## 10. Universal Grammar and First Language Acquisition

- On the basis of messy input, children create mental representation of language which goes beyond the input they are exposed to and is very similar to that of other native speakers of the same language variety.
- Language is the most abstract piece of knowledge.
- Second language learners are cognitively mature and presumably much more resourceful in problem solving and dealing with abstract concepts.
- From a theoretical point of view, different possible scenarios are open to consideration; for example,
  - SL grammars are constrained by universal grammar (UG)  UG does not constrain SL grammar or UG is impaired
- UG approach is concerned with knowledge of language called 'competence.'
- It is not about performance, about how language is used in real life.
- A complete theory of language also has to define how we access our knowledge base and how it relates to a number of sociolinguistic and psychological variables.
- Chomsky acknowledges this and has been concerned almost exclusively with addressing the first two issues.
- Notion of an innate language faculty in children argues that children go through developmental stages which are very similar across children of given language though progress rate varies.
- These stages are similar across languages.
- Child language is said to be rule-governed and systematic; they are resistant to correction and have limited processing capacity.
- Universalists do not conclude that there must be a specific language module in the brain.
- It does not seem to be linked in any clear way to intelligence.
- In fact, children vary in the age at which they go through these developmental steps and in how fast they go through each stage.
- Furthermore, many children with cognitive deficit develop language normally.
- As there are numerous examples of people with cognitive disabilities or difficulties who performed well in language(s), evidence of opposite is also found.
- There are many cognitively 'normal' children with impaired language condition known as 'specific language impairment.'
- A study suggests that some aspects of language at least might be genetically controlled.
- Damage to left hemisphere of the brain also results in language deficit.
- Language and cognition seem to be largely separate but they do interact.

## 11. Universal Grammar and Second Language Learning

- The evidence posits that there must be some kind of innate language faculty that is biologically triggered.
- Lenneberg (1967) outlined characteristics that are typically biologically triggered behaviours and argued that language conforms to the criteria used in order to define such behavior.
- Aitchison presents Lenneberg's criteria as a list of six features:

The behaviour emerges before it is necessary. They start talking when they don't need it for survival. 2. Its appearance is not a result of a conscious decision. 3. Its emergence is not triggered by external events. 4. Direct teaching and intensive practice have relatively little effect. 5. There is a regular sequence of 'milestones' as the behavior develops; these can usually be correlated with age and other aspects of development. 6. There may be 'critical period' for the acquisition of the behaviour.

- Human beings have to be exposed to language before puberty in order for language to develop.
- First language learner's initial state is supposed to consist of a set of principles and languages vary in limited ways.
- It means that language learning is highly constrained in advance.
- UG is the principle of structure-dependency which states that language critically depends on the structural relationship between elements in a sentence.
- All languages are made up of sentences which consist of at least a NounPhrase and a Verb-Phrase.
- Universal Grammar includes a universal inventory of categories that the child selects from on the basis of the input.
- According to White, there are three potential sources of crosslinguistic variation relating to functional categories:
  Languages can differ in terms of functional categories which are realized in the grammar (like Japanese lacks the category Determiner). 2. The features of a particular functional category can vary from language to language (i.e. French has a gender feature while English does not). 3. Features vary in strength: a feature can be strong in one language and weak in another, with a range of syntactic consequences.
  (Inflection features are strong in French and weak in English, resulting in certain word-order alterations).
- Universal Grammar is a theory of natural languages that definitely includes second language too.
- First and second language learning is similar in many ways.
- In first language acquisition, explanation that generated most enthusiasm was about some kind of language blueprint in brain.
- Second language learners go through fairly rigid stages which are unlike both their first language and the second language they are exposed to.
- The situation is complicated by a number of factors, such as:
  - SL learners are cognitively mature.  They already know at least one other language.  They have different motivations for learning a second language.
- These points have important implications that need to be addressed.
- Even if, UG hypothesis is correct for first language learning, there are still some logical possibilities concerning its role in SLL.
  Second languages are not constrained by UG principles and parameters, and they do not behave like natural languages. 2. They are UG constrained. There are different hypotheses regarding whether SL learner has full access or partial access to UG.
- Learners might not be able to reset parameters; therefore, they operate with first language settings for some parts of the new language.
- UG theory aims to describe and explain human language.
- It is nonetheless directly relevant to the study of SL.

- It is a linguistic theory, not a learning theory
- It has been hugely influential in drawing up sophisticated hypotheses regarding SLA.
- It helps exploring interplay between the first and second language learners and facilitates understanding of linguistic knowledge learners bring to the task of SLA
- It is primarily concerned with the description and explanation of formal system underlying language
- Its scope does not include a theory of processing or learning.
- UG is more of a property theory and not a transition theory.
- Therefore, it must be evaluated as such.

## 12. Evaluation of Universal Grammar and Cognitive Approaches

- The Universal Grammar (UG) view of language has been very influential since 1950s, but not uncontroversial.
- UG approach views language as a mental framework, underlying all human languages. It focuses on some aspects of language and not others.
- It is only concerned with the sentence and its internal structure rather than any larger unit of language.
- It studies languages clinically, in a vacuum, as a mental object, rather than a social or psychological one.
- It separates language knowledge and language use rigidly. Its methodologies are criticized for not being representative of reality.
- It is preoccupied with the modelling of linguistic competence, not concerned with naturalistic performance.
- UG theorists are criticized for lacking in reliability of SL judgments. Therefore, their recent work has used range of elicitation techniques.
- Furthermore, it has left untouched many central areas to our understanding of SLA process.
- It is exclusively concerned with documenting and explaining nature of SL linguistic system and ignores the social and psychological variables.
- UG has been very useful for linguistic analysis. It facilitates well-defined and focused hypotheses; it is useful in not only establishing some facts about SLA, but also in explaining those facts.
- UG approach is only interested in the learner as the processor of a mind that contains language; variations among different individuals are of little concern.
- Its primary emphasis is on language as the object of study and on what is universal within mind. It makes clear and explicit statements of the ground it aims to cover and the claims it makes.
- It has systematic procedures for theory evaluation and explains as well as describes at least some language phenomena. It increasingly engages with other theories in the field.
- The Second Language Acquisition (SLA) researcher under these approaches put more emphasis on the learning component of SLL; they are interested in transition theories.
- Their focus is still very much on the learner as an individual.
- They are more interested in understanding how the human brain processes and learns new information.
- The two approaches of Cognitive theorists of SLA are:

- Those who believe that language knowledge might be 'special' in some way, but they are concerned to develop transition or processing theories to complement property theories.
- Emergentist or Constructionist does not consider separation between property and transition theories as legitimate.
- They believe that you can explain both the nature of knowledge and how it is processed through general cognition principles.
- Constructivists consider that the complexity of language emerges from associative learning processes being exposed to a massive and complex environment.
- Many of them believe that the language develops as learners move from the learning of exemplars that are committed to memory.
- They claim that children pick up frequent patterns they hear around them and slowly make more abstract generalization as the database of related utterances grow.

## 13. Models of Second Language Learning

- Processing approaches are interested in how brain's processing mechanism deal with second language.
  These include 1) Information processing approach, 2) Processability theory.
- Information processing approach investigates how different memory stores (short-term memory, long-term memory) deal with SL information and how this information is automatized and restructured.
- Processability theory looks more specifically at processing demands made by various formal aspects of second language, and implications for learnability and teachability of second language structure.
- Here, we will discuss two information processing models:
  - McLaughlin's Information processing model (1987, 1990)  Anderson's Active Control of Thought (ACT* ) model (1983, 1985)
- In McLaughlin's model, humans are viewed as autonomous and active.
- The mind is a generalpurpose, symbol processing system.
- Complex behaviour is composed of simpler modular processes; processes take time so predictions about reaction time can be made. The mind is viewed as a limited capacity processor.
- Within this framework, second language learning is viewed as acquisition of a complex cognitive skill.
- To learn a second language is to learn a skill because various aspects of the task must be practiced and integrated into fluent performance.
- This requires automatization of component sub-skills.
- Automatization means that learning involves a shift from controlled toward automatic processing via practice.
- It results in constant restructuring of the linguistic system of SL learner.
- When second language learner seems unable to get rid of non-native-like structure despite abundant linguistic input over many years, it is called fossilization.
- Fossilization in this model would arise as a result of a controlled process becoming automatic prematurely.

- Anderson's Active Control of Thought (ACT*) model is more wide-ranging, and the terminology is different but practice leading to automatization also plays central role.
- It enables declarative knowledge.
- Anderson posits three kinds of memory: a working memory, a declarative longterm memory, and a procedural long-term memory.
- This model has been criticized for insisting that all knowledge starts out in declarative form, which is clearly problematic in case of first language learner as Anderson has accepted in answering to the criticism.
- Anderson's model is a general cognitive model of skill acquisition.
- It can be applied to those aspects of SLL that require proceduralization and automatization.
- According to Anderson, the move from declarative to procedural knowledge takes place in three stages.
  The cognitive stage: a description of the procedure is learnt. 2. The associative stage: a method for performing the skill is worked out. 3. The autonomous stage: the skill becomes more and more rapid and automatic.

## 14. Learning strategies and Second Language Learning

- At the cognitive stage, the learner would learn that an –s must be added to the verb after a third person subject.
- At associative stage, learner would work out how to add an –s when the context requires it.
- In other word, he/she learns to associate an action with corresponding declarative knowledge.
- At the autonomous stage learners' action would become increasingly automatic to the point that the declarative knowledge may even be lost.
- Contemporary SLL theorists disagree with Anderson's implied position that SL grammar is initially learnt through conscious study and application of explicit rules.
- There is consensus that much grammar learning takes place without conscious awareness.
- Some information-processing (I-P) theorists have responded to this problem by suggesting that the 'declarative knowledge' component can be subdivided into conscious and unconscious parts.
- Others have argued that I-P models are most helpful in explaining more peripheral strands in SLL.
- O'Malley and Chamot (1990) suggest that the learning strategies are procedures undertaken by the learners to make their language learning as effective as possible.
- Learning strategies must not be confused with communication strategies; they do overlap but there is difference in focus.
- Learning strategies facilitate learning whereas communication strategies help overcoming a specific communicative problem.
- Learning strategies can be classified into three categories:
- Metacognition strategies: selective attention, planning, monitoring, evaluation.
- Cognitive strategies: rehearsal, organization, inferencing, summarizing, deducing, imagery, transfer, elaboration.
- Social or affective strategies: co-operation, questioning for clarification, and self-talk.

- Learning strategies are complex procedures applied to tasks; they may be represented as procedural knowledge, acquired through cognitive, associative and autonomous stages of learning.
- The strategies may be conscious in early stages of learning and later be performed without person's awareness.
- Thus, these have to be learnt in exactly the same way as other complex cognitive skills.
- Before a skill is proceduralized, it will have to compete for working memory space with other aspects of the task in hand.
- If learning strategies are a skill, then they can be taught and get proceduralized more quickly.
- This will free working memory space for other aspects of learning.
- O'Malley and Chamot raised a problem that teaching strategies will involve considerable time and efforts to be effective; therefore, we need long-term studies investigating the effect of strategy teaching.
- General benefits of applying cognitive theory to SLA are as follows:
    - Learning is an active and dynamic process in which individuals make use of a variety of information and strategic modes of processing.  Language is a complex cognitive skill in terms of how information is stored and learnt.  Learning a language entails a stage wise progression from initial awareness, active manipulation of information and learning processes to full automaticity in language use.  Learning strategies parallel theoretically derived cognitive processes and have the potential to influence learning outcomes in a positive manner.
- Anderson's Active Control of Thought (ACT*) and Fluency Development in Second Language Acquisition
- Towell and Hawkins reject the idea that Anderson's model can account for all aspects of SLL.
- They use models of natural language processing in order to explain how grammatical knowledge transforms into fluent performance in second language.
- In order to explain why certain grammatical structures appear before others and why learners go through rigid stages in acquisition of SL, they resort to Universal Grammar approach.
- In order to understand how learners use this grammatical knowledge in increasingly efficient ways, Towell and Hawkins appeal to an information-processing account.

## 15. Theories of Second Language Processing and Connectionism

- Next two theories we are going to discuss focus on the factors controlling how SL learners process the linguistic input.
- These theories are Processability theory and Perceptual Saliency approach.
- Outlined by Pienemann, it aims to clarify how learners acquire computational mechanisms that operate on the linguistic knowledge they construct.
- It claims that we need both theory of grammar and a processing component to understand SLA.
- It focuses on the acquisition of the procedural skills required for processing the formal properties of second languages.
- Pienemann believes that language learning is gradual acquisition of computational mechanisms.
- Limitations in processing skills in early stage of learning prevent them from attending to some aspects of SL.

- The processing challenge within this framework is that learners must learn to exchange grammatical information across elements of a sentence.
- Pienemann's Processibility theory explains that SL learners follow a fairly rigid route while acquiring certain grammatical structures.
- It implies that structures only become 'learnable' when previous steps on this acquisitional path have been acquired.
- According to Pienamann, learners can only operate within their Hypothesis space, constrained by available processing resources.
- It led him to develop "teachability hypothesis" in which he considers the pedagogical implications of the learnability or processability model. It predicts:
    - Stages of acquisition cannot be skipped through formal instructions  Instruction will be beneficial if it focuses on structures from 'the next stage'
- Its most interesting aspect is the attempt to establish a link between learning and teaching.
- The Perceptual Saliency approach argues that human beings perceive and organize information in certain ways, and it is perceptual saliency of linguistic information that drives the learning process forward; rather, than an innate language-specific module.
- We find similarity in linguistic development across children and across languages because human beings are programmed to perceive and organize information in certain way.
- Slobin (1979) has devised operating principles which guide children in their processing of the linguistic strings which they encounter.
- These principles are based on the claim that certain linguistic forms are more 'accessible' or more 'salient' to the children than others. These principles are as follows:
  Pay attention to the end of words. 2. Linguistic elements encode relation between words. 3. Avoid exceptions. 4. Underlying semantic relations should be marked overtly and clearly. 5. Use of grammatical markers should make semantic sense.
- Connectionism: Advances in computer technology has given new life to this approach.
- Connectionism or parallel distributed processing likens the brain to a computer that would consist of neural networks, complex clusters of links between information nodes.
- These links or connections become strengthened or weakened through activation or non-activation.
- Learning in this view occurs on the basis of associative process rather than construction of abstract rules.
- It claims that learners are sensitive to regularities in the language input and extract probabilistic patterns on the basis of these regularities.
- Learning occurs as these patterns become strengthened or weakened through repeated activation or non-activation.
- Connectionism strikingly differs from other approaches as it does not believe that the learning of rules underlies the construction of linguistic knowledge rather it happens through associative process.
- According to them learning is not rule-governed.
- Connectionism is seen as an alternative to symbolic accounts of language acquisition.
- It is a transition theory that explains how associative patterns emerge in learners.

## 16. Evaluation of Cognitive Approaches and Functional Perspectives

- The scope of cognitivists' research varies widely from application of general models of language processing to studies using computers to stimulate acquisition of discrete grammatical phenomena.
- Some cognitivists specifically focus the processing mechanisms and how they develop in SLL.
- They believe that they also need a property theory to understand the linguistic system which will complement their transition theory.
- While others, adopting an emergentist or connectionist approach, see their field as the whole process of language learning.
- They do not separate the development of processing from development of linguistic system. Processing theorists do not say much about language itself.
- They concentrate on study of processing constraints operating in SLA. Whereas, connectionists believe that our mind is predisposed to look for associations between elements and create neural links between them.
- They see language as a set of probabilistic patterns that gets strengthened in learner's brain through repeated activation.
- They rely on controlled laboratory research involving experiments with artificial language or small fragments of real languages.
- However, controlled nature can be seen as a disadvantage.
- Overall, connectionist models are often criticized for their clinical and fragmentary view of language ignoring social and linguistic phenomena.
- They are unable to explain what the mental grammar of learner consists of and what constraints learners' hypotheses about the language system.
- Developmental route of SLL and acquisition of highly complex linguistic phenomena are not yet convincingly explained by these approaches.
- Cognitivists primarily investigate development of processing in SL learners.
- To do so, psychologists use laboratory techniques to measure accurately performance indicators; while, linguists apply linguistic analysis techniques to study SL learners' productions or intuitions.
- Both methodologies have their advantages and disadvantages.
- The ultimate goal of any SLA model is better understanding of SLA process overall.
- This goal is much enriched by cognitive studies.
- These studies have also enlightened us on the processes involved in speeding up of acquisition process.
- Connectionists are primarily concerned with individual; they do not see learner as a social being.
- They are interested in mind as a processor of information rather than in specificity of the linguistic information it contains.
- The link they build up with neurology and neurobiology is also important.
- The advantages of these models over traditional symbolic models are:
  They are neurally inspired. b. They incorporate distributed representation and control of information. They are data-driven with prototypical representations. d. They show graceful degradation as do humans with language disorders. e. They are models of learning and acquisition rather than static description.
- Functional/Pragmatic Perspectives on Second Language Learning

- The researchers who adopt this approach are centrally concerned with the ways in which SL learners set about making meaning and achieving their personal communicative goals.
- They emphasize the importance of learners' speech acts and how they exploit immediate social, physical and discourse context to make meaning.
- They argue that the meaning-making efforts are a driving force in ongoing second language development that interacts with the development of formal grammatical systems.
- Functionalism in linguistics is the explication and explanation of grammatical structure in which semantic and pragmatic constructs are integral.

## 17. Cognitive, Textual, Social Orientations and Functionalism

- Cognitive orientation can be exemplified by the work of Solbin (1985) that proposed the existence of 'basic child grammar' in which children construct their own form-function relationship to reflect a child's-eye view of the world.
- He suggested that one of the opening wedges for grammar is the linguistic encoding of a scene in which an agent brings about change of state in an object.
- In textual orientation central issue is to investigate the extent to which particular linguistic devices are employed to organize stretches of discourse intra-sententially as well as across broader stretches of text.
- At discourse level, functional linguists are interested in how both vocabulary and grammar are deployed to create textual cohesion across sequences of clauses and sentences.
- Functionalist research with social orientation is interested in relationship between the development of child's formal language system and aspects of their social world.
- Some of this work examines children's speech acts and their relationship with lexical or grammatical choices.
- Other work looks more broadly at the social context in which children interact and types of speech events they are engaged in. It also seeks to link these influences to linguistic development.
- The functional approaches pay attention respectively to the relations between grammatical development and prototype events, between grammar, pragmatics and text organization, and between grammar and the social world.
- The functional tradition is well established in SLL theory.
- It claims that language development is driven by pragmatic communicative needs and that the formal resources of language are elaborated to express more complex patterns of meaning.
- Functionalist research takes form of naturalistic case studies, mostly of adults in early stages of SLL.
- These studies have offered numerous rich accounts of both rate and route of naturalistic SLL. They vary in their scope of enquiries.
- Some adopted a 'patch' approach, studying evolution of forms or development of SL within 'time' or 'space' domain.
- Whereas others proposed SL 'basic variety' that represents a proto-grammar stage that all learners should pass through.
- Functionalist tradition has contributed to our understanding of inter-language communication and made interesting suggestions about interactions between formal and functional development.

- Functionalists have demonstrated various devices which inter-language users deploy to convey meaning.
- They have drawn our attention to textual and discourse organization issues, and offered considerable evidence that early learners rely heavily on parataxis rather than on syntax.
- A continuing limitation of this approach is that most attention is given to earliest stages of development.
- The range of target languages investigated is also not very wide.

## 18. Functionalism and Interaction in Second Language Learning

- Functionalist researchers insist on gradual nature of Inter Language (IL) development and syntacticization but with possible reorganizational consequences. ‘
- At the same time, most functionalists have adopted a ‘patch’ approach–working on overall utterance structure when studying the basic variety or alternatively exploring development within semantic and formal sub-systems.
- Functionalists argue for a multi-level approach to analysis.
- While their contribution at the descriptive level has been very strong and varied, their contribution to the explanation of IL development is limited.
- It clearly shows how effective a basic variety can be in meeting immediate communication needs, but it is less clearly established that communicative need is the primary driver for syntacticization and development beyond the basic variety.
- Functionalist research largely concentrates on analysis of learners’ inter-language output and pays relatively less attention to input and even interaction.
- Functionalist research has mostly concerned itself with naturalistic adult learners acquiring a socially dominant target language (TL) in the workplace and other non-domestic settings.
- The main focus here is directly on the role of environmental language use in promoting SLL in the form of input received by SL learner, SL output produced by learner, and SL interaction between learner and some other conversation partner.
- ‘Interactionist’ perspective mostly does not challenge the concepts of autonomous language module or cognitive mechanisms at work within the individual learner.
- Input hypothesis claims that comprehensive input is the only necessary condition for language learning to take place provided that learner pays attention to it.
- It is further directed toward interaction hypothesis and output hypothesis.
- Interactions are not a simple one-directional source of target language input feeding into the learner’s presumed internal acquisition device.
- Instead, when learners engage with their internal interlocutor in negotiations around meaning, input’s nature might be qualitatively changed.
- The more input is queried, recycled and paraphrased, the greater its potential usefulness as input gets because it should become increasingly well-targeted to particular developmental needs.
- Merrill Swain’s (1985, 1995) study with immersion students led her to question the claim that comprehensible SL input was sufficient to ensure inter-language development.
- So she advanced her claims called ‘Output Hypothesis.’ Swain argued that students often succeed in comprehending second language (SL) text while only partly processing them.

- SL production (output) really forces learners to undertake complete grammatical processing. Thus, it drives forward most effectively the development of SL syntax and morphology.
- When we examine the role of input and interaction in first language acquisition, we come to know that adults commonly use 'special' speech styles when talking with young children.
- This is called 'baby talk' which might be helpful to language acquisition. But such child-directed speech (CDS) has undergone criticism from UG theorists.
- For instance, Noam Chomsky described the notion that aspects of first language acquisition could be related to the input as 'absurd.'
- In turn, some child language specialists criticized parameter-setting models of acquisition as overly deterministic and ignoring substantial evidence of probabilistic learning from 'noisy' input.
- Interactionists such as Gallaway and Richard (1994) have pointed out the ways in which CDS might facilitate language acquisition.
- These include: managing attention, promoting positive affect facilitating segmentation, feedback, correction models, reducing processing load, encouraging conversational participation, and explicit teaching of social routines.
- However, interactionists are cautious about any possible contribution of CDS to language acquisition.
- Some clear findings which are also relevant to SLL are:
- Mostly CDS studies were carried out in English-speaking, middle-class family context in developed countries. In such context, CDS is typically semantically contingent. Also, explicit formal corrections of child's production are unusual but recasts are common which offer useful negative evidence.
- There is evidence for some specific claims about relationship of particular formal characteristics of CDS and children's developing control of particular construction. However, such relationships are complex and dependent on precise developmental stage reached by the individual child.
- Caretakers are neither motivated by any prime language-teaching goal nor are their speech adapted to model target grammar. Instead, it is derived from the communicative goal of engaging in conversation with a less competent partner, and sustaining and directing their attention.
- Cross-cultural studies of interaction revealed that styles of CDS in middle class Anglophone societies are far from universal where infants are not seen as conversational partner. They strongly challenge environmentalist explanations of language learning that finely tuned CDS is actually necessary.

## 19. Input and Interaction in Second Language Acquisition

- Cultures where child directed speech (CDS) of Western type is rare or absent, children's early utterances frequently include partial imitation and rote-learned segments.
- Cross cultural study of child language development supports the idea that children will only learn to talk in an environment which they can make some sense of.
- On the other hand, they can learn to talk in a much wider variety of environments (Lieven, 1994). The normally developing child is well buffered against variation in the input.
- Buffering implies either small amount of social support or any of several different environmental events (Snow, 1994).

- Researchers agree that multi-dimensional models of acquisition are necessary, and the way forward in clarifying how input and interaction may be facilitating language acquisition lies at present in close.
- Comprehensible input is both necessary and sufficient for SLL to take place. Humans acquire language in only one way – by understanding or by receiving 'comprehensive input.'
- Speaking is a result of acquisition, not its cause.
- If input is understood, there is enough of it, the necessary grammar is automatically provided.
- Input hypothesis is supported by rather little empirical evidence and is not easily testable.
- The concepts of 'understanding' and 'noticing gap' are not clearly operationalized and constantly proposed. The processes whereby language in social context is analyzed and new elements are identified and processed by language acquisition device are imprecise.
- Among the research traditions that took inspiration from Krashen's proposals are:
  The Interaction hypothesis 2. The Output hypothesis
- Some alternative psycholinguistic theories and claims are:
  Noticing hypothesis 4. Input processing hypothesis 5. Autonomous induction hypothesis
- Various studies during 1970s and 1980s demonstrated that the talk addressed to learners was typically grammatically regular but somewhat simplified linguistically.
- The degree of simplification reported in many descriptive studies was puzzlingly variable.
- Also, these studies stopped short at description of distinctive features of 'Foreigner Talk Discourse.'
- Long proposed a more systematic approach to linking features of 'environmental' language, and learners' second language.
- Long proposed his Interaction hypothesis as an extension of Krashen's original Input hypothesis.

## 20. Consciousness Raising, Negative Feedback, and Negative Evidence

- Mackey's (1999) study provided the clearest evidence that taking part in interaction can facilitate second language development.
- However, somewhat contradictory findings show a need for stronger theoretical models clarifying the claimed link between interaction and acquisition.
- These researchers appealed to add the ideas of noticing, consciousness-raising, attention etc. to acquisition.
- Earlier interactionist research was criticized for being one-sidedly pre-occupied with functional aspects of SL interaction and neglecting linguistic theory.
- Long's eventual reformulation of interaction hypothesis places more emphasis on linking features of input and the linguistic environment with 'learner-internal factors' and explaining how such linkages may facilitate subsequent language development.
- This new version highlights the possible contribution of negative evidence to SLL and clarifies the processes by which input becomes intake through introducing the notion of 'selective attention.'
- Many researchers consider output as necessary to increase fluency and emphasize on practice.
- However, output hypothesis by Swain (1985, 1995) goes beyond this 'practice' function and proposes three further functions for learner output:

- The noticing/ triggering function (conscious-rising role)  The hypothesis-testing function  The metalinguistic function (reflective role)

- Swain believes that the activity of producing target language may push the learner to become aware of gaps and problems in their current SL system, provide them with the opportunities to reflect on, discuss and analyze problems explicitly and offer opportunities to experiment with new structures and forms.
- Feedback, Recasts, and Negative Evidence in First Language Acquisition
- These are increasingly important topic in debates.
- Theorists arguing for a strongly Innatist Model claimed that language is simply not learnable from normal input that provides positive evidence and lacks negative evidence.
- Without negative evidence, learners cannot discover the limits and boundaries of the language system.
- On the other hand, Nativists finds the answer in some form of Universal Grammar to eliminate many possible generalizations about language structure that are compatible with the input received but are actually incorrect.
- We previously saw that negative evidence is much more prevalent in child-directed speech.
- Caretakers' recasts offer implicit negative evidence about children's interim grammatical hypotheses.
- It remains still less clear whether negative evidence is necessary for the acquisition of core aspects of language or not.
- To explore these questions, Oliver's (1995) study provides significant findings.
- It indicated that more than 60% of the errors by non-native speaker children received negative feedback from their native speaker partners; the most frequent were negotiations of some kind.
- Recasts usually occurred in response to utterances containing single errors in association with particular types of grammar mistakes.
- Further observational studies examined the occurrence, and apparent effects of negative feedback in SL classroom.
- For instance, Lyster and colleagues (1997) noted that recasts were the most common type of feedback.
- However, recasts were much less likely to lead to immediate self-correction by the students.
- A further analysis reported that feedback provided by the teachers varied according to the type of error that had been made.
- Teachers were more likely to respond to lexical errors with negotiation (e.g. clarification requests), whereas they respond to grammatical and phonological errors with recasts.
- Recasts were seen as an effective strategy in case of phonological error.
- However, recasting was much less effective for repair of grammatical mistakes.
- The study suggested that more interactive feedback modes would be more effective in pushing learners to amend their hypotheses about SL grammar as well as vocabulary.

## 21. Input Processing and Autonomous Induction Theory

- Researchers have developed the idea that the amount of attention may influence the extent to which SL input and interaction actually produce SL intake. Schmidt (1990, 1994, 2001) has been most influential in promoting this view.

- He is careful to distinguish among different types of attention.
- He uses the term 'noticing' to refer to the process of bringing some stimulus into focal attention and registering its simple occurrence, whether voluntarily or involuntarily.
- He reserves the terms 'understanding' and 'awareness' for explicit knowledge: 'awareness of a rule or generalization.' Schmidt is optimistic about the contribution of both kinds of attention.
- His main evidence supports the significance of noticing.
- He argued that noticing is the necessary and sufficient condition for conversion of input to intake for learning; later, he modified this view to the claim that: more noticing leads to more learning.
- Accuracy of Recast Reproduction (Philip, 2003)
  Learners' language level 2. Length of the recast 3. Number of corrections
- Survey of input, output, and interaction research showed descriptive nature of research; attempts to link different types of second language usage with SLL have produced mixed results.
- Many commentators have argued that stronger theorizing is required for interaction studies to progress.
- Interactionist researchers are increasingly interested in modelling internal linguistic and psycholinguistic factors.
- However, no detailed models of language processing have been proposed by any of interactionist researchers.
- Here, we will briefly discuss two models: Input processing theory and Autonomous induction theory.
- Input Processing theory by Bill Van Patten and associates (1996, 2002) is well known because of an associated research program on language pedagogy, 'processing instruction.'
- It attempts to explain how environmental second language input becomes converted into intake.
- It does not offer a complete model of these processes; instead, it offers a set of 'principles' to explain apparent failure of second language to completely process the linguistic forms encountered in SL input.
- Principle No.1: Learners have preferences for semantic processing over morphological processing. Principle No. 2: The learners have a preference for beginning and ending words.
- This approach has led to a series of pedagogical experiments.
- Input processing theory is primarily focused on explaining the shortcuts and restricted processing strategies which learners seem to use.
- Intake in Light of Input Processing Theory by Bill Van Patten
  Linguistic data is actually processed from the input. 2. It is held in working memory for further processing. 3. Input processing theory does not offer a complete model of successful processing input. 4. It offers a set of principles. 5. It explains the apparent failures of learners to process the input.
- Autonomous Induction theory by Suzanne Carroll (2000) offers a much more complete and ambitious model of the above mentioned processes.
- Carroll rejects parameter (re)setting as a totally inadequate metaphor. Instead, she proposes inductive learning (i-learning).
- Inductive learning refers to learning by generalization from examples.
- Carrol challenges the claim that increased comprehension can lead to identification and acquisition in a sequential manner.
- According to her, it is logically impossible.

- Unless enough formal analysis is done so that elements are identified in the speech stimulus, there is no way of generating interpretation of its meaning.
- Carroll's model is complex.
- It's been criticized for its neglect of the detail of language processing which converts language stimuli into interpretable input.

## 22. Interactionist Approach and Sociocultural Theory

- Input, Output, and Interaction hypotheses have led to very active strands of empirical research. The first phase of research was inclined toward documenting phenomenon of meaning negotiation.
- The second phase developed in the following ways:
- Relating environmental factors in language learning to linguistic theory, particularly to Universal Grammar b) Interest in the significance of negative evidence c) Increased attention to information processing theory and the complications involved in conversion of environmental language firstly into input and subsequently into intake
- Native speaker and non-native speaker interlocutors can and will work actively to achieve mutual understanding.
- Negotiations involve both linguistic and interactional modifications, which together offer opportunities to 'notice' aspects of target language form, whether from positive or negative evidence.
- Non-native speaker participants in 'negotiations for meaning' can't attend to, take up, and use language items made available to them by native speaker interlocutors.
- Learners receiving negative feedback, relating to particular target language structures, can be significantly advantaged when later tested on those structures.
- Achievements of this tradition are still constrained by a number of important limitations, such as:
- Work on interaction has been carried out within a Western or Anglophone educational setting. More cross-cultural studies are still required before any claims can be made that 'negotiation for meaning' is a universal phenomenon.
- Researchers in Input or Interactionist tradition generally accept that SLA must be the result of interaction between environmental stimuli, a learner-internal language system, and some language-specific language capabilities.
- Attempts at modelling this interaction are mostly still very fragmentary and incomplete.
- There are still not many studies that focus on particular language structures, tracking them through processes of instruction, negotiation, and output or recasting.
- There is lack of studies that document learners' use and control of these items.
- It is still not in position to generalize or make powerful predictions about likely usefulness of interaction in domains of variability.
- The theorists who advocate this perspective view language learning in essentially social terms.
- They claim that target language interaction cannot be viewed simply as a source of 'input' for autonomous and internal learning mechanisms; rather, it plays more central role in learning.
- This theory was originally presented by Soviet developmental psychologist Vygotsky who argued that humans do not act directly on physical world but rely on tools and labour activity, use symbolic tools or signs to mediate, and regulate their relationships with others.

- Following were the leading supporters of the Soviet theorist Lev Semeonovich Vygotsky: Jerome Bruner 2. James Wertsch 3. Barbara Rogoff 4. James Lantolf 5. Mercer 6. Wells
- From this point of view, learning is also a mediated process.
- It is mediated partly through learners' developing use and control of mental tools.
- It is also seen as socially mediated, that is dependent on face-to-face interaction and shared processes.

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