Knowledge of Grammar, Oral Communication Strategies, and oral Fluency: A Study of Iranian EFL Learners

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Abstract

This study tested the impact of implicit and explicit knowledge of grammar on learners' use of oral communication strategies (OCSs) and the interface of OCSs and oral fluency. The study was performed on 24 male and 36 female Iranian university students of English Translation studying at Payame Nour Universities of Lar, Khonj, and Evaz chosen based on availability and ease of access. The data were gathered using Timed Grammaticality Judgement Test (Dekeyser, 2000) as a measure of implicit knowledge of grammar, a structure section of TOEFL Paper-based Test (version 2004) as a measure of explicit knowledge of grammar, Oral Communication Strategies Inventory (Nakatani, 2006), and two oral production tasks for measuring learners' oral fluency. Analysis of the data using Multivariate Analysis of Variance (MANOVA) and Pearson's Correlation showed that both implicit and explicit knowledge of grammar affect learners' use of oral communication strategies; however, no relationship was found between overall use of OCSs and oral fluency which can be suggestive of greater or possibly overriding impacts of some other variables on oral fluency compared to OCSs. The findings of the study are supposed to provide guidelines for learners, teachers and syllabus designers concerning the use of OCSs, especially with regard to other variables considered in this study.

1. Introduction

Knowledge of grammar and communication strategies (CSs) are two widely discussed issues in second language acquisition (SLA). Throughout the history of SLA research and teaching methodology, different issues have been discussed regarding knowledge of grammar such as whether to teach it or not, the way it has to be taught and its storage and retrieval within the mind (Ellis, 2008).

Meanwhile, the place and importance of grammar in language teaching are undeniable, to stress its importance, Paulston (1992) has claimed that "grammar… is at the heart of adult second language learning" (p. vi), and she further argues that without rules of grammar competence will be defective.

CSs have also been studied and discussed about in two respects, first the way they affect learners' performance (Thornbury & Slade, 2006) and second their place and importance in language teaching (Brown, 2006). Meanwhile, developing learners' oral fluency has been the aim of many language courses.

Previous studies on the interface of oral communication strategies (OCSs) and linguistic proficiency have yielded different results. A study by Nakatani (2006) showed the dominant use of socio-affective and (oral) fluency-oriented strategies during speaking and fluency-maintaining strategies during listening by learners. However, LiskinGasparro (1996) found that proficient second language (L2) learners are more prone towards using L2-based strategies while less proficient learners had a greater tendency towards first and third language based strategies.

Studies on the relationship between using OCSs and oral fluency are rather limited in number, but two case studies by Schmidt (1983) and Schmidt and Frota (1986) show that these two variables may be related.

The intention of the present study is twofold: first, to investigate the impact of different types of knowledge of grammar (explicit and implicit) on OCSs used by language learners and second, to check for the possible relationship between OCSs use and oral fluency.

Based on the aims of this study, these three research questions were posed:

Q1: Is there any significant difference between self-reported oral communication strategies of Iranian EFL learners with high explicit knowledge of grammar and those with low explicit knowledge of grammar?

Q2: Is there any significant difference between self-reported oral communication strategies of Iranian EFL learners with high implicit knowledge of grammar and those with low implicit knowledge of grammar?

Q3: Is there any significant relationship between Iranian EFL Learners' self-reported oral communication strategies and their oral fluency?

2. Review of Literature

2.1. Knowledge of Grammar

Brown (2000) defines grammar as rules governing conventional arrangement and relationship of words in a sentence. Han and Ellis (1998) have divided knowledge of grammar into two types, explicit and implicit knowledge of grammar. In Bialystok's (1990) view, implicit L2 knowledge is typically manifested in some form of naturally occurring language behaviour such as free conversation; hence, implicit knowledge may not be separated from behaviour.

Han and Ellis (1998) simply define explicit knowledge as knowledge about the L2 and name two components of this knowledge: analysed knowledge and metalanguage. In their words, analysed knowledge refers to that knowledge

about L2 items and structures of which learners are aware although not necessarily fully conscious. On the other hand, metalanguage has been regarded as knowledge of rules and structures which have been articulated with precise terminology (Han & Ellis, 1998).

2.2. Communication Strategies

In Tarone's (1981, p. 287) words, CSs are "those strategies deployed to compensate for some deficiency in the linguistic system, and [to] focus on exploring alternate ways of using what one does know for the transmission of a message".

These strategies are typically from two categories, avoidance strategies, such as abandoning the message, or achievement strategies, for example, the use of paraphrase to describe something for which we don't know the exact word (Thornbury & Slade, 2006).

The notion of second language CSs was first introduced in 1970s following recognition of the fact that due to the mismatch between learners' knowledge and their communicative intentions they resort to a number of systematic language phenomena to handle their problems (Dornyei & Scott, 1997).

Throughout the history of CS research, CSs have been conceptualised through different approaches. According to Dornyei and Scott (1997), the traditional approach to conceptualising CSs considers them as nonverbal first-aid devices used to compensate for the gaps in one's L2 proficiency and this conceptualisation is well reflected in the works of Tarone (1977) and Faerch and Kasper (1983).

Tarone (1980, p. 420) has adopted an interactional approach to conceptualising CSs, in his view CSs "relate to a mutual attempt of two

interlocutors to agree on a meaning in situations where requisite meaning structures do not seem to be shared".

A number of studies concerning the interface of CSs and language proficiency, by Nakatani (2006), LiskinGasparro (1996), Si-Qing (1990), and Song (2005) have shown that language proficiency can affect learners' choice of CSs.

The findings of Nakatani (2006) indicated that use of socio-affective and (oral) fluency-oriented strategies during speaking and fluency-maintaining strategies during listening was pervasive among learners with higher proficiency. LiskinGasparro (1996) found that more proficient learners had a higher tendency towards using L2-based strategies such as paraphrasing while less proficient learners usually relied on first language (L1) and third language (L3) based strategies such as borrowing from L1 or L3 or foreignizing L1 or L3 words. However, each study has its own drawbacks. For example Nakatani (2006), has mainly focused on learners' oral proficiency, and LiskinGasparro (1996) has solely focused on lexical repair strategies.

The term 'oral communication strategy' was first introduced by Nakatani (2005). He used this term rather than communication strategy to avoid confusions between written and oral communication strategies. According to Nakatani (2006), most of the previous studies on CSs were conducted using Strategy Inventory for Language Learning (SILL; Oxford, 1989) which has two inherent problems, first SILL has confused learning strategies with communication strategies, and second, communication strategies in SILL are mainly related to initial learning and retrieval of vocabulary items.

2.3. Oral Fluency

When reading the literature on oral fluency, one would find no single definition for oral fluency, rather what is found is a plethora of definitions which mention a variety of factors affecting language learners' oral fluency (Kormos & Denes, 2004). Pawley and Syder (1983, p.191) define native-like oral fluency as 'the native speaker's ability to produce fluent stretches of discourse'.

Lennon (2000) has construed oral fluency as a performance phenomenon, and has claimed that it is based on listeners' impression, rather than measurements using proficiency tests. So in his words, "oral fluency reflects the speaker's ability to focus the listener's attention on his/her message by presenting a finished product, rather than inviting the listener to focus on the working of the production mechanisms" (pp. 391-392).

As well as defining oral fluency, its measurement is also a matter of debate, there are two ways for measuring oral fluency. First, using computational measures (Thornbury & Slade, 2006), and second, listeners' judgements (Kormos & Denes, 2004). Computational measures consist of two categories of variables, temporal variables and hesitation phenomena. Examples of temporal variables are speech rate, pause length, and length of run (i.e., average number of syllables between pauses); and examples of hesitation phenomena are: filled pauses, repetitions, and self-corrections (Thornbury & Slade, 2006).

Several variables such as phonological memory (O'Brien, Segalowitz, Freed, & Collentine, 2007), formulaic language, and using communication strategies are believed to affect one's oral fluency (Thornbury & Slade, 2006).

Schmidt's (1983) case study of Wes, an adult ESL learner who had made considerable progress in his oral fluency in spite of the limited progress in his grammatical knowledge, is a good indicator of the probable relationship between using CSs and oral fluency. In another study, Schmidt and Frota

(1986) have shown how a language learner made spectacular progress in his oral fluency mainly using CS. In fact, much of the progress in communication made by subjects in the above mentioned studies was due to using CSs (Thornbury & Slade, 2006).

Additionally there are some more recent studies by Cheng (2007), Yoon (2011), Huang (2010), and Wijers (2010) which have given testimony to the interface of CSs and oral fluency.

3. Methodology

3.1. Participants

The participants of this study were 60 (24 males and 36 females) university students of English Translation in Iran. The method of sampling was opportunity sampling. The participants came from a variety of socioeconomic backgrounds and from different cities within Larestan region and its vicinity.

3.2. Instrumentation

In the present study the following instruments were used.

(a) *Timed Grammaticality Judgement Test (DeKeyser, 2000)*

The Timed Grammaticality Judgement Test (TGJT) consists of 98 pairs of sentences, with each pair having one sentence that is grammatically unacceptable. The test takers were asked to identify the correct sentence in each pair. The time for completing the test was 17 minutes. DeKeyser (2000) has reported a reliability coefficient (KR-20) of 0.91 for grammatical items and 0.97 for ungrammatical items on this test. This test was used as a measure of learners' implicit knowledge of grammar.

(b) TOEFL Paper-based Test (PBT) – Structure Section (2004 version)

The structure section of TOEFL PBT test was used as a measure of learners' explicit knowledge of grammar. The test contains 40 multiple choice items that test learner's knowledge of a variety of different grammar rules. According to Rosenfeld, Oltman, and Sheppard (2004), reliability coefficient of TOEFL PBT tests may vary from administration to administration, still the range of these variations is from 0.59 to 0.90 with a median of 0.74. The duration of the test was 20 minutes.

(c) Oral Communication Strategies Inventory (Nakatani, 2006)

Oral Communication Strategies Inventory (OCSI) is a questionnaire based on Nakatani's (2006) classification of OCSs. This questionnaire is a 5-point Likert-type questionnaire composed of two parts with part one consisting of 32 statements on the use of strategies based on the eight types of OCSs for dealing with speaking problems and part two consisting of 26 statements concerning the use of strategies related to the seven types of OCSs for dealing with listening problems.

The reliability indices for the speaking and listening parts of this inventory are 0.86 and 0.85 respectively (Nakatani, 2006).

(d) Oral Production Tasks

Two oral production tasks were given to the participants to measure their oral fluency.

The tasks were (a) a free conversation task where speakers talked about a topic they had chosen from "101 IELTS Speaking" (Case, 2008) IELTS preparation series, and (b) a simulation task where participants were given the choice of 10 different hypothetical situations adapted from Cormack (2013) where they could interact using English.

The scoring was based on six criteria driven from Kormos and Denes (2004) and O'Brien et al. (2007). Each participant received an impression marking ranging from 1 to 10 for each criterion; hence, a maximum possible score of 60 for each task that makes a total of 120 points for each task. Participants' performance was rated by three raters and the average of the scores was taken as their final oral fluency score.

The six criteria for measuring oral fluency adapted from Kormos and Denes (2004) were:(a) absence of silent and filled pauses that negatively affect the flow of speech, (b) absence of unnatural hesitations, (c) frequency and accuracy of stress, (d) Average length of run, (e) accuracy of the produced speech sample, (f) ratio of fluent runs.

(e) TOEFL Paper Based Test (2003 version)

The 2003 version of TOEFL PBT test was given to the participants as a proficiency test to screen 30 students out of the 60 participants for the completion of oral production tasks. 30 participants were screened out of the 60 as it was not feasible for researchers to interview more than 30 participants due to time and material limitations (lack of adequate funding for video recording, interview sites, etc.) The test includes three subtests: (a) listening comprehension section for testing the test takers' listening ability, (b) structure and written expressions section which measures test takers' knowledge of structural rules, and (c) reading comprehension for the measurement of learners' reading ability.

The reliability of the test is the same as the one mentioned for the 2004 version of TOEFL test above.

3.3. Data Collection Procedure

The data for the present study were collected in three stages, each stage was completed in a separate session. In stage one, participants received TGJT (DeKeyser, 2000), the structure section of TOEFL PBT (2004 version) and OCSI (Nakatani, 2006).

In the second stage, TOEFL PBT (2003 version) was administered to the participants and they were given 100 minutes to finish this test. The purpose of the test was to screen 30 participants out of the 60 to complete the aforementioned oral production tasks.

Finally, in the third stage, the 30 participants were invited to complete the two oral production tasks described in the previous section.

4. Data Analysis

Given the fact that in present study opportunity sampling was used, use of parametric tests requires prior assumption testing. In what follows, results of testing different assumptions of MANOVA statistics for the present study's sample are presented.

In case of outliers, checking the residual statistics revealed that the maximum value for Mahalanobis Distance for our sample regarding the first and the second research questions was 33.14. Given the number of dependent variables (15), the critical value for Mahalanobis Distance would be 30.58 which means the maximum value for Mahalanobis Distance in our study has exceeded the critical value. Checking Mahalanobis Distance values for each case in the sample revealed that this violation was related only to one of the cases in the sample (with Mahlanobis Distance value of 33.14). Because the

violation was limited to one case and because its score was not too high, it was decided not to omit this case from the sample.

Regarding linearity, the matrices of scatter plots for all of the variables in the two groups were checked and no linearity was found. In case of normality, checking histograms and Q-Q plots showed no violations of the assumption of normality.

4.1. Research Question 1

Concerning the first research question, the participants were divided into high (H) and low (L) groups based on their scores on TOEFL (2004) structure test, the median of their scores on this test (which was 22) was used to divide the groups into two equal halves. The use of the OCSs by the subjects in the high and low groups was compared by means of one-way multivariate analysis of variance (MANOVA). Table 1 shows the obtained results.

Table 1. MANOVA Results for the Overall Difference in the Use of OCSs by High and Low Groups

	Value	*F*	*P*	*Partial Eta Squared*
Wilks' Lambda	0.59	2.02	0.03	0.40

The value for Wilks' Lambda is .59 with a p value of .03 which is lower than our alpha level (α=.05). As the p value for Wilks' Lambda is lower than the alpha level, it can be concluded that there is a significant difference between self-reported oral communication strategies employed by Iranian EFL learners with high explicit knowledge of grammar and those with low explicit knowledge of grammar. Additionally, the results of univariate F-tests reported in Table 2 show the specific strategies on which the two groups had significant differences.

Table 2. Results of Univariate F-Tests Comparing the Use of Each Specific OCS by the H and L Groups and the Means for the Use of Each Specific Strategy

(n=60, df=1, α=.05)

Strategies	M		SD		F	p
	H Group	L Group	H Group	L Group		
Speaking-Social Affective Strategies	20.4	22.16	3.87	3.96	3.04	.08
Speaking-Fluency Oriented Strategies	21.9	22	3.25	3.37	.01	.90
Speaking-Negotiation for Meaning while Speaking	14.43	15.8	3.11	2.53	3.47	.06
Speaking-Accuracy-Oriented Strategies	18.03	18.30	2.73	2.80	.13	.71
Speaking-Message Reduction and Alteration Strategies	9.63	10.20	1.73	2.56	1	.32
Speaking-Nonverbal Strategies while Speaking	7.4	7.5	1.85	1.94	.04	.83
Speaking-Message Abandonment Strategies	10.2	12.40	2.31	2.73	**12.13**	**.00**
Speaking-Attempt to Think in English Strategies	5.46	7	1.97	1.96	**9.07**	**.00**
Listening-Negotiation for Meaning While Listening	16.53	19	3.41	2.75	**9.49**	**.00**
Listening-Fluency Maintaining Strategies	17.26	17.93	2.77	2.94	.81	.37
Listening-Scanning Strategies	14	14.5	2.71	2.63	.52	.47
Listening-Getting the Gist Strategies	13.4	13.16	2.90	2.33	.11	.73
Listening-Nonverbal Strategies While Listening	7.1	8	1.98	1.50	**3.9**	**.05**
Listening-Less Active Listener Strategies	4.96	6.53	1.56	1.87	**12.38**	**.00**
Listening-Word-Oriented Strategies	13.56	14.23	2.50	3.09	.84	.36

As it can be seen in the above table, there are significant differences in the use of five strategies between the two groups. These strategies include message abandonment while speaking (F=12.13, p=.00) attempting to think in English while speaking (F=9.07, p=.00), negotiation for meaning while listening (F=9.49, p=.00), nonverbal strategies while listening (F=3.9, p=.05), and less active listener strategies (F=12.38, p=.00). In other words, learners with low explicit knowledge of grammar employed these five OCSs more than learners with high explicit knowledge of grammar.

4.2. Research Question 2

To answer the second research question, the participants were divided into high and low groups based on their scores on the TGJT. The cut point for the division was determined based on participants' median on the TGJT which was 83.5.

Similar to the first research question, MANOVA was the statistic of choice to compare participants' use of OCSs. The results are depicted in Table 3.

Table 3. MANOVA Results for the Overall Difference in the Use of OCSs by High and Low Groups

	Value	F	p	Partial Eta Squared
Wilks' Lambda	0.43	3.88	0.0001	0.57

The value of Wilks' Lambda is .43 with a p value of .0001 which is smaller than our alpha level (α=.05) indicating that there's an overall significant difference between the OCSs used by the two groups.

The results of univariate F-tests presented in Table 4 show that the two groups have significant differences in the use of six strategies.

Table 4. Results of Univariate F-Tests Comparing the Use of Each Specific OCS by the H and L Groups and the Means for the Use of Each Specific Strategy (n=60, df=1, α=.05).

Strategies	M		SD		*F*	*p*
	H Group	L Group	H Group	L Group		
Speaking-Social Affective Strategies	20.23	22.33	4.35	3.33	**4.40**	**.04**
Speaking-Fluency Oriented Strategies	22.03	21.86	3.26	3.36	.03	.84
Speaking-Negotiation for Meaning while Speaking	14.86	15.36	3.20	2.59	.44	.50
Speaking-Accuracy-Oriented Strategies	17.56	18.76	2.81	2.59	2.95	.09
Speaking-Message Reduction and Alteration Strategies	9.57	10.26	1.67	2.58	1.54	.21
Speaking-Nonverbal Strategies while Speaking	7.46	7.43	2.12	1.63	.00	.94
Speaking-Message Abandonment Strategies	10.16	12.5	2.21	2.76	**13.02**	**.00**
Speaking-Attempt to Think in English Strategies	5	7.46	1.68	1.73	**31.23**	**.00**
Listening-Negotiation for Meaning While Listening	16.96	18.56	3.67	2.75	3.64	.06
Listening-Fluency-Maintaining Strategies	17.7	17.5	3.26	2.44	.07	.78
Listening-Scanning Strategies	13.6	14.9	2.78	2.41	**3.73**	**.05**
Listening-Getting the Gist Strategies	13.43	13.13	2.68	2.51	.19	.66
Listening-Nonverbal Strategies While Listening	7.13	7.96	2.01	1.49	3.31	.07
Listening-Less Active Listener Strategies	4.63	6.86	1.42	1.61	**32.27**	**.00**
Listening-Word-Oriented Strategies	13.2	14.6	2.45	3.00	**3.91**	**.05**

It can be inferred from Table 4 that while speaking the participants with low implicit knowledge of grammar resort to social affective strategies such as controlling anxiety or behaving socially to avoid silence (F=4.40, p=.04), abandonment of the message (F=13.02, p=.00), and attempts to think in English (F=31.23, p=.00) more than learners with high implicit knowledge of grammar. Moreover, in order to cope with their listening problems, they employ scanning strategies (F=3.73, p=.05), less active listener strategies (F=32.27, p=.00) and word-oriented strategies (F=3.91, p=.05) more than learners with high implicit knowledge of grammar. Both message abandonment and less active listener strategies are negative strategies based on Nakatani's (2006) classification.

4.3. Research Question 3

Prior to hypothesis testing, a Spearman-Brown prophecy formula was used to determine the inter-rater reliability of the ratings which turned out to be .61, a fairly reliable rating.

Considering the convenient sampling, Spearman Rank Order correlation was the statistic of choice. The formula was used to test the strength of the relationship between overall OCS use of the learners and their oral fluency. Analysis of data revealed that there is no statistically significant relationship between the two variables. Table 5 provides the details for the data analysis related to this research question.

Table 5. Result of Spearman Rank Order Correlation between Oral Fluency Scores and Overall OCS Use (α=.05).

Variables	M	SD	N	rho	p
Fluency	74.5	22	30	.09	.63
OCSs	212.47	21.5dgh	30		

As it can be seen in the table, the p value for this correlation coefficient (p=.63) is larger than our alpha level (α=.05) which indicates that there is no significant relationship between Iranian EFL learners' self-reported OCSs and their oral fluency.

5. Discussion and Conclusion

5.1. Discussion

The present study investigated the impact of implicit and explicit knowledge of grammar on learners' use of OCSs and the interface of OCSs and oral fluency, The findings concerning the impact of knowledge of grammar on learners' OCS use are in line with the findings of previous researchers such as Nakatani (2006), LiskinGasparro (1996), Si-Qing (1990), and Song (2005).

It is shown that learners' knowledge of grammar, regardless of the type of knowledge of grammar, has some effects on their overall use of OCSs. According to the findings, those learners who have a better command of grammar are less reliant on OCSs. Meanwhile, it was observed that those learners with lower knowledge of grammar also had a tendency towards using negative OCSs.

The results confirm Ellis'(1997) and Thornbury and Slade's (2006) arguments concerning the impact of knowledge of grammar on using CSs. The results are indicative of the fact that as one's knowledge of grammar increases, her or his reliance on OCSs begins to decrease. What is even more interesting is the fact that not only the amount of knowledge, but also the way this knowledge is stored, processed, and retrieved within the mind affects the type and frequency of OCSs used by the learners.

As to the interface of OCSs and oral fluency, the present study tried to test the possibility of the relationship between OCSs and oral fluency. In this

respect, results of this study are in contrast with Thornbury and Slade's (2006) claim about the possible relationship between using CSs and oral fluency which mainly rests upon Schmidt's (1983) and Schmidt and Frota's (1986) studies.

The results of the study also contradict the previous findings of Cheng (2007), Yoon (2011), Huang (2010), and Wijers (2010). However, these contradictory results need to be approached with great care given the small number of cases in the study. Meanwhile, the way oral fluency has been operationalized in this work has possibly affected the findings of the study.

6. Conclusion

As mentioned in the review of literature some of the previous works have tested the impact of language proficiency on learners' use of CSs; however, none of the previous studies has solely focused on grammar. Hence, the present study has attempted to fill some gaps in the literature.

The findings indicated that not only knowledge of grammar has an impact on the OCSs used by the learners, but also the way this knowledge has been stored, processed and retrieved within the mind affects learners' use of OCSs. Meanwhile it is shown that there is no interface between oral fluency and OCSs, however given the aforementioned limitations, the findings need to be approached with great care.

The implication of this finding is for those involved in language teaching and learning to maintain a healthy balance between using OCSs and grammar based on the aims of their courses and linguistic knowledge of their learners. Meanwhile, it seems that where development of oral fluency is the aim, a sole focus on OCSs may not be beneficial to the development of learners' oral fluency.

The findings of this study are also subject to at least three limitations. First, the data were collected from a small sample chosen based on availability and ease of access. The second limitation is related to the instrument used for gathering data on participants' use of OCSs; it's possible that a self-report questionnaire may not be a reliable tool for collecting data on OCSs use compared to conversation analysis measures. Finally, in the present study learners' oral fluency was rated using criterion-based impression markings by non-native teachers which may have resulted in biased or inaccurate ratings.

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