The Relationship between Gesture and Language Proficiency in Iranian EFL Learners

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Abstract: Students’ proficiency level is closely related to the gesture rates accompanying speech in English (Gullberg, 1998). This hypothesis was tested in the present study through a comparative analysis between 10 upper intermediate and 10 intermediate level students. The similarities and differences between these two groups of students in terms of their use of gestures (i.e., deictic gesture as well as iconic gesture), were investigated. The participants in the two groups were asked to describe a photograph and to engage in a 10-minute conversation with the researcher. The results showed that students of intermediate level made use of gestures, both deictic and iconic gesture, at a higher rate as compared to students of upper intermediate level. The results also suggest that the proficiency level of foreign and second language learners of English determines the degree to which they use communicative strategies especially with respect to gesture rates accompanying speech in English. The pedagogical implications of these findings are discussed.

Key Words: Paralinguistic features, English Proficiency, Gesture use, Communication strategies

Introduction

The importance of speaking English is inevitable since it is regarded as one of the most spoken languages in the world. Correspondingly, knowing how to speak English proficiently and how to use different communication strategies particularly in problematic situations not only benefit second and foreign language learners, but is also of considerable importance. Besides, the bedrock of communicative competence is knowing what to say and in what manner to say it.
Our aspiration as teachers of second or foreign languages is to challenge our students to go beyond using syntactically correct sentences and to achieve communicative competence. As regards, teachers have tried to teach communicative competence to treat language as a tool for communication (Wilkins, 1976; van Ek, 1977; Dubin & Olshtain, 1986). Communicative competence is defined as “the ability to communicate successfully in a wide variety of circumstances” (Gregerson, 2007, p.51). With the emphasis of language instruction moving from syntactical accuracy and phonological correctness to making oneself understood, we need to take a closer look at the resources making communication comprehensible. Gesture, facial expression and gaze behavior are among those resources used to communicate messages (Kirch, 1979).

Recently, researchers have shown an increased interest in paralinguistic features of language which are particular types of manifestation of learner competence, namely the use of Communication Strategies (CS) (Gullberg, 1998). Nonverbal behavior such as facial expressions, head or eye movements and gestures as paralinguistic features are considered to be varieties of CS, namely compensatory strategy (Fernansez Doboas, 1999).

Tarone (1981) argued that three criteria motivate speakers to use CS. Speaker’s need for communicating something to an interlocutor is the first motive for using CS. Speaker’s awareness of his or her linguistic ability is the second criteria. Speakers use CS when they know that they have problems with the linguistic structure which is necessary in communicating their desired meaning; this is in line with Faerch and Kasper’s (1983) definition of CS. According to them, when speakers face problems in communicating their desired meaning, they turn to different communicative strategies to overcome the linguistic problems with a reduced interlanguage system. Using (CS) such as gesture is extremely significant among foreign language learners, particularly when it comes to learning and acquiring English as a second or foreign language.

Gestures as CS render communication easier. McNeill (1985) argued that the link between speech and gesture is so solid that the communicative system is labeled “the speech-gesture system”. One of the questions to which more empirical researches (e.g., McNeil, 2005; So, Kita, Goldin-Meadow, 2013) have been devoted to is the study of the relationship between the language learners’ language proficiency and their use of gesture. A better understanding of this relationship is expected to shed light on the acquisition process and have significant impact on language teaching practices; however, after more than two decades of research in this area, no definitive conclusion has yet been reached. Although it is now a well-accepted fact that the degree of proficiency influence CS use but to what extent and in which specific ways CS is employed is still an open question and an object of research (Fernandez Doboa, 2002).
The possible influence of learners’ language proficiency on their use of gestures was suggested in the early approaches to the study of CS. Subsequent studies have attempted to test this hypothesis, reaching two main conclusions. On the one hand, Hyde (1982) found that lower level students make more frequent use of CS than proficient ones, because they encounter more problems in communication due to their limited command of the target language. On the other hand, Gullberg (1998) provided evidence concerning the relationship between learner’s proficiency level and the use of gestures. Prior to attempting to look into each hypothesis, we will begin our discussion by trying to understand the nature of communicative competence, nonverbal communication and gesture as a form of nonverbal behavior.

**Review of Literature**

**Communicative competence**

In language teaching, test tools have been developed in order to distinguish between students’ Cognitive Academic Language Proficiency (CALP) and their Basic Interpersonal Communicative Skills (BICS) (Cummins, 1979). While CALP is often comprised of grammatical and lexical competence, BICS, on the other hand, relates to how the linguistic knowledge is used in actual communication (Gullberg, 1998).

The term communicative competence (CC) was introduced by Hymes (1972). CC is based on a weaker focus on grammar, syntactic rules and form, and greater emphasis on language use, acceptability and appropriateness (Gullberg, 1998). Communicative competence was further characterized and classified into four types by Canale and Swain (1980). These four classifications are namely as grammatical competence (consisting of linguistic competence concerning the code), sociolinguistic competence (concerning the culturally and socially defined appropriateness of meaning and form), discursive competence (dealings with the appropriateness of utterances in linguistic context), and strategic competence (an element which helps the learner to compensate in cases of communicative breakdown due to lack of competence in any of the other areas).

**Different Types of Strategies**

Bialystok (1983) distinguishes between communication and learning strategies. Less advanced learners frequently demonstrated to use more CSs compared to more advanced learners (Chen 1990; Glahn 1985; Poulisse 1987, 1990; Poulisse & Schils 1989). Paradoxically, it has also been suggested that the more proficient a learner is, the more strategic language use he or she will demonstrate. In a study of different kinds of gestures used as CS, Labraca and Khanji (1986) revealed that learners, who were generally judged as better L2 speakers, used more covert strategies than students with less proficiency. The seemingly contradictory results concerning proficiency and strategy use thus reflect some of the difficulties relating to identification of different types of strategies (Gullberg, 1998).
Some other studies have also suggested that proficiency level of the speakers affects the type of strategies chosen by them. For instance, learners of low proficiency appear to rely less on the linguistic knowledge. They draw more on other knowledge resources, such as knowledge of the world (Chen, 1990; Paribakht, 1985). It has also been noted that learners of low proficiency mostly favor L1-based strategies, such as code switching rather than interlanguage-based strategies like description (Bialystok, 1983; Bialystok & Frohlich, 1980; Glahn, 1985; Poulisse, 1990). Second and foreign language learners use another type of CS which is called compensatory strategy. Nonverbal communication as a compensatory strategy is discussed in the next section.

**Nonverbal Communication**

Nonverbal communication is simply defined as “all communication other than language” (Andersen, 1999, p. 2). In addition, DeVito and Hecht (1990) described nonverbal communication as “all the messages excluding words that people exchange” (p. 4). In this definition, messages are perceived as symbolic and therefore their use is intentional (Gregerson, 2007). For instance, if a language learner extends his arm above to scratch his itching head, this behavior is not intended as communication; however, if the same motion is done while trying to answer a question in the classroom, the movement symbolizes the notion that he is processing the question for the correct answer. So the teacher would give him time to think, and the motion would thus be considered as nonverbal communication. That is to say, not all behaviors lead to communication. In the present study body movements are considered which are intentional as compensatory strategies.

**Gesture**

A first temporary definition for ‘gesture’ is the movement of the hand(s) and/or arm(s). According to the basic definition, all manual movements are gestures. However, the dictionary definitions also refer to intentions and expression (Gullberg, 1998).

According to Gullberg (1998) manual gestures can be differentiated with respect to their connection to communicative purposes.

Different kinds of gestures belonging to diverse gesture classification system have been investigated by different researchers depending on their objectives and their research questions. Two categories or dimension of gesture were investigated in the present study. Iconic or what can be also called as symbolic gesture and the deictic or pointing gesture. Iconic gestures as referential symbols are used for presenting and delivering images of concrete objects or actions (McNeill, 1990). This kind of gesture is commonly used by preverbal children (Acredolo and Goodwyn, 1985; 1988). Iconic gesture works through its formal and structural similarity to an event or object (McNeill, 1990, p.4). Deictic or pointing gesture is “an extended index finger”;

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nonetheless, other body parts which are extensible or held entity can be utilized (McNeill, 1990, p.4).

Cohen and Borsoi (1969) believe that gestures facilitate speech production. The idea that gestures facilitate speech production would be an explanation to the results showing that the use of gestures facilitates lexical access; moreover, it could explain why children who use iconic gestures can produce longer utterances than when they use no gestures (Nicoladis, 2002).

**Task Effects**

It was suggested that different tasks would affect the type of strategy learners choose (Galvan & Campbell 1979; Palmberg 1979). Different types of tasks have been used in the elicitation of CS data, such as picture descriptions, translation, conversation, narration, word transmissions and interviews (Gullberg, 1998). Bialystok and Frohlich (1980) used different types of picture description tasks. Participants were asked to write down the description, to describe the picture orally, or to describe it to an interlocutor so that this person could draw the picture on a board. All three types of task affected the amounts of speech produced, but not exactly the same strategies were employed in all types of the task.

**Research Objectives**

Considering the significance of using gestures as compensatory strategy in communication, this area of research has not received due attention. Although, it should be noted that different controversial studies have shown different results (e.g., Nakatani, Makki & Bradley, 2012; Razmjoo & Ardekani, 2011; Yarahmadzehi & Samani, 2014). Nakatani et al. (2012) expressed that nonlinguistic means were observed in less frequency in elementary and intermediate EFL learners; this is in line with the results of the study carried out by Yarahmadzehi and Samani, (2014) who believe that pre-intermediate EFL learners used gesture very rarely in communication. It is worth mentioning that Razmjoo and Ardekani (2011) conducted a qualitative and quantitative research to show the effects of EFL learners’ proficiency on the application of strategies. The study revealed that level of proficiency does not affect learners speaking strategy use.

Since aforementioned studies have investigated the relationship between EFL learners’ proficiency level and CSs; the present study, specifically, seeks to investigate the similarities and differences between intermediate and upper intermediate level students in terms of the rate of gestures (i.e., deictic gestures as well as iconic gestures), they use in oral communication. Attention will be paid to gestures such as hand and arm movements that Iranian EFL learners use to solve problems during oral English communication. Most research on CS (e.g., So et al, 2013; Gullberg, 1998) has concentrated exclusively on gesture as a compensatory strategy, and by following the same approach, we hope to make our results comparable to those of previous researchers and at the same time to narrow down the otherwise overly broad scope of the study.
Research Questions

Based on the aforementioned objective, the researchers in the present study look to answer the following questions:

1. Is there a significant difference between intermediate and upper intermediate level students in terms of the rate of gestures they use in oral communication?

2. Is there a significant difference between intermediate and upper intermediate level students in terms of deictic gestures they use in oral communication?

3. Is there a significant difference between intermediate and upper intermediate level students in terms of iconic gestures they use in oral communication?

Methodology

Participants

The data for the present study was collected at the Islamic Azad University and Aftab language institute of Mashhad, Iran. All foreign language learners participating in the project were Iranian students of English.

20 male and 20 female students participated in this study. 10 males and 10 females were from the language institute studying the textbook American English File 3, 10 males and 10 females were sophomores studying Teaching English as Foreign Language (TEFL) in their 3rd semester. All participants were selected through convenience sampling. The mean age for the participants was 18, with the youngest and oldest participants being 15 and 31, respectively. Pseudonyms were used to maintain anonymity and confidentiality in the research findings.

In order to study the use of gesture (i.e., hand and arm movement) in relation to a representative range of degrees of proficiency, two different groups of learners with differences in their command of English were selected. The sophomore university students who had passed the English proficiency entrance exam, but were still studying general English courses were labeled as upper intermediate and the students studying at the language institute were grouped as intermediate.

Instruments

The instruments employed in the elicitation of data were designed to obtain a sample of oral production in English that could be considered as representative as possible of the natural oral communication in the foreign language. It was also essential that these instruments make the identification and classification of gestures possible. Based on previous research, it was discovered that differences in task designs may affect CS (Poulisse et al., 1990), therefore the researchers opted for using different data collection procedures: a photograph description (see
Appendix A) ; and a 10-minute conversation (see Appendix B). These tasks are considered as two of the most widely used instruments in CS research (Hyde, 1982).

**Procedures**

Before collecting the data, the researchers assured the participants that confidentiality and anonymity considerations would be observed. In the first task, students were asked to describe a photograph (see Appendix A) in as much detail as possible. According to Doboa (2002) pictures and photographs gives an immediate content to the learners to communicate orally.

The conversation task (see Appendix B) was used in order to obtain a sample of oral language that could be considered as an example of everyday communication. The aim of this task was to engage students in the conversation with the researchers, in which they could talk about any subject they are interested and change the subject freely as in the everyday communication. In the first task, the researchers acted only as an observer, since Dewalt and Dewalt (2002) state “observation may help the researchers to have a better understanding of the context and phenomenon under study” (as cited in Kawulich, 2005, p. 3). Whereas, in the other task she took an active role as an interlocutor because it affords access to the "backstage culture" (Demunck & Sobo, 1998, p.43); it allows for detailed description, which they interpret one's goal of describing "behaviors, intentions, situations, and events as understood by one's informants" is highlighted (p.43).

The oral language productions of the learners in the accomplishment of the two communicative tasks were video recorded, transcribed and analyzed according to Gullberg (1998) categorization of gestures in order to identify iconic and deictic gestures instances in the data.

**Transcription and coding**

In order to make the study as reliable as possible; moreover, in order to validate the findings of the study and the procedure of the study a second rater was also asked to code the students’ gestures and the overall results from both coding (the two researchers) were discussed in a joint session with the second rater. Any discrepancy was discussed and resolved.

Two types of gestures were coded: abstract deictic and iconic gestures. Both raters frequently revisited previous transcriptions and coded gestures to ensure that gestures were being consistently categorized.

The statistical analyses were performed with SPSS version 22. Independent Sample t-test was conducted to compare the rate of gestures in general and iconic and deictic gestures in particular, used by intermediate and upper intermediate students.
Findings

The gesture rate of the two diverse levels of students (upper intermediate and intermediate level students), in oral communication was compared by submitting to a quantitative analysis and running a T-test. The results obtained made it possible to answer the three research questions raised at the introduction.

The first research question investigated whether there was a difference between intermediate and upper intermediate level students in terms of the rate of gestures they use in oral communication. The results obtained from the two groups on the use of gesture in oral communication can be seen in Table 1.

Table: 1

<table>
<thead>
<tr>
<th>Gesture</th>
<th>N</th>
<th>Mean of Gesture Use</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>upper intermediate</td>
<td>20</td>
<td>3.80</td>
<td>1.61933</td>
<td>.51208</td>
</tr>
<tr>
<td>intermediate</td>
<td>20</td>
<td>7.20</td>
<td>2.34758</td>
<td>.74237</td>
</tr>
</tbody>
</table>

Table 2. shows the result of an independent t-test which was conducted to compare gesture rate between intermediate and upper intermediate level student.

Table: 2

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1.227</td>
<td>.283</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 2, The Sig = 0.001 which is less than 0.05, the assumption is that there is a significant different between the upper intermediate and intermediate level students' means. Correspondingly, there is a considerable variance between the two groups of students in terms of
using gestures. This suggests that students belonging to intermediate level use gestures at the higher rate compared to students with a higher proficiency in spoken English.

The second research question investigated whether there was a significance difference between intermediate and upper intermediate level students in terms of deictic gestures they use in oral communication. The descriptive statistics for deictic gesture rate between the two mentioned groups can be seen in Table 3.

Table: 3

Descriptive Statistic for Deictic Gestures

<table>
<thead>
<tr>
<th>Deictic Gestures</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>upper intermediate</td>
<td>20</td>
<td>3.00</td>
<td>1.41421</td>
<td>.44721</td>
</tr>
<tr>
<td>intermediate</td>
<td>20</td>
<td>4.50</td>
<td>1.71594</td>
<td>.54263</td>
</tr>
</tbody>
</table>

An independent t-test was carried out to compare and contrast iconic gesture rate between intermediate and upper intermediate level students. Table 4. depicts the results of the test.

Table: 4

T-test for Using Deictic Gestures

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1.066</td>
<td>.316</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-2.133</td>
<td>17.366</td>
</tr>
</tbody>
</table>

As can be seen in Table 4, the Sig= 0.047 which is slightly less than 0.05 the assumption is that there is a difference between the upper intermediate and intermediate level students means in terms of using deictic gestures. Correspondingly, there is a considerable variance between the two groups of students in terms of using deictic gestures. It shows that intermediate level students used a higher rate of iconic gesture in their oral communication compared to upper intermediate students.

Another objective of the study was to find if there is significant difference between intermediate and upper intermediate level students in terms of iconic gestures they use in oral communication. Table 5. illustrates descriptive statistics of iconic gesture rate between the two aforementioned groups.
Another comparison was made between upper intermediate and intermediate level students by running an independent t-test in order to shed light on the differences between these two groups of students in terms of iconic gesture rate. Table 6. indicates more detailed result of the t-test.

Table: 6

T-test for Using Iconic Gestures

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed</td>
<td>F</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>2.290</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-2.885</td>
</tr>
</tbody>
</table>

According to Table 6., the Sig= 0.01 owing to the fact that the p value is less than 0.05, the assumption is that there is a considerable difference and divergence between the upper intermediate and intermediate level students' iconic gesture means. Correspondingly, there is a considerable variance between the two groups of students in terms of iconic gestures rate. This suggests that students of intermediate level make use of iconic gesture at the higher rate compared to students of upper intermediate level.

Conclusion

Language learners use various communication strategies to overcome different linguistic difficulties they encounter while communicating orally in a foreign language; using these strategies is partially dependent on the proficiency level of the students (Paribakht, 1985; Jourdain, 2000). Earlier in this study, it was discussed that regardless of their proficiency level, foreign language learners and speakers benefit from using gestures to access words in oral communication.

A comparative analysis of upper intermediate and intermediate level students was conducted to determine the similarities and differences between these two groups of students in terms of using...
gesture (i.e., deictic gesture as well as iconic gesture). The results suggest that students of intermediate level make use of gesture, both deictic and iconic gesture, at the higher rate compared to students of upper intermediate level.

The deictic or pointing gestures, iconic or what can be also called as symbolic gestures are used at the higher rate by Iranian intermediate students compared to upper intermediate level students and there is a significant divergence between these two groups of students. The finding is in line with Hyde's (1982) findings who assert that compared to proficient student lower level students make more frequent use of communication strategies for example gestures owing to the fact that they encounter more problems due narrow knowledge of target language vocabulary. The findings of the present study are also in line with the findings of Chen (1990); Glahn (1985); Poulisse (1987) who agreed that less advanced learners have frequently been shown to use more CSs than more advanced learners. As can be seen in this study the means of gesture rate in oral communication in intermediate and upper intermediate groups are 7.20 and 3.80, respectively.

In addition, the findings of the present study is supported by the hypothesis that resulting from the more limited command of the target language vocabulary, lower level students are expected to face more lexical difficulties in the accomplishment of the same communicative task than more proficient ones and therefore they make more frequent use of Cs as this hypothesis is supported by previous studies (Hyde, 1982; Paribakht, 1985; Poulisse et al. 1990).

Using gestures (i.e., deictic and iconic gestures), for Iranian intermediate level students seems to be a way to overcome their linguistic difficulties and this is supported by the fact that Some researchers have argued that gestures serve to facilitate speech production (Cohen & Borsoi, 1996; So et al, 2013; So & Lim, 2012).

Suggestions and Recommendations

To summarize, our findings showed that less proficient speakers tend to use more gestures, both deictic and iconic, than proficient speakers. This leads us to the wrong impression than advanced students were using CS more often than intermediate ones (Fernandez Doboa, 1999). Teachers should be aware that intermediate learners, due to their insufficient syntactic and lexical knowledge, use more CSs such as gestures. It is teachers’ responsibility to let the students know that the aim of learning a second language is to have a comprehensible communication and not to be syntactically or phonologically perfect. They must encourage the learners to convey their meaning through different strategies like using gestures. Much further research needs to be done before reaching a comprehensive understanding of the relationship between gesture use and language proficiency. The limitations of our study do not allow us to draw a definitive conclusion on this issue.
References


Hymes, D. (1972). On communicative competence. In J. B. Pride & J. Holmes (Eds.),


Appendix A

Describe the photograph below.