learning language with "wild grammars and developed in a natural language." (Adjemian 1976: p. 297-320). In case of the learner who were facilitated during this study, violation of the phonological principles was noticed but that did not indicate that they wound up sounding words/syllables exactly like their mother tongue. This happened because there are certain sounds which exist in Hindi language but they are absent in English phonetics. For example, the sound ‘Gha’ in Hindi is the pronunciation of the fourth letter of ‘Ka’ series i.e. Ka, Kha, Ga, Gha, and Na. This sound (Gha) does not exist in English phonetic alphabet. Similarly, the sound of ‘Ta’ (as in Tum) and ‘Bha’ (as in Bhaji) are nowhere found in
English. Therefore, the Hindi L1er learning English in L2 English class pronounced these sound in the following way:

<table>
<thead>
<tr>
<th>Words</th>
<th>L2ers’ Pronunciation</th>
<th>Standard Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghost</td>
<td>/ghɔːst/</td>
<td>/gɔːst/</td>
</tr>
<tr>
<td>Bhaji</td>
<td>/ bhaːji/</td>
<td>/bɑːji/</td>
</tr>
<tr>
<td>Tandoori</td>
<td>/tanduːɾi/</td>
<td>/tænduəɾi/</td>
</tr>
</tbody>
</table>

Table -4.1 Mispronunciations due to non-existence of sound in English

This may be regarded as the inference or transfer of L1 to L2, but the problem of pronunciation does not always occur because of L1 transfer, its root is found within the target language also. The words given below are mispronounced not because of the similar sounding word/s in Hindi language, but because of the fact that the same syllable in different word structure in English is pronounced in different ways. At the initial level, the L2ers of English with L1 Hindi or any other language are almost bound to mispronounce these words in English.

<table>
<thead>
<tr>
<th>Words</th>
<th>L2ers’ Pronunciation</th>
<th>Standard Pronunciation</th>
<th>Root of Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donkey</td>
<td>/dʌŋki/</td>
<td>/dɔːŋki/</td>
<td>Monkey /mʌŋki/</td>
</tr>
<tr>
<td>Cello</td>
<td>/selɔ:/</td>
<td>/ʃələu/</td>
<td>Cell /sel/</td>
</tr>
<tr>
<td>Chivalry</td>
<td>/ʃɪvəlri/</td>
<td>/ʃɪvəlri/</td>
<td>Chin /ʃɪn/</td>
</tr>
<tr>
<td>Arch</td>
<td>/ɑːrɔk/</td>
<td>/ɑːtʃ/ or /ɑːrʃ/</td>
<td>Architect /ɑːkɪtkt/</td>
</tr>
<tr>
<td>Tomb</td>
<td>/təmb/</td>
<td>/tuːmb/</td>
<td>Top /tɔːp/</td>
</tr>
</tbody>
</table>

Table- 4.2 Mispronunciations due to problem within language
The speakers of English have to produce 44 sounds out of 26 letters. Therefore, sometimes, it becomes very difficult to pronounce the same letter or group of letters in two or more different ways. In this situation the learner goes on pronouncing the same letter or syllable according to the sounds s/he has listened first. Since the word ‘chin’ (/tʃɪn/) is taught at the early state, the learner takes it as an example and goes on mispronouncing ‘ch’ in other word structures like ‘chivalry’, chimera’, and so on. Although these are some obvious counterevidence yet the theists do not accept them. They say that L2ers can never achieve native-like competence. This seems to be a valid argument because in English itself there are more than one varieties based on pronunciation, spelling, vocabulary, etc. Today we have British English, American English, Australian English, etc which came into existence because they differ with another in many respects. Language varies from time to time, place to place and even from person to person. In the world, there are no two persons who can think and speak alike. Hence, the claim of the theists is worth accepting.

Now, coming back to the main theme, it is important to mention that mispronunciation of some words or syllables is not a logical problem. The logical problem lies in the fact that, without conscious learning or proper instruction, the adult learners correctly pronounce the ‘ch’ in the words ‘chimney’, ‘machine’, and chemical. The adult learners even at early stage know that the words ‘goes’ and ‘does’ are pronounced differently. This, once
again, proves that UG not only works with SLA but also takes a slightly different position than L1A.

The supporters of deism claim that UG is not at work in L2 acquisition. They believe that, besides UG, there are some other sources of getting linguistic competence in L2. There is no outright rejection of UG from the deists’ side but they say that UG and learning mechanism are two different element and both remain absent in SLA. Instead, the L2ers, at initial level, have a simple learning mechanism and UG created language specific grammar. Bley Vroman (1990) finds many differences in L1 and L2 acquisition and takes a position contrary to White. But nowhere does he reject the presence of UG to L1ers. Clashen and Muysken (1986) and meisel (1997), who are the true advocates of No Transfer/No Access hypothesis, claim that the L2 learners construct unnatural grammars by using general learning strategies. This assumption of the deists show that L2 learners do have a UG based grammar which may be unnatural to them.

Although it is not easy to favour either of the positions yet, after the analysis of the data collected, the claim of the theist seems to be stronger than that of the deist. The theist is more concentrated on the problem of failure in L2 acquisition. If his problem is solved at any stage of acquisition, it may guide the path of L2 acquisition and make it as easy and natural as possible. The deist is very much threatened by L2 success because he takes the desired success into
account; he has to accept the role of transfer of L1 grammatical properties and thereby disconfirming their own hypothesis. The problem of performance beyond competence cannot be rejected simply by saying that L2er do not have native like competence. Furthermore, if we take the cases of mispronunciation and word order, it is clear in the examples given above that both these errors are not universal. They are mostly found at the early stage of SLA.

4.3 The Developmental Problem

In addition to the logical problem of language acquisition, there is a developmental problem also. If the logical problem throws light on how acquisition beyond input is possible, the developmental problem deals with how acquisition proceeds. If we take the example of ice, it can make both the ideas clear. The developmental problem is not concerned about how water turns into ice. Rather, it is very much concerned about why water expands when it freezes. Therefore, we can define the developmental problem as "The problem of explaining why the process of acquisition of a language takes the form (e.g. exhibits the stages) that it does"

The developmental problem, therefore, requires a transition theory that may ask, "Why does system S change status from S-1 to S-2?" (Cummins, 1983). If we try to find the answer of this question and several others also which are queued up to inquire the design of a transitional theory of language
acquisition, it can contribute in developing an acquisition theory that can explain the acquisition process. Many researchers have tried and given their suggestions regarding the formation of a developmental theory of language acquisition. Minimalist mechanism, modularity and non-modularity approaches, parameter setting, critical age of learning and so on are the components of the theory of language acquisition that they have suggested so far. Atkinson (1982) is one of the prominent scholars who arranged all the hypotheses and came to conclusion that all the assumptions and approaches can be put under two components i.e. ‘a sequence of theories $T_1$, $T_2$, …$T_n$ and a mechanism $M$.’ after this arrangement he could set some criteria to which as he says, "any acquisition theory must meet." Given below are the three important criteria which may be the basic need for designing a transitional theory of language acquisition.

1. $T_i$ must be constructed within the framework of a particular general theory. We do not want to have radically different property theories each according for knowledge at a different developmental stage. I will call this the theoretical framework criterion.

2. The sequence ($T_1$, $T_2$, …$T_n$) must be explicable; that is, we must be able to explain why X occurs before Y and not vice-versa in a developmental sequence. I will call it the sequence criterion.
3. There must be a detailed specification of the acquisition mechanism M. I will call this the mechanism criterion.


What Atkinson wants to say is that there are n-numbers of theories of language acquisition. First of all we must have a look over all the theories and then we should arrange them in a particular sequence which may explicitly tell us why something should be put before the other things. This criterion will help us in giving a right start and result oriented ending. Finally he wants a mechanism that can give us desired output.

4.3.1 The Theoretical Criterion

Since past three decades, much heat has been generated on developing theories of language acquisition. In the last decade of the 20th century, forty to sixty theories were counted, but only a few of them seriously deal with the logical and developmental problem of language acquisition. For instance, theories of acculturation, variables, variation, discourse, etc. have nothing to do with developing a mechanism for language acquisition. Any linguistic, grammatical or competence/performance theory can attempt to solve the logical and developmental problems. The phenomenon of second language acquisition and related theories at least for the case which has been studied here tries to answer the following questions:

1. How is language acquired?
2. How is L2 structured before output?
3. Is learning English similar to or different from acquiring Hindi?
4. What is the simplest form of input in English that should be supplied to the learners?
5. Can language be acquired in the way it is not?
6. What is the factor responsible for making enormous gap between input and output?

Several problems were faced during this study on the adult learners of undergraduate level, because most of the learners who were selected belonged to rural area and had passed English as a compulsory subject upto 12\textsuperscript{th} class. They were already having a base of English language, but they did not have similar performance in all the four skills. Listening which is hardly taught at school level was altogether absent. To the learners, who were chosen for experimentation, this skill was introduced for random input and found that it was the most suitable one for desired output. A few sentences were spoken on 'Myself' and all the students were asked to listen to them carefully. All the sentences which were spoken were repeated and the students were asked to speak and write at least 50 words on ‘Myself’. In the class of 45 students when data were collected and analyzed, the results which were obtained are given in the table below:
Chart- 4.1 Result of Performance in Writing

One third of them could not go beyond 25% marks and another one-third remained within 26-50% marks. Around 15% of them fell into the group of 51 to 75% and remaining 17% were the best among them. It shows that the simplest task which is taught from KG to UG level is still lacking perfection because the primary skill of listening is completely avoided from basic to the higher level.

4.3.2 The Sequence Criterion

The second criterion, according to Atkinson, that should be taken into account while designing a theory of language acquisition is the sequence criterion. It is a remarkable fact that language acquisition has developmental problem and there are number of elements which constitute this problem. To identify and describe these elements has been the area of research. Right from the beginning of the research on L2 acquisition, a few attempts have been made to identify the sequence of development in SLA. Larsen-Freeman (1976),

<table>
<thead>
<tr>
<th>Marks in % out of 5</th>
<th>0-25%</th>
<th>26 to 50%</th>
<th>51-75%</th>
<th>76-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of students</td>
<td>15</td>
<td>15</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>
Flavell (1972) and Atkinson (1982) have been made some significant efforts in this regard. The main problem in this field is that there is no single or master solution to all the problems related to developmental sequence. However Atkinson (1982) carried forward the assumptions of Falvell (1972) and suggested three kinds of explanations for developmental sequence given below:

I. Environmental Component

This is one of the primary factors that plays a very important role in developmental sequence. So far, we have identified that there is a developmental problem in SLA and for the explanation of this problem we have n-number of theories. Here, it is important to explain that environmental input and its frequency is responsible for developmental problem of sequence. If we look into the theoretical aspects, we can refer to the mythical and the Mahabhartian Age. The episode of Abhimanyu Vadha (murder) throws enough light on the process of learning and its sequence afterward. The linguistic input for the formation and breaking of the Chakravyhu (an arrangement of warriors in the form of many centric circles) created the developmental sequence in Abhimanyu’s mind as he learned this art or war strategy before the other arts. Similarly, the adult learners of SLA have passed through at least three phases which are responsible not only for the developmental problem but for its sequence also:

a) The period of unconscious learning before birth.

b) The critical age of learning upto 13 years.
c) The phase of transition from 13 to 16.

All the three factors are very important because learning starts with the very first beating of heart and it ends with its failure. The innate linguistic competence, which Chomsky finds in every child, must be constituted of at least two things i.e. gene and the unconscious input before birth. After the contribution of these two, there is another spell of unconscious input until the child is admitted to school. This is the first time that the child comes in contact with another part of the world where the school plays an important role in setting developmental sequence in SLA. Here, the child starts learning a second and sometimes a third language simultaneously.

Having visited a few schools in different parts of Delhi, it was found that the pupils of class five were competent to speak three languages i.e. the mother tongue which is a dialect of Hindi, standard Hindi and English. In some schools some of the pupils were also competent to use French, German or Spanish as a fourth language. It was just because of the environment and the design of the school curriculum that the children were able to use three or four language. Since this study is based on the adult learners learning English as a second language, the focus was confined my to them only. The students who passed their 10th or 12th class in Hindi medium were not as
competent as those of in English medium still the developmental problem was there which was because of their environment and pidginization of English in everyday discourse. The inputs through mass media and the increasing percentage of English words and structure in their mother tongue created developmental problem in their performance. Although there is no set formula that can describe the sequence of development in SLA yet it has been observed that the input during childhood and adolescence plays a great role in ordering linguistic development. For example, the sentence given below clearly shows the interference of the mother tongue grammar in the adult learners.

5. One day I caught the wrong train. I jumped from the train when it was catching speed.

When analyzed, the root of the error was found partly in the mother tongue and mostly in the linguistic inputs the learner received during his childhood. The learner translated the sentence of Hindi language *Jab Gadi Speed Pakad Rahi Thee* into the target language and committed the error. He committed this error during translation because his teacher or the environment taught him the word ‘catch’ which has the word ‘Pakadna’ as its equivalent in ‘Hindi’. Therefore, sequentially the pattern for the use of the word ‘catch’ developed in his mind before the word that should be used in place of the verb phrase ‘was catching’ in sentence 5. The grammar translation method which is still being used
in the government schools in rural area created this problem. The school never taught the student what word should be used with speed in place of ‘catch’? Therefore, no pattern could be developed regarding the appropriate use of the word ‘catch’. Hence, environment, in the present scenario is playing an important role in deciding developmental sequence.

II. Reductive Component

When things are taught and acquired in more basic or general ways they become reductive and force the learner develop more basic or general patterns. Some words or items are just the linguistic reflexes of cognates in another. Such items are developed much before the other items. This happens mostly in the early stage, because “early L2 acquisition mimics L1A” The adult Hindi L1ers learning English as second language show the following problems:

(a) They acquire the pattern $S + be$-$verb + complement$ before $SVOCA$ pattern as it is closer to the structure in his mother tongue.

The sentence *He is a player* in English is closer to ‘Vaha ik khiladi hai’ in Hindi.

(b) They committed error in using be-verbs when they developed and use the wrong pattern with the help of be-verb. Even after
focused and targeted teaching of one month, the adult L2 learners committed the errors related to the use of the *be*-verbs. The analyses of the error committed in a group of 45 students is as given below:

i. 25 students used the *be-verb* in the way as it was fossilized in the mother tongue and even at the early stage of SLA and committed the error as given below in sentence 6.

6. I am go to market.

ii. 10 students were puzzled between the correct and incorrect use of the two patterns and committed the error given below in sentence 7.

7. I am goes to the market.

iii. Only ten out of forty-five students could frame correct sentence as given below.

8. I go to market.

The early stage of learning L2 is the mimicry of L1 that is why the learners translates ‘Jata Hu’ (Hindi) as ‘am go’ into English.

III. Teleological Component

Sometimes, inputs are developed in particular sequences in such a way that no other sequence is logically possible. This is because of
teleological component of developmental sequence. This component is actually depending upon the fossilization of rules and patterns. It is through this element that the learner comes to know why subject in statements comes before verb. There is hardly any learner who changes the order of subject and verb in statement. Even at initial stage of learning a learner is very much concerned of this rule.

The sequence criterion proves to be very helpful when a trainer who designs pronunciation training programmes for the L2ers because there is a developmental interrelation between perception and production. Muller and Niedzeilski (1968) noticed a positive transfer from perception to production whereas Polivanov (1932/1974) finds that perception of foreign sound can be noticed through the native language. Trubetzkey (1939/1958), one of the earliest researchers, “characterized such perception as the ‘filtering’ of the new sound system through the ‘sieve’ of the NL.” Therefore, it is quite significant to say that the influence of NL on foreign language learning cannot be subsided. The developmental sequence in second language learning depends not only on the competence in target language but in the NL also. Once again, we will have to rely upon generative framework of Chomsky because without competence there will be no performance but the most remarkable thing in this regard is that there is always a gap between competence and performance. Thus, despite a particular sequence of the
NL competence, the L2ers cannot achieve the level of native like performance in L2.

4.3.3 The Mechanism Criterion

The mechanical criterion in language learning is a learning mechanism that helps in acquiring complex skills. For example, in arithmetic there is a mechanism available for adding a digit more than one times. If somebody wants to add seven times six, then there is no need to add 6 seven times. The answer can be obtained from the table of 6. Similarly, in language acquisition, different mechanisms are available for learning different skills. While teaching verb-forms, there is no need to memorize each verb separately, the past tense rule can be applied to all regular verbs. The mechanism criterion has two equally important mechanisms for the explanation of development in SLA.

a) Non-modular mechanism criterion

b) Modular mechanism criterion

Non modular mechanism of learning is a process like generalization, restructuring, automatisation, analogy, inference, etc. Slobin (1973, 1985) finds this approach similar to the ‘operating principles’, which means there are internalised instructions to the learner which enable him to deal
with input, store information and produce linguistic output. Anderson (1989) makes three observations on Slobin’s Operating Principles.

I. It points out a change from general cognitive prerequisites to language acquisition in particular.

II. The latest list of Ops is larger. Out of 40 OP, some principles are quite complex.

III. Some of the OPs relate to off line processing.

(Anderson, 1983: p. 46-64)

Slobin’s explanation regarding non-modular mechanism for linguistic development was not encouraging to many scholars. They argued that increasing numbers of OPs proved to be a great burden on the learners. Secondly there was no mechanism in the theory that could arrange all the principles. M. Bowerman says that there is no clarity about “how the OPs would enable one to determine which noun phrases in a sentences are not possible referents of a given anaphor.” (Bowerman, 1985: p. 1257-1319). Thus, it has now become quite clear that Operating Principles have been put under doubts because of the degree of their usefulness to language learning. It is still doubtful whether they are the part of the mechanical criterion or not. Above all, hypothesis testing, restructuring, generalization, etc. require a kind of process to collect data and to categorize them to specify Operating Principles. This makes property theory complex beyond understanding of the average learner.
Modularity Learning Mechanism is based on linguistic input instead of Operating Principles. This mechanism has the Subset Principle and Uniqueness Principle. Berwick (1985) who explains the Subset Principles finds that learner do not produce over general rules because they are consistent upon input. SP is necessary in L1 acquisition as it is based on positive evidence only. White (1987, 1989) believes that SP is necessary both to L1A and L2 Subset Principle as she writes:

A condition on the sequence of grammars that characterizes the process of language acquisition such that early grammars in the process generate languages that are subsets of those generated by later grammars in the process. The subset principle is motivated by the observation that the evidence that is effective for the child in first language acquisition is essentially limited to positive evidence. (White, 1987: p. 95-110)

Berwick (1985), Clark (1987) and Anderson (1983) are some of the researches who have explained Uniqueness Principle. This is also known as one-to-one principle because it is the principle that "The language learner is claimed to apply in the process of language acquisition that says that each meaning is represented by a single form in the language being acquired."
This principle allows the learners to get rid of incorrect forms through the input of correct ones. For example, the past forms of irregular verbs ‘go’ and ‘speak’ can be corrected by focused input of ‘went’ and ‘spoke’. This will allow the learners to use ‘went’ and ‘spoke’ in place of ‘goed’ and ‘spaked’ but the problem with this principle is that it requires a lot of attention and extra labour in case of the verbs like ‘hang’ and ‘learn’. Both the verbs (learn and hang) are used in their regular and irregular past tense form. But there are chances of committing the following errors if extra input about the use of their regular and irregular past form is not supplied.

8. She hanged my coat up on the hook.

9. He is a learnt man who knows almost everything about his area.

To correct the errors in 7 and 8, the teacher will have to supply extra inputs at least two times; first time to correct the past tense of ‘hang’ and ‘learn’ and second time to tell the difference between the use of regular and irregular forms of ‘hang’ and ‘learn’.

Modular developmental mechanism is also not free from criticism. It is still not clear whether these principles play a role in the formation of a learning mechanism or not. J D Fodor and Crain (1987) say that the learner has to decide which of the principles can bring them closer to the conservative grammar. The SP which claims that “a learner makes the most conservative hypothesis consistent with the input” seems to restate the developmental
problem rather that suggesting a solution. If the L1 grammar generates a subset of principles, then there should not be any explanation for developmental theories, sequence and mechanism which, unfortunately, is needed during L2A. Therefore, there is sufficient evidence to support White’s claim that SP is not available to L2ers. It is here remarkable that White and some other scholars who deny the availability of SP to L2ers are just talking about the over generalization that the L2ers avoid. No where do they reject the role of the L1 in L2A.

4.4 Conclusion

To find an appropriate solution for the developmental problem is another complex problem. The principles which seem to operate the process of learning L2 cannot be regarded as learning mechanisms, and the theoretical and sequential criteria have their limitations. In theoretical criterion, we have the problem of n-number of theories. It, in fact, is very difficult for a learner to adopt and rely upon one particular theory. Learning needs either a linguistic or a mentalist theory. Long (1993) proposed 60 theories, but he says that they are not the theories of L1 acquisition rather they are the theories in L2 acquisition. Learning ‘language’ is a very complex human phenomenon for which there is no simple mechanism available so far. Any mechanism that deals with language acquisition should also deal with logical and developmental problems. They should have some kind of explanation on competence and performance sequence and mechanism etc. The controversy between theist and deist explanations does not give a clear indication regarding the design and
application of a theory of L2 acquisition. The generative framework of L2 acquisition also tries to explain the process of language acquisition on the basis of competence and performance, but in case of L2 acquisition, there is no appropriate answer to the question, can the theory of L2 competence be successfully applied to real life situations? So far, there is no ground for the practical applicability of this theory. Making experiment on learner or in a locality cannot suggest a perfect solution, because language varies from person to person, time to time and place to place. Therefore the theatrical problems of logical and development field can be answered through a theory and not through practical or experiments.

*****
References


******