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A Study of L2 Implicit Knowledge of UG and PG students of Shivaji and Solapur Universities

Sachin V. Londhe
Assistant Professor,
K. N. Bhise Arts and Commerce College,
Kurduwadi (Solapur University)
Maharashtra, India
londhesan1729@gmail.com
&
Dr. Sarwade A. M.
Department of English,
Shivaji University, Kolhapur, Maharashtra, India
sarwadeam@gmai.com

Abstract

Implicit Knowledge of the L2 is often defined as the intuitive and procedural knowledge that is normally accessed automatically in fluent performance and that cannot be verbalized. (R. Ellis, 2005). Explicit Knowledge is understood as the conscious and declarative knowledge of the L2 that is accessed during controlled processing and is potentially verbalizable (R. Ellis, 2005). The Present article examines Implicit Knowledge of a Second Language (L2) of UG and PG students of Shivaji and Solapur Universities. The data for the present study is collected through the responses of the selected students to the questionnaires used and prepared for testing the role of Explicit L2 Knowledge in learning English.

Key Words: Implicit Knowledge, Explicit Knowledge, Second Language Acquisition, etc.

The importance to Explicit Knowledge in the theories of L2 acquisition is given by number of renowned scholars like Bialystok, R. Ellis, Hulstijn, Krashen etc. The idea that there are two types of knowledge that learners may possess about a second language, that is, Implicit and Explicit Language Knowledge, dates back to and underlies two early language learning theories put forth by Krashen and Bailystok. The purpose of this article is to examine Explicit

Knowledge of a Second Language (L2) of UG and PG students of Shivaji and Solapur Universities. 229 students of Under Graduate and Post Graduate Classes are selected from both the universities.

Implicit and Explicit L2 Knowledge

Before talking about Implicit and Explicit L2 Knowledge, it is essential to know the meaning of the phrase 'linguistic knowledge'. There are two positions regarding linguistic knowledge. The first position, based on the works of Chomsky, claims that linguistic knowledge consists of knowledge of the features of a specific language, which are derived from impoverished input (positive evidence) with the help of Universal Grammar (UG). This view of language is innatist and mentalist in orientation. It emphasizes the contribution of a complex and biologically specified language element in the mind of the learner. The second position, which is based on connectionist theories of language learning, and is advanced by cognitive psychologists such as Rumelhart and McClelland (1986), views linguistic knowledge as comprised of an elaborate network of nodes and internode connections of varying strengths that dictate the ease with which specific sequences or 'rules' can be accessed (Ellis, R. 2009: 10). These positions are generally presented as opposite to one another (e.g. Gregg, 2003), but in one important respect they are in agreement. Both the innatist and connectionist accounts of L2 learning view linguistic competence as consisting primarily of Implicit L2 Knowledge and see the goal of linguistic theory as explaining how this Implicit Knowledge is acquired. However, they differ in the importance that they attach to Explicit Knowledge. (Ellis, R. 2009: 11).

Rod Ellis has attempted to identify the criteria that can be used to distinguish Implicit and Explicit L2 knowledge. There are seven dimensions which are used to distinguish Implicit and Explicit Knowledge. They are divided into two broad categories. One of them is 'representation dimensions' and other is 'processing dimensions'. The representation dimensions involve (a) Awareness, (b) Type of knowledge, and (c) Systematicity and certainty of L2 knowledge. The processing dimensions include (a) Accessibility of knowledge, (b) Use of L2 knowledge, (c) Self report and (d) Learnability.

Representation dimensions:

1. **Awareness:** There are two kinds of awareness, the unconscious awareness and conscious one. Karmiloff-Smith gave the distinction between them for the first time in 1979. According to him, unconscious knowledge is connected with epilinguistic behaviour. It means one is able to recognise whether a sentence is grammatical or ungrammatical immediately but s/he may not know why a given sentence is

grammatical or ungrammatical and at the same time s/he may not know the grammatical rule that has been broken. Unconscious awareness is active in Implicit Knowledge and conscious awareness is active in Explicit Knowledge (Ellis 2006:433).

2. **Type of knowledge:** It is the second dimension which represents the difference between Implicit and Explicit Knowledge. Explicit Knowledge is like declarative knowledge and Implicit is like procedural knowledge. Declarative knowledge is encyclopadaedic in nature as far as grammatical features are concerned. Procedural knowledge is easily accessible and one can easily write or correct a sentence. It is activated very quickly without even thinking about the grammatical structure (Ellis 2006:433).

3. **Systematicity and certainty of L2 Knowledge:** According to Tarone (1982), (quoted in Ellis2006:433), once Implicit Knowledge is established in a learner's interlanguage it becomes very systematic. Sorace (quoted in Ellis 2006: 433) says Explicit Knowledge tends to be imprecise, inaccurate and inconsistent.

Processing dimensions:

1. **Accessibility of Knowledge:** It concerns with the time needed to access Implicit and Explicit Knowledge when it is necessary. In the year 2002, Preston suggested that all L2 learners use two different types of grammar knowledge. One is deeply embedded and other resides more on the surface. According to Ellis (2006), first one is Implicit Knowledge and second one is Explicit Knowledge. Therefore, it means that deeply embedded (Implicit) Knowledge can be processed automatically and more on the surface (Explicit) Knowledge can be processed in much more controlled way. However, all researchers do not agree with the way Implicit and Explicit Knowledge is accessed. Hulstijn (2002) suggests that even though it may be possible to speed up the processing of Explicit Knowledge through practice there remains a fundamental difference between automated Explicit Knowledge and Implicit Knowledge. In contrast, DeKeyser (2003) argues that there is no functional difference between automated Explicit Knowledge and Implicit Knowledge (quoted in Ellis 2006: 433).
2. **Use of L2 Knowledge:** The situation in which learners are asked to perform task affects the learners' use of knowledge. It is proved that if an intermediate learner gives a lot of time to think about what to say, how to structure his/her sentence/utterance , his/her speech becomes more accurate. The reason for this result

is that if a learner is given a lot of time s/he gets access to Explicit Knowledge. And when the same learner is not given enough time and pressured to complete the task rapidly, his/her speech becomes less accurate and s/he uses Implicit Knowledge.

3. **Self Report:** It refers to the capacity of a learner to justify the words and grammatical constructions s/he has used. In his study, Butler (2002) states that the all Japanese adults learning English gave an explanation for the choice of articles in a close task. They were able to tell whether the given sentence is correct or incorrect and simultaneously they can explain the grammatical rules, but often in non-technical language. However it is to be remembered that Implicit Knowledge cannot be verbalised and to verbalise any rule one has to form an explicit rule. This leads to the conclusion that self report is formed by using Explicit Knowledge (Ellis 2006: 434).
4. **Learnabilty:** The point of learnabilty is very significant. It is believed that one can learn L2 explicitly at any age. On the other hand, Implicit Learning can only take place when the subject is young (Ellis 2006: 434). Munzo (2007) claimed that older learners learn explicitly better than young ones. However, Bialystok (1994) claims that 'Explicit Knowledge can be learned at any age', but that there are age-related limitations on L2 learners' ability to learn. Krashen (1982) also argues that most learners are capable of learning only rules formally and functionally simple as Explicit Knowledge.

Following are the main points that have emerged from this discussion of Implicit and Explicit L2 Knowledge (Ellis, R. 2009: 16)

(1) Explicit Knowledge appears phylogenetically and ontogenetically later than Implicit Knowledge and it involves different access mechanisms.

(2) Explicit Knowledge is neurologically distinct from implicit knowledge.

(3) The question of whether the two types of knowledge are to be seen as dichotomous or continuous is a matter of controversy, but neurological evidence and current connectionist models of linguistic knowledge point to a dichotomy. (4) The question of the separateness of the representation of the two types of knowledge is independent from the question of whether the processes of Implicit and Explicit Learning are similar or different. This remains a controversial issue. It is likely, however, that learning processes and knowledge types are correlated to some degree at least.

(5) While there is controversy regarding the interface of Explicit and Implicit Knowledge at the level of learning, there is wide acceptance that they interact at the level of performance.

The Present Study:

The subjects who are chosen for the present study are UG and PG students of Shivaji and Solapur Universities. The mother tongue of the most of these students is Marathi. Most of the students have started learning English form their first standard as per the new education policy of Govt. of Maharashtra. They have learnt English as a second compulsory language up to 12 standards. Arts students continued to learn it in their three years course of graduation, while science and commerce students study it at first and third and at first and second years of their graduation course respectively. Apart from that, from 11 Standard English is used as the medium of instruction for Science students and for Commerce students from first year at the under graduation. The medium of instruction for PG students is English. So it can be said that the students who are selected for the present study have studied English language for more than 13 years in classrooms.

For the present study, in all, 229 UG and PG students from Shivaji and Solapur Universities have been selected. The age of these students range from 20 to 28 and the average age is 21.0437. The students related to Arts, Commerce and Science faculties are randomly selected from the colleges and university departments affiliated to Shivaji and Solapur Universities. The following table shows the University-wise number of students selected for the research.

University	Class		Faculty			Sex		Residential Location		Total
	UG	PG	Arts	Commerce	Science	Male	Female	Rural	Urban	
Shivaji	57	60	72	14	31	43	74	91	26	117
Solapur	57	55	49	13	50	46	66	87	25	112
Total	114	115	121	27	81	89	140	178	51	229

Table 1 Distributions of Students

Data Collection

The data for the present study is collected through the responses of the selected students to the questionnaires used and prepared for testing the role of Explicit L2 Knowledge in learning English. The three questionnaires are used and prepared for the present research. These questionnaires are administered to 229 students in their respective classrooms. These questionnaires are untimed tests. To collect the natural data for knowing the role of Explicit L2 Knowledge in learning English, students are also asked to write the very first response they think as the most appropriate to the situations given in the questionnaires.

The Questionnaire/ Test Battery

In the present research three questionnaires are used. Questionnaire 1 seeks to collect the background information about of the students. The Questionnaire II is the Untimed Grammaticality Judgement Test. It consists of 68 grammatically correct and incorrect sentences and it is designed to assess the Explicit Knowledge of English of the students. The Questionnaire III is Metalinguistic Knowledge Test. It is divided into two subparts. The first part includes 17 ungrammatical sentences and second part contains 16 sentences.

The detailed discussion of the questionnaire is as follows:

Questionnaire Part I

This questionnaire tries to collect information about the selected students. The variables considered here are university and college students, their sex, age, category, class, faculty, medium of education, residential location, parents' education, mother tongue and English studying year. As mentioned earlier these variables influence the process of acquisition of English language. Moreover, these variables are important, as they help to classify students on different dimensions like Shivaji University and Solapur University, UG and PG, Male and Female, Rural and Urban, family education background , faculty, students studying English from first or fifth standard, etc.

Questionnaire Part II

As mentioned earlier, this questionnaire is prepared to examine the Explicit Knowledge of English language. This test is used and prepared to assess the Explicit Knowledge of the students as they get ample time to think over the given sentences and in the process they can recall the grammatical rules and recognise the grammatically correct or incorrect sentences. Printed questionnaire is given to each student and they are asked to state whether the sentence is correct or incorrect and, after that, they also have to register the degree of certainty of their response. It means that they have to state whether they are 'less than 50 % sure' or 'more than 50% sure' or '100 % sure' of their response. The grammatical categories examined in the tests are as follows:

Sr. No	**Grammatical Category**	**Distribution in the test (Item No.)**
1	Verb Complements	4,26,44,57
2	Regular Past Tense	5,19,38,53
3	Question Tag	6,36,49,64
4	Yes/No question	8,22,39,61

5	Modal Verbs	9,18,32,47
6	Unreal Conditions	10,28,41,56
7	Since/For	1,11,17,34
8	Articles	13,30,48,55
9	Ergative Verbs	14,37,58,62
10	Possessive S	15,33,43,52
11	Plural S	16,40,54,63
12	Third Person	7,20,25,59
13	Relative Clauses	65,66,67,68
14	Embedded Question	12,21,29,50
15	Dative Alteration	3,23,31,49
16	Comparatives	2,24,35,42
17	Adverb Placement	27,45,46,60

Table 2 Item distribution in the Timed Grammaticality Judgement Test

Questionnaire Part III

This part of the questionnaire is the untimed Metalinguistic Knowledge Test. It is divided into two sections. It aims at assessing the Explicit Knowledge of the students about English language. The first section of the questionnaire includes 17 ungrammatical sentences. The part of the sentence containing the error is underlined. The students are asked to find the correct statement, from the given four alternatives, that best explains the error. In this test it is believed that students read out the sentence and find the underlined part as the error in the sentence and the error is described in the four alternatives given. It is hypothesized that while finding out the best explanation for the underlined error, students use the explicit knowledge which is stored in their mind as they get enough time to register their response.The grammatical categories used in this test are as follows:

Grammatical Category	**Distribution in the test (Item No.)**
Modal	1
Verb Complement	2
Third Person	3
Unreal Condition	4
Comparatives	5
Indefinite article	6
Ergative Verbs	7
Possessive- s	8

Regular Past Tense	9
Indefinite article	10
Embedded Question	11
Yes/No	12
Adverb Placement	13
Question Tag	14
Since/For	15
Dative Alteration	16
Relative Pronoun	17

Table 3 Item distributions in the Metalinguistic Knowledge Test (Section 1)

It is hypothesized that while finding out the best explanation for the underlined error, students use the explicit knowledge which is stored in their mind as they get enough time to register their response.

The section II of the test is again divided into two subsections. In the first subsection of the test, a short passage is given and the students are asked to read the paragraph carefully and write down the various grammatical features asked for from the passage. The grammatical features used in the test are: definite article, verb, noun, preposition, passive verb, conditional verb, adjective, adverb, countable noun, indefinite article, relative pronoun, auxiliary verb, modal verb, past participle, finite verb, infinitive verb, agent, comparative form and pronoun. It is assumed that the students use their explicit grammatical knowledge to register their response. In the second subsection 16 sentences are given and the students are asked to underline the item requested in the bracket after the sentence. The grammatical features used in the test are: subject, indirect object, gerund, direct object, complement, object etc. This test, too, assesses the explicit grammatical knowledge of the students.

These tests were designed keeping in mind the criteria which distinguish Implicit and Explicit Knowledge. It is predicted that each test would measure Explicit Knowledge. Following table sets out these predictions:

Criterion	**Untimed GJT**	**Metalanguage**
Degree of Awareness	Rule	Rule
Time available	Unpressured	Unpressured
Focus of attention	Form	Form
Metalinguistic Knowledge	Yes	Yes

4 Table Design features of the test (Ellis, R. 2005: 157)

Test Content

The tests are designed to provide measures of learners' knowledge of 17 English grammatical structures. The choice of the grammatical content is motivated by a number of factors. First and foremost, an attempt was made to select target language structures that were known to be universally problematic to learners (i.e. to result in errors). For this, the SLA literature was consulted (e.g., Burt & Kiparsky, 1972). Second, the structures are selected to represent both early and late acquired grammatical features according to what is known about the developmental properties of L2 acquisition (e. g., Pienemann, 1989). Third, the structures are selected to represent a broad range of proficiency levels according to when they were introduced in ESL courses covering beginner, lower intermediate, upper intermediate, and advanced levels. Fourth, the structures are chosen to include both morphological and syntactic features (Bowles, Melissa A., 2005: 252). Following table lists the selected structures and summarizes their properties in terms of the various selection criteria.

Structure	**Example of Learner Error**	**Acquisition**	**Pedagogic introduction**	**Type**
Verb Complements	Dipak says he wants *buying* a car next week	Early	Lower intermediate	S
Regular Past Tense	Sonali *miss* an interesting party last weekend.	Intermediate	Elementary/ lower intermediate	M
Question Tag	We will leave tomorrow, *isn't it*?	Late	No clear focus at any level	S
Yes/No Question	Did Anand *visited* his father yesterday?	Intermediate	Elementary/ lower intermediate	M
Modal Verbs	I must *to brush* my teeth now.	Early	Various levels	M
Unreal Conditions	If he had been richer, she *will* marry him.	Late	Lower intermediate/ intermediate	S
Since and For	Ranjana has been *studying* in Auckland *for* three years	Intermediate	Lower intermediate	S
Indefinite	They had *the* very good time at the	Late	Elementary	M

Articles	party.			
Ergative Verbs	Between 1990 and 2000 the population of India *was increased*.	Late	Various levels	S
Possessive S	Leena is still living in her rich *uncle* house.	Late	Elementary	M
Plural S	Mahesh sold a few old *coin* to a shop.	Early	No clear focus at any level	M
Third Person Subject Verb Concord	Heera *live* with his friend Kajol.	Late	Elementary /lower intermediate	M
Relative Clauses	The boat that my father bought *it* has sunk.	Late	Intermediate/ advanced	S
Embedded Questions	She wanted to know why *had he studied English.*	Late	Intermediate	S
Dative Alteration	The teacher explained *Saurabh the answer*.	Late	No clear focus at any level	S
Comparatives	The building is *more bigger* than your house.	Late	Elementary/ intermediate	S
Adverb Placement	She writes *very well* English.	Late	Elementary/ lower intermediate	S

Note: S=Syntactic, M=Morphological

Table 5 Experimental grammatical structures (Ellis, R. 2005: 155)

Analysis of the data

The group-wise (5 groups) performance of the students, who are divided into five groups based on the percentage of the score they have obtained in the questionnaires II and III. Five groups are shown in the following table:

Sl. No.	Group Number	Score in percentage (%)
1	I	0-20
2	II	21-40
3	III	41-60
4	IV	61-80

5	V	81-100

Table 6 Five Groups

The percentage of the overall score of the students on the tests assessing Implicit Knowledge is discussed in the following histogram:

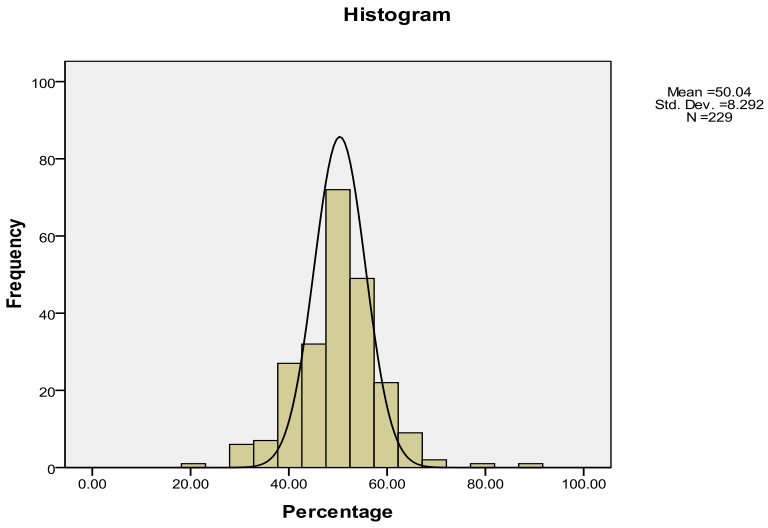

Table 7 Group-wise Implicit Knowledge

The score is converted into percentage and on the basis of this percentage the students are classified in five groups using the following table. The frequency of these groups i.e. the number of students pertaining to each is shown in the following table:

Implicit Groups	Implicit Score in %	Frequency
I	0-20	0
II	21 -40	29
III	41 – 60	181
IV	61 – 80	17
V	81 - 100	2
	Total	229

Table 8 Implicit Groups

The table shows that a large number of students, i.e. 181, belong to Group III, while the least number of students, i.e. two, falls in Group V. 29 students belongs to II group and 17 students are included in IV group. There are no students who get score between o and 20 for Implicit Knowledge.

With the help of the classification of students in these groups, the following part of the chapter explains the relation between the Implicit Knowledge of the students and their university, class, and residential location.

University-wise Implicit Knowledge

Table 9 illustrates the group-wise Implicit Knowledge of the students from Shivaji and Solapur Universities.

The table shows that, out of the total 229, 117 Students are from Shivaji and 112 students are from Solapur Universities. Out of the total 117 students of Shivaji University, only one (1%) student scores the highest marks .i.e. between 81 and 100 %. The large numbers of students i.e. 88 (75%) have obtained marks between 41 and 60 %. The marks between 61 and 80 % have been received by only 14 (12%) students.14 (12%) students get the marks between 21 and 40 %.

		Implicit Group					
	Score obtained %	0-20	21 -40	41 - 60	61 - 80	81 - 100	Total
University	Shivaji University	0	14	88	14	1	117
	%	0	12	75	12	1	

	Solapur University	0	15	93	3	1	112
	%	0	13	83	3	1	
	Total	0	29	181	17	2	229

Table 9 Group-wise Implicit Knowledge: University-

However, out of the total 112 students of Solapur University, the maximum numbers of students i.e. 93 (83%) have attained marks between 41 and 60 %. Only one (1%) student gets the highest marks i.e. between 81 and 100 %. The marks between 21 and 40 % have been obtained by 15 (13%) students and only three students (3 %) get the marks between 61 and 80 %. The above table also shows that not a single student from both the universities get the least marks i.e. zero and 20 %.

Class-wise Implicit Knowledge

The table 10 shows the group-wise Implicit Knowledge of the students in relation to their class. It reveals that, out of the total 229, 114 are UG and 115 are PG students. Out of the total 114 UG students, only one (1%) student scores the highest marks .i.e. between 81 and 100 %. The large numbers of students i.e. 85 (75%) have obtained marks between 41 and 60 %. The marks between 61 and 80 % have been received by only seven (6%) students. 21 (18%) students get the marks between 21 and 40 %.

		Implicit Group					
	Score obtained %	0-20	21 -40	41 - 60	61 - 80	81 - 100	Total
Class	UG	0	21	85	7	1	114
	%	0	18	75	6	1	
	PG	0	8	96	10	1	115
	%	0	7	83	9	1	
	Total	0	29	181	17	2	229

Table 10 Group-wise Implicit Knowledge-Class

However, out of the total 115 PG students, the maximum numbers of students i.e. 96 (83%) have attained marks between 41 and 60 %. Only one (1%) student gets the highest marks i.e. between 81 and 100 %. The marks between 21 and 40 % have been obtained by

eight (7%) students and 10 students (9 %) get the marks between 61 and 80 %. The table also shows that not a single student from both the classes get the least marks i.e. zero and 20 %.

4.4.3 Residential Location-wise Implicit Knowledge

The table 11 explains the group-wise Implicit Knowledge of the students from rural and urban areas. It shows that, out of the total 229, 178 students are from rural and 51 students are from urban areas. Out of the total 117 rural students, only one (0.56) student scores the highest marks .i.e. between 81 and 100 %. The large numbers of students i.e. 143 (80%) have obtained marks between 41 and 60 %. The marks between 61 and 80 % have been received by only 12 (7%) students. 22 (12%) students get the marks between 21 and 40 %.

		Implicit Group					
	Score obtained %	0-20	21 -40	41 - 60	61 - 80	81 - 100	Total
Location	Rural	0	22	143	12	1	178
	%	0	12	80	7	0.56	
	Urban	0	7	38	5	1	51
	%	0	14	74	10	2	
	Total	0	29	181	17	2	229

Table 11 Group-wise Implicit Knowledge: Residential Location

However, out of the total 51 urban students, the maximum numbers of students i.e. 38 (74%) have attained marks between 41 and 60 %. Only one (2%) student gets the highest marks i.e. between 81 and 100 %. The marks between 21 and 40 % have been obtained by seven (14%) students and only five students (10 %) get the marks between 61 and 80 %. The above table also shows that not a single student from both the areas get the least marks i.e. zero and 20 %.

Conclusions:

To conclude, after studying the analysis of the students, it can be said that Implicit Knowledge of the students of Shivaji University is either equal to or greater than that of students of Solapur University. The analysis of the UG and PG students shows that Implicit

Knowledge of the Postgraduate students is better than that of Undergraduate students. Residential Location wise study of the students reveals that rural students' Implicit Knowledge is better than that of the urban students.

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