The Interplay between Explicit and Implicit Knowledge
of English Native Speakers and ESL Learners

Azizullah Fatahi Milasi
Allame Tabataba’i University
&
Reza Pishghadam
Ferdowsi University

Abstract
This paper reports on a study designed to explore the role of explicit knowledge in general language proficiency and the interplay of explicit and implicit knowledge in grammaticality judgments. To this end, 60 students of Tehran International School (30 NSs and 30 NNSs) were selected as the participants. A general proficiency test was used to measure their general language ability. Also, a Grammaticality Judgment Test (GJT) was developed to examine the participants’ ability to (i) identify and correct the errors, (ii) verbalize the violated grammatical rules, and to assess (iii) the 'feel' or 'rule' pattern of their judgment. The results revealed that there was a fairly strong relationship between both groups' performance on the two measures. Subsequent analyses of the response patterns on GJT indicated an intricate interplay between explicit and implicit knowledge of the test-takers. It concludes with some theoretical and pedagogical implications for SLA researchers and L2 teachers.

Key Words: Explicit/Implicit knowledge, Grammaticality Judgment Test, Language learning
Introduction

The research literature on cognition psychology and second language acquisition (SLA) has over the past decades witnessed much theoretical controversy or contradictory claims about the role of conscious and unconscious processes in the learning process and the relationship between explicit or metalinguistic knowledge and L2 acquisition and performance. More specifically, in the field of SLA, various competing 'interface' positions on the role of explicit and implicit knowledge in L2 acquisition have been adopted and further explored by different researchers. According to Hu (2002) and Ellis (2004, 2005), the first group of SLA theorists, apart from a 'peripheral and fragile' advantage of monitoring L2 production, see little benefit for explicitly 'learned' knowledge in L2 performance, theorizing that neither competence nor performance in a second language can be affected in any substantial way by grammar teaching and the so-called pseudo grip of metalinguistic awareness (Krashen, 1982, 1993, 1998; Paradis, 1994; Schwartz, 1986). Other researchers maintain that the route of the L2 knowledge progress is from implicit to explicit states and that different types of knowledge are involved to different extents in different domains of language use (Bialystok, 1982; Ryan and Bialystok, 1985; Birdsong, 1989). Yet others (e.g., Sharwood Smith, 1981; Dekeyser, 1997, 1998) argue for a direct interface between explicit and implicit knowledge, claiming that L2 learners can begin with explicit knowledge that can through practice be proceduralized, automated, and converted into implicit knowledge. Last but by no means least, there are other SLA researchers (e.g., Ellis, 1994) who contend that metalinguistic or explicit knowledge is not directly involved in communicative output but can facilitate the development of implicit knowledge.

In spite of all these theoretical and empirical contradictions, empirical research on the relationship between L2 explicit knowledge and second language learners' general knowledge proficiency and that of the native speakers seems to be rather limited. More importantly, there is an apparent need for more research which empirically and systematically explores the impact of explicit knowledge or metalinguistic awareness of both L2 learners and native speakers with the same educational
background in the same educational context on their general language proficiency. The findings of this line of research can theoretically shed more light on all these oppositional stances and will practically have important pedagogical implications. The present study, therefore, aims at investigating this in an international school with both ESL and native speaker subjects sampled from the same educational context.

The Definition of Explicit and Implicit Knowledge
Over the years, much theoretical and empirical work has been done on L2 explicit or metalinguistic knowledge with reference to implicit knowledge. Therefore, it is highly needed to define, measure, and explore explicit and implicit knowledge considering the importance attached to these types of knowledge by the current theories of SLA. According to Ellis (2004), the research literature on psychology and SLA is replete with such terms referring to L2 explicit knowledge as language awareness, metalinguistic phenomena/ awareness/ abilities/ performance, analyzed knowledge, conscious knowledge, declarative knowledge/rules/memory, learned knowledge, explicit knowledge, and, following Sharwood Smith (2002), metagrammar, all of which overlap in fundamental ways. Ellis (2004) then uses the term 'explicit knowledge' in a consistent fashion to refer to this area of mental representation and defines it as (p. 244-5):

Explicit L2 knowledge is the declarative and often anomalous knowledge of the phonological, lexical, grammatical, and sociocritical features of an L2 together with the metalanguage for labeling this knowledge. It is held consistently and is learnable and verbalizable. It is typically accessed through controlled processing when L2 learners experience some kind of linguistic difficulty in the use of the L2. Learners vary in the breadth and depth of their L2 explicit knowledge.
The Interplay between Explicit and Implicit......

To put it another way, explicit knowledge is knowledge *about* language and *about* the uses to which language can be put. On the other side of the coin, there is basically broad consensus that linguistic competence is comprised of a different type of unconscious knowledge variously referred to as intuitive knowledge/awareness, epilingualistic behavior, spontaneous/automated knowledge, procedural knowledge/rules/memory, or, following Ellis, implicit knowledge. In other words, there is general agreement that the acquisition of an L2 entails the development of implicit knowledge, but there is no consensus on how this is achieved (Ellis, 2005). As noted earlier, various contradictory claims have been made and advanced regarding the dichotomy and distinctiveness of these two types of knowledge that will briefly be dealt here.

Tunman and Herriman (1984) argue that children, at a certain age, cease using their language to communicate and begin to do manipulation and reflection upon it as an object of thought. Moreover, it has been shown that children's use of explicit or metalinguistic knowledge reflects different degrees of consciousness, depending in particular on their literacy skills, though they do not differ remarkably in their acquisition or use of their basic linguistic competence or implicit knowledge (Birdsong, 1989; Ellis, 2004). This then suggests that the kind of knowledge that triggers conscious, explicit, and metalinguistic operations is distinct from that unconscious, automatic, and implicit kind of knowledge that underlies everyday language use.

In a similar vein, in SLA, Krashen (1982, 1993, 1998), Paradis (1994), and Schwartz (1993) have also argued for the separateness of implicitly “acquired” and explicitly “learned” L2 knowledge, claiming that explicit knowledge is only available to monitor the output derived from implicit knowledge. In its pure version, this “non-interface” position rejects both the possibility of explicit knowledge converting or transforming directly into implicit knowledge through practice or whatsoever techniques and the possibility of implicit knowledge becoming explicit (Ellis, 2005). These SLA theorists also postulate that
the two types of knowledge reside neuroanatomically distinct memory system. However, other SLA theorists (e.g., Bialystok, 1994) argue for a weaker form of this non-interface position recognizing the possibility of the transfer of implicit knowledge to explicit knowledge through the process of conscious reflection on and analysis of output generated by means of implicit knowledge.

This claim is controversial, however, and has come under intense attack on both theoretical and empirical grounds by several SLA researchers. Two well-known processing models from cognitive psychology, which have also been applied to SLA, are McLaughlin's information-processing model (McLaughlin, 1987, 1990; McLaughlin and Heredia, 1996) and Anderson's (1983, 1985) ACT model. According to the former, complex behavior builds on simple modular processes that can be isolated and independently studied. Within this framework, SLA is viewed as the acquisition of a complex cognitive skill and various aspects of the task must be practiced and integrated into fluent performance which requires both automatization of component sub-skills and constant restructuring of the linguistic system or the interlanguage of the L2 learner (McLaughlin, 1987). These two central notions--automatization and restructuring--involve a shift from controlled toward automatic processing. Accordingly, L2 learners first resort to controlled processing that requires a lot of attentional control on the part of the subject, and is constrained by the limitations of short-term memory. Then, via repeated activation, sequences produced by controlled processing become automatic and ultimately stored as units in the long-term memory, which means that they are readily and rapidly available when the situation requires it, with minimal attentional control on the part of the subject (Mitchell & Myles, 2004).

The latter processing model, ACT model, similarly, views 'practice leading to automatization' as central. It therefore enables declarative knowledge (i.e., knowing that something is the case) to become procedural knowledge (i.e., knowing how to do something). In addition, Anderson posits three kinds of memory: a working memory,
similar to McLaughlin’s short-term memory, and two kinds of long-term memory--a declarative long-term memory and a procedural long-term memory. He maintains that declarative and procedural knowledge are stored differently and learning tasks place by declarative knowledge becoming procedural and automatized (Mitchell & Myles, 2004).

These two models are in line with other versions of the ‘weak interface’ positions, all of which endorse the possibility of transfer of knowledge from one system to the other but posit some restrictions on when and how this can take place. Another version proposed and outlined by some theorists like Pienemann (1989, 1998, 2003), argues for the possibility of this transmission only if the L2 learner is developmentally ready to acquire the linguistic form. The next version views explicit knowledge as fostering the development of implicit knowledge by promoting some of the processes believe to be involved. N. Ellis (1994), for instance, claims that explicit instructional techniques teaching declarative rules can have ‘top-down’ impacts on perception, thereby making relevant features perceptually salient, and thus enabling learners to ‘notice’ them and to consciously ‘notice the gap’ between the observed input and the typical output based on other existing interlanguage system. The importance of noticing as the “gateway to subsequent learning” (Batstone, 1994) has considerably been notified by many SLA researchers over the past decades. Most specifically, Schmidt (1990, 1995) and Schmidt and Frota (1986) have originally postulated noticing hypothesis, arguing that what learners consciously notice in the input is what becomes intake for learning, and, in other words, they can use their explicit knowledge to produce output that then serves as ‘auto-input’ to their implicit learning mechanisms. According to Ellis (1994), “Schmidt suggests that the explicit/implicit contrast represents a continuum, but notes that there is no consensus on where to draw the line to demarcate conscious knowledge”. (p.361)

In a similar vein, Lee and VanPatten (2003) describe SLA as the construction of an unconscious or implicit system of language consisting of several components interacting in language use. They posit a set of
three acquisitional processes: input processing, system change, and output processing. Input processing describes how learners understand the grammatical information they receive as input and then transform into intake by form-meaning associations. System change describes how new explicit L2 knowledge or grammatical information is incorporated or accommodated into the developing system of language and how this new information restructures the implicit knowledge of language. Finally, output processing accounts for how learners learn to use the newly acquired grammar to communicate automatically.

Purpura (2004), reviewing a number of interventionist input-, practice-, and feedback-based instructional studies, concludes that “when students are asked to focus on grammar points more or less appropriate for their developmental level, they usually learn” (p.43). He goes on to add that “Formal, explicit grammar instruction seemed to help L2 learners develop their interlanguage at a more rapid space” (p. 44). Most importantly, he, following Long (1991), differentiates between a traditional structural synthetic syllabus of grammatical forms (referred to as ‘focus on forms’ by Long) and an updated form-and-meaning focused instruction (referred to as ‘focus on form’ by Long) that ‘overtly draws students; attention to linguistic elements as they arise incidentally in lessons whose overriding focus is on meaning or communication” (Long, 1991: 45-46).

Other SLA researchers, like Sharwood Smith (1981) and Dekeyser (1995, 1998) adopt a direct ‘strong interface’ position between explicit and implicit knowledge, claiming that not only can explicit knowledge be derived from implicit knowledge but that explicit knowledge or metagrammar (Sharwood Smith, 2002) can be converted into implicit knowledge through communicatively contextualized practice, repeated activation, and corrective feedback. In this way, noticing a feature in input may be a conscious or an unconscious process. More specifically, Dekeyser (2003) argues that proceduralized explicit knowledge can be considered “functionally equivalent” to implicit knowledge. This position stands in direct opposition to ‘non-interface’ position advocated by Krashen and others.
Lastly, Ellis (2004) adopts a connectionist account of implicit linguistic knowledge as an elaborate interconnected network and argues that it is neurologically distinct from explicit linguistic knowledge. However, he never intends to imply that implicit knowledge cannot be rendered explicit or vice versa. He also maintains that “learning processes and knowledge types are correlated to some degree at least” and that “they interact at the level of performance” (p.235).

**Measuring Explicit Knowledge and Metalanguage Knowledge**
Ellis (2004) considers it an important issue to make a distinction between explicit knowledge as awareness of grammatical rules/features (i.e., analyzed knowledge) and metalinguistic knowledge needed for talking about them when studies of explicit knowledge have basically focused on grammar. He maintains that metalanguage or grammar metatalk “is not an essential component of explicit knowledge” since although explicit knowledge is potentially verbalizable, “this does not entail the use of technical metalanguage” (p.261). Thus nontechnical rule explanation or verbalization is also accepted as a measure or estimation of explicit knowledge to various degrees. He then adds that the value of metalanguage lies in its contribution to the development of explicit knowledge as awareness with greater precision and accuracy and in facilitating its access. Therefore, they seem to be closely related. That is, an increase in the depth of explicit knowledge will occur in close association with the acquisition of more metalanguage, “if only because access to linguistic labels may sharpen understanding of linguistic constructs” (p. 240). Finally, it is considerably important not to confuse the ability to verbalize knowledge with the knowledge itself. It stands to reason that verbalization of rules requires at least some productive metalanguage and the ability to provide clear explanations of mental abstract phenomena but learners’ explicit knowledge exists independently of both the metalanguage they know and their ability to explain (Ellis, 2004. 2005). However, it is impossible to directly access such phenomena, the only way of examining them is through receptive or productive tasks, activities, or tests that involve their applications or invite their uses.
To sum up this part, it is worth noting that the measurement of analyzed knowledge (as opposed to metalanguage) should be the primary goal in testing explicit knowledge. In addition, a test would more likely serve this purpose if it is untimed and encourages learners to deliberate carefully before making a judgment about the grammaticality or acceptability of target language sentences or texts. Further, a Grammaticality Judgment Test (GJT) may provide a more valid measure of the learners’ explicit knowledge if it includes ungrammatical sentences as its focal point of assessment. It is believed that learners are more likely to use their implicit knowledge for judging grammatical sentences and their explicit knowledge for judging ungrammatical sentences. Therefore, the construct validity of GJT s as measures of explicit knowledge is more catered to if L2 learners have been asked to (a) identify the error in an ungrammatical sentence, (b) correct the error, (c) state the grammatical rule that has been broken, and (d) indicate the degree of certainty of their judgment and thereby implying the type of knowledge they have drawn upon (Ellis, 2004).

General L2 Proficiency and Explicit Knowledge

Language assessment is clearly an integral part of language pedagogy, as it provides an empirical basis for making a variety of educational decisions, both on theoretical and practical levels. Over the second half of the 20th century, and even more recently, language testing theorists have attempted to construct theoretical and operational frameworks or models for conceptualizing and defining various interrelated components of general language proficiency or communicative language ability (Lado, 1961; Carrol, 1968; Oller, 1979; Canale & Swain, 1980; Canale, 1983; Bachman, 1990; Bachman and Palmer, 1996; and recently, Purpura, 2004). It is worthy to note that grammar or grammatical knowledge has ever played a pivotal role as a major component of all these models hand in hand with other components. Nevertheless, grammar has over the years suffered from extremist positions and perspectives in the field that have been put forward by different theorists, both its advocates and its adversaries, at various points in time. There is hardly any doubt now that practitioners in the
The Interplay between Explicit and Implicit......

field have regained their consciousness and account more favorably than ever for the critical role of grammar in language pedagogy and language assessment.

In the meantime, various measures of general language proficiency have played a significant role in the life of a great number of test-takers on different corners of the world. These measures of general L2 proficiency have influenced national and international language teaching and assessing programs, and this impact has been huge. Therefore, it is not without relevance to investigate the direct or indirect effects of different types of grammatical knowledge on the performance of both L2 learners and native speakers on these tests in order to better justify the practice of decision-making in the field.

According to Hu (2002), Seliger (1979) was an early study that investigated the functions of metalinguistic knowledge about the uses of the allomorphs of the indefinite article (a/n) in L2 performance of English and found no relationship. Grigg (1986) also compared the learners' production to their rule-verbalization ability and failed to find any effect. However, several other studies have come up with various results. Hu (2002) has witnessed the involvement of metalinguistic and explicit knowledge in L2 performance and acknowledges an apparent need for more empirical work that systematically investigates the effects of metalinguistic or explicit knowledge on L2 performance and factors that influence the development and use of explicit knowledge in L2 production. Ellis (2004) cites a number of studies (e.g., Sorace, 1985; Butler, 2002) that have reported a relationship between the quality of learners’ explicit knowledge and their overall proficiency.

Among the studies that have explored L2 learners and native speakers’ performance on both general language proficiency tests and GJTs is Hinkel (2002). The findings revealed that non-speakers of English with high TOEFL scores do not necessarily share the same grammaticality judgments for certain linguistic features as native speakers do, even after years of language instruction and exposure. More
Importantly, Green and Hetch (1992) administered a test consisting of twelve errors commonly committed by German learners of English to 300 German subjects at different levels as well as 50 native speakers of English. They were then required (1) to state the rules they believed had been transgressed and (2) to correct the errors. The results showed that German L2 learners of English were wholly able to produce a correct rule in less than half the cases (46 percent) but managed to correct a larger proportion of errors (78 percent) without necessarily recourse to a viable explicit rule. However, German university students with the longest experience of learning English were able to state the correct rule in most cases (85 percent) and nearly always produced a correct correction of the error (97 percent). This implies the fact that L2 learners’ ability to correct the errors seems to be significantly higher than their ability to verbalize the transgressed rules. Surprisingly, native speakers’ (NS) ability to state the rules (42 percent) did not exceed that of the nonnative speakers (NNSs) though their associated corrections of the errors were high to the same extent (96 percent). One possible interpretation for these findings is that classroom learners with ‘learned’ rules operated to a large extent by ‘feel’, that is, implicit rules-- which very possibly had been facilitated by explicit rules-- then brought conscious rules into play. The explicit rules resurfaced when they were specifically called for and were then wrongly remembered in some cases (Green and Hetch, 1991). In other words, the researchers suggest that L2 learners’ explicit rules constituted only a subset of their available implicit knowledge (Ellis, 2005). They then conclude that both learning explicit knowledge and using language communicatively may contribute to the development of the implicit rule system.

Purpose of the Study

As it was mentioned, there seems to be a paucity of research in the field on the relationship between explicit knowledge and second language learners’ and native speakers’ proficiency levels. In fact, there seems to be a dire need for more research to be conducted into this relationship. Therefore, the present study aims to explore how explicit and implicit knowledge come into interplay in the performance of multinational ESL
learners and native speakers of English in the same international educational context on both a GJT and a general language proficiency test and what judgment or response pattern(s) would emerge for the items of the GJT, partly following Green and Hetch’s (1992) method of analysis. Therefore, the following research questions are formulated:

1. What is the relationship between the overall performance of multinational ESL learners as well as NSs of English on a GJT (that is, their explicit knowledge) and their respective performance on a general proficiency measure?

2. Is ESL learners’ L2 explicit knowledge different from NSs’ explicit knowledge considering their performance on the GJT?

3. How is the ability of both groups to verbalize rules different from their ability to ‘identify’ or ‘correct’ the related errors?

4. Is the ‘judgment pattern’ (i.e., “feel” or “rule”) of ESL learners different from that of the native speakers?

**Participants**
The participants in this study were 60 male middle-school students (8th & 9th grades, aged 14-15) at Tehran International School (30 NNSs of English and 30 NSs) in Iran. They took part in a General English (GE) class taught by one of the researcher; the course basically dealt with metalinguistic knowledge making use of the series of "World of Language" (Toth et al., 1996). They were receiving their education entirely in English as the medium of instruction. The NNSs were students who passed their childhood and primary-school period in different countries, mainly Turkey, Switzerland, North/South Korea, Serbia, Germany, Cyprus, Sudan, Saudi Arabia, etc. They were living in Tehran basically due to their parents' employment in their embassies in Iran or just on business. Also, some have parents of mixed nationalities such as Persian and Japanese. These students were regarded as L2 learners of English in this study. The NSs, on the other hand, were born,
raised or primarily educated in an English-speaking country (America, Canada, England, and Australia) and English was their first language. Most of them had recently been enrolled at that international school and intended to return to those English-speaking countries for their follow-up education.

Instrumentation
First, the participants’ general language ability was assessed using the standardized 400 A test of Nelson English Tests, which is most commonly used at this level for middle-school students. In this study, the reliability coefficient of this test was high (Cronbach’s alpha: .82)

Second and more important, an untimed Grammaticality Judgment Test (GJT) was constructed and developed to assess the participants’ explicit knowledge of twenty-five English grammatical (both morphological and syntactic) structures embedded within some English sentences that were in turn somehow contextualized into minidialogues (see the appendix). It is worthy to note that the target language structures incorporated into the GJT are generally known to be universally problematic to learners (i.e., to result in errors) and are also assumed to be those that the participants had been taught through their education. Each item required the students to (i) ‘identify’ and ‘correct’ the error in an ungrammatical sentence (i.e., error indication and correction ability), (ii) ‘state’ or ‘explain’ the grammatical rule that had been broken (i.e., rule-verbalization ability), and (iii) indicate the kind or degree of certainty of their judgment at the end of each item (i.e., the kind of knowledge they drew upon in order to make a grammaticality judgment). In addition, each item had potentially 2 points, one points for the ‘error identification (half a point) and correction (half a point)’ part and another point for the ‘rule-verbalization’ part. The latter remaining point was differentially assigned to each item on the basis of the following rating-scale which was developed by the researchers partly adopting and adapting the scales used by Green and Hetch (1992), Han and Ellis (1998), and Ellis (2004, 2005):
The Interplay between Explicit and Implicit…….

Table 1
A scale for rating rule-verbalization

<table>
<thead>
<tr>
<th>Point</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>The testee is unable to explain how s/he reaches a judgment or only generally remarks, “It doesn’t make sense” or “it doesn’t fit.”</td>
</tr>
<tr>
<td>0.25</td>
<td>The testee is able to identify verbally the element that is the source of the error, but the explanation is incomplete, incorrect, imprecise, and not necessarily applicable with no or very simple metalanguage.</td>
</tr>
<tr>
<td>0.5</td>
<td>The testee is able to verbalize a ‘partly correct but general’ rule that is related but not applicable to the item. It contains some simple metalanguage.</td>
</tr>
<tr>
<td>0.75</td>
<td>The testee is able to state a fairly correct and indirectly applicable rule using some metalanguage.</td>
</tr>
<tr>
<td>1</td>
<td>The testee is able to state a completely correct rule directly applicable to the item using appropriate metalanguage.</td>
</tr>
</tbody>
</table>

To design the Grammaticality Judgment Test, first based on the guidelines laid down by Ellis (2004), the researchers constructed the test: in a pilot study, three experts in the field were asked to give their opinions about the content validity of the test; and to disambiguate the contents of the items, ten students (five native speakers and five non-native speakers), who had the features of the target population, were asked to take the whole test and verbalize their answers. Finally, the test was modified and prepared for the study. To determine the reliability of the test, for the “correction” part Cronbach’s alpha was computed, which was found to be high (Alpha: .87), and for the “explanation” part, two raters who were experts in English grammar were asked to score the explanations of the testees. Then, the inter-rater reliability (using Pearson correlation) was computed, which was \( r = .94 \).

Results
Testing the (inter-)relationship between the group performance on the language proficiency test and on the GJT, two Pearson Product Moment correlations were run. Table 2 shows the correlation coefficients computed for the two groups:
Table 2
Correlations between general language ability and explicit knowledge measures

<table>
<thead>
<tr>
<th>Group</th>
<th>Measures</th>
<th>Correlation Coefficient</th>
<th>Common Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSs</td>
<td>GJT &amp; Proficiency Test</td>
<td>0.61*</td>
<td>0.37</td>
</tr>
<tr>
<td>ESL Learners</td>
<td>GJT &amp; Proficiency Test</td>
<td>0.59*</td>
<td>0.35</td>
</tr>
</tbody>
</table>

*Sig p < 0.05 critical r xy (df = 28) = 0.361

The results above indicate that the English native speakers’ GJT scores were correlated strongly with their general language ability test scores at the 0.05 level of significance. Likewise, a statistically significant correlation was found between the scores on the same measures of the ESL learners. Moreover, the magnitude of the common variance computed for each correlation coefficient was rather high given the nature of the tests, that is, neither test was constructed based on the instructional materials available at that international school.

In order to test the significance of the difference between the NSs and the ESL learners’ GJT scores, an independent samples t-test was run comparing the two means (Table 3).

Table 3
Independent samples t-test comparing the GJT group means

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SS</th>
<th>t-observed</th>
<th>t-critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSs</td>
<td>30</td>
<td>20</td>
<td>1409.691</td>
<td>0.96</td>
<td>2.021</td>
</tr>
<tr>
<td>ESL Learners</td>
<td>30</td>
<td>17</td>
<td>1302.651</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Sig p < 0.05

This Table shows that the t-observed (0.96) was neither equal nor higher than the t-critical (2.021) at the 0.05 level. It is therefore concluded that the difference is not statistically meaningful.

To compare the ‘rule-verbalization ability’ (RV) with the ‘error-correction ability’ (EC) of each group, the percentage figures were computed (Table 4). In this Table, the same computation done to discern
The Interplay between Explicit and Implicit……

the ‘judgment pattern’ (i.e., ‘feel’ [F] or ‘rule’ [R]) of each group is also shown.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>R</th>
<th>F</th>
<th>RV</th>
<th>EC</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSs</td>
<td>30</td>
<td>Mean</td>
<td>6.5</td>
<td>19.8</td>
<td>2.75</td>
<td>17.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percent</td>
<td>26</td>
<td>78*</td>
<td>11</td>
<td>69*</td>
</tr>
<tr>
<td>ESL Learners</td>
<td>30</td>
<td>Mean</td>
<td>5.13</td>
<td>16.9</td>
<td>3.26</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percent</td>
<td>20.5</td>
<td>68*</td>
<td>13.04</td>
<td>54*</td>
</tr>
</tbody>
</table>

*Sig

This Table indicates that, firstly, the performance of the NSs in identifying and correcting the errors (EC) (mean=17.22, 69 percent) was somehow better than the EC performance of the ESL learners (mean=13.6, 54 percent). Nevertheless, both groups’ EC ability noticeably exceeded their RV ability (NSs: mean=2.75, 11 percent; ESL learners: mean=3.26, 13.04 percent). It might be worthy to note that the ESL learners’ performance on RV was slightly better than the NSs’.

Secondly, the ‘feel’ judgment percentage of the NSs (78 percent) was remarkably higher than their ‘rule’ judgment percentage (26 percent). The same pattern held true for the ESL learners (F: 68 percent vs. R: 20.5 percent). It is again worth noting that some ESL learners were not probably able to distinguish between ‘rules’ and ‘feel’ performing on some items and; therefore, opted both out.

Last but by no mean least, administering and, more importantly, scoring the GJT papers, the researchers noticed some reactions from the student and some data-driven response patterns which are briefly listed below:

1. Since that might have been the first time the participants were given such a test, they could not tolerate the test format, most specifically, the ‘rule-verbalization’ section and kept objecting through out the test-taking process.
2. As indicated above, most of the explanations postulated as rules, were mainly based on ‘feel’, hunch, and cursory reflection on the grammatical structures or features. This may be the reason why the use of explanations such as ‘It doesn’t make sense’, ‘It seems strange’, or ‘It makes more sense this way’ was broadly widespread.

3. Some participants’ feel/think judgment patterns were not consistent with respect to their rule explanations. For instance, there were cases when a student ticked ‘I’m sure I know the rule’ choice but wrote no rule or what he wrote was absolutely inaccurate.

4. There were some originally Arab students among ESL learners whose GJT scores, particularly on the RV part, were highly better than those of the students with other countries of origin.

5. Finally, there were instances when the testees identified the error but were not able to correct it.

Discussion
As noted above, this study was an attempt to discern how explicit and implicit knowledge of different speakers of a language come into interplay whilst they are performing some real-life or simulated tasks. The results revealed that there was a fairly strong relationship between the knowledge-based performance and the general language ability of both ESL learners and native speakers nearly to the same degree. In other words, a modest variance overlap existed between the two language measures, suggesting that an increment in one might further motivate or facilitate the enhancement of another. Moreover, no significant difference was observed between the performance of NSs and ESL learners who were receiving education in an international school. These findings might readily lend themselves to an interpretation that acknowledges the involvement of some type of explicit knowledge in the participants’ general proficiency performance. Subsequent analyses indicated that this type of explicit knowledge is not necessarily knowledge of rules or rule-verbalization ability. A vast majority of testees performed rather well on the error-identification and correction
section of the GJT but poorly on the rule explanation part. More important, in the ‘miniquestionnaire’ section evaluating their ‘feel’ or ‘rule’ judgment pattern at the end of each item, a considerable percentage of both NSs and ESL learners opted for the ‘feel’ choice.

The findings reveal that the interaction between explicit and implicit knowledge is really an intricate one. This means that the types of knowledge seem to be distinguishable merely at the extreme ends of a hypothetical knowledge continuum. In other words, at some point in the middle, there seems to be a processing system or network of proceduralization, automatization, and interaction at work between various factors and knowledge resources that is beyond explanation through simple words. In the case of native speakers, it is plausible to argue that their language knowledge is basically and deeply ‘feel’ or implicit while they are gradually becoming more aware of the grammatical structures and features through instruction or instances of natural communication breakdown that entail further metalinguistic reflection. On the other hand, the knowledge threshold of second language learners is largely dependent upon their first language and educational background. In this study, as for some ESL learners such as Arabic speakers whose first language is said to be syntax-rich and structurally different from English and whose educational system puts much emphasis on L1 and L2 explicit metalinguistic knowledge, their basic L2 knowledge seems to be metalanguage, explicit, ‘knowing that’, or declarative. However, further education with English as the medium of instruction as well as more natural exposure or communication with NSs appear to have proceduralized language knowledge from a ‘rule’ level to a ‘feel’ or implicit level. However, as for the ESL learners originally from some European countries whose first language is more structurally similar to English or from other countries like Nigeria, India, Pakistan where English is fairly the official language and ESL curriculum is communicative from the onset, the story is different. That is, their second language seems to be initially implicit. However, there is no doubt that L2 explicit or metalinguistic knowledge they receive will
be internalized into the former system and will facilitate its development.

Overall, the findings of this study shed lights on and lend more support to Green and Hetch (1992, p.178) results and implications that the ESL learners “operated to a large extent by ‘feel’.” Put another way, “they corrected largely by implicit rules, which very possibly had been facilitated by explicit rules.” Clearly, the same pattern holds true for the native speakers, however, with a higher success rate.

These findings obviously have certain theoretical implications for SLA research, which have been pointed out above, and plausible pedagogical applications to second or foreign language learning and teaching. Probably, the most outstanding insight that can be gained from this study is that, a balance needs to be established between time devoted to the learning or teaching of L2 explicit rules, metatalk, or metalinguistic knowledge and time specialized to the meaning-based communicative use of language, both of which may facilitate or contribute to the development of the implicit rule system (Green & Hetch, 1992, p. 179). Lastly, the findings further substantiate the claims made by the advocates of the ‘form-and-meaning focused instruction’ (Purpura, 2004).

**Conclusion**

To sum up, the explicit and implicit knowledge of both ESL learners and NSs seemed to come into intricate interplay performing on the employed measures in this study. It also became apparent that explicit knowledge is not necessarily the ability to explicitly verbalize the associated rules with the errors in the GJT nor metalanguage knowledge, that is, grammatical technicalities. However, It is interpreted as the declarative awareness or the “knowing that” knowledge of how grammatical forms or structures fit together to convey the intended meaning. It is also worth mentioning the fact that this type of knowledge lends itself readily to a transferring process through purposeful practice or repeated activation in order to become proceduralized or automatized. Therefore, at some
point, it might be really difficult to differentiate some portion of language knowledge as explicit or implicit. The findings of this study seem to have certain theoretical and pedagogical implications for both SLA researchers and teachers that were discussed above.

Received 10 September, 2006
Accepted 28 February, 2007
LIJAL, Vol. 10, No. 1, March 2007

References


The Interplay between Explicit and Implicit......


The Interplay between Explicit and Implicit


IJAL, Vol. 10, No. 1, March 2007


The Interplay between Explicit and Implicit......


Appendix

Teheran International School (May, 2005)

Name: ........................................ Country: ........................................ Class: ........................................

Instruction: In this series of questions, 1) Underline the grammatically incorrect words; 2) Write its correct form; 3) State the grammatical rule that has been broken; and 4) Say how much you are sure about your answer (by ticking the right choice).

Example: A: What do you usually do on Fridays?
B: I often go to the cinema.

Correct form: go.

Rule: "do" must agree with the subject. "do" to "does", "do" to "do", "do" to "he", "do" to "we", "do" to "you", "do" to "they".

If I am sure I know the rule. □ I feel think it should be like this:
1. A: How's the weather there?
B: It's a nice weather.
Correct form: ........................................
Rule: ........................................

□ I am sure I know the rule. □ I feel think it should be like this:
2. They seldom don't go to the movies.
Correct form: ........................................
Rule: ........................................

□ I am sure I know the rule. □ I feel think it should be like this:
3. A: Why is Tom so worried?
B: He loses his keys yesterday.
Correct form: ........................................
Rule: ........................................

□ I am sure I know the rule. □ I feel think it should be like this:
4. Tom is a carefully driver.
Correct form: ........................................
Rule: ........................................

□ I am sure I know the rule. □ I feel think it should be like this:
5. I asked her whether could she read before she started school.
Correct form: ........................................
Rule: ........................................

□ I am sure I know the rule. □ I feel think it should be like this.
The Interplay between Explicit and Implicit......

6. A: What is that?  
B: It is the book I wanted you to read it.  
Correct form:  
Rule:  

☐ I am sure I know the rule.  ☐ I feel think it should be like this.  
7. A: Are you sitting down?  
B: Yes, I sit.  
Correct form:  
Rule:  

☐ I am sure I know the rule.  ☐ I feel think it should be like this.  
8. A: How is her swimming?  
B: She can certainly swim a lot faster than I can.  
Correct form:  
Rule:  

☐ I am sure I know the rule.  ☐ I feel think it should be like this.  
9. A: They're really good friends.  
B: Yes, they were in the same class for the past 3 years.  
Correct form:  
Rule:  

☐ I am sure I know the rule.  ☐ I feel think it should be like this.  
10. The window repaired by the landlord.  
Correct form:  
Rule:  

☐ I am sure I know the rule.  ☐ I feel think it should be like this.  
11. She said that she didn't mind to wait until we get back.  
Correct form:  
Rule:  

☐ I am sure I know the rule.  ☐ I feel think it should be like this.  
12. This is the city where George Washington lived.  
Correct form:  
Rule:  

☐ I am sure I know the rule.  ☐ I feel think it should be like this.
I am sure I know the rule.
I feel think it should be like this.

20. A: Can you explain me this word?
   B: No, you have to guess it yourself.
Correct form:

Rule:

I am sure I know the rule.
I feel think it should be like this.

21. A: What time are the news on television?
   B: At 7 o'clock.
Correct form:

Rule:

I am sure I know the rule.
I feel think it should be like this.

22. A: Is the fish enough cooked?
   B: Yes, it looks delicious.
Correct form:

Rule:

I am sure I know the rule.
I feel think it should be like this.

23. A: Where is Eric? I don't see him these days?
   B: He has gone to to the Japan.
Correct form:

Rule:

I am sure I know the rule.
I feel think it should be like this.

24. A: What are you interested with?
   B: Art and architecture.
Correct form:

Rule:

I am sure I know the rule.
I feel think it should be like this.

25. A: He seems not to be feeling well.
   B: Yes, he has been working much hard that he has made himself ill.
Correct form:

Rule:
The Interplay between Explicit and Implicit