

CHAPTER 1

Introduction

1.1 Background and purpose

For many years teaching has been the main concern of the educational specialists. There have been large amounts of efforts and studies, along with hypotheses and theories, which have tried to devise a way to enable teachers to “teach” better. There has been, however, little attention paid to the learner and the process of learning as it is taking place in the mind of the learner.

Fortunately, recent researches show an increasing interest in investigating what learners do when they are involved in a learning task. In fact, “learner-orientedness” is the main concern of today’s education. It aims to describe affective learning processes and learning behaviours of successful language learners. Undoubtedly, different classifications of strategies and cognitive styles play important roles in the process.

Research has shown that different learners experience degrees of success when learning a second language due to their cognitive and personality differences (Carroll, 1990; Ehrman & Oxford, 1990, 1995). Moreover, today teachers of second languages need to learn to identify and understand their students’ significant individual differences in order to provide more effective instruction (Carroll et al., 1996). On the other hand, the findings of many ESL/EFL research projects have shown the positive effect of learning strategy instruction on enhancing different skills of learners (Bialystock & Frohlic, 1978; Bickel & Truscello, 1996; Oxford, 1990). It seems that many individual differences can influence the use of learning strategies.

This study is an attempt to investigate the role of field dependence/independence (FD/FI) in using metacognitive and cognitive strategies in

skilled and semi-skilled readers. Since these two factors are investigated in relation to each other, there may be enough reason to hope for a clearer insight of their effect on each other and ultimately on success in language learning.

One more point to mention is the inclusion of reading in this study. Reading is a very important skill in learning a foreign language and reading comprehension is claimed to be the main purpose of foreign language teaching in Iran. But acquiring and mastering this skill seems complex to many learners and they often find it difficult to exploit this skill in their learning experience.

1.2 Statement of the Problem

Oxford (1990) mentions some examples about using different strategies:

In learning ESL, Trang watches TV soap opera from the United States, guessing the meaning of new expressions and predicting what will come next. Feng-ji memorizes pages of words from an English dictionary and breaks the words into their components. Amany meets with an English-speaking conversation partner for lunch three times a week. Haruko arranges to live with an American family so she can learn the culture and language in a full-time immersion situation. Masha tapes English labels to all the objects in her dorm room. Marcel practices song lyrics in English, moving freely to the music while singing ... (p.1).

All the above mentioned people are employing language learning strategies, specific actions, behaviours, steps, or techniques that students use to improve their progress in developing L2 skills. The conflict does not restrict to using different strategies, but there are some differences such as individual differences that cause some problems in teaching-learning process. Many studies have shown that teachers are generally unaware of the strategies employed by their students. Studies have shown a lack of understanding of students' strategies on the part of teachers (O'Malley, & Chamot, 1987).

The problem, then, is that teachers unfortunately are not aware of the importance of strategy training. They can help students make effective use of multiple strategies. Also, they need to know that individual differences such as age, sex, attitudes, motivation, setting, level of proficiency, etc can influence the use of learning strategies. In fact, teachers do not know which students are underachieving due to the differences between their learning styles and strategies, and the styles and strategies which are emphasized by the teacher. One factor which has rarely been investigated is the cognitive style of field-dependence/independence which has been suggested as “potentially important in second language acquisition” (Larsen Freeman and Long, 1991, p.193). This study aims to investigate the role of cognitive style of FD/FI in using metacognitive and cognitive strategies in reading by a group of skilled and semi-skilled field-dependent and field-independent readers.

1.3 Research Questions and Hypotheses

The present study, therefore, tried to find answers to the following questions:

1. Is there any significant difference between cognitive strategies used by semi-skilled FD readers and those used by semi-skilled FI readers?
2. Is there any significant difference between cognitive strategies used by skilled FD readers and those used by skilled FI readers?
3. Is there any significant difference between metacognitive strategies used by semi-skilled FD readers and those used by semi-skilled FI readers?
4. Is there any significant difference between metacognitive strategies used by skilled FD readers and those used by skilled FI readers?
5. Is there any significant difference between cognitive strategies used by semi-skilled FD readers and those used by skilled FD readers?
6. Is there any significant difference between metacognitive strategies used by semi-skilled FD readers and those used by skilled FD readers?

7. Is there any significant difference between cognitive strategies used by semi-skilled FI readers and those used by skilled FI readers?

8. Is there any significant difference between metacognitive strategies used by semi-skilled FI readers and those used by skilled FI readers?

The study had eight null hypotheses:

1. There is no significant difference between cognitive strategies used by semi-skilled FD readers and those used by semi-skilled FI readers.

2. There is no significant difference between cognitive strategies used by skilled FD readers and those used by skilled FI readers.

3. There is no significant difference between metacognitive strategies used by semi-skilled FD readers and those used by semi-skilled FI readers.

4. There is no significant difference between metacognitive strategies used by skilled FD readers and those used by skilled FI readers.

5. There is no significant difference between cognitive strategies used by semi-skilled FD readers and those used by skilled FD readers.

6. There is no significant difference between metacognitive strategies used by semi-skilled FD readers and those used by skilled FD readers.

7. There is no significant difference between cognitive strategies used by semi-skilled FI readers and those used by skilled FI readers.

8. There is no significant difference between metacognitive strategies used by semi-skilled FI readers and those used by skilled FI readers.

1.4 Significance of the Study

In many second or foreign language teaching situations, reading receives a special focus, and reading comprehension is claimed to be the main purpose of foreign language teaching in Iran, especially at pre-university level because the English books of the level are usually reading-oriented, presumably to help them go

through academic texts when they enter universities. For the same reason, reading was put at the centre of attention in this research.

But a more important point is the way reading is taught and learned at different levels, especially at pre-university level, where students are asked to read longer texts. Teachers in the school are familiar with students' questions about "how to learn to read." This study attempted to shed light on the process of learning as related to "how students read" (reading strategies), and to learning styles of pre-university students. This study targets a real need for improving students' learning and reading abilities.

1.5 Delimitation of the Study

There is a wide variety of factors which affect the way a learner chooses to facilitate his learning. The study considered only some of them, namely, cognitive and metacognitive strategies, cognitive style of FD/FI and students' level of proficiency namely, skilled and semi-skilled. O'Malley and Chamot's classification of learning strategies are applied as the definition needed for classifying reading strategies (1990). In this research, population is limited to pre-university female students because the researcher did not have access to the male ones.

1.6 Definitions of the Terms

1.6.1 Field-dependence

Field-dependence is "the tendency to be dependent on the total field so that the parts embedded within the field is perceived most clearly as a unified whole" (Brown, 1994: 160). As such, a FD learner is less successful in tasks where concentration on small items is required. The FD learner seems to achieve a higher degree of success in everyday language situations beyond the constraints of the classroom; tasks requiring interpersonal communication skills.

1.6.2 Field-independence

Field-independence is “the tendency to articulate figures as discrete from their backgrounds and a facility in differentiating objects from embedding contexts, as opposed to a countertendency to experience events globally in an undifferentiated fashion” (Messick, 1976: 14). A FI learner is characterized as being capable of “perceiving a particular, relevant items or factor in a field of distracting items” (Brown, 1994: 160). That is to say, an FI learner can easily concentrate on small factors in a given task.

1.6.3 Cognitive Style

The term cognitive style refers to “variations among individuals in the preferred way of perceiving, organizing, or recalling information and experience” (Stansfield & Hansen, 1983, p. 263). Witkin, Oltman, Raskin and Karp (1971) also define cognitive style as “self-consistent modes of functioning which individuals show in their perceptual and intellectual activities” (p. 3).

1.6.4 Learning Strategies

A learning strategy is like a tactic used by a player. It is a series of skills used with a particular learning purpose in mind. Thus, learning strategies involve an ability to monitor the learning situation and respond accordingly. This means being able to assess the situation, to plan, to select appropriate skills, to sequence them, to coordinate them, to monitor or assess their effectiveness and to revise the plan when necessary. In this study, cognitive and metacognitive strategies will be considered (Williams & Burden, 1997).

1.6.4.1 Cognitive Strategy

Cognitive strategy involving the manipulation or transformation of the learning materials/input (e.g., repetition, summarizing, using images). These are specific approaches learners use in order to facilitate their learning. Strategies other than cognitive strategies, e.g., affective and social strategies, are concerned with factors like emotions and social factors, whereas cognitive strategies deal with cognition and mind (Williams & Burden, 1997).

1.6.4.2 Metacognitive Strategy

Metacognitive strategies involving higher-order strategies aimed at analyzing, monitoring, evaluating, planning, and organizing one's own learning process. There is an useful distinction between cognitive and metacognitive strategies; Cognitive strategies are seen as mental processes directly concerned with the processing of information in order to learn, that is for obtaining, storage, retrieval or use of information, but metacognitive strategies involve learners stepping outside their learning, as it were, and looking at it from outside. Such strategies include an awareness of what one is doing and the strategies one is employing, as well as knowledge about the actual process of learning (Williams & Burden, 1997).

CHAPTER 2

Review of the Related Literature

2.1 Introduction

The process of education is one of the most important and complex of all human endeavours. A popular notion is that education is something carried out by one person, a teacher, standing in front of a class and transmitting information to a group of learners who are all willing and able to absorb it. This view, however, simplifies what is a highly complex process involving an intricate interplay between the learning process itself, the teacher's intentions and actions, the individual personalities of the learners, their culture and background, the learning environment and a host of other variables. The successful educator must be one who understands the complexities of the teaching-learning process and can draw upon this knowledge to act in ways which empower learners both within and beyond the classroom situation (Williams and Burden, 1997). For many years the focus of studies in language teaching has been on devising the most effective methods of teaching. Theories and concepts of these methods have evolved from teacher-oriented to more learner-oriented approaches. But it was not more than half a century that learning became the centre of these attempts (Purpura, 1997). Because of almost unrecoverable shortcomings of methods of teaching, researchers concentrated on investigating models of learning (Tyake, 1991). This shift caused a sizable interest in the learning process, and there emerged a number of studies concerning the relationships between learners' strategy use and the processes and products of Second Language Acquisition (Purpura, 1997). It was within this framework that many teachers and researchers' attempt to characterize the students' learning strategies in SL learning have been the outcomes of theories in second language acquisition and in cognitive psychology, and despite the advances in these two areas, there has been little communication between the two (O'Malley et al., 1985).

Linguists and cognitive psychologists describe SLA differently. Linguists assume that language is learned separately from cognitive skills (Spolsky, 1985). The distinction between learning and acquisition is one outcome of this approach. In this view, according to Fillmore, and Swain (1984), cognitive processes are limited to various aspects of cognitive style and other predisposition for learning (cited in O'Malley et al., 1985). One of the principal cognitive processes ignored in these theories is learning strategies.

Cognitive psychologists, on the other hand, define learning languages in terms of information processing and the role of cognitive processes in learning (O'Malley & Chamot, 1990). Along with these processes are learning styles and strategies. These concepts which are at the centre of attention throughout this study will be discussed in the following sections.

2.2 Influence on Strategy Use

Research indicates that factors influencing the L2 students' choice of learning strategies include motivation, career/academic specialization, sex, and cultural background, nature of task, age, and stage of language learning. More motivated L2 students typically used more strategies than less motivated L2 students, whether in intensive classrooms, regular classrooms, or even satellite language programs (Oxford, 1989; Oxford & Nyikos, 1989). Career or academic orientation was significant in strategy choice: Engineering students, for instance, chose learning strategies that were more analytic than those selected by humanities students. Females reported greater strategy use than males in several studies (summarized by Oxford, Nyikos, & Ehrman, 1988). Cultural background also correlated with strategy choice: For example, rote memorization was more prevalent among their Hispanic counterparts. The nature of the task – conversation versus letter writing, listening for details versus listening for the main idea – help determine the strategies used to do the activity. Students of different ages and different stages of L2 learning used different

learning strategies, with more sophisticated strategies often being employed by more advanced students.

2.3 Learning Styles and Strategies

“The literature on learning strategies in SLA emerged from a concern for identifying the characteristics of effective learners” (O’Malley & Chamot, 1990, p. 5). Researchers in the area of SL acquisition focused on learning strategies of successful SL learners. The assumption was that if learning strategies of good language learners are identified and taught to less competent learners, it will have considerable potential for enhancing the development of second language skills (O’Malley et al., 1985). It was a significant finding since if strategy training can make learners more aware of their own strengths and weaknesses, it could be very contributing to a language learning program.

In this regard, studies have been conducted on the strategy use of successful and unsuccessful students. These studies resulted in different lists of strategies, like that of Oxford and Crookall (1989). They found out that the major difference between successful and unsuccessful students was the great number of strategies the former applied. But if training of strategies used by successful learners is to be effected, it should not be done without regard to the learning style of the learner (O’Malley, 1985). Reid (1987) shows that individuals vary in strategies they use because of differences in learning styles (or variables), and cognitive styles.

Of course, it should be noted that there are some other factors which influence the strategy use of learners, and, consequently, their success. Some instances might be course objectives, motivation, task difficulty and previous study (Oxford, & Crookall, 1989), learning contexts and capability in the adoption of learning strategies to the task, and sociocultural factors (Sullivan 1996). In the following sections, the notions of learning styles and strategies will be discussed

2.4 Cognitive and Learning Style

Keefe and Perrell define style as: “A complex of related characteristics in which the whole is greater than its parts. Learning style is a gestalt combining internal and external operations derived from the individual’s neurobiology, personality and development, and reflected in learner behaviour” (Keefe and Ferrell, 1990, p. 16). This definition can be developed slightly to bring out a contrast between cognitive and learning styles, a distinction sometimes left unclear in the literature. The former can be defined as a predisposition to process information in a characteristic manner while the latter can be defined as a typical preference for approaching learning in general. The former, in other words, is more restricted to information processing preferences, while the latter embraces all aspects of learning.

The review which follows starts by focusing on cognitive style, and then moves to consider issues of learning style more broadly. The major interpretation of cognitive style has been through studies of the constructs of field-independence and field-dependence. Drawing on the original proposals of Witkin (1962), this view of style has contrasted on analytic predisposition to the processing of information with a preference for a more holistic approach. Field-dependents are seen as more likely to analyze information into its component parts, and to distinguish the essential from the inessential. Field dependents, in contrast, are more likely to deal with information structures as wholes, or “gestalts.” At a personal level, field independents are portrayed as aloof, preferring to find solutions to problems for themselves. Field dependents, in contrast, are sociable and work well in groups. Each of these putative preferences could have advantages in language learning: the former should link with a capacity to analyze linguistic material, and perhaps learn systematically; the latter to engage in communicative language use, and to “talk to learn.” The FI/FD concept, in its original form, also includes, besides such an analytic predisposition, related contrasts between internal and external frames of reference, and between different interpersonal competencies (Chapelle and Green, 1992).

2.4.1 Types of Learning Styles

Major learning styles, as discussed by researchers can be classified under five dimensions: cognitive, cognitive and executive, affective and cognitive, social and affective, and physiological. These styles are summarized in the Table 2.1.

Table 2.1: Learning styles and dimensions

Style	Dimension	Description
Cognitive	Global vs. Analytic	whole picture, right brain, studial learning vs. Separate parts, left-brain, experiential learning
	FI. Vs FD.	analytic, inner-directed vs. less analytic, reliant on the context of information
Cognitive and executive	Intuitive-random vs. Concrete-sequential	the big picture, creative, guesser, vs. Focused on the present, demand full information, few compensation strategy
	Closure-oriented vs.	Dislike ambiguity, seeking early decisions

	Open	vs. high tolerance for ambiguity, postponing decisions
	Impulsive vs. reflective	global, fast-inaccurate vs. analytic, slow-accurate
Affective and cognitive	Feeling Vs. Thinking	globally influenced by the feeling of others vs. not readily concerned with social and emotional subtleties
Social and affective	Extrovert Vs. Introvert	interested in social affairs vs. stimulated most with their inner world
physiological	Visual Vs. Auditory Vs. Hands-on (sometimes called haptic, kinaesthetic, or tactile)	like to read, visual stimulation vs. oral directions, unsupported with visual means vs. like a lot of movement

Based on Oxford and Anderson (1995)

Karen L. Smith (1997) states,

“All learners are not equally proficient with all styles. Guidance, opportunity, and practice can help them acquire new ones and expand their potential for success in a variety of situations. Since multiple styles are

dominant in learners to varying degree, teaching to styles is a daunting task in a traditional, teacher-centred, face-to-face classroom. Teachers, as the sole information source available to students, would be forced to bring in materials and approaches that simultaneously present information from the global perspective as well as the detailed perspective, offer concrete experiences as well as discovery options, and present facts in a non-linear and linear fashion. Preparation for a single class would require teachers to create multiple lesson plans and to accumulate a library of material on each topic. Clearly, this is impossible for one person to accomplish for even one class let alone for an entire course or curriculum, traditional, lecture, based approaches to education emphasize receptive, reflective, abstract, analytic, and linear learning styles. A collaborative, learner-centred approach offers opportunities for all learning styles to succeed, provided adequate information delivery, analysis, and application opportunities are made available to students.” (p. 3).

This study tried to gain more information on the cognitive styles and strategies. The following sections will deal with these two concepts in some details.

2.5 Cognitive Style

It was around 30 years ago that educational theorists and researchers began investigating the concept of cognitive style (Reid, 1996). Since then, many researches were conducted on learning styles, and many classifications and definitions were proposed. Some of the most popular researches, along with their findings, are presented in the previous section.

These definitions may hint a separation between cognitive style like global/analytic or FI/FD learning styles, and other cognitive and none-cognitive variables (e.g., cognitive strategies, affective, and affective styles like extroversion and introversion). Reid (1987) also distinguishes between affective variables and cognitive variables as two distinct, but closely related, concepts. The former deals

with factors like attitude and motivation, and the later concerns individual's characteristics related to specific learning behaviors in learning. Reid also quotes Brown (1973) who defines cognitive styles as the self-consistent and enduring individual differences in cognitive organization and functioning. These variables are claimed to be relatively stable ability, characteristics of learners that affect success in the language learning.

According to Abraham (1985), there has been a considerable interest on the part of teachers and researchers in the learner characteristics, like learning strategies of learners and the individual differences in the style of learning that affect strategy use and success: One of these learner characteristics which appears to be related to SL performance is the cognitive style of field dependence/ independence. The following part will deal with these concepts.

2.6 Field-dependence vs. Field-independence

Before delving into a discussion of how field dependence-independence affects our lives, it is important to take a general look at this cognitive control or style to gain a better understanding. Field dependence-independence describes the extent to which:

- The surrounding framework dominates the perception of items within it,
- The surrounding organized field influences a person's perception of items within it,
- A person perceives part of the field as a discrete form,
- The organization of the prevailing field determines the perception of its components, or
- A person perceives analytically. (Jonassen & Grabowski, p. 86)

When field dependents interact with stimuli, they find it difficult to locate the information they are seeking because other information masks what they are looking for. Field independents find it easier to recognize and select the important information

from its surrounding field. When information is presented in an ambiguous, unstructured format, the field independent will impose his/her own structure on the information. The field dependent will attempt to understand and learn that information as it is presented and without restructuring it.

Another way to look at field dependence and independence is through a global versus articulated cognitive style. Those with a global perspective, field dependents, see things in the entire perceptual field (the forest rather than the trees). In other words, field dependents have difficulty separating the part from the complex organization of the whole. The analytic style presented by field independents allows them to create their own models for things they want to understand or articulate to others.

Witkin combined the various dimensions of social and intellectual behavior into a Theory of Psychological Differentiation (Witkin, et.al., 1962) which includes four dimensions: global-articulate, articulation of body concept, sense of identity, and defense structures. The most important aspect of Witkin's Theory is his belief that these are stable traits that predict cognitive and social functioning across environments.

Engelbrecht and Natzel (1997) quote Berry et al. (1992) who characterize FI people as relying on bodily cues within themselves and generally being less oriented toward social engagement with others. Berry et al., also, say that FD people, on the contrary, rely more on external visual cues but are more socially oriented and competent. Moreover, Engelbrecht and Natzel (1997) mention that FD is more prevalent in societies with insistence on authority, while in autonomous social settings FI is more common. Field independent learners perceive figures as discrete items from their field (Messic et al., 1976), while FD people are dependent on the total background, and this creates them many problems in perceiving parts of the whole (Brown, 1986). Also, FD global learners are more sensitive to external data and social facts like names and faces (Messick et al., 1976). On the contrary, a FI learner is more confidential and self-reliant (Chapelle, & Green, 1992).

Chappelle and Green, (1992) quote Witkin and Berry (1975) and Berry (1976) who mention FI/FD to be effective in cross-cultural contexts, hence important in cross-linguistic SLA research. There are some researchers who have investigated the role of FI in the academic achievement.

2.6.1 Research about FD/FI and its Effect on Learning

- Goodenough (1976) concluded that field dependents are dominated by salient cues in concept-learning tasks, use a "spectator" approach to learning, are more affected by negative reinforcement, and are better at incidental learning of social information.

- Field independence predicted higher proficiency in learning Spanish, especially for field independent females. (Hansen, 1980)

- Passing students were more field independent, whereas failing students and students who dropped out of nursing courses were more field dependent (Goodfellow, 1980).

- Field dependents had more difficulty in abstracting relevant information from instruction supporting more difficult learning tasks (Canelos, Taylor, & Gates, 1980).

- Across grades, field independence was correlated with higher mathematics achievement, especially for concepts and application (Vaidya & Chansky, 1980).

- Field independents scored better on music reading tasks than field dependents (King, 1983).

- Field independents recalled significantly more from mathematical/scientific passages whereas field dependents recalled more from socially oriented passages (Phifer, 1983).

- Field independents recalled more structural and functional information (equipment parts) than field dependents (Skaggs, Rocklin, Dansereau, & Hall, 1990).

- Field independents achieved more on performance-based assessments than did field dependents (Lu & Suen, 1995).
- James (1973) reported that the most field independent teachers gave field independent students higher grades than field dependent students and the most field dependent teachers assigned the highest grades to the field dependent students.
- Field-dependent children learned mathematics better from a field dependent instructor than from a field independent teacher (Packer & Bain, 1978).
- Field independents learned the most in math lessons when given minimum guidance and maximum opportunity for discovery, whereas field dependents profited most from maximum guidance (Adams & McLeod, 1979; McLeod, 1978).
- Field dependent students taught by field independent teachers achieved more than field dependent students taught by field dependent teachers (Jolly, 1980). All students learned more from field independent teachers.
- Field independents learned more from an individualized, self-paced course than field-dependents (Wilborn, 1981).
- Field dependents achieved higher scores on a nutrition test after using highly structured materials (presented in a logical order using a deductive sequence requiring written answers to convergent questions), whereas field independents achieved more from the low-structured treatment materials (Tannenbaum, 1982).
- When collaborative pairs of learners consisted of two field independents, they performed much better than two field dependents (Frank & Davis, 1982). One of each produced intermediate results.
- Field independents were more efficient at taking notes in outline format than field dependents, which improves their performance over field dependents (Frank, 1984). Frank found that some combination of teacher-supplied organizational structure and training in note taking will maximize the learning for field dependents. Rickards, et. al., (1997) found that field dependents were able to elicit a powerful structure strategy for recall when allowed to take notes while reading a passage.