The impact of language-learning strategies on the development of reading comprehension

Hossein Tavakoli[1] and Reza Biria[2]

[1]Department of English Language, Islamic Azad University, Izeh Branch, Iran.

[2]Department of English Language, Islamic Azad University, Khorasgan Branch, Iran.

ABSTRACT

The present study was carried out to investigate the nature of the possible relationship between the use of language-learning strategies (LLSs) and Iranian EFL university students' reading proficiency. The following research questions were addressed in this project: (1) is there a difference in types and frequency of language-learning strategies that are used by Iranian EFL University students from those reported in other research studies? (2) Is there a difference in strategy use due to gender variable? and (3) is there any relationship between strategy use and reading proficiency. One hundred senior EFL students participated in this study. All the subjects were required to complete the Strategy Inventory for Language Learning (SILL) questionnaire developed by Oxford (1990) and a reading comprehension test selected from the TOEFL test. With respect to the first research hypothesis, it was found that metacognitive strategies are used most frequently than other strategy groups. With regard to the second hypothesis, this study showed no significant difference at $p<0.05$ between strategy use and gender. And finally, with respect to the third research hypothesis, the results indicated that the only learning strategies having a meaningful relationship with the students' reading proficiency were metacognitive strategies.

Introduction

In second language acquisition (SLA) research, a major concern of researchers has been the identification of the factors that affect the rate and route of L2 acquisition (Ellis, 1986). The result of such a concern has been the provision of lists of cognitive, affective, linguistic, and social factors believed to influence L2 learning (Ellis, 1994). Hence, the emphasis was placed on the role of the learner in the learning process and his/her mental experiences in learning an L2 (Lee, 1998), and the focus was put on the concept of learner autonomy and independence. It proves the fact that the traditional teacher-centered approaches to language teaching have failed in fulfilling their promise in bringing about a speedy and error-free learning outcome. Advances made in cognitive sciences and the resurrection of humanistic philosophies in psychology and education resulted in the fact that the learners were no longer viewed as organisms born with blank slates on which associations were stamped (Brown, 1994); each learner came to be viewed as a dynamic creature being responsive to mental, social, as well as physical influences. Some of the language teaching methods, such as The Silent Way, explicitly made the substitution of teaching to learning as one of their primary objectives. Teachers were advised to teach, test and get out of the way (Richards & Rodgers, 1986). The Cognitive operations which were performed by the learners in the course of learning experience attracted the attention of educational psychologists and language researchers alike. The rise of interest shown in the study of cognitive factors affecting learning outcomes is basically the result of a profound paradigm shift that took place in psychology almost forty years ago, going back to 1960s. Educational psychologists abandoned the behaviorist explanations of learning offered by Skinner, and his contemporaries and turned to Cognitive psychology as an alternative. Mind, which was regarded as irrelevant in the associationist approaches to the study of learning, came to be recognized as the most important entity in the learning process. The learners' mental processes came to the forefront of psychological explanations, and the cognitive make-up of the learners came under close scrutiny (e.g., Freeman & Lang, 1991; Brown, 1994; William & Burden, 1997; Chastain, 1998; Stern, 1981).

Another factor which resulted in an emphasis on the concept of the individuality of the learner and his/her uniqueness as a person was the rise of Humanism in psychology and education (Stevick, 1990; Ehrman & Dörnyei, 1998; Atkinson, 1989; Cormon, 1986; Appel, 1989; Underhill, 1989; Gadd, 1998; Arnold, 1998). The phenomenological approach supporting humanism contended that each individual constructs a subjective picture of reality for him/herself and as a result, the meaning of reality changes with each personal perspective. The emergence of humanistic ideas in education in general, and in language teaching in particular made the concept of mass and compulsory education as a more democratic enterprise. Learning, in addition to being a personal process, acquired interpersonal tone, and the way learners related to one another and expressed their true selves became an important element in the success and failure of learning processes (Underhill, 1989).

Reiss (1985) reported that during the past two decades, the emphasis on foreign language research had shifted from the teacher to the learner, and educational research had identified a number of factors that account for some of the differences in how student learn. However, Harlow (1988) insists that although the instructional process involves both teacher and learner, the bulk of research efforts throughout the history of education have centered upon teaching techniques, while neglecting the importance of learner himself. As Rubin (1975) argues, many foreign language teachers are so concerned with finding the best method or with getting the correct answer that they fail to attend

to the learning process. Dansereau (1978) also notes serious limitations to the over-emphasis on teaching methods, such as inadvertent reinforcement of ineffective and non-transferable learner strategies. The interest centered on students and their learning, so how students learn and how can they be guided to learn well matter much more than teachers and teaching.

Review of the literature

Within the field of educational psychology over the last few decades a gradual but significant shift has taken place, resulting in less emphasis on teachers and reflected in various ways in language education and applied linguistics. It led to changes in syllabus design (e.g., Nunan, 1988; 1995) language teaching practice (e.g., Tudor, 1996), the view of the learner in general (e.g., Ehrman & Dornyei, 1998), and language-learning strategies (e.g., Oxford, 1990). Research into language-learning strategies (LLSs) began in 1970s (e.g., Rubin, 1975; Stern, 1975; Fillmore, 1976), and particularly developments in Cognitive Psychology influenced much of the research on language-learning strategies (e.g., William & Burden, 1977). In most of the research on language-learning strategies, the primary concern has been "identifying what good language learners report they do to learn a second/foreign language, or in some cases, are observed doing while learning a second/foreign language" (Wenden & Rubin, 1987). Research into what learners do to learn a language has resulted in the identification of specific strategies and in attempts to classify them in some way. The most general finding among the investigation of language-learning strategies was that the use of appropriate language-learning strategies leads to improved proficiency or achievement overall or in specific skill areas (Wenden & Rubin 1987; Chamot & Kupper 1989; Oxford & Crookall 1989; Cohen 1990; O'Malley & Chamot 1990; Oxford 1993; Oxford et al. 1993). These studies also supported the notion that the use of appropriate learning strategies enables students to take responsibility for their own learning by enhancing learner autonomy, independence, and self-direction (Oxford & Nyikos 1989). In line with that, it appears to be extremely important that teachers of a second or a foreign language should learn to identify and comprehend how the strategies of their students are functioned in varied language activities. They the teachers can play an active and valuable role, which can enhance the work of language teachers. Further, O'Malley et al. (1985b) suggested that the learning strategies of good language learners, once identified and successfully taught to less competent learners, could have considerable potential for enhancing the development of second language skills.

Since the work done by researchers such as Rubin (1975) and Stern (1975) in the mid seventies, awareness has been slowly growing of the importance of the strategies used by learners in the language learning process, since ultimately, like the proverbial horse led to water but which must do the drinking itself, even with the best teachers and methods, students are the only ones who can actually do the learning. As Oxford (1993: 11) put it: "learning begins with the learner". This growing awareness has resulted in what Skehan (1989: 285) calls an "explosion of activity" in the field of language learning strategy research. In spite of this activity, however, defining and classifying language-learning strategies remains no easy task. The term "strategy" is defined by Cambridge University Dictionary Online (http://dictionary.cambridge.org) as: "a detailed plan for achieving success in situations such as war, politics, business, industry or sport," and, of course, learning. Thus, planfulness or goal-orientation is an essential part of any definition of "strategy." Planfulness as a feature of learning strategies is reflected in various terms used by different researchers. These terms include "goal," "intention," "purpose," "conscious action," "awareness," or "control." For instance, Pressley and McCormick (1995: 28) argue that learning strategies are consciously "controllable" (as means for learners to achieve their learning goals. Even if none of the terms above is explicitly used in a given definition of learning strategies, the form of the definition of "learning strategy" is usually something like this: "A learning strategy is 'X [in order] to achieve Y.'" This form naturally implies a goal, purpose, or intention.

Several key definitions of learning strategies have been given by a number of leading figures in the second and foreign language field. For instance, one of the earliest researchers in this field, Rubin (1975: 43) provided a very broad definition of learning strategies as "the techniques or devices which a learner may use to acquire knowledge". Rubin (1987: 19) defined learning strategies as "... any sets of operations, steps, plans, routines used by the learner to facilitate the obtaining, storage, retrieval, and use of information." Richards and Platt (1992: 209) state that learning strategies are "intentional behavior and thoughts used by learners during learning so as to better help them understand, learn, or remember new information." Faerch and Casper (1983: 67) stress that a learning strategy is "an attempt to develop linguistic and sociolinguistic competence in the target language." According to Stern (1992: 261), "the concept of learning strategy is dependent on the assumption that learners consciously engage in activities to achieve certain goals and learning strategies can be regarded as broadly conceived intentional directions and learning techniques." Tarone (1983: 67) defines a learning strategy as "an attempt to develop linguistic and sociolinguistic competence in the target language -- to incorporate these into one's interlanguage competence". (Interlanguage refers to the type of language produced by nonnative speakers in the process of learning a second language or foreign language). As noted earlier, strategies always involve goals or purposes. The goals expressed by Tarone in this definition are to attain various competencies in the language: "develop linguistic and sociolinguistic competence" and "incorporate these into one's interlanguage competence." This definition, focusing on the linguistic arena, does not emphasize learner autonomy, cultural understanding, or other aspects of language learning. O'Malley and Chamot (1990: 1) define LLSs as "the special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information". This definition differs from Tarone's in two ways. First, it tells us that LLSs can be either observable (behaviors)) or unobservable (thoughts). Second, it clearly spells out the goals: strategies are to help students achieve comprehension and learning new information.

Oxford (1990: 8) provides one of the most comprehensive definitions, as follows: "Language-learning strategies are: operations employed by the learner to aid the acquisition, storage, retrieval, and use of information… specific actions taken by the learners to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations". In Oxford's (1990) definition, several student-intended goals are evident. These are related to aspects of learning and use of information, as well as to the changed nature of learning when learning is enhanced by strategies ("easier, faster, and more self-directed . . ."). This definition thus expands the list of goals presented by O'Malley and Chamot (1990). Based on her synthesis of previous research and on factor-analytic, questionnaire-based studies of LLS among adult learners, Oxford developed one of the most widely accepted classification taxonomies in the language learning area.

She initially adopted a version of Rubin's direct/indirect distinction but rapidly dropped this distinction when it proved theoretically unsustainable and not particularly useful to practitioners (R. Oxford, personal communication, March 10, 2005). Oxford's (1990) model of language-learning strategies consists of six categories: Memory strategies, Cognitive strategies, Compensation strategies, Metacognitive strategies, Affective strategies, and Social strategies. Each of these is defined below and also illustrated with examples.

Memory strategies are specific devices (mnemonics) used by learners to make mental linkages that will allow new information, most often vocabulary, to enter and remain in long-term Memory. Examples of Memory strategies are 'to make associations with what has already been learned, to draw pictures to help remember new words, and to repeatedly pronounce or write new words in order to remember them'.

Although Memory strategies could easily be viewed as Cognitive strategies, their purpose is limited to memorization and involves mostly surface processing (Biggs, 1988). Prior research shows that Memory strategies operate differently from many Cognitive strategies in terms of frequency of use (Oxford, 1996; Lan & Oxford, 2003).

Cognitive strategies help learners process and use the language for learning or for accomplishing a task involving the language, e.g., 'watch TV in English, listen to radio/CDs in English, use English computer programs, and find similarities between first and second languages'. Compared with Memory strategies, the purpose of Cognitive strategies is not simply memorization but instead deeper processing and use of the language (Biggs, 1988). This category is commonly used for research on second language learning (Cohen, 1998, O'Malley & Chamot, 1990; Oxford, 1990, 1996).

Compensation strategies are intended to make up for missing knowledge while listening, reading, speaking, or writing. For example, 'use gestures or body language (for speaking), rephrase (for speaking or writing), ask for help (for listening, reading, speaking, or writing) and make guesses based on the context' (for listening and reading). (Oxford, 1990, 1996).

Metacognitive strategies Meta means "above" or "beyond," so Metacognitive means "beyond" the Cognitive. Metacognitive strategies encompass the planning, organizing, evaluation, and monitoring of one's own language learning, e.g., 'organize time for learning, check one's progress, and analyze one's mistakes and try not to make them again'. This category is widely used in the second language field (O'Malley & Chamot, 1990).

Affective strategies help the learner deal with his or her own emotions, motivations, and attitudes while (or about) learning English. Examples of such strategies are 'taking risks; try to relax when feeling anxious about learning, and reward oneself for succeeding'. This category, sometimes combined with Social strategies, is often involved in strategy work in second language learning (Oxford, 1990, 1996).

Social strategies refer to how learners interact with other people in the context of learning languages and related culture. Social strategies include, among others, 'ask someone to speak slowly, practice with others and show interest in learning about the culture of English-speaking countries'. This category, sometimes combined with Affective strategies, is often part of strategy research (Oxford, 1990, 1996).

Concerning reading skill, it is most emphasized in traditional foreign language teaching, and even today is the mainstay of English as a foreign language (EFL) instruction in many countries (Bernard Susser & Thomas N. Robb, 1990). According to Chastain (1988), reading skill will facilitate communicative fluency in each of other language skills. Reiss (1983: 50) contends that "the more our students read, the more they become familiar with the vocabulary, idioms, sentence patterns, organization flow, and cultural assumptions of native speakers of the language". The significance of reading is also addressed by many other researchers. Rivers (1981) believes that reading is the "most important activity in any language class" (1981: 259). Alderson (1983: 1) claims, "a reading ability is often all that is needed by learners of English as a foreign language (EFL)". Keshavarz & Mobarra (2003: 101) state, "the ability to read efficiently in any language has always been regarded as the main manifestation of literacy". They believe, "the better one can read in a language, the more learned s/he is expected to be". McNamara (2004: 1) also regards "understanding of learning from written material as one of the most important skills to process in modern society".

Reading and learning to read, according to Wallace (1992), is a social, interactive process as well as a personal and private activity. As most foreign-language learners have little or no contact with foreign native speakers, reading can serve to fill this gap. Besides, the reading skill, once developed, is the one which can be most easily maintained to a high level by the students themselves without help from a teacher (Rivers, 1981). Moreover, the ability to read is acknowledged to be the most stable and durable of the second language modalities (Bernhardt, 1991).

Reading, like any other activity, is the consequences of some goals or purposes in mind. In other words, we won't go for it unless we have certain aims or intensions to achieve. Rivers and Temperley (1978) suggest that there are seven main purposes for reading:

1. to obtain information for some purposes or because we are curious about some topics;
2. to obtain instruction on how to perform some tasks for our work or daily life (e.g., knowing how an appliance works);
3. to act in a play, play a game, or do a puzzle;
4. to keep in touch with friends by correspondence or to understand business letters;
5. to know when or where something will take place or what is available;
6. to know what is happening or has happened (as reported in newspapers, magazines, reports, etc.);
7. for enjoyment or excitement;

There are also different types of reading. According to Wallace (1992), reading for specific purposes (related to particular content areas such as engineering or medicine), reading for general purpose, and reading for pleasure are major types of reading. According to Rivers (1981), reading activities may be classified as "extensive" and "intensive" reading. In extensive reading, the reader gains a general understanding of what is being read. Intensive reading, on the other hand, provides a basis for explaining difficulties of structures, extending knowledge of vocabulary and idioms, and developing greater control of the language in speech or writing.

From another perspective, Davies (1995) classifies different types of reading as:

1. *receptive reading* which is a kind of rapid and automatic reading that we do when we read narratives;
2. *reflective reading* in which we pause often and reflect on what we have read;
3. *skim reading* in which we read rapidly to establish in a general way what a text is about;
4. *scanning* or searching for specific information;

According to Wallace (1992), the main principle of Smith's (1971) and Goodman's (1967) approaches is that reading is a

unitary process. This unitary view of the reading process has led researchers to talk of reading "strategies" rather than distinct "skills". Strategies involve ways of processing text which will vary with the nature of the text, the reader's purpose, and the context of situation (Wallace, 1992: 57). Grellet (1981) developed a typology of reading strategies as following:

1. sensitizing
A. making inferences
B. understanding relations within the sentences
C. linking sentences and ideas
2. improving reading speed
3. going from skimming to scanning
A. predicting
B. previewing
C. anticipation
D. skimming
E. scanning

In many parts of the world, reading ability in a foreign language is often important to academic studies, professional success, and personal development. This is particularly true of English as so much professional, technical and scientific literature is published in English today. In fact, it is frequently the case that the ability to read in English is required for all L2 learners of English. Yet despite the specific need for an L2 learner, most of them fail to learn to read adequately in the foreign/second language. Over the past few decades, L2 reading theory and research has undergone dramatic changes. From a simple decoding system pertaining to literacy in the recent past, reading has moved to a complex psycholinguistic and interactive model. This dramatic change may be attributed to a change in the whole of language system of teaching. During the 1950s, the emphasis of language teaching was placed primarily upon the mastery of mechanism, by which the language works, i.e. the language system. This systematic approach was the offspring of the linguistic system. Thus most reading classroom activities were directed towards helping the language and the symbol representing its sounds. Nevertheless, recently the linguistic climate has begun to change. New trends now focus on the communicative aspect of language (e.g., Anderson, 1989; Carrell, 1991; Cziko, 1980). Accordingly, reading theory and research has been affected by the new interest in communication. Reading is, thus, viewed as a means of cross-cultural communication and for helping experts in different fields to keep abreast of the new developments. Hence, instead of seeking sound-symbol relationships and practicing language structures, readers seek meaning and try to reconstruct a message from what they read. Yorio (1971) claims that the reading problems of L2 learners are due largely to imperfect knowledge of the language. Cziko (1980) also believes that much of the difficulty in L2 reading may be due to an ability to make full use of contextual because of low language proficiency. Less proficient reader, as Carrel & Eisterhold (1983) put it, are more word-bound.

Exploration in L2 reading reveals that six areas have been addressed and researched (Zarei, 2002). The first area is concerned with the word-level issues in reading development that involves word-recognition skills, automaticity, fluency and vocabulary knowledge of various types. In the case of research on vocabulary, the following list may exhaust the topic: (a) meaning of words, (b) parts of speech forms, (c) common collocations, (d) derivational forms and (e) the general semantic fields in which a word commonly appears. Other topics related to word learning and fluency focus on the role of cognates, translation, definitions, glosses, and dictionary use (Parry, 1991; Hazenberg & Hulstijn, 1996).

The second area deals with extended units of text and the comprehension of information that they contain. Included in this group is the importance of grammatical knowledge, the awareness of grammar as a discourse organizing system, discourse organization knowledge text structuring principles, and strategies for text comprehension which include comprehension and main idea strategies, Metacognitive monitoring and repair strategies (Anderson, 1991; Carrel, 1992; Kern, 1994).

The third area of research centers on main idea comprehension practices as well as specific instructional routines including reading questions, fill-in exercise and writing and speaking tasks based on text information (e.g., Chen & Graves, 1995).

The fourth group of reading research topics examines the issue of extensive reading and ways to build student motivation (e.g., Elley, 1991), and also the issues unique to L2 reading which include the role of transfer, the impact of L1 cultural preferences and educational experiences on L2 reading (e.g., Schoonen, Hulstign, & Bossers, 1998; Bell, 1995).

The fifth set of research topics involves issues that are related to instruction but not necessarily components of instruction, more specifically social and cultural contextual factors that influence reading: (a) social and family influences on reading ability, (b) the impact of social groups on valuing literacy practices or even resisting school socialization expectation (Bell, 1995).

The sixth set of research topics relates to reading assessment, which often brings up images of standardized tests, multiple-choice questions or summary writing. In fact, researchers can explore a much broader range of topics including so-called alternative methods of assessment such as reading portfolios, checklists, observations, interviews, group performances, charts of progress over time and many other options (Alderson, 2000; Read, 2000; Urquhart & Wier, 1998).

In this chapter, an attempt was made to present the literature related to the significant notions of the study.

Statement of the problem

Reading for L2 learners is a primary learning activity both in the instructional and extra-curricular setting. Thus crucial importance of the reading ability in the academic context has led to considerable research on reading in the foreign or second language (Grabe, 2000). The idea that reading is a cognitive enterprise (Flavell, 1979), and is achieved as a result of the interaction among the reader, the text, and the context has recently encountered the L2 reading researchers to describe language-learning strategies used by successful versus unsuccessful readers (Kaylani, 1996), to investigate strategy transfer from L1 to the L2 (Sarig, 1987), and to validate strategy training (Kern, 1989). Many studies have concluded the strategic awareness and monitoring of the comprehension are important aspect of skilled reading (Auerbach & Paxton, 1997; Jiminez *et al.,* 1996).

Recent research in the foreign/second language reading comprehension has largely followed the footstep of the first language reading research (Sheorey & Mokhtari, 2001), and has used the theoretical framework of the first language reading such as that of Goodman (1985), and Smith (1979, 1982). Previously, Clark & Silberstein (1977) and Goady (1979) proposed Goodman-like psycholinguistic models of L2 reading. In these models, reading is conceptualized as an active process of text comprehension in the light of the reader's use of background knowledge and appropriate strategies (e.g., Carrel, 1988; Goodman, 1993). In addition, recent models consider reading as an interactive Cognitive process in which readers

interacted with the text using prior knowledge (Carrel & Eisterhold, 1983; Carrel, 1985, 1988), cultural background (Steffenson & Joag, 1984; Pritchard, 1990) and language-learning strategies (Oxford, 1990).

An area of basic research in second language acquisition is the identification and description of learning strategies used by language learners and the correlation of these strategies with other learner variables such as proficiency level, age, gender, motivation, and the like (Chamot & El- Dinary, 1999; El-Dib, 2004; Green & Oxford, 1995; Oxford & Burry-Stock, 1995).

In spite of the increasing popularity of research on learning strategies since the mid 70s, the notion of learning strategies and their frequencies, on the one hand, and their relationship with such variables as gender and proficiency level, on the other hand, is still a new research area in Iran. There have been a few studies (Lachini, 1997; Tahmasebi, 1999; Akbari, 2001; Soleimani, 2004) on the use of learning strategies of the individual Iranian EFL University students. The students may develop their own understanding of models of the foreign language. They do perform many tasks in the classroom. However, they are not asked systematically to describe in detail how they proceed in performing them.

It is clear that students can be helped to use better strategies and research suggests that better strategies improve language performance. Just how language-learning strategies should be taught is open to question, but so far it has been confirmed that strategy awareness is generally more effective when woven into regular classroom activities, especially reading comprehension, than when presented as a separate strategy course. Hence, this study investigates the feasibility of helping students become more effective language learners by making them become aware of some of the learning strategies that descriptive studies have identified as characteristic of the "good language learner" (Rubin, 1975; 1981; Stern, 1975). The results of this study may also benefit the teachers, if they include learning strategies as part of their instruction, how to play an active and valuable role in helping their students to become successful learners of the target language.

Research questions
1. What are the different types and frequency of language-learning strategies that are   used by Iranian EFL university students?
2. Is there a difference in strategy use due to gender?
3. What is the relationship between strategy use and reading proficiency?

Research hypotheses
1. There is a difference in types and frequencies of language-learning strategies   used by Iranian EFL university students as compared with those reported in studies in different contexts.
2. There is no difference in strategy use due to gender.
3. There is no relationship between strategy use and reading proficiency.

Methodology
Subjects
One hundred subjects were randomly selected for this study from one thousand EFL learners studding in Iran. As shown in Table 1, thirty-three of them were male and sixty-seven were female. All of them were senior students, i.e. fourth- year university students.

Table 1. Subject Distribution

Gender	No	Percentage
Male	33	33
Female	67	67
Total	100	100

The reason for the selection of senior students was mostly due to the fact they had passed many different courses, especially reading courses. Subsequently, they seemed to enjoy a good command of reading ability in English. According to Bachman (1995), it is not valid to use the Test of English as a Foreign Language to measure the English proficiency of beginning level students studying English as a second/foreign language. Rubin (1975: 237) noted that "the employment of language-learning strategies depend on a number of variables, among them, the level of proficiency". He implies that as the students advance towards upper levels of proficiency they make more use of strategies. According to Rubin, "successful language learners have a very strong desire to communicate, are willing to guess when unsure, and are nor afraid of being worry or appearing foolish". To see whether seemingly high-proficiency students employ more language-learning strategies, the researcher decided to sample his subject from among senior students.

Table 2. Scores Distribution of Reading Comprehension Test

Scores	Frequency	Cumulative Percent
7	2	2
8	1	3
10	1	4
11	3	7
12	1	8
14	2	10
15	1	11
17	2	13
18	2	15
19	1	16
20	3	19
21	5	24
22	2	26
23	6	32
24	1	33
25	9	42
26	4	46
27	7	53
28	3	56
29	3	59
30	6	65
31	6	71
32	5	76
33	1	77
34	5	82
35	5	87
37	5	92
39	2	94
41	3	97
42	1	98
44	2	100
Total	100	

Based on the mean and standard deviation of the obtained scores form reading comprehension test, the subject were divided into three proficiency levels: low-proficiency (scores which were less than one standard deviation below the mean score), mid-proficiency (scores falling in the ranges of one standard deviation above and below the mean score), and high-proficiency level (scores more than one standard deviation above the mean score). The obtained scores from the reading comprehension and their frequencies are illustrated in the Table 2.

Instrumentations

The following two research instruments were used to measure the variables in this study: Firstly, in order to measure strategy use, Oxford's (1990) Strategy Inventory for Language Learning (SILL) was used in this study. The SILL was devised by Rebecca Oxford (1990) as an instrument for assessing the frequency of use of language-learning strategies by students. It was designed to identify the strategies that make students more effective language learners. The survey provides information about the strategies that the individual learner employs to learn a second language. Ellis contends that "it is the most comprehensive classification of learning strategies to date and has been widely used (Ellis, 1994: 539). It appears to be the only language learning strategy instrument that has been checked for reliability and validated in multiple ways (Oxford & Burry-Stock, 1995). Its Cronbach alpha reliability coefficients range from 0.89 to 0.98 in various studies (Oxford, 1996a). Its validity rests on its predictive and correlative link with language performance as well as its confirmed relationship to sensory preferences (Oxford, 1996).

There are two versions of SILL: one for native speakers of English (80 items) and another for learners of English as a second or foreign language (50 items). The SILL uses a 5 Likert-scale for which the learners are asked to indicate their responses (1, 2, 3, 4, and 5) to a strategy description such as "I try to find patterns in English. Oxford described each of the statements on a 1 to 5 scale as the following:

1. Never or almost never true of me.
2. Usually not true of me.
3. Somewhat true of me.
4. Usually true of me.
5. Always or almost always true of me

The researcher did not do any modifications on the items of the SILL. The version of the SILL (Oxford, 1990) used in this study comprised a 50-item instrument which were subdivided into six groups as follows:

Memory strategies (9 items) are used for entering new information into memory storage and for retrieving it when there is a need for communication. (e.g., grouping, representing sounds in memory, structured reviewing, using physical response).

Cognitive strategies (14 items) are used for linking new information with existing schemata and for analyzing and classifying it. Cognitive strategies are responsible for deep processing, forming and revising internal mental models and receiving and producing messages in the target language (e.g., repeating, getting the idea quickly, analyzing and taking notes).

Compensation strategies (6 items) include such strategies as guessing and using gestures. Such strategies are needed to fill any gaps in the knowledge of the language. (e.g., switching to the mother tongue, using other clues, getting help and using a synonym).

Metacognitive strategies (9 items) are techniques used for organizing, planning, focusing and evaluating one's own learning. (e.g., linking new information with already known one, seeking practice opportunities, and self-monitoring).

Affective strategies (6 items) are used for handling feelings, attitudes and motivations. (e.g., lowering anxiety by use of music, encouraging oneself and discussing feelings with others).

Social strategies (6 items) are used for facilitating interaction by asking questions, and cooperating with others in the learning process, (e.g., Asking for classification, cooperating with others and developing cultural understanding).

Secondly, in order to measure the subjects' reading proficiency, a reading comprehension test was chosen from already reliability-and-validity-established TOEFL test from Peterson's publications**.** The test comprised five short reading passages followed by fifty multiple-choice questions.

Since the subjects were considered as intermediate or upper intermediate, the researcher, then, decided to choose TOEFL test as an instruments. According to Bachman (1995), it is not valid to use the Test of English as a Foreign Language (TOEFL) to measure the English proficiency of beginning level students studying English as a second language. "…there is considerable evidence supporting the uses of this test with intermediate to advanced level adult learners of English as a foreign language"(p.237).   The test publisher, Peterson's Thomson Learning, is among the world's largest providers of lifelong learning information. It is a division of the Thomson Corporation (TTC), one of the world's leading information companies (Rogers, 2001: I). According to the test author, Bruce Rogers, "this, TOEFL Success, is the most complete, acceptable, and up-to-date TOEFL preparation book now available. It is based on twelve years of classroom experience teaching TOEFL preparation classes in the United States and abroad and on several years of research on the test. It is simply written and clearly organized and is suitable for any intermediate or advanced students of English as a second or foreign language" (Rogers, 2001: IV). The author believes that not only the whole package but also the sections by themselves proved to be highly reliable and valid in different contexts, conducted through multiple standardized ways (Rogers, 2001:III). Drawing on the above-mentioned quotes, therefore, the researcher decided to choose the instrument from the reading comprehension section of Peterson's TOEFL test package.

Procedure

The data was collected by the researcher during a week in January, 2014. After contacting the English teachers of the participants in person to get approval for asking their students to take part in this study, the researcher prearranged the time. The researcher went to each English class to administer the SILL and the TOEFL's reading comprehension test. The subjects were informed of the complete information about the purpose and benefits of the study, the protection of anonymity and confidentiality, and the steps involved. They were assured that neither their teachers nor any other person, other than the researcher, would have access to their responses and their names would not be used in reporting the results. The subjects were also told that the questionnaire to be distributed contained questions about their use of English learning strategies. Afterwards, the sheets of the SILL and directions were given, and the subjects were told that they should ask for any clarification they might need and any other extra time as they filled out the questionnaire. Almost all of them had no difficulty in understanding the questionnaire. All students answered the questionnaire in their own classrooms finished responding to all the items. The questionnaire administration took approximately 30 minutes for each class to complete.

The rest of the class hour devoted to the subjects' answering the reading comprehension section of the TOEFL test. They were required to select the best choice from four-multiple-choice items and then mark it on the answer sheet. Its administration lasted approximately 50 minutes for each class.

Quantitative data analyses were performed in this study. The quantitative analysis involved several statistical procedures: 1) descriptive statistics, including means, and standard deviations were computed to summarize the learner's responses, both for each of six categories of learning strategies in SILL instrument and reading comprehension test, 2) in order to determine the multiple comparison at $p < .05$ among all

strategies, Pearson Product Correlation were used to identify the strength and the direction of the relationship among the six strategy groups, and 3) to test the difference in strategy use among the three reading proficiency groups, and to investigate the effect of gender difference on strategy use, one-way analysis of variance (ANOVA) was also carried out The level of significance for the mean variation was considered at $p<.05$, the standard used in most quantitative research. In the following sections, each research question will be addressed separately followed by the results obtained by statistical analyses.

Addressing the first research question

The first research question of the study is to address: "What are the language-learning strategies that are most frequently used by Iranian EFL students?"

The results of strategy analysis on items identified six-category groups. These strategy groups were recognized as the following:

1. Metacognitive strategies (MET)
2. Cognitive strategies (COG)
3. Compensation strategies (COM)
4. Metacognitive Strategies (MET)
5. Affective strategies (AFF)
6. Social strategies (SOC)

The mean scores of the six categories of learning strategies employed by the subjects are reported in Table 4. It can be seen that all the means, except for metacognitive strategies, fall between 2.90 and 3.33 on a scale of 1 to 5, a range which Oxford (1990) defined as medium use. As shown in Table 3, the averages were interpreted according to key developed by Oxford (1990):

Table 3. Oxford's Index for Interpretation of the LLSs

High	Almost always used	4.5 to 5.0
	Generally used	3.5 to 4.4
Medium	Sometimes used	2.5 to 3.4
	Generally not used	1.5 to 2.4
Low	Never or almost never used	1.0 to 1.4

Table 4. presents rank ordering, standard deviation, and percentage in the strategies according to their frequency of usage. The means and percentages in the Table show that metacognitive strategies enjoy the highest mean of 3.74. On the contrary, memory and affective strategies are ranked the lowest.

Table 4. Mean Scores, Standard Deviation, Percentages, Degree, & Rank of Strategy Groups

Strategy	Mean	Std.	%	Degree	N	Rank
MET	3.74	.67	74.8	High	100	1
COM	3.33	.64	66.6	Medium	100	2
COG	3.29	.53	65.8	Medium	100	3
SOC	3.24	.70	64.8	Medium	100	4
MEM	2.91	.52	58.2	Medium	100	5
AFF	2.90	.70	58	Medium	100	6

The relationship between how these six categories of language-learning strategies are related to each other are shown in Table 5. In order to determine the multiple comparison at $p<.05$ among all strategies, correlational analysis among SILL with each other was conducted using Pearson Product Correlation.

The six categories were related to each other in a weak to a moderate fashion. The Table shows that the highest significant relationship is between social and metacognitive strategies ($r=.66$).

Metacognitive strategies are moderately related to cognitive strategies ($r=55$). Social strategies are more moderately related to cognitive strategies ($r=.63$) and weakly to compensation strategies ($r=.41$). There is also a rather poor relationship

between compensation strategies and cognitive strategies ($r=.40$), and a moderate relationship between memory and cognitive strategies ($r=55$).

The weakest relationship exists between metacognitive and memory strategies ($r=.22$). Table 5. shows that cognitive strategies have a higher Correlation with other strategies of compensation ($r=.40$), metacognitive ($r=.55$), and social strategies (.63). This means that the students who used cognitive strategies were often inclined to use other strategies, too.

Table 5. Correlation Analysis among the SILL

Strategy	Pearson's r & Sig.	MEM	COG	COM	MET	AFF	SOC
MEM	r						
	Sig.						
	N	100					
COG	r	.38					
	Sig.	.000					
	N	100	100				
COM	r	.33	.40				
	Sig.	.00	.00				
	N	100	100	100			
MET	r	.22	.55	.35			
	Sig.	.02	.00	.00			
	N	100	100	100	100		
AFF	r	.33	.31	.28	.37		
	Sig.	.00	.00	.00	.00		
	N	100	100	100	100	100	
SOC	r	.39	.63	.41	.66	.37	
	Sig.	.000	.00	.00	.00	.00	
	N	100	100	100	100	100	100

Table 6. illustrates the 50-strategy items that constitute each strategy group along with the rank order and the mean of every single item in descending order. The Table shows that most of the items with the higher mean are metacognitive strategy items. For example, the following items are all among the metacognitive language learning strategies items and enjoy the highest means as compared with other items. Item No 32. (I pay attention when someone is speaking English), item No 31. (I notice my English mistakes and use that information to help me do better), item No 33. (I try to find out how to be a better learner of English), and item No. 38.

(I think about my progress in learning English); and among compensation strategy items, item No. 29. (If I can't think of an English word, I use a word or phrase that means the same thing), and item No. 24. (to understand unfamiliar English words, I make guesses), are among the highest means, i.e. used most frequently by the subjects.

Addressing the second research question

The second research question of the study is to address: "Is there a difference in strategy use due to gender variable?" To answer the question on the significant differences at $p<.05$ in strategy use according to gender variable, a non-parametric test was conducted. The computed value of all strategies is presented in Table 7. Statistically speaking, there is no significant effect for gender at $p<.05$ level on strategy use.

Addressing the third research question

The third and final research question of the study is to address: "What is the relationship between strategy use and reading proficiency?" All students took the reading comprehension section of the Peterson's TOEFL test.

Table 6. Strategy Preference of the Items by Their Means & Frequency of Usage

Rank	Item	Strategy	Mean	Std.	Rank	Item	Strategy	Mean	Std.
1	32	MET	4.32	.85	26	42	AFF	3.29	1.34
2	29	COM	4.16	.91	27	9	MEM	3.28	1.21
3	31	MET	4.10	.92	28	36	MET	3.27	1.26
4	33	MET	4.05	.97	29	14	COG	3.24	1.31
5	38	MET	3.99	1.09	30	2	MEM	3.20	1.23
6	24	COM	3.93	.92	31	13	COG	3.18	1.08
7	37	MET	3.81	1.08	32	34	MET	3.17	1.21
8	50	SOC	3.74	1.13	33	10	COG	3.14	1.31
9	11	COG	3.73	1.17	34	20	COG	3.13	1.11
10	45	SOC	3.63	1.07	35	27	COM	3.07	1.32
11	30	MET	3.60	1.11	36	28	COM	3.03	1.18
12	16	COG	3.57	1.17	37	8	MEM	2.99	1.07
13	1	MEM	3.56	1.03	38	25	COM	2.97	1.21
14	12	COG	3.52	1.09	39	47	SOC	2.96	1.19
15	18	COG	3.48	1.32	40	19	COG	2.93	1.27
16	39	AFF	3.47	1.32	41	46	SOC	2.91	1.35
17	3	MEM	3.45	1.29	42	26	COM	2.87	1.34
18	4	MEM	3.43	1.16	43	23	COG	2.83	1.16
19	22	COG	3.43	1.15	44	44	AFF	2.75	1.44
20	49	COM	3.40	1.16	45	48	SOC	2.75	1.20
21	35	MET	3.37	1.18	46	41	AFF	2.32	1.20
22	40	AFF	3.35	1.23	47	5	MEM	2.31	1.07
23	21	COG	3.33	1.05	48	43	AFF	2.27	1.42
24	17	COG	3.30	1.05	49	7	MEM	2.10	1.04
25	15	COG	3.30	1.17	50	6	MEM	1.92	1.25

Based on the mean and standard deviation of the obtained scores form reading comprehension test, the subjects were divided into three proficiency levels: low-proficiency (scores which were lower than one standard deviation below the mean score), mid-proficiency (scores falling in the ranges of one standard deviation above and below the mean score), and high-proficiency level (scores higher than one standard deviation above the mean score). In the Table 8, mean differences and standard deviations in strategy use according to three reading proficiency, i.e. high, mid, and low, levels are displayed. As shown below, metacognitive strategies were used more frequently by the low-proficiency students. With respect to affective strategies, high-proficiency students employed these strategies more often than mid or low proficiency students. Other strategy groups were used more or less equally by all three proficiency students.

Table 7. Results of Chi-Square Test for the Differences in Strategy Use According to Gender Variable

Strategy	MEM	COG	MET	COM	AFF	SOCI
Chi-Square	2.618	.550	1.398	.018	1.024	1.960
Df	1	1	1	1	1	1
Sig.	.10	.45	.23	.89	.31	.11

To uncover the impact of strategy use on the reading proficiency variable, one-way ANOVA was conducted. The results of one-way ANOVA in Table 9. indicate that there are no significant differences between memory, cognitive, compensation, and social strategies and reading proficiency.

Table 8. The Mean Differences & Standard Deviations in Strategy Use According to Three Reading Proficiency Levels (High, Mid, Low)

Strategy	Proficiency Level	N	Mean	Std. Deviation
MEM	Low	19	2.83	.58
	Mid	58	2.95	.48
	High	23	2.88	.58
	Total	100	2.91	.52
COG	Low	19	3.43	.49
	Mid	58	3.24	.52
	High	23	3.30	.58
	Total	100	3.29	.53
MET	Low	19	4.05	.65
	Mid	58	3.57	.64
	High	23	3.90	.65
	Total	100	3.74	.67
COM	Low	19	3.41	.62
	Mid	58	3.32	.70
	High	23	3.30	.53
	Total	100	3.33	.64
AFF	Low	19	2.89	.50
	Mid	58	2.85	.74
	High	23	3.05	.73
	Total	100	2.90	.70
SOC	Low	19	3.27	.81
	Mid	58	3.22	.79
	High	23	3.26	.82
	Total	100	3.24	.79

Because the level of significance for all of these strategy groups are bigger than .05. On the contrary, a significant difference exists on the use of metacognitive strategies among the three reading proficiency levels.

Table 9. Results of One-Way ANOVA for the Impact of Strategy Use on Reading Proficiency

Strategy		Sum of Sq.	Df.	Mean Sq.	F	Sig.
MEM	Between Groups	.22	2	.11	.40	.66
	Within Groups	27.45	97	.28		
	Total	27.68	99			
COG	Between Groups	.53	2	.26	.94	.39
	Within Groups	27.33	97	.28		
	Total	27.86	99			
COM	Between Groups	4.12	2	2.06	.16	.85
	Within Groups	40.83	97	.42		
	Total	44.96	99			
MET	Between Groups	.13	2	.06	4.90	.00
	Within Groups	41.44	97	.42		
	Total	41.58	99			
AFF	Between Groups	.69	2	.34	.69	.50
	Within Groups	48.27	97	.49		
	Total	48.96	99			
SOC	Between Groups	.05	2	.02	.03	.96
	Within Groups	62.80	97	.64		
	Total	62.85	99			

Table 10. Results of Scheffe Post-Hoc Test for Metacognitive Strategies

Dependent Variable	(I)Reading Proficiency	(J)Reading Proficiency	Mean Difference	Sig.
MET	Low	Mid	.48	.02
		High	.15	.74
	Mid	Low	-.48	.02
		High	-.32	.12
	High	Low	-.15	.74
		Mid	.32	.12

As shown in Table 10, a Scheffe post-hoc test was applied to show the comparison between the means of strategies according to reading proficiency levels on metacognitive strategies. The results of the Scheffe post-hoc test indicated that a significant statistical difference existed among the means of metacognitive strategies across the high, mid and low-proficiency levels in favor of low and mid-proficiency students. This implies that the students with low and mid-reading proficiency use more metacognitive as compared with the students of high- reading proficiency level. On the contrary, high-proficiency level students on metacognitive strategies did not show a difference of use in favor of low and mid-proficiency students. This difference did not demonstrate any statistical significance at the p<.05 level.

Discussion

Strategy frequency

A close examination of the results of this study revealed that Isfahan University EFL students' learning strategy use as measured by the SILL, ranges from high (3.74) to medium (2.90). Metacognitive strategies are utilized as the most frequently used category of language-learning strategies (3.74), followed by Compensation strategies (3.33), Cognitive strategies (3.29), Social strategies (3.24), Memory strategies (2.91), and Affective strategies (2.90). Metacognitive strategies, which ranked the highest among the other language-learning strategies, involve exercising "executive control" over one's language learning through planning, monitoring, and evaluating. The high use of Metacognitive strategies among Iranian EFL students is similar to the obtained results of other studies on the same variable that observed students from Asian countries like Japan, China, Korea, India, Iran, and Taiwan as reported in some of the studies on Asian students (e.g., Sheorey, 1998; Oxford *et al.*, 1996).

The results of this study are in line with those of Phillips (1991). He, using SILL to measure strategy use, found that for of 141 university students-level Asian ESL students, Metacognitive (M=3.70) and Social (M=3.65) strategies were used more frequently than Affective (M=3.12) and Memory (M=3.00) strategies.

These findings are supported by those of diary study by Goh (1996). In her analysis of the diaries kept by 40 learners, Goh found that the subjects were very aware of themselves as learners and highly analytical about the processes involved in their learning process. They reported using a number of different Metacognitive strategies in all three categories of planning, monitoring, and evaluating.

In this study Metacognitive strategies followed by the Compensation strategies. The preference of Compensation strategies may be explained by the need to cope with various combinational, interactional situations in their English class and suggest that the Iranian EFL students used Compensation strategies to make up for missing knowledge.

Lachini (1997) studied the learning and communication strategy use of intermediate, upper intermediate, and advanced Iranian learners of English as a foreign language. He found that Metacognitive strategies were the most frequently utilized learning strategies, followed by Cognitive strategies. Goh and Kwah (1997) reported on a study of language-learning strategies used by 175 ESL Chinese students. They found that Metacognitive strategies were most frequently used, while Memory strategies were least frequently used.

Sheorey (1999) investigated the strategy use pattern of Indian learners of English. He found that Indian learners of English relied more heavily on Metacognitive strategies followed by Cognitive, and Memory strategies. Bremner (1999) studied the strategic behavior of Hong Kong learners of English as a second language. The findings revealed that Hong Kong learners made extensive use of Metacognitive and Compensation strategies. Mochoizuki (1999) investigated the strategy behavior of university level Japanese learners of English as a foreign language. The researcher found that more proficient learners made more extensive use of Cognitive and Metacognitive strategies compared to their less proficient counterparts.

Tahmasebi (1999), addressing the relationship between the vocabulary learning strategies used by Iranian EFL students and their level of language proficiency, found that among general language-learning strategies measured through the SILL, Metacognitive strategies were the most used category of language-learning strategies followed by Social strategies. Akbari and Talebinezhad (2003), studying 128 English major university students also found that their sample students made extensive utilization of Metacognitive strategies followed by Social strategies.

Shamais (2003) reported on the current English language-learning strategies used by Arabic-speaking English-majors in Palestine. The subjects of the study were (99) male and female students still studying for their B.A. degree. The results of this study showed that English majors used learning strategies with high to medium frequency, and that the highest rank (79.6%) was for Metacognitive strategies while the lowest (63%) was for Compensation strategies. Soleimani (2004) investigated the strategy use of 97 EFL students of Arak Azad University. He concluded that Metacognitive strategies were among the most frequently used learning strategies.

A study, conducted by Oxford *et al.* (1993) on American high school in rural and suburban areas of USA who were learning Japanese as a foreign language showed that Cognitive strategies were used the most frequently (M=3.02). The results of this study do not appear to confirm with the findings from other studies of ESL/EFL situations, such as Kim's study (1995), which showed that Compensation strategies were among the most frequently used by Korean adult learning English as a second language. The Korean EFL students in Lee's study (1994) and the students of Asian background in Grainger's study (1997) also preferred Compensation (M=3.67) followed by Social strategies (3.65).

These results, however, do not match those of Politzer and McGroarty (1985) nor of O'Malley and Chamot (1990) who discovered that students from Asian backgrounds prefer rote learning and language rules as opposed to more communicative strategies. In this study Memorization was less frequently used strategy among the subjects. This indicates that the students spent significantly more time regulating and managing their learning than storing and recalling new information. In addition, if we consider the corresponding level of frequency for the mean scores of 2.91, we can see that the students reported using memorization strategies only infrequently. It is clear from the findings of this study that the subjects made very little use of specific techniques or mnemonic devices to enhance their memorization efforts. Some of the Memory strategies mentioned in the questionnaire are: connecting the sounds of new words to an image or picture, making a mental picture of a situation in which a word might be used, using rhymes, physically acting out a word, and remembering new words or phrases by remembering the location on pages, the board, etc. about such techniques. The researcher's speculation was later confirmed when he informally interviewed ten students about the way they learnt new words or phrases. The students reported that although they tried very hard to memorize new words, they did not use any of techniques mentioned in the questionnaire. They depended largely on sheer mental power to remember new words, by saying or writing them reportedly; for example, some students said they did this very frequently and consistently, sometimes devoting a good part of the evening to it. The results, however, were often disappointing. This strategy of repeating words seem to have been transferred from their literacy practice in L1, where memorization was simply done by rote rather than by association

It looks as if Iranian students of English are aware of the importance of using Metacognitive strategies, i.e., planning and organizing their learning activities. According to Soleimani (2004), part of this awareness can be attributed to study skill courses offered to Iranian BA English major students during their two years of study. However, the role of Affective strategies and their contribution to the L2 proficiency are neglected by Iranian learners of English. The problem may stem from the fact that Iranian students do not receive any training as to how Affective elements can affect their learning outcome.

Gender and strategy use

The current study didn't find statistically significant overall strategy use differences by gender. These findings are inconsistent with the previous studies in this area. It is inconsistent in that all the studies have revealed that males and females use different strategies toward their foreign language learning with females employing more frequently some of the strategies (e.g., Ok, 2003; Dreyer & Oxford, 1996; Oxford *et al..*, 1996 & Kaylani, 1996; Politzer, 1983; Ehrman & Oxford, 1989; Oxford & Nyikos, 1989; Lee, 1994; Kaylani, 1996; Sheory, 1999; O'mally & Chamot, 1990; Noyuchi, 1991). They found a wide range of gender differences in strategy use in favor of female students, compared with their male counterparts. This study indicated no significant differences at p<0.05 level for the gender variable. The difference between the obtained results of the current study and those of other studies on the gender variable might well be attributed to the differences in the students' learning level in this study. For instance, Kaylani's subjects were all school students. Oxford and Nyikos' subjects were all university students studying in majors other than English. Oxford et al.'s research primarily had to do with high school students. Sheorey's subjects were all collage students studying majors other than English. Politzer (1983) chose his subjects from different walks of life, including university students as well. Lee's subjects were chosen from high school and college students.

However, the results of this study are in line with those of Shamais (2003). He reported on the current English language-learning strategies used by Arabic-speaking English-majors in Palestine. The results showed that gender and proficiency had no significant differences on the use of strategies. Uçar (2005) also investigated language-learning strategies and it particularly focuses on whether gender plays a role on the selection of certain language-learning strategies. The study was carried out in Middle East Technical University with 70 first year students. The study revealed that gender did not play a significant role in the selection of language-learning strategies

Reading proficiency and strategy use

With regard to the third null hypothesis of the study, the statistical analysis of the results indicates that the only learning strategy having a meaningful relationship with the students' reading proficiency is Metacognitive strategies. Other strategy categories do not bear any significant relationship with reading proficiency. The results indicate that the null hypothesis formulated in this study must be rejected.

Various studies, such as Politzer & Mcgroarty (1985), Chamot & Kupper (1989), Van & Abrahaw (1998), Green & Oxford (1995), Oxford & Ehrman (1995), Goh & Kwah (1997), Akbari (2001), Akbari & Talebinezhad (2003), and Soleimani (2004) have investigated the relationship between the proficiency and strategy use. The results of the current study are inconsistent with those of above-mentioned studies. The results of these studies have established significantly greater overall use of language-learning strategies among high proficiency levels than Mid and Low proficiency levels. Furthermore, several of these studies empirical studies have reported that as students' level of proficiency increased they made greater use of certain categories of strategies. For instance, green and Oxford (1995) found greater use of Compensation, Metacognitive, and Cognitive strategies among higher proficiency levels. Oxford & Eheman (1995) found greater use of Cognitive strategies among their higher proficiency subjects. In this study, only Metacognitive strategies have a significant correlation with Mid and low proficiency students. On the other words, there is no significant correlation found between high proficiency students and the use of Metacognitive strategies. The results of this study

indicated greater use of Metacognitive strategies in favor of Mid and Low proficiency as compared to high proficiency levels. No significant statistical differences were observed in the used Memory, Compensation, Cognitive, Memory, Affective, and Social strategies across the three proficiency levels. Hence, the category of Metacognitive learning strategies came out to be the best predictor of the subjects' second language reading proficiency.

The obtained results of this study seem no to support the findings of several recent studies, such as Green and Oxford (1995), Goh and Kwah (19997), Bremner (1999), Park (1999), Akbari (2001), Akbari & Talebinezhad (2003), and Soleimani (2004) that among the language-learning strategies Compensation strategies can be seen as a good predictor of the students' second language proficiency.

The fact that this strategy group could be used as predictor for the reading ability of the learners shows their high application and utility for the learners. It seems that the other five strategy groups do not bear any direct connection to the learner's reading comprehension ability. It can be argued that our educational system in general and more specifically at university level does not foster in the students a sense of independence and discovery. Our college and university students are now used to being spoon fed, which means that they expect their instructors and professors to solve their learning problems. As Akbari (2001) states, in an educational system where self-reliance is not promoted and valued it would not be a surprise to see that strategy use does not make any meaningful contribution to the learners' academic achievement. It is only a heuristic educational atmosphere that strategy use would be promoted and appreciated.

According to Farhady (1996), a difficulty with the use of questionnaire is the fact that some subjects may not report what they actually do due to either personal or educational reasons. That is, many learners do not report the truth since they may find their behavior socially or educationally disapproved. A student who does not have a good study plan (Cognitive learning strategies), does not practice enough (Metacognitive learning strategies), is insensitive about emotional reactions to the learning/teaching situation (Affective learning strategist), and does not benefit from the knowledge and experience of the others (Social learning strategies) may feel that he/she is following unsound educational techniques and may be unwilling to reveal his/her true weaknesses. As e result, he/she may resort to saving strategies such a disguising the truth and reporting a socially approved study plan.

Conclusion

The present study was carried out with the intension of investigating the relationship between the use of language-learning strategies used by Iranian EFL students and their reading comprehension ability. The researcher found that Isfahan University EFL students' learning strategy use as measured by the SILL, ranged from high (3.74) to medium (2.90). Metacognitive strategies are utilized as the most frequently used category of language-learning strategies (3.74), followed by Compensation strategies (3.33), Cognitive strategies (3.29), Social strategies (3.24), Memory strategies (2.91), and Affective strategies (2.90).

The results obtained also indicated that among the language-learning strategies employed by the subjects, only Metacognitive strategies had a meaningful relationship with their second language reading proficiency. Likewise, no significant relationship was found between strategy use and gender variable.

In spite of the fact that no significant relationship was found between L2 reading proficiency and language-learning strategies, the results are not conclusive since in the use of questionnaire for data collection purposes we sometimes face the issue of social desirability. That is, some subjects may not report their true strategic behavior due to the fact that they want to conceal their learning inadequacies or impress their teachers or the researchers (Akbari 2001). In other words, what subjects report themselves as being or using does not necessarily reflect the truth. It would be more desirable to use the strategies they claim to use so that the researchers could have a more solid basis for their conclusions.

Moreover, based on the available data, it can be concluded that the participants in this study may be lacking awareness about learning strategies. They may not be aware of the available strategies which they can use to facilitate their learning or they may be unaware of the strategies that they are already employing. All these show that learners should be trained in learning strategies so that they will consciously start employing the right strategies for themselves to enhance their learning and to become more autonomous and competent language learners.

Implications of the study

The findings of this study can have pedagogical implications for instruction and curriculum development. First, learners of English as a foreign language should learn to recognize the strategies they are using and be advised to select most appropriate techniques for the instructional environment. Successful language learners may serve as informants for students experiencing less success in language learning regarding strategies, techniques, and study skills. Through monitoring each other, students can take an active part in not only learning but also teaching.

Second, teachers can become more aware of the learner strategies and styles that their students are (and are not) using so that teachers can develop teaching styles and strategies that are compatible with their students' ways of learning.

Third, teachers can help students identify their current learning strategies by means of a variety of data collection methods; surveys, one-on-one and group interviews, diaries, think-aloud data or other means. Teachers need to know the advantages and disadvantages of each method.

Fourth, language curricula, materials and instructional approaches can incorporate diversified activities to accommodate the various characteristics of the learners found in the foreign language classroom. In addition, use of appropriate learning strategies can enable students to take responsibility for their own learning by enhancing learner autonomy, independence and self-direction (Dickinson, 1987). These factors are important because learners need to keep on learning when they are no longer in a formal classroom setting (Oxford & Crookall 1989). Unlike most other characteristics of the learner, such as aptitude, motivation, personality, and general Cognitive styles, learning strategies are teachable. Thus teachers can help their students learn quicker, easier, and more effective by weaving learning strategy training into regular classrooms.

References

Abraham, R. & Vann, R. (1987). Strategies of two language learners: a case study. In A. Wenden & J. Rubin (eds.), *Learner Strategies in Language Learning*. Englewood Cliffs: Prentice/Hall.

Abraham, R. & Vann, R. (1996). Using task products to assess second language learning processes. *Applied Language Learning, 7 (1-2), 61-89.*

Akbari, R. (2001). *The Relationship between the use of language learning strategies by Iranian intermediate university students.* Unpublished PhD dissertation. Isfahan: Isfahan University.

Anderson, N. (1989). *Reading comprehension tests versus academic reading: What are second language readers doing?* Unpublished doctoral dissertation, The University of Texas at Austin, Austin.

Appel, J. (1989). Humanistic approaches in the secondary School: how far can we go? *ELT Journal, 43(4), 261-267.*

Arnold, J. (1998). Towards more humanistic English. *ELT Journal, 52(3), 235 241.*

Atkinson, D. (1989). Humanistic approaches in the adult classroom: an affective reaction. *ELT Journal, 43(3), 268-273.*

Auerbach, E. & Paxton, D. (1997). It's not the English thing: Bringing reading research into the ESL classroom. *TESOL Quarterly. 32(2), 237-261.*

Bell, M. (1995). *Guidelines for the evaluation of TAFE programmes*. Australia: Technical and Further Education.

Bernhardt, E. (1991). *Reading development in a second language: theoretical, empirical and classroom perspectives*. Norwood, NJ: Ablex.

Biggs, M. (1988). In R. Schemeck (ed) *Learning strategies and learning styles*, New York: Plenum Press.

Bremner, S. (1999). Language learning strategies and language proficiency: Investigating the relationship in Hong Kong. *Canadian Modern Language Review. 55, 490-515.*

Brown, H. (1994). *Teaching by principles*. Englewood Cliffs, NJ: Prentice Hall.

Brown, H. (1994). *Teaching by principles: an interactive approach to language pedagogy.* Upper Saddle River, NJ: Prentice Hall Regents.

Carrell, P. (1985). Facilitating ESL reading by teaching text structure. *TESOL Quarterly, 19, 727-752.*

Carrell, P. (1988). Interactive text processing: Implications for ESL and second language classrooms. In P. Carrell, J. Devine, & D. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 239-259). Cambridge, UK: Cambridge UP.

Carrell, P. (1991). Second language reading: reading ability or language proficiency*? Applied Linguistics, 12(2), 159-79.*

Carrel, P. (1992). Awareness of text structure: Effects on recall. *Language learning, 42, 1-20.*

Carrell, P., & Eisterhold, J. (1983). Schema Theory and ESL Pedagogy. In P. Carrell, J. Devine, & D. Eskey (Eds.), *Interactive approaches to second language reading*. (pp. 73-92). Cambridge: Cambridge University Press.

Chamot, A. & El-Dinary, P. (1999). Children's learning strategies in language immersion classroom. *Modern Language Journal, 83, 319-338.*

Chamot A. &, Küpper, L. (1989). Learning strategies in foreign instruction. *Foreign Language Annals, 22, 13-24.*

Chastain, K. (1988). *Developing second language skills: theory and practice*. New York: Harcourt Brace.

Chen, I. & Graves, H. (1995). *Language learning strategies used by high and low English proficiency students in a technology college*. Unpublished thesis, National Changhua University of Education, Changhua, Taiwan.

Clark, R. & Silberstei, C. (1977) Teachers' thinking. In P. Peterson, & H. Walberg (Eds.). *Research on Teaching: Concepts, Findings, and Implications*. Berkeley, California: McCuthran.

Clark, R. & Silberstein, C. (1977). Toward a realization of psycholinguistic principles in the ESL reading Class. *Language Learning, 27, 335-154.*

Cohen, A. (1990). *Language learning: Insights for learners, teachers, and researchers*. New York: Newbury House/Harper and Row.

Cohen, A. (1998). *Strategies in learning and using a second language*. Harlow, England: Longman.

Cormon, F. (1986). Humanistic activities and teacher motivation. ELT Journal, 40 (4), 178-181.

Cziko, G. (1980). Language competence and reading strategies: A comparison of first and   language oral reading errors. *Language Learning, 30(1), 101-116.*

Dansereau, D. (1978). The development of a learning strategy curriculum. In H. O'Neil, Jr. (Ed.), Learning strategies (pp. 1-29). New York: Academic Press.

Davies, C. (1995). Extensive Reading: an expensive extravagant? *ELT Journal, 4(4), 329-336.*

Dickinson, L. (1987). Self-*instruction in language learning.* Cambridge: Cambridge University Press.

Dreyer, C. & Oxford, R. (1996). Prediction of ESL proficiency among Afrikaans speakers in South Africa. In R. Oxford (ed.), *Language learning strategies around the world: Crosscultural perspectives*, 61-74. Manoa: University of Hawaii Press.

Ehrman, M. & Dörnyei, Z. (1998). *Interpersonal dynamics in second language aquisition*. Thousand Oaks: Sage Publications.

Ehrman, M. & Oxford, R. (1989). Effects of sex differences, career choice, and psychological type on adult language learning strategies. *Modern Language Journal, 73, 1-13.*

El-Dib, M. (2004). Language learning strategies in Kuwait: Links to gender, language level, and culture in a hybrid context. *Foreign Language Annals, 37, 85-95.*

Elley W. (1991). Acquiring literacy in a second language: The effect of book-based programs. *Language learning 41, 375-411.*

Ellis, R. (1986). *Understanding second language acquisition*. Oxford: Oxford University Press.

Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.

Faerch, C. & Kasper, G. (1983). *Strategies in interlanguage communication*. London: Longman.

Farhady, H. (1996*). Research methods in applied linguistic*. Tehran: Payame- noor.

Fillmore, C. (1976). Ideal readers and real readers. In D. Tannen (ed.), *Georgetown University Roundtable on Languages and Linguistics* (1987: 248-270). Washington D. C.: Georgetown University Press.

Flavell, J. (1979). Metacognition and cognitive monitoring: A new area of cognitivedevelopmental inquiry. *American Psychologist, 34, 906-911.*

Gadd, N. (1998). Towards Less Humanistic English Teaching. *ELT Journal, 52 (3), 223-233.*

Goady, J. (1979). A psycholinguistic model of the ESL reader. In R. Mackay, B. Barkman & R.R. Jordan (Eds.), *Reading in a second language* (pp. 5-12). Rowley, MA: Newbury House.

Goh, C. (1996*). Listening Diaries: what they can tell us about second language learning.* A paper presented at the RELC Regional Seminar, Singapore.

Goh, C., & Kwah, P. (1997). Chinese ESL students' learning strategies: A look at frequency, proficiency and gender. *Hong Kong Journal of Applied Linguistics, 2, 39 53.*

Goodman, K. (1967). Reading: A psycholinguistic guessing game. *Journal of Reading Specialist, 6, 126-35.*

Goodman, K. (1985). *Unity in reading*. In Singer and Ruddell (1985). Interest level: Specialist.

Goodman, K. (1993). *Phonics phacts*. Portsmouth, Ntl: itteinemann.

Goodman, K. (1996). On reading. Portsmouth, Ntl: itteinemann

Green, J. & Oxford, R. (1995). A closer look at learning strategies, L2 proficiency, and gender. *TESOL Quarterly, 29, 261-297.*

Grabe, L. (2000). Dilemmas for the development of second language reading ability. Prospect: *A Journal of Australian TESOL, 10(2), 38-51.*

Grellet, F. (1981). Developing reading skills: a practical guide to reading comprehension exercises. In K. Chastain (ed.), *Developing second language skills.* USA: Harcourt Brace Jovanovich, Inc.

Harlow, L. (1988). The effects of the yellow highlighter-second-language learner strategies and their effectiveness: a research update. *The Canadian Modern Language Review, 45, 91-101.*

Hazenberg, S. & Hulstijn, J.H. (1996). Defining a minimal receptive second language vocabulary for non-native university students: An empirical investigation. *Applied Linguistics 17(2),* 145-163.

Jimenez, R., Garcia, G., & Pearson, P. (1996). The reading strategies of bilingual Latina/o students who are successful English readers: Opportunities and obstacles. *Reading Research Quarterly, 31, 90-112.*

Kaylani, M. (1996). The influence of gender and motivation on EFL learning strategies in Jordan. In R. Oxford (Ed.), (1996). *Language learning strategies around the world: Crosscultural perspectives.* National Foreign Language Resource Center. Manoa: University of Hawaii Press.

Kern, R. (1989). Second language reading strategy instruction: its effects on comprehension and word inference ability? *The Modern Language Journal 73, 135- 49.*

Kern, R. (1994). The role of mental translation in second language reading. *Studies in Second Language Acquisition, 16 (4), 441-461.*

Keshavarz, M. & Mobarra, M. (2003). The effects of simplification and elaboration on reading comprehension of Iranian EFL learners. Retrieved October, 24, 2010 from http://www.Sid.ir

Kim, S. (1995). Types and sources of problems in L2 reading: a qualitative analysis of the recall protocols by Korean high school students, *Foreign Language Annals, 28, 1, 49-70.*

Kim, Y. (1995). The effect of gender and learning context on the use of language learning strategies. *English Teaching, 50, 331-345.*

Lachini, K. (1997). The impact of language proficiency on language communication and learning strategies. *Iranian Journal of Applied Linguistic, 2, 35-9.*

Lan, R., & Oxford, R. (2003). Language learning strategy profiles of elementary school students in Taiwan. *IRAL, 41, 339–379.*

Lee, H. (1994). Investigating the factors affecting the use of foreign language learning strategies and comparing the strategy use of EFL and ESL students. *English Teaching. 48, 51-99.*

Lee, L. (1998). Supporting greater autonomy in language learning. *ELT Journal, 52, (4), 282-289.*

McNamara, D. (2004). SERT: Self-explanation reading training. *Discourse Processes, 38, 1–30.*

Mochizuki, A. (1999). Language learning strategies used by Japanese university students. *RELC Journal, 30(2), 101–113.*

Noyuchi, T. (1991). Review of language learning strategies research and its implications. *Applied Language Learning, 4, 25-45.*

Nunan, D. (1988). *Learning strategy preferences by EFL teachers in Southeast Asia.* Paper presented at the 4th International Conference, Institute of Language in Education, Hong Kong.

Nunan, D. (1995a) ATLAS. *Learning-centred communication.* Boston: Heinle & Heinle/International Thompson Publishing.

Nunan, D. (1995b). Closing the gap Between learning and instruction. *TESOL Quarterly, 29(1), 133-158.*

O'Malley, J. & Chamot, A. (1987). The impact of interaction on comprehension. *TESOL Quarterly, 21, 737-758.*

O'Malley, J. & Chamot, A. 1990: Learning strategies in second language Acquisition. cambridge: Cambridge University Press.

O'Malley, J., Chamot, A., Stewner-Manzanares, G., Kupper, L., & Russo, R. (1985). Learning strategies used by beginning and intermediate ESL students. *Language Learning, 35* (1), 21-46.

Oxford, R. (1990). *Language learning strategies: what every teacher should know.* New York, Newbury House Publishers.

Oxford, R. (1993). Research on second language learning strategies. *Annual Review of Applied Linguistic 23, 175-187.*

Oxford, R. (Ed.) (1996). *Language learning strategies around the world: cross-cultural perspectives.* Honolulu, HI: Second Language Teaching & Curriculum Center, University of Hawaii.

Oxford, R. & Burry-Stock, J. (1995). Assessing the use of language learning strategies worldwide with ESL/EFL version of the strategy inventory for language learning (SILL). *System, 23(1), 1-23.*

Oxford, R. & Crookall, D. (1989). Research on language learning strategies: methods, findings, and instructional issues. *The modern Language Journal, 73, 4, 404 19.*

Oxford, R., Ehrman, M. & Kupper, L. (1993). Instructional implications of gender diffrences in language learning styles and strategies. *Applied Language Learning, 4, 65-94.*

Oxford, R. & Ehrman, M. (1995). Adults' language learning strategies in an intensive foreign language program in the United States. *System, 23, 359-386.*

Oxford, R. & Nyikos, M. (1989). Variables affecting choice of language learning strategies by university students. *Modern Language Journal, 73, 292-300.*

Park, Young-Ye. (1999). An analysis of interrelationship among language learning strategies, learning styles, and learner variables on university students. *English Teaching, 54(4), 281-308.*

Parry, K. (1991). Building a vocabulary through academic reading. *TESOL Quarterly, 16(2), 185-194.*

Phillips, V. (1991). A look at learner strategy use and EFL proficiency. *TESOL Quarterly, 3, 57-67.*

Politzer, R. L. (1983). An exploratory study of self reported language learning behaviors and their relation to achievement. *Studies in Second Language Acquisition, 6(1), 54-68.*

Politzer, R. & McGroarty, M. (1985). An exploratory study of learning behaviors and their relationship to gains in linguistic and communicative competence. *TESOL Quarterly, 19(1), 103-123.*

Pressley, M. & McCormick J. (1995). *Calling education to account.* London: Heinemann and Open University.

Reiss, M.b(1983). Helping the unsuccessful language learner. Modern *Language Journal, 65(2), 121-128.*

Reiss, M. (1985). The good language learner: another look. Canadian *Modern Language review 41, 211-523.*

Richards, J., Platt, J., & Platt, H. (1992). *Longman dictionary of language teaching and applied linguistic.* London: Longman.

Richards, J. & Rodgers, T. (1986). *Approaches and methods in language teaching: A description and analysis.* Cambridge: Cambridge University Press.

Rivers, W. (1981). *Teaching English skills.* Chicago: University of Chicago.

Rivers, W., & Temperley, M. (1978). *A practical guide to the teaching of English as a second or foreign language.* New York: Oxford University Press.

Rubin, J. (1975). What can we learn from the good language learner? *Canadian Modern Journal Review 31, 304-318.*

Rubin, J. (1981). Study of cognitive process in second language learning. *Applied Linguistics, 11(2), 117-131.*

Rubin, J. (1987). Learner strategies: Theoretical assumptions, research, history, and typology. In A. Wenden & J. Rubin (Eds), *Learner strategies in language learning,* 15-30, Englewood Cliffs, NJ: Prentice-Hall.

Sarig, G. (1987). High-level reading in the first and in the foreign languages: Some comparative process data. In J. Devine, P. Carrell, & D. Eskey (Eds.), *Research in Reading in English as a Second Language*. Washington, D.C.: Teachers of English to Speakers of Other Languages, 105-120.

Schoonen, R., Hulstijn, J., & Bossers, B. (1998). Metacognitive and language-specific

knowledge in native and foreign language reading comprehension: An empirical study among Dutch students in grades 6, 8, and 10. *Language Learning, 48, 71-106.*

Seliger, H. (1984). Processing universals in second language acquisition. In F. Eckman, L. Bell, & D. Nelson (Eds.), *Universals of Second Language Acquisition*. Rowley, MA: Newbury House, 36-47.

Shamais, W. (2003). Language learning strategy use in Palestine. Tesol-EJ, 7, 41-50.

Sheorey, R. (1998). The state of English and English language teaching in India. *TESOL Matters, 8 (4), 1, 19.*

Sheorey, R. (1999). An examination of language learning strategy use in the setting of ani Variety of English. *System 27, 173-190.*

Sheorey, R. & Mokhtari, K. (2001). Differences in the metacognitive awareness of reading strategies among native and non-native readers. System: *An International Journal of Educational Technology and Applied Linguistics, 29, 431-449.*

Silberstein, S. (1994). *Techniques and resources in teaching reading*. New York: Oxford University Press.

Skehan, P. (1989). *Individual differences in second language learning*. London: Edward Arnold.

Smith, F. (1971).*Understanding reading*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Smith, F. (1982). *Group processes and personal change*. New York: Harper & Row.

Smith, C. (1979). *Vocabulary instruction and reading comprehension*. Hillsdale, NJ: Erlbaum.

Soleimani, M. (2004). *The effect of using language learning strategies on improving listening skill: a case of EFL Learners*. Unpublished M.A. thesis. Isfahan: Isfahan University**.**

Stern, H. (1975). What can we learn from the good language learner? *Canadian Modern Language Review 31, 304-318.*

Stern, H. (1983). *Fundamental concepts of language teaching*. Oxford: Oxford University Press.

Stern, H. (1992). *Issues and options in language teaching*. Oxford: Oxford University Press.

Stevick, E. (1990). *Success with foreign languages*. Prentice Hall International Language Teaching

Tahmasebi, A. (1999). *Vocabulary learning strategies and the level of language proficiency.* Unpublished MA. Thesis , Tehran: Tarbiat Modares University.

Tarone, E. (1983). Some thoughts on the notion of communicative strategy. In C. Faerch & G. Kasper, (Eds), *Strategies in interlanguage communication*. 61-74, London: Longman.

Tudor, I. (1996). *Learner-centeredness as language education*. Cambridge: Cambridge University Press.

Underhill, A. (1989). Process in humanistic education. *ELT Journal 43 (4), 250-260.*

Urquhart, S., & Cyril W. (1998). *Reading in a second language: process, product and practice*. London/New York, Longman.

Wallace, C. (1992). *Reading*. Oxford: Oxford University Press.

Wenden, A. & Rubin, J. (1987). *Learning strategies in language learning*. Englewood Cliffs, N. J.: Prentice Hall.

Yorio, C. (1971). Some sources of reading problems for foreign language learners. *Language Learning, 21(1), 107-115.*

Zarei, G. (2002). A developmental study of EFL reading comprehension and metacognition processes: A constructivist vs. transmissional approach. Unpoblished Ph.D. dissertation, University of Isfahan, Iran.