



RESEARCH PAPER

The Role of Intuition in the Acquisition of Complex Structures

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ABSTRACT

The present study to investigate the role of intuition in the acquisition of English sentences. The comprehension of complex sentences demands greater cognitive involvement and intuition plays a significant role in this regards. Fifty (50) non-native speakers of English (university students at M. Phil level) were randomly selected for data collection. A grammatical judgment test was conducted to gauge the grammatical knowledge of the participants. Following the grammatical judgment test, the participants were asked to explain their grammatical judgment employed in the grammatical judgment test through open ended questions. The findings of the study show that the grammatical knowledge of the participants was intuitive. In complex structure their grammatically was found more intuitive in nature as compared to simple structures. They could not explain some of the correct and incorrect grammatical judgment thereby indicating that what they could not explain was evidence of their intuitive knowledge. This type of intuitive knowledge is similar in nature to the native speakers' knowledge of their language.

Introduction

Different have been adopted by different scholars about the second language acquisition. Some of them approach the later from Universal Grammar perspectives. Universal grammar approaches defines as something which is genetically endowed to all the human being. The said grammar exists in the mind of the native speakers in form of intuition. By intuition, they can differentiate between grammatical and ungrammatical structure. However, when asked about their knowledge on which they have based their judgement, they are generally not able to recollect and explain their knowledge. A lot of research has been conducted on the role of intuition, in the first language acquisition. However, the role of intuition in second language acquisition is still not determined.

According to (Riemer, 2009), intuition is the window on the linguistic competence of the speakers on the basis of which native speakers judge the grammaticality of sentences. However, Gass (1983) maintains that intuition, in linguistics sense, is the judgment of grammaticality or ungrammaticality of an utterance. It refers to the inherent dispositions of the underlying linguistic knowledge of the speakers, informing us about the complex behavior of performance on behalf of the learners which should be deeply investigated in order to unearth this dual and organized nature of intuition (Carroll, Bever, & Pollack, 1981). The present study therefore

Literature Review

Linguistic intuition is an unreflective take or awareness which speakers have about the linguistic forms of their language. Intuition is our only possible way to correct judgments about string of words in a sentence (Fitzgerald, 2010). It is the logical act which relates those social concepts and norms that belong to the world of grammar (López-Serena, 2009). Intuition is not only helpful in the judgments of acceptability and grammaticality, but it is also a window to the linguistic and expressive competence of the speakers. According to Chomsky (1965) 'acceptable' refers to those utterances which are completely natural in a language and which are readily understandable without any analysis, and which are in no way odd and unconventional and grammaticality is one of those factors which determine acceptability. Grammatical judgments refer to the correctness according to the grammar of language while acceptability judgments refer to the appropriateness according to the performance condition (López-Serena, 2009). Primary intuition is related to the explicit knowledge of language which Chomsky called as 'mind' or 'brain' of the speakers, while secondary intuition is to make introspective judgments about the structure and meaning of linguistic expression (Wasow & Arnold, 2005). This distinction is more or less the same distinction between metalinguistic intuition and linguistic intuition (Marti, 2009). Intuition is linked with human thinking because our highly intellectual processes like the senses of being right and wrong, what to choose and follow are heavily depend upon and are the products of intuition. Similarly, our creative thinking and imagination, representations and inferences of meanings and making preferences among the multitude of choices are based on intuition (Dewey, 1925). The language therefore, is an opaque entity and it processes partly outside one's consciousness that is why intuition plays a vital role its production and comprehension (Raami, 2015).

One can hardly find out a full description of intuition and its role in second language acquisition and the processes of judging grammaticality of sentence structures. Susan (1983) investigated the area by testing the function of grammaticality judgment. The findings confirmed other researches like Barlett's (1982) that there are basically three stages through which the learners pass to correct the errors. First, the learners feel or notice that there is something wrong. Second, they identify the problems; and third, they correct the errors. The correction comes

only as a result of awareness at some level when the learners notice that there is something wrong. Sinclair, Jarvella and Levelt (1978) assume that there are two facilitative functions for linguistic awareness for the children, face to face communication and learning to communicate. Fitzgerald (2010) has defended the orthodox model (according to him) of linguistic intuitions. According to him, linguistic intuitions are the outcomes of the system of grammatical competence interacting with performance for the perception and articulation of language. For example, the following sentences having reflexive pronoun 'myself'.

I shaved myself.

Myself shaved me

English speakers intuitively declare the first sentence as grammatically perfect, while the second sentence as ungrammatical. These intuitive judgments about the permissible position of reflexives and their semantic interpretation are explained in terms of the concept of c-command (constituent-command). Linguistic structures like these are explained in tree diagrams and the related nodes in tree diagram are described in the familial terms. So, if Y node is directly above node X, then Y is the parent of X and if Z is directly above Y then Z is the grandparent of X. And if Y is also above W node, then W and X are sisters. Consequently, we can say that Z contains all these nodes as sons, grandsons and so on. Now in terms of this tree diagram, a node X c-commands a node Y if and only if X's sister either (1) is Y or (2) contains Y. For a reflexive pronoun like in first sentence above is a part of a good grammatical sentence, it must be bound i.e. its interpretation must be related to the antecedent it has in the sentence. To correlate it with our examples, we see that *myself* is bound with *I*. Accordingly, the first sentence is correct and second one is not. It is because that according to a well-known hypothesis (Principle A of Binding Theory) a reflexive must be co-relative to its antecedent that c-commands it (Black, 1996). Folk are expert in identifying and ascription in meanings on the basis of their intuition that no theorist can significantly do better (Devitt, 2006). The more expert a person is in linguistics, the wider his range of reliable linguistic intuitions would be (Devitt, 2010). This view was criticized by Culberston and Gross (2009) claiming that linguistic intuitions of a competent speaker plays evidential role in his/her language. These intuitive informational contents or judgments are provided to speaker by its linguistic competence.

Material and Methods

Descriptive research design was used for this research. It enabled the researcher to know the nature of the knowledge of the subjects. In order to measure the performance of students, a proficiency test was designed. The test contained questions of different types, ranging from structurally simple to complex sentences. The students were asked to mark the sentences as correct or incorrect. The test also contained open ended questions which asked why the student considered a particular sentence grammatical correct or incorrect. Further, they were asked what grammatical rule if any had been violated in the incorrect sentences. The

identification of the correct sentences helped the researcher indicate the existence and use of implicit knowledge. While, explicit knowledge was indicated by the explanation provided by the participants whether a sentence was grammatical or not. If he/she could explain whether a particular sentence was grammatical or not, he/she possess explicit knowledge of the grammar and its rule. Through this test, we measured and confirmed whether intuition had any role or not in learning English sentences as a second language. The test comprised of the following:

- 1: Identification of ungrammatical sentences
- 2: Understanding and interpretation of ambiguous sentences
- 3: Identification of incorrect sentences involving different types of pronoun.

The results of the test were statistically analyzed and a qualitative approach was used for in-depth analysis of data. The data was collected from fifty graduate students enrolled in M. Phil. program in English in ten universities across the country. The selected students had sufficient background in English because English grammar taught to them throughout their right primary level to the current level of study. The test contained both closed ended and open ended question to test implicit and explicit knowledge respectively.

Results and Discussion

The open-ended questions (containing simple to complex sentences) were either grammatically correct or incorrect for different syntactic reasons. The following table shows the results of these correct and incorrect sentences.

Table 1
The results of closed ended questions

	Sentence	Correct Responses	Incorrect Responses
		%	%
1	*The doctor and professor have arrived.	80%	20%
2	The doctor and the professor have arrived.	80%	20%
3	The doctor and professor arrived.	95%	5%
4	Most of the guests invited to the party were highly educated.	80%	20%
5	Most of the guests who were invited to the party were highly educated.	95%	5%
6	*Most of the guests invite to the party were highly educated.	100%	0%
7	The book is dull.	100%	0%
8	Is the book dull?	100%	0%

9	The book which is on the shelf is dull.	100%	0%
10	*The book which on the shelf is dull.	100%	00%
11	Is the book which is on the shelf dull?	70%	30%
12	I will call you when I arrive.	95%	5%
13	I called you when I arrived.	95%	5%
14	*I will call you when I have arrived.	90%	10%
15	The party ended after Mary's departure.	100%	0%
16	The party ended after Mary departed.	100%	0%
17	Mary ate her dinner quickly.	100%	0%
18	Quickly, Mary ate her dinner.	95%	5%
19	Mary quickly ate her dinner.	100%	0%
20	Mary has quickly eaten her dinner.	100%	0%
21	*Mary ate quickly her dinner.	100%	0%

Means 94.04%5.96%, * show incorrect English

In the table given above, the responses for individual correct and incorrect sentences and their collective percentage (94.04% correct responses) show that graduate students had enough knowledge about English sentences. The students used their intuition to identify them as correct or incorrect, however when asked to explain the grammatical rules on the basis of which a sentence is either grammatically correct or incorrect; they could not explain the rules explicitly. The percentages in the above which are 100% show that for some sentences the role of intuition in second language learning is just like the role of intuition in first language. But the percentages below 100% show that the role of intuition in second language learning is limited than its role in first language acquisition.

In the table given above, the first sentence is grammatically incorrect because the *doctor* and *professor* are not two different persons but one person and there is only one definite article at the very start of the sentence which means that the person who is both a doctor and professor has arrived. The second sentence is correct because the doctor and professor in the sentence are two different persons which is clear from the use of definite article 'the' before the two specific name. Similarly, the third sentence is also correct because the sentence is in past simple tense where past form of the verb is used with both singular and plural nouns; so, the verb 'arrived' is correct if the two names represent two persons or a single person. The statistical results show the first incorrect sentence and the second correct sentence were marked 80% correct by the participants. This increases in case of third sentence (95%) as the syntactic complexity reduced here. But none of the participants explained the above given rule for these sentences implying that they had marked these sentences as correct or incorrect on the basis of their intuition only. The intuition's role is

confirmed because they could not provide explanation for the ungrammatical sentences.

The fourth and fifth sentence in the table given above were correct because omission of 'who' does not make the sentence incorrect but the sixth sentence was incorrect because invitation to a guest is commonly expressed in passive voice in English which requires a past participle form of the verb. The 100% correct responses and their inability to explain the relevant rules of grammar for confirms that this knowledge was intuitive in nature.

From sentence 7 to 11, only sentence 10 is grammatically incorrect. However interestingly in sentence 11 the students faced difficulty in recognizing it as grammatically correct. The example with 30% incorrect indicates that they neither have explicit nor implicit knowledge which enable them to classify the sentence among the correct among those correct. The correct responses were less than those for other sentences but no one explained the rule involved. From sentence 12 to 14, only sentence 14 was incorrect, which, was correctly identified by 90%), while 95% of the participants correctly identified sentence 12 and 13 as correct. However, when were asked to explain how they come up with this response, they could not explain.

The rule behind the ungrammaticality of complex sentence is that if the independent clause is in future simple tense, the dependent clause necessarily be in present simple tense and when we refer to two different activities in the past in a single complex sentence; we use past perfect tense in the independent clause and simple past tense in the dependent clause. This rule is different from the rule in English grammar, usually and in discourse specifically when there is the concept of parallel construction or parallelism, which refers to the semantic or syntactic balance between the words, phrases, clauses and sentences. For example, Muzaffar's favorite activities are gossiping, teasing and hunting'. In this example, all the three nouns which are present participle have *-ing* endings. Majority of the English L2 learners are unaware of these rules but identify sentences on the basis of their linguistic intuition. Similarly, none of the participants explained the rule about different uses of the word 'after' in sentence 15 and 16. In sentence 15 'after' acts as preposition which precedes the phrase, 'Mary's departure' and in sentence 16, it is a subordinate conjunction which precedes the clause 'Mary departed'.

The sentences from 17 to 20 are correct while, the sentence 21 is incorrect because of violating *The principle of adjacency of case assignment* rule. According to this principle, nothing can come in between a verb and its direct object. It means that the NP must be next to its verb or preposition which gives it abstract case (Stowell, 1981). The responses of the participants were mostly correct but none of the participants explained the rule in such terms suggesting a role of intuition in learning of English complex structures by second language learners.

Results for English Ambiguous Sentences

The table. 2 shows the results of the ambiguous sentences containing a wh-word (how) in the embedded clause. The students were asked to provide the possible interpretations for these sentences.

Table 2
The results of the interpretation for English ambiguous sentences

Sentences	One Interpretation	two interpretations
1) When did the boy say that he got a bruise?	40%	60%
2) When did the boy say how he got a bruise?	100%	00%

The first question in the above table had two possible interpretations because this sentence did not have a wh-word. These interpretations are:

- 1) It is a question about the time when the boy got hurt (afternoon)
- 2) It is a question about the time of telling it (in the evening)

Only 40% students could identify both the interpretations while 60% students observe only one interpretation of the sentence. On the other hand, the second question was 100% correctly interpreted having only one interpretation. However, when the students were asked why, there are two interpretations for the first sentence and one interpretation for the second one, no one explained the rule there is a principle of Universal Grammar at work which is called '*Island Constraints*'. This constraint restricts the Wh-movements in particular ways. Both the examples contain the Wh-word which can enter from the main to embedded clause as in sentence (1) but not in sentence (2) because the second clause of the second sentence already has a Wh-word (*how*). The first example contains subordinator, while the second an adverb (adjunct). Because of the presence of a subordinator (*that*) in the second clause of (1), the sentence had got two interpretations. However, (2) has only one interpretation owing to the fact that it has an adjunct (*how*). The results as a whole suggest that second language learners' use their intuition (though in a limited sense as compared to its use in first language use) in their application of grammatical judgment to discern between correct and incorrect sentences.

Results and Discussion

The results of the data show various possible interpretations. It was hypothesized that if the students were able to use their grammatical judgement while discerning between correct and incorrect sentences, they would not be able to explain the rules. The result shows that the participants were able to explain the rules for simple sentences. However, in case of complex sentences, they could discern between the correct and incorrect sentence but fail to explain their grammatical judgment. The subjects could explain their grammatical judgment about most of the complex sentences though they are able to identify grammatically

correct sentences and discern it from those ungrammatical. They could not explain which could be indicative of UG access in second language acquisition.

In the light of the findings from the data, it is claimed that linguistic intuition is part of humans' unique ability and attribute '*thought*' reflected through language. The respondents reached the decisions with little, if any awareness of the process by which they reached it. They could hardly give a precise and a complete answer to the question asked. The respondents were unaware of just what aspects of the question they were answering to. The subjects like native speakers used their tacit knowledge which is intuitive in nature in lieu of deliberate system which is analytic in nature. In this way the results are consistent with the theory of inter language by Noam Chomsky (Corder 1981). The mental system of human is endowed with mechanisms for learning and develops these mechanisms for learning operating both without and with the use of conscious attention.

Human beings have amazing and automatic capacities to frequently record in memory a wide variety of naturally occurring processes/events without conscious intention to do so and are not necessarily improved by feedback and training is remarkably stable for people with different intellectual abilities and across age groups (Sedlmeier & Betsch, 2002; Hasher and Zacks, 1984). The subjects use their intuition while learning complex structures. The essence of intuition or intuitive responses is that they are reached with little conscious efforts, and normally without conscious awareness. This little deliberation is very apparently established through the findings in the present study (Hogarth, 2001). So the subjects of the subject could rarely provide adequate accounts of how they obtained their answers, and they are mostly unaware of just what aspects of the problems in the situations they were responding to and the results are consistent with Bruner's concept of intuition (1960). Intuition in the above sense was not related to explicit learning but to implicit learning and so, second language learners rely on their intuition in learning English structures. As a result, they could not explain the rule explicitly in complex and ambiguous structures.

This implicit knowledge is very similar to what is called procedural learning. Procedural learning means knowing that how to do something but having no explicit knowledge about the same. The same is also called declarative learning 'knowing that something is the case' (Fatahi, 2007).

The above distinction between explicit and implicit knowledge could be very much true about first language but in terms of second language learners, they could be just considered at the extreme ends of hypothetical knowledge continuum. This would be a processing system of automatization, interaction and proceduralization at work between a numbers of factors or/and knowledge resource, which is beyond explanation through simple and easy words (FATAHI, 2007). The language knowledge of a native speaker is basically and deeply a '*feel*' or implicit; while, he/she is gradually becoming more aware of the grammatical features and structures through instructions and instances of natural communication breakdowns

entailing further metalinguistic reflections. On the other hand, knowledge of a second language learner is largely dependent upon one's mother tongue and educational background. However, further education in English as a medium of instruction as well as more natural exposures or frequent communications with speakers of the target language seems to have made the knowledge of the target language proceduralized (changed from 'rule' explicit to a 'feel' or implicit levels. The following continuum has been proposed in by Fatahi about first and second language difference.

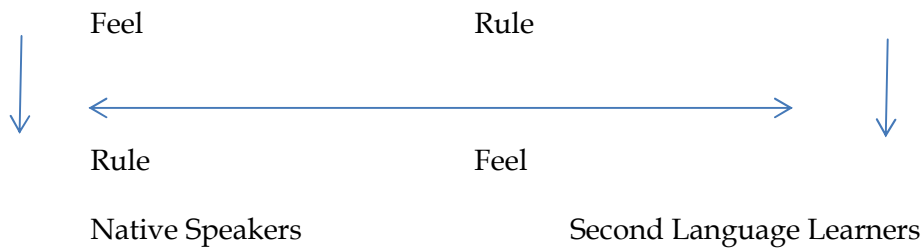


Figure 1: The Continuum for Intuition in L1 and L2

(Fatahi, 2007)

However, most of the studies suggest that L2 learner's initial state is Universal Grammar like L1 learner's (Matsuya, 2009). If we focus on the successful second language (L2) learners, it would appear that they also achieve complex knowledge of the L2 which goes well beyond the available input (White, 1985). The same is evident in the present study. The participants were asked to:

- 1) Identify errors in the ungrammatical sentences
- 2) State the grammatical rules that have been violated in the ungrammatical sentences
- 3) Indicate the degree of certainty of their judgments thereby implying the type of knowledge they have drawn upon

The data obtained from about the above hypotheses was tested from L2 learners' ability to identify the correct sentences from the incorrect one which proved to be higher than correcting the errors, which in turn seemed to be significantly higher than their ability to explain the rules violated (Green & Hetch, 1992). The subjects of the study like first language learners seem to know, without being told that a linguistic rule is 'structure-dependent', suggesting that they do not simply figure out all the logical possibilities in their attempts to acquire language but process them structurally which could be explained explicitly. It means positive input alone is not sufficient for learning English sentences. There must be an innate, built-in knowledge in second language learning as well like the one which applies to first language acquisition. In the light of the findings of the present study, the above

shall get deep and interesting insights into the process of second language acquisition.

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