Relationship between Field Dependence/Independence and Listening Comprehension Strategy Use by Female Iranian English Majors[*]

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Abstract

This study aimed at exploring the relationship between field dependence/ independence and the use of listening comprehension strategies by female English majors in Shiraz. To this end, 138 students at the intermediate level, chosen out of 208, were given the Strategy Inventory for Listening Comprehension (Afsarnia, 1999) to determine the type of strategies they used. They were then divided into two groups of field dependent and field independent based on their performance on the Group Embedded Figures Test (GEFT), devised by Witkin et al (1971). Correlation coefficients indicated that metacognitive, memory, cognitive and social strategies were significantly related to the cognitive style, whereas affective and compensatory strategies did not show a significant correlation. Next a series of t-tests was run and it was seen that FI students used metacognitive, memory, and cognitive strategies more frequently than their FD counterparts, but FD students made more use of social strategies than FI ones.

Key words: *cognitive style, field dependence, field independence, FI, FD, LC, listening comprehension strategies*

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1. Introduction

Since the time teacher-centered methods gave way to learner-centered approaches, many researchers have focused on learning and different characteristics of learners. Among the different factors that may affect second/foreign language learning, field dependence/independence (FD/I) as a cognitive factor has also gained importance. There have been many studies done on the relationship between field dependence/ independence and language skills or components. These studies reveal some interesting points about field dependent/independent students and their differences in mastering language skills and components. The large amount of research on FD/I is by itself indicative of the high importance that can be attached to this cognitive factor concerning pedagogical objectives.

However, there seems to be not much investigation into the relationship between FD/I and listening comprehension strategies employed by students. This is due to the fact that attempts at recognizing the strategies of listening comprehension have just blossomed in recent years. And this was the main incentive for the present study.

FD/I refers to individual differences in terms of perceiving, organizing, analyzing, or recalling information, and experience. FD indicates a tendency to rely on external frames of reference in cognitive activities and "to be 'dependent' on the total field so that the parts embedded within the field are not easily perceived" (Brown, 2000: 115). FI suggests reliance on internal rules or strategies for processing information and involves the "ability to perceive a particular, relevant item or factor in a 'field' of distracting items." (Brown, 2000: 114). According to Richards, Platt, and Platt (1992):

> *field dependence is a learning style in which a learner tends to look at the whole of a learning task which contains many items. The learner has difficulty in studying a particular item when it occurs within a "field" of other items. A field independent learning style is one in which a learner is able to identify or focus on particular items and is not distracted by other items in the background or context. (page 138)* .

Witkin *et al*. (1977, as cited in Chapelle and Green, 1992), define FD/I as a cognitive style, a bipolar, stable trait affecting how one thinks, feels, and behaves. The FI person is analytic, confident, and self-reliant, whereas the FD

person is holistic, uncertain, and dependent upon others.

Listening strategies, according to Vandergrift (1999), are the strategies that listeners consciously or unconsciously use in order to understand, analyze, and interpret a text. The use of these strategies can make authentic texts more accessible in the early stages of learning a language, so that the process becomes more relevant and interesting to the learners. Useful listening strategies are developed when teachers provide students with abundant opportunities to practice listening outside the evaluation conditions (Vandergrift 1999).

2. Review of Literature

2.1. Field Dependence/Independence

Field dependence/independence has been studied from different points of view, in relation to different variables. Field independence is reported to be associated with the use of analytic strategies, while field dependence is mostly correlated with the use of global strategies. (Clark and Roof, 1988). Field independence is found to be advantageous in proficiency tests (Jamieson, 1992), in formal linguistic achievement and functional proficiency tasks (Carter, 1988), and in cloze tests (Stansfield and Hansen, 1983). FI people are said to be more reflective than the FD people (Loo and Townsend, 1977). However FD is mostly associated with team work than FI (Cano and Mavquez, 1995). Furthermore, FD is reported to have a noticeable role in the acquisition of linguistic competence and integrative competence (Hansen, 1981), and in social interactions (Brown, 2000).

There are, however, some studies that run counter to this general trend. Dooley (1976) and Joffe (1987) report no significant difference between field dependent/independent students concerning their reading achievements. Similarly, no significant correlation is said to exist between FD/I and variables such as internality (Massari, 1975), birth order (Finley and Solin, 1975), and communicative competence (Hansen, 1981).

2.2 Listening Comprehension Strategies (LCSs)

Sedaghat (2001) investigated the effects of attitude, motivation, and proficiency level on the use of listening comprehension strategies by Iranian female EFL students. The results indicated that attitude had a significant effect

on metacognitive, cognitive, memory, compensatory, and social strategies, whereas motivation had only such an effect on affective strategies. The interaction of motivation and proficiency level was also significant.

Carissa (1997) investigated the possible existence of a sequence of use of listening comprehension strategies by advanced ESL learners. Although the results revealed that these students had a similar pattern of strategy use regardless of their gender and English achievement, those students with higher ability in listening comprehension tended to use the following six strategies more often than the other students: self-evaluation, summarization, elaboration, inferencing, feedback, and reprise.

Murphy (1985, as reported in Carissa 1997) worked with 12 intermediate university students and concluded that the high achievers used their prior knowledge, made guesses (inferring), and monitored their comprehension more often than did low achievers.

DeFillips (1980) studied 26 French students of both skillful and unskillful listeners, and found out that they used the same strategies, but with different frequencies; that is, the skillful listeners used 5 times more visualization, 3 times more French-English cognates, and 2 times more role identification than the other group.

3. Objectives of the Study

This study was carried out to determine whether FD/I cognitive styles relate in any way to the use of listening comprehension strategies by female English majors in Shiraz. In other words, the study attempted to find an answer to the following question:

Is there any significant difference between field dependent and field independent female students concerning their use of listening comprehension strategies?

4. Methodology

4.1. Participants

Two hundred and eight sophomores and juniors majoring in Teaching English or English Translation in Shiraz sat for the placement test. Of these participants, 95 were from Shiraz University (21 sophomores and 74 juniors), and 113 from Shiraz Islamic Azad University (71 sophomores and 42 juniors).

However, the final sample consisted of 138 participants because 70 students had been ruled out on the basis of their scores on Oxford Placement Test (OPT) or the GEFT. In fact, students with a score of more than one standard deviation above or below the mean on the placement test were excluded from the study. Similarly, the students whose scores were the same as the median (8.00) on the GEFT were ruled out. Those who scored higher than the median were considered field independent, and those below the median formed the field dependent group.

To see whether the FD/I groups were significantly different or not, a t-test was run and the result ($t = 21.57$, $df = 136$, $p<.001$) indicated a statistically significant difference. In other words, the FD group was really different from the FI.

The sample did not include freshman students because they were at the beginning of their study and had not been exposed to any listening comprehension courses. Seniors were also excluded since they had taken the GEFT in a similar study before. Male students were also put aside due to their small number.

4.2. Instruments

Group Embedded Figures Test (GEFT), a psychological test developed by Witkin *et al* (1971), was used to divide the participants into groups of field dependent and field independent. GEFT comprised 18 geometrical simple figures embedded in more complex figures. For each one, students had to find the simple figure embedded in the complex one. The alpha reliability of the test was reported to be 0.90 (Elliotte, 1995) and its test-retest reliability was reported at. 0.89 (Rezaeian, 2001). The validity of the test was confirmed by Witkin and Berry (1975), who declared its suitability for evaluating the FD/I cognitive style in different cultures.

Another instrument, the Strategy Inventory for Listening Comprehension (SILC) (Afsarnia, 1999), was used to see what strategies different students made use of. The SILC included 67 Likert-scale items on six different types of strategies, namely, Metacognitive , Memory, Compensatory, Cognitive, Social, and Affective strategies. The instrument was found to be valid and reliable through a factor analysis done by its designer (Afsarnia, 1999).

The third instrument was Oxford Placement Test (Allan , 1985) that contained 50 multiple-choice items of vocabulary, structure and reading

comprehension. The time allotted for this test was 35 minutes.

4.3 Data Collection Procedure

First, all the students sat for the GEFT, which comprised three parts. The first part that had 7 figures and took 2 minutes was just for the sake of practice. The second and the third parts included 9 figures each, and the time allocated for each part was 5 minutes. One point was given to each correctly marked figure, so the maximum possible score was 18. The higher a student's score, the more field independent he/she would be. Then, in the same session, the students were given the SILC with enough time to complete all the items. Depending on the type of the answer, each item received a score ranging from 1 to 5. Finally, there was the OPT which was given in a different session to eliminate fatigue and its effect on the results.

4.4. Data analysis

The data collected through the GEFT and SILC were first subjected to correlational analysis to see if any relationships existed between the variables. Then some independent t-tests were run to see whether there existed any significant difference between the two groups of FD and FI in the use of listening comprehension strategies.

5. Results

The correlation coefficients between each strategy type and the cognitive style are presented in Table 1. This table shows that metacognitive strategies are significantly related to FD/I (when all the participants are considered collectively).The coefficient is .217 which is significant at .01 level. However, when considered separately, neither FD nor FI correlates significantly with this strategy type. Almost similar results are observed for other strategy types except for compensatory and affective strategies which do not show any significant correlation.

Table 2 shows the results of the t-tests. Based on the correlation coefficients, it could be predicted that compensatory and affective strategies would not be affected by the cognitive style. This prediction is confirmed in Table 2. In all other strategies a significant difference is observed between the two groups. FI students make more use of metacognitive, cognitive and memory strategies, whereas FD students surpass them in the use of social strategies.

6. Discussion

The results obtained in this study show that compensatory and affective strategies are not related to the cognitive style. Compensatory strategies involve note-taking, substitution, inferencing, induction, deduction etc. and affective strategies concern feelings of fear, anxiety, loss of self-confidence and the like. It can be inferred that these strategies are probably the most general strategies familiar to all learners, regardless of their cognitive styles; so they equally make use of them. Feelings of fear and anxiety are common to all learners, and though it is believed that FI students tend to be more self-confident and self-reliant than FD students (Brown 2000; Witkin *et al*, 1977 as cited in Chapelle and Green, 1992), there may not really be a significant difference between them in this regard.

There are, however, certain differences between FI and FD groups. FI students tend to use metacognitive strategies, which involve monitoring, planning, organization, etc., more frequently than their FD counterparts. This is in line with the findings of Jamieson and Chapelle (1987) and Krashen (1977, as cited in Brown, 2000). As field dependence has been associated with naturalistic second language acquisition and field independence with classroom learning (See Ellis, 1985; Brown, 2000; Carter, 1988), it seems natural for FI students to use more metacognitive strategies to enhance their formal learning. Similarly, FI students make more use of cognitive strategies including translation, repetition, transfer, rehearsal, etc. This can also be attributed to conscious learning and the activities that can be found in formal classroom situations. Furthermore, memory strategies such as elaboration, grouping, retention, relation, etc. are also used by FI students more than FD ones. This is understood if we consider the fact that FI students focus on particular details rather than the whole and to commit theses details to memory they make use of memory strategies.

There is one strategy type that is used more frequently by FD students, and it is social strategies such as clarification, native interaction, non-native interaction, etc. This is in line with Brown (2000), Ellis (1985), and some others. These experts state that FD students by virtue of their empathy, social outreach and perception of other people tend to be more active in face-to-face interactions. That is why they make use of social strategies more frequently than the FI students.

7. Conclusion

On the whole, we can say that FI students in this study are apt to be more successful listeners since they make frequent use of a variety of strategies. FD students only use social strategies more than FI students and for affective and compensatory strategies there are no significant differences. This conclusion supports Carissa (1997); Chapelle and Green (1992); Alptekin and Atakan (1990); Chapelle and Abraham (1990, as cited in Brown, 2000), Carter (1988); Chapelle (1986); Ellis (1985), and Saurenman (1980).

Table 1

Correlation coefficients between cognitive styles and LC strategies

Strategies	FD	FI	FD/I
Metacognitive	.176 p=.14	.039 p=.74	.217 P=.01
Memory	.144 p=.23	.124 p=.30	.613 P=.000
Compensatory	.0004 p=.99	-.161 p=.18	.038 P=.65
Cognitive	-.089 p=.46	-.28 p=.018	.184 P=.03
Social	.266 p=.02	-.208 p=.08	.376 P=.000
Affective	-.251 p=.03	-.118 p=.33	.011 P=.90
N= 138	Ahmady (2002: 32)		

Table 2
t-test results for LC strategies

Strategies	Groups	Mean	SD	t-value	DF	Sig.
Metacognitive	**FD** **FI**	88.01 92.72	13.33 11.03	2.26	136	.025
Memory	**FD** **FI**	28.43 47.49	5.99 11.87	11.9	136	.000
Compensatory	**FD** **FI**	16.68 19.23	4.01 2.71	.94	136	.34
Cognitive	**FD** **FI**	50.08 56.50	10.34 9.66	3.76	136	.000
Social	**FD** **FI**	11.23 9.17	2.35 1.87	5.67	136	.000
Affective	**FD** **FI**	10.73 11.44	3.55 2.91	1.28	136	.20

Ahmady (2002: 34)

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