Are Preferences for Assessment Techniques Related to Learners’ Learning Strategies?

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Abstract. One important area in the field of language assessment which has been favored in recent years is related to the issue of the relationship between learning strategies and different instructions and assessment techniques. In particular, it is not yet clearly known what type and why some assessment techniques are more preferred by learners who tend to use different learning strategies. Thus, this study is devoted to find out the relationships between two categories of learning strategies (cognitive and meta-cognitive) employed by EFL learners on the one hand and EFL learners’ preferences for assessment techniques on the other hand. Data for the study was collected from two inventory questionnaires, Assessment Preferences Inventory (API) and Strategy Inventory for Language Learning (SILL), which were given to 70 adult EFL learners—both men and women—in two institutes in Shiraz who are studying English as their foreign language. The results indicated that learners who used cognitive and meta-cognitive strategies had different preferences for assessment techniques to a large extent. The results

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suggest that not only should English teachers consider their learners’ learning strategies, but also they ought to pay close attention to different assessment techniques which best suit their learners’ preferences.

**Keywords:** Learning strategies, assessment techniques, EFL preferences for assessment techniques.

1. **Introduction**

Increased interest in student-centered learning approaches amongst language educators has led to numerous studies investigating individual language learning strategies (LLS) and their relationship to achievement in learning second/foreign languages. Studies have indicated support for appropriately applied language learning strategies on second/foreign language achievement (Green and Oxford, 1995; Oxford and Nyikos, 1989). Until the 1970s, the majority of L2/EFL research focused on the evaluation of teaching methods and instructional materials. However, since the early 1970s, great emphasis has been placed on the investigation of social, psychological, and affective variables that enhance or hamper L2 success and achievement.

In recent years, the topic of numerous investigations has been learning strategies, which vary among learners and are specific to individual differences of students. In all these studies, it has been proved learning strategies play important roles in students’ learning and achievements. The most general finding regarding the investigation of language learning strategies was that the use of appropriate language learning strategies leads to learners’ improvement in proficiency or their overall achievement or in specific skill areas (Cohen, 1990; O’Malley and Chamot, 1990). 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 and Nyikos, 1989).

Considering the results obtained through these studies, new insights have been achieved about the processes that students should go through for learning, the difficulties they might face in the process of learning and how their varied learning strategies can help them for better learning. Not only are these results crucial for and about learners, but
also they have a great amount of implications for teachers and applied linguists. Moreover, for understanding the students’ achievements after paying attention to this important factor—learning strategies—, we have to make use of assessment techniques. Since assessing these factors differ in great extent, teachers and educational professionals cannot stick to just one assessment technique and therefore have to employ different assessment techniques.

On the other hand, each learner has specific preference for different assessment techniques that are vastly used by their teachers. It can be inferred that learning strategies and preferences for assessment techniques are so interrelated that should be considered as two important factors that can have extreme impact on students’ success. Although it is crucial to take both of these issues into consideration, their complicated relationship is not well understood. Unfortunately, no previous study in the field can be found to address this important issue so far. Defining and employing the relationships between these two factors will help not only learners for having easier and better learning but also their teachers who do their best to construct more efficient learning areas.

The aim of the current study is provide a comprehensive answer to whether learning strategies that are consciously or unconsciously used by EFL learners and their preferences for assessment techniques are related and shed further light on the issue of how these complicated relationships affect learners’ success. Therefore, for having more successful and effective learning and learners, while in planning the learning environment and instructing of the most preferred assessment techniques, all these concepts should be taken into consideration. In this sense, this study builds a bridge between these two important issues, which have been ignored so far.

2. Literature Review

In this part, the definition of both learning strategies and assessment techniques will be presented in various extent followed by their backgrounds and their components. Moreover, a detailed review of research on cognitive and meta-cognitive strategies, which are the subject of this
study, will be stated. In the next part, for making the issue more specific and vivid, the differences between learning strategies and styles will be discussed. Furthermore, due to the fact that learners prefer different kinds of assessment techniques, the last part of this section is titled “preferences for assessment techniques” in which different studies, that are about this subject, are going to be discussed.

2.1 Language learning strategies (LLS)

Second language strategy research dates back to the year 1975. According to Cohen & Macaro (2007), “if there is one article, which can be seen to have announced the birth of language learner strategy research, it was what the good language learner can teach us by Joan Rubin in 1975” (p.26). Since then, various theorists have contributed to the definition of language learning ‘strategies’. The word strategy comes from the ancient Greek word ‘strategia’, which means steps or actions taken for the purpose of winning a war. The warlike meaning of strategia has fortunately fallen away, but the control and goal directedness remain in the modern version of the word (Oxford, 1990).

Thus, planfulness or goal-orientation is an essential part of any definition of “strategy.” In fact, language learning strategies are specific behaviors or thought processes that students use to enhance their own L2 learning. Language learning strategies are defined as specific methods or techniques used by individual learners to facilitate the comprehension, retention, retrieval and application of information for language learning and acquisition (Oxford, 1990). Oxford (1990) 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 (p. 8).

A more detailed explanation of language learning strategies indicates that these strategies are specific methods or techniques consciously used by individual learners to facilitate language learning and acquisition (Oxford, 1990). Research into strategies is also important because they
are readily teachable (Oxford and Nyikos, 1989). Based on these discussions, it is believed that certain characteristics do exist for LLSs. Oxford (1990) describes these characteristics as features which:

1. Contribute to the main goal, which, for many learners, is communicative competence.

2. Allow learners to become more self-directed and independent learner. A given strategy is neither good nor bad; it is essentially neutral until the context in which it is used is thoroughly considered. Moreover, a strategy is useful if the following conditions are present:
   (a) The strategy relates well to the L2/EFL task at hand,
   (b) The strategy fits the particular student’s learning style preferences to one degree or another, and
   (c) The student employs the strategy effectively and links it with other relevant strategies.

Strategies that fulfill these conditions “make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (Oxford 1990, p. 8). Learning strategies can also enable students to become more independent, autonomous, lifelong learners (Allwright, 1990). Yet students are not always aware of the power of consciously using L2 learning strategies for making learning quicker and more effective (Oxford & Nyikos, 1993). Research has shown that strategies can be taught and when applied do improve achievement levels (O’Malley, 1985). Skilled teachers help their students develop an awareness of learning strategies and enable them to use a wider range of appropriate strategies.

In the last decade, researchers in second or foreign language acquisition (e.g., O’Malley & Chamot, 1990; Oxford, 1990; Wenden, 1986) have been attempting to provide an empirical basis for learning strategies. Studies dealing with individual differences in the learning process have focused on such questions as what makes a good language learner and why some students develop proficiency more quickly and easily than others do. In the L2/TL arena, early studies of so-called “good language learners” (Naiman, Fröhlich, Stern, & Todesco, 1975; Rubin, 1975) determined that such learners consistently used certain types of learning
strategies, such as guessing meaning from the context. Later studies found that there was no single set of strategies always used by “good language learners,” however. For example, Rubin (1975) stated the good language learner is a willing and accurate guesser, has a strong motivation to communicate, is often not inhibited, is prepared to attend to form, practices, monitors his own speech and the speech of others, and attends to meaning.

On the basis of such findings, it was hypothesized that if less successful learners are taught how to use these types of strategies (i.e., if they learn how to learn), they become more effective and independent learners. Those studies found that less able learners used strategies in a random, unconnected, and uncontrolled manner (Abraham & Vann, 1987; Chamot et al., 1996), while more effective learners showed careful orchestration of strategies, targeted in a relevant, systematic way at specific L2 tasks. The observations made by L2/EFL researchers about the differences in learning among L2/EFL learners have motivated second language acquisition (SLA) researchers to explore the sources of these differences with the objective of providing instruction that facilitates learning.

In an investigation by Nunan (1991), he stated that learners that are more effective differed from less effective learners in their greater ability to reflect on and articulate their own language learning processes. In a study of learners of English in Puerto Rico, students that are more successful used strategies for active involvement more frequently than did less successful learners. Furthermore, Oxford (1989) suggested that a more important concern in the choice of language learning strategies might be the purpose for which a language is learned. They introduced a model of qualitative differences in learning. Through the findings of such studies, the researcher hopes to provide empirical evidence to highlight the relationships between students’ language learning strategy use and the targeted factors and further provide implications for pedagogical practice.

In spite of this body of research, serious questions have begun to be raised. The results of instruction in learning strategies have been less than satisfactory (O’Malley & Chamot, 1990). Other researchers noted
that we lack sufficient knowledge about strategies, which unsuccessful learners use. Oxford (1986) has argued that a greater emphasis needs to be placed on identifying effective second/foreign language learning strategies and teaching students how to use them. Long story short, not enough seems to be known about why students use or do not use certain strategies. It is suggested it is important to investigate the factors affecting student use of strategies so as to ensure greater success when teachers provide learning strategy training to students.

2.1.1 Different categories of learning strategies
Research by Oxford (2002) clearly supports the notion that L2/FL strategies can be classified into “systematic manner.” Language learning strategies have been classified into seven major categories:

1) Cognitive strategies (identifying, retention and storage of learning material as well as retrieval, rehearsal, and comprehension),

2) Meta-cognitive strategies (preparing and planning, identifying, monitoring, orchestrating, and evaluating strategy use),

3) Mnemonic or memory-related strategies (memorizing strategies),

4) Compensatory strategies (circumlocution strategies such as using a word you do know to describe the meaning of a word or phrase you do not know),

5) Affecting strategies (strategies for interacting with others), and

6) Self-motivated strategies (self-encouragement, relaxation, and meditation, eliminating negative influences, creating positive influences).

Oxford (1990, 2001) refers to the first six of these categories, while other researchers (Chamot & O’Malley, 1994) use a fewer number. Oxford (1990) classified language learning strategies into direct strategies (memory, cognitive, and compensation), and indirect strategies (meta-cognitive, affective, and social).

Oxford outlined direct strategies as follows:

(1) Memory-related strategies, also known as mnemonics, help learners link one L2 item or concept with another but do not necessarily involve
deep understanding. Memory strategies are divided into four sets: Creating mental images, applying images and sounds, reviewing well, and employing actions.

(2) Cognitive strategies enable the learner to manipulate the language material in direct ways, e.g., through reasoning, analysis, note-taking, summarizing, synthesizing, outlining, reorganizing information to develop stronger schemas (knowledge structures), practicing in naturalistic settings, and practicing structures and sounds formally. Cognitive strategies, which may vary from repeating to analyzing expressions to summarizing, have a unified function, namely to manipulate or transform the target language by the learner. Cognitive strategies fall into four sets: Practicing, receiving, and sending messages, analyzing and reasoning, and creating structure for input and output.

(3) Compensatory strategies (e.g., guessing from the context in listening and reading; using synonyms and “talking around” the missing word to aid speaking and writing; and strictly for speaking, using gestures or pause words) help the learner make up for missing knowledge.

While indirect strategies were outlined as follows:

(1) Meta-cognitive, which means 20 beyond or with cognitive, provides learners with ways to coordinate their learning. Meta-cognitive strategies are clustered into three sets: centering your learning, planning your learning, and evaluating your learning. Meta-cognitive strategies (e.g., identifying one’s own learning style preferences and needs, planning for an L2/ EFL task, gathering and organizing materials, arranging a study space and a schedule, monitoring mistakes, and evaluating task success, and evaluating the success of any type of learning strategy) are employed for managing the learning process overall.

(2) The affective field, which is extremely hard to describe, refers to emotions, attitudes, and motivations. Affective strategies include three sets: lowering your anxiety, encouraging yourself, and taking your emotional temperature.

(3) Language is a communication that occurs between and among peo-
ple. Thus learning a language involves other people, and appropriate strategies are necessary in this learning process. Social strategies (e.g., asking questions to get verification, asking for clarification of a confusing point, asking for help in doing a language task, talking with a native-speaking conversation partner, and exploring cultural and social norms) help the learner work with others and understand the target culture as well as the language.

Oxford’s model has been used by researchers and teachers around the world. Her Strategy Inventory for Language Learning (1990), based on this model, has been translated into 23 languages, and used in more than 200 dissertations and theses as was used for this article.

2.1.2. Complex relation between meta-cognitive and cognition strategies
Most conceptualizations of meta-cognitive have in common that they take the perspective of higher-order cognition about cognition. There is a higher-order agent overlooking and governing the cognitive system, while simultaneously being part of it. The issue whether cognition and meta-cognitive can be disentangled is not merely an academic one. In fact, meta-cognitive draws on cognition. It is very hard to have adequate meta-cognitive knowledge of one’s competencies in a domain without substantial (cognitive) domain-specific knowledge, such as knowledge about relevant concepts and theories in a domain, about intrinsic difficulties of a domain, and about what is irrelevant. In terms of meta-cognitive skills, one cannot engage in planning without carrying out cognitive activities, such as generating problem-solving steps and sequencing those steps. Similarly, one cannot check one’s outcome of a calculation without comparing the outcome with an estimation of it, or recalculating the outcome in another way.

If meta-cognitive is conceived as (knowledge of), a set of self-instructions for regulating task performance, then cognition is the vehicle of those self-instructions. These cognitive activities in turn are subject to meta-cognitive, for instance, to ongoing monitoring and evaluation processes. This circular process of meta-cognitive and cognitive activities makes it hard to disentangle them in the assessment of meta-
cognitive. Occasionally, meta-cognitive can be observed in students-verbalized self-instructions, such as this is difficult for me, let’s do it step-by-step or “wait, I don’t know what this word means.” Metacognition, however, is not always explicitly heard or seen during task performance. Instead, it has often to be inferred from certain cognitive activities. For instance, doing things step-by-step may be indicative of planned behavior, although self-instructions for planning are not explicitly verbalized. Future research has to differentiate far more precisely between explicitly verbalized meta-cognitive knowledge and self-instructions, cognitive activities that are indicative of meta-cognitive and purely cognitive activity.

2.1.3 Language learning strategies and language styles
Language learning styles and strategies are among the main factors that help determine how -and how well -our students learn a second or foreign language. A second language is a language studied in a setting where that language is the main vehicle of everyday communication and where abundant input exists in that language. A foreign language is a language studied in an environment where it is not the primary vehicle for daily interaction and where input in that language is restricted. There are many definitions of learning styles in the literature. For example, language-learning styles are the general approaches students are predominantly disposed to use in order to learn a new language (Ehrman, 1990).

Of greatest relevance to this methodology book (Danserau, D. F. (1978) is this statement: “Learning style is the biologically and developmentally imposed set of characteristics that make the same teaching method wonderful for some and terrible for others” (p. 3). Hong, E. (1998). thought that learning style “describes a student in terms of those educational conditions under which he is most likely to learn. Learning style describes how a student learns, not what he has learned” (p. 27). Some examples of learning style dimensions: analytic students tend to concentrate on rules, word analysis, and language comparisons and avoid free-flowing communicative activities, while global students prefer conversation to rule-language or analysis (Oxford, 1991).
Visual learners gravitate toward reading, prefer quiet, like to work alone, and need visual backup to oral input. Auditory students are comfortable without visual input and frequently like multiple sources of aural stimulation. Kinesthetic students need movement, and tactile students want to manipulate real objects in the classroom; for both kinesthetic and tactile groups, sitting at a desk for very long can be detrimental to learning. In short, Learning styles generally operate on a continuum or on multiple, intersecting continua. For example, a person might be more extraverted than introverted, or more closure-oriented than open, or equally visual and auditory but with lesser kinesthetic and tactile involvement. Teachers can actively help students “stretch” their learning styles by trying out some strategies that are outside of their primary style preferences.

On the other hand, learning strategies are defined as “specific actions, behaviors, steps, or techniques—such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult language task—used by students to enhance their own learning” (Scarcella & Oxford, 1992, p. 63). When the learner consciously chooses strategies that fit his or her learning style and the L2 task at hand, these strategies become a useful toolkit for active, conscious, and purposeful self-regulation of learning. Yet students are not always aware of the power of consciously using L2 learning strategies for making learning quicker and more effective (Nyikos & Oxford, 1993). Skilled teachers help their students develop an awareness of learning strategies and enable them to use a wider range of appropriate strategies. When left to their own devices and if not encouraged by the teacher or forced by the lesson to use a certain set of strategies, students typically use learning strategies that reflect their basic learning styles (Ehrman & Oxford, 1989; Oxford, 1996).

2.2 Definition of assessment and background

Assessment is any act of interpreting information about student’s performance, collected through any of a multitude of means. The literature on learning and teaching largely suggests that “assessment is at the heart of the student experience” (Brown & Knight, 1994) and that it is “an ongoing process” (Brown, 2004, p.4). It is generally acknowledged that
assessment plays a crucial role in the learning process and, accordingly, on the impact of new teaching methods (Brown et al.). In this sense, as described by Heaton (1975), “both testing and teaching are so closely interrelated that it is virtually impossible to work in either field without being constantly concerned with the other” (p.5).

When teachers perform assessment, they deal with measurement, with the progress the students have made, and they give feedback to the students after diagnosing their learning problems. Further, teachers “provide each student with accurate descriptive feedback source his or her learning” if they prefer assessment for instruction. In recent years, many LT researchers have been concerned with the identification and characterization of individual characteristics that influence variation in performance on language tests. There are two types of systematic sources of variability (Bachman, 1990):

A) Variation due to differences across individuals in their communicative language ability (CLA), processing strategies and personal characteristics; and

B) Variation due to differences in the characteristics of the test method or test tasks.

An important challenge for today’s higher education remains the development and implementation of learning and teaching practices that foster in students skills to acquire and apply their knowledge efficiently, to think critically, analyze, synthesize and make inferences (Segers et al., 2003). Evidence further suggests that students while favoring one approach may vary that approach according to situational factors, one of which has been found to be assessment. Any assessment strategy needs to be efficient in terms of staff time, cost-effective for the organizations concerned and should ensure that learners find the tasks they are set manageable, relevant, and developmental. The assessment tasks need to be integral to the learning process, rather than a subsequent bolt-on and, to ensure this, tutors should be able to concentrate equally strongly on giving feedback and on making evaluative decisions about performance. Any assessment strategy that aims to be inclusive should deploy a variety of methods for assessment (for example written assignments, presentations, reflective accounts and so on), so that the same
students are not always disadvantaged.

The program of assessment chosen needs to be reliable, so that different assessors derive the same grade for similar work (inter-assessor reliability) and individual assessors mark reliably to a defined standard (intra-assessor reliability). This can only be assured when the criteria are clearly understood by all who undertake assessment. An important challenge for today’s higher education remains the development and implementation of learning and teaching practices that foster in students skills to acquire and apply their knowledge efficiently, to think critically, analyze, synthesize and make inferences (Segers, 2003).

In light of the effect, assessment has on students, both as performers and as the objects (and often victims) of the decisions based on the assessment results, it is surprising to witness the paucity of research regarding students’ assessment attitudes and preferences. Moreover, most of the studies that did investigate this issue did not relate it to students’ personal characteristics. This is even more surprising in the view of the fact, that studies regarding the effect on performance of the interaction between assessment format and personal characteristics yielded significant results.

2.2.1 Different assessment techniques

Different types of language tests can be distinguished according to five features:

1) The purpose or purposes for which they are used. These are selection, entrance, readiness, placement, diagnosis, and progress tests.

2) The content upon which they are based like achievement, proficiency, and aptitude tests.

3) The frame of reference for interpreting test results such as norm-reference and criterion reference.

4) The scoring procedure such as subjective or objective.

5) Specific assessment techniques or test methods, for example, multiple-choice, true-false, completion or essay type, dictation, and cloze tests. Since this research is about different assessment techniques, the last category
will be discussed in the rest of this article.

Different assessment techniques that were investigated in this research:

1) Multiple-choice
2) Portfolio assessment (students’ collected work, finished or in progress)
3) Tasks resembling as closely as possible to textbooks’ tasks
4) Written tests with supporting materials (notes and books)
5) Take home exams (in forms of papers or projects)
6) Questions that require drawing conclusions.

2.2.2 Preferences for assessment techniques

Assessment is an important component of learning environments as learning approaches. It explains quantity of students’ achievement and development by measuring both learning process and products. There is a strong relationship among instruction, learning, and assessment processes. Effective assessment of student achievement depends on how they are instructed and how they learn. Therefore, all these concepts should be taken into consideration while planning the learning environment. While planning the learning environment, students’ individual differences should be considered both in instruction and assessment process. For these reasons, recently, the concept of “assessment preferences” has gained importance.

The concept of “assessment preferences” refers to students’ opinions, attitudes, and preferences of assessment methods and their properties. Under the concept of assessment preference, some assessment methods were defined. Recent studies have showed that there is correlation between learning strategies and assessment preferences of students. Students’ assessment styles are changed according to learning approaches and learning strategies they preferred. (Birenbaum, 1970; Entwistle, 2000). Test takers’ characteristics include personal attributes such as age, native language, culture, gender, and background knowledge and cognitive, meta-cognitive, psychological, and social characteristics such as strategy use, motivation, attitude, intelligence, anxiety, and socio-economic status.

Whereas traditional assessment refers to measurement of lower or-
der thinking skills which is mostly focusing on memorization of in-class learning. Short answer tests, matching tests or essay tests which focus on memorization of in-class learning are the examples of traditional assessment methods. On the other hand, complex, constructivist type of test refers to essay items, which require using higher order thinking skills. Defining the relationship between learning approaches and assessment preferences will guide teachers for constructing learning area effectively. Knowing the relationship between these individual differences will help teachers to assess students’ individual differences as well as shape the learning environment depending on those individual differences.

Furthermore, in Iran, there are few studies about assessment preferences and learning strategies that were carried out. Carrying out a study to assess the relationship between learning strategies and assessment preferences will provide important data for teachers and researchers.

3. Research Questions

This study tried to provide concise answers to these questions:

1) Are preferences for Assessment Techniques related to EFL learners’ Learning Strategies?

2) Which assessment technique was more preferred by learners who used cognitive strategies?

3) Which assessment technique was more preferred by learners who used meta-cognitive strategies?

4. Methodology

4.1 Participants

Participants of this study were selected based on a convenience sampling. 100 learners participated in this study but just 30 of the initial participants were removed since they chose the “unsure” item in the questionnaires. All participants were EFL learners and both genders (Male and Female) were involved in this study. They were at different ages (18 and higher) were studying English in two different language
institutes in Shiraz, Iran. The questionnaires were distributed to them in a class time after getting some information about the unknown materials. They were assured that their personal information would be kept confidential and they were free if they did not like to participate.

4.2 Instruments
Two types of paper and pencil questionnaire were employed in this study, namely Assessment Preferences Inventory (API) (see appendix B) and Strategy Inventory for Language Learning (SILL) (see appendix A).

4.2.1 Assessment preferences inventory (API)
The API (Birenbaum 1994) is a 5-point Likert-type questionnaire containing items referring to three content dimensions: assessment form-related dimensions, examinee-related dimensions, and grading and recording. Each item was rated on a 5-point scale indicating the extent to which the student would like to be assessed in that manner, where 1 indicated “to a very small extent” and 5 “to a very large extent”. For the purposes of this study, a revised version was used which included 6 assessment techniques and learners were asked to answer the items of this questionnaire.

In order to indicate learners’ preferences for assessment techniques, the 5-point Likert Scale was collapsed into a 3-point Scale. Learners who chose 4 or 5 were considered as those who preferred a specific assessment technique, those who chose 1 or 2 were regarded as those who did not prefer the assessment techniques while those who selected 3 were discarded from the study.

4.2.2 The strategy inventory for language learning (SILL)
The SILL (Oxford, 1986-1990) was first designed as an instrument for assessing the frequency of use of language learning strategies by students at the Defense Language Institute Foreign Language Center in Monterey, California. The SILL uses a choice of five Likert-scale responses for each strategy described: never or almost never true of me, generally not true of me, somewhat true of me, generally true of me, and always or almost always true of me. The SILL response options are based on the widely used and well-accepted response options of the Learning and
Study Strategies Inventory described by Weinstein, Palmer, and Schulte (1987).

This study dealt only with revised and short form of the questionnaire since only two dimensions of language learning namely cognitive and meta-cognitive were considered.

1. Cognitive strategies, such as reasoning, analyzing, summarizing (all reflective of deep processing), as well as general practicing (14 items).

2. Meta-cognitive strategies, such as paying attention, consciously searching for practice opportunities, planning for language tasks, self-evaluating one’s progress, and monitoring errors (9 items).

A Cronbach’s calculated for this study also revealed an acceptable reliability (0.89).

4.3 Procedure

The participants were given a brief oral instruction on how to deal with the questionnaires in an appropriate way. They completed the SILL and API in class in 45 minutes under the supervision of the regular class instructors under conditions of anonymity and confidentiality. The full descriptive instructions regarding the procedures of administration were provided to and discussed with the instructor of the classes before the administration. Also for many of those who were not able to attend the class, the two types of questionnaires (SILL & API) were sent to complete.

The students were told that there were no right or wrong answers to any question and that their confidentiality was secured and their response would be used for research purposes only. They were also informed that while their participation would not affect their grades, they still had the option not to participate. All students chose to fill out the surveys. With regard to the SILL, students who scored higher in the cognitive part of the questionnaire were classified as cognitive while those who scored higher in the meta-cognitive part of the questionnaire were considered as meta-cognitive.

4.4 Data analysis

Since this study tried to investigate the relationships between learning
strategies EFL learners used and their preferences for assessment techniques, a number of Chi-square analysis were employed to analyze the data.

5. Results

Statistical analyses produced a composite profile of the samples. More than one hundred participants completed the questionnaires, however 30 of them were not included in the analysis because they had chosen “unsure” option within the Likert scale and as a result could not be assigned into a specific category.

5.1 Chi square analyses

In this part, the Chi square analysis for finding the existing relationships between two aspects of learning strategies-cognitive and meta-cognitive-and six assessment techniques will be presented.

5.1.1 Learning strategies vs. preferences for portfolio assessment

![Figure 5.1.1](image)

**Figure 5.1.1:** The relationship between learning strategies and EFL learners’ preference about portfolio assessment.

Chi square analysis indicated a statistically significant relationship between learning strategies (cognitive and meta-cognitive) used by EFL learners and their preferences for portfolio assessment, $2(1, 70) = 21.26$, $< 0.001$. Figure 5.1.1 displays the results.
Table 5.1.1: The relationship between learning strategies and EFL learners’ preference about portfolio assessment

<table>
<thead>
<tr>
<th>Assessment Technique</th>
<th>EFL learners who preferred Portfolio Assessment</th>
<th>EFL learners who did not prefer Portfolio Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cognitive</td>
<td>Meta-cognitive</td>
</tr>
<tr>
<td>Portfolio Assessment</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>43</td>
</tr>
</tbody>
</table>

As this table displays, more than 20 EFL learners who sought meta-cognitive strategies were in favor of portfolio assessment compared to less than 8 learners who used cognitive strategies. In other words, the results indicated that learners who employed meta-cognitive strategies were more in favor of portfolio assessment.

5.1.2 Learning strategies vs. preferences for multiple-choice exams

The results found by Chi square analysis showed statistical significant relationship between learning strategies (cognitive and meta-cognitive) and participants preferences for multiple-choice exams, $x^2(1, 70) = 4.63$, $p < 0.05$.

![Bar chart showing the comparison of learning strategies and preference for multiple-choice exams]

**Figure 5.1.2:** The relationship between learning strategies and EFL learners’ preferences about use of multiple-choice questions in exams

Moreover, according to Table 5.1.2, it can be recognized easily that most learners using meta-cognitive strategies had greater tendency for multiple-choice exams than cognitive learners did in that more than
40 meta-cognitive strategies users preferred multiple-choice exams compared to 17 cognitive strategies users. Therefore, there is a positive relationship between using meta-cognitive strategies and preference for multiple-choice exams.

**Table 5.1.2:** The relationship between learning strategies and EFL learners’ preferences about use of multiple-choice questions in exams

<table>
<thead>
<tr>
<th>Learning Strategies</th>
<th>EFL learners who preferred Multiple choice</th>
<th>EFL learners who did not prefer Multiple choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment Technique</td>
<td>Cognitive</td>
<td>Meta-cognitive</td>
</tr>
<tr>
<td>Multiple-choice questions</td>
<td>17</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>13</td>
</tr>
</tbody>
</table>

**5.1.3. Learning strategies vs. preferences for exam tasks resembling as closely as possible to textbooks’ tasks.**

The relationship between learning strategies (cognitive and meta-cognitive) used by EFL learners and their preferences for assessment techniques which resemble their textbooks’ tasks was found to be statistically significant, $x^2(1, 70) = 6.00, p < 0.05$.

**Figure 5.1.3:** The relationship between learning strategies and EFL learners’ preferences about use of exams’ tasks resembling as closely as possible to textbooks’ tasks.
Table 5.1.3: The relationship between learning strategies and EFL learners’ preferences about use of exams’ tasks resembling as closely as possible to textbooks’ tasks.

<table>
<thead>
<tr>
<th>Assessment Technique</th>
<th>EFL learners who preferred Exam tasks resembling as closely as possible to textbooks’ tasks.</th>
<th>EFL learners who did not prefer Exam tasks resembling as closely as possible to textbooks’ tasks.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cognitive</td>
<td>Meta-cognitive</td>
</tr>
<tr>
<td>Exam tasks resembling as closely as possible to textbooks’ tasks.</td>
<td>39</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>17</td>
</tr>
</tbody>
</table>

As Table 5.1.3. indicates, it is obvious that those learners who used cognitive strategies were more willing to be assessed by questions that are the same as those written in their textbooks’ tasks; that is 39 learners out of 70 (more than half) preferred such exams and 14 learners who used meta-cognitive strategies liked such exams.

5.1.4. Learning strategies vs. preferences for supporting materials in written tests.

Figure 5.1.4: The relationship between learning strategies and EFL learners’ preferences about use of supporting materials in written tests.

The Chi square analysis for examining the relationship between learning strategies (cognitive and meta-cognitive) used by EFL learners and use of supporting materials in written tests showed a statistically significant relationship between these variables, \( x^2(1, 70) = 13.23, p < 0.001 \).
Table 5.1.4: The relationship between learning strategies and EFL learners’ preferences about use of supporting materials in written tests.

<table>
<thead>
<tr>
<th>Learning Strategies Assessment Technique</th>
<th>EFL learners who preferred Written tests with supporting materials</th>
<th>EFL learners who did not prefer Written tests with supporting materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written tests with supporting materials</td>
<td>Cognitive</td>
<td>Meta-cognitive</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>37</td>
</tr>
</tbody>
</table>

According to the Table 5.1.4., not only is the significant relationship crystal clear, but also the preference of learners who used meta-cognitive strategies is so obvious. Only 12 EFL learners who used cognitive strategies selected this kind of assessment technique compared to 37 meta-cognitive learners who used meta-cognitive strategies.

5.1.5. Learning strategies vs. preferences for take home exams

Chi square analysis did not indicate any statistically significant relationship between learning strategies used by EFL learners and their preferences for take-home exams, $x^2(1, 70) = 01.57, p = 0.21$.

![Figure 5.1.5: The relationship between learning strategies and preferences for take home exams](image)

As Table 5.1.5. reveals EFL learners who used both cognitive and meta-cognitive strategies were in great favor of take home-exams in that 57 out of 70 learners (37 cognitive and 20 meta-cognitive) liked to be assessed by such exams.
Moreover, less than 15 EFL learners (6 cognitive and 7 meta-cognitive) preferred not to take their exams home and definitely preferred other types of assessment techniques.

Table 5.1.5: The relationship between learning strategies and preferences for take home exams.

<table>
<thead>
<tr>
<th>Learning Strategies</th>
<th>EFL learners who preferred Take home exams</th>
<th>EFL learners who did not prefer Take home exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment Technique</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take home exams</td>
<td>Cognitive 37</td>
<td>Cognitive 6</td>
</tr>
<tr>
<td></td>
<td>Meta-cognitive 20</td>
<td>Meta-cognitive 7</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>13</td>
</tr>
</tbody>
</table>

5.1.6. Learning strategies vs. preferences for questions that require drawing conclusions.

The chi-square analysis result reveals that there exists a statistically significant relationship between learning strategies EFL learners who used (cognitive and meta-cognitive) and their preferences for questions that require drawing conclusions, $x^2(1, 70) = 0.14, p < 0.05$.

Figure 5.1.6: The relationship between learning strategies and EFL learners’ preferences for questions that require drawing conclusions.

Moreover, according to Table 5.1.6, it can be expressed that those EFL learners who used cognitive strategies liked to be assessed in their exams by the questions in which drawing conclusions were needed (40 learners) compared to EFL learners who made use of meta-cognitive strategies (14 learners).
Table 5.1.6: The relationship between learning strategies and EFL learners’ preferences for questions that require drawing conclusions.

<table>
<thead>
<tr>
<th>Learning Strategies</th>
<th>EFL learners who preferred Questions require drawing conclusion</th>
<th>EFL learners who did not prefer Questions require drawing conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions require drawing conclusion</td>
<td>Cognitive</td>
<td>Meta-cognitive</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>16</td>
</tr>
</tbody>
</table>

6. Discussions

If it is strongly believed that education should meet each student’s different learning strategies, shouldn’t we beg the answer of the question of why varied assessment techniques would not adjust to learners’ individual preferences? Although some students struggle more and more for each exam, they receive low scores again. Isn’t that due to fixed-form tests?

The present study tried to investigate the correlation between learning strategies and assessment preferences of students. Defining these correlations between learning strategies and assessment preferences can guide teachers for constructing learning area more effectively. Knowing the relationship between these differences would help the teachers while assessing students and their individual differences and shaping the learning environment depending on those differences. In order to shed light on these astonishing findings three research questions were posed.

Research question 1: Are preferences for Assessment Techniques related to learners’ Learning Strategies?

In order to explore whether learning strategies employed by EFL learners and their preferences for assessment techniques are related or not and provide answers into the first research question, a Chi square analysis was applied to data obtained from the two questionnaires, namely Strategy Inventory for Language Learning (SILL) and Assessment Preference Inventory (API). The current study examined the relationship between learners’ preferences for 6 assessment techniques and the learning strategies they employed. Out of 6 assessment techniques investigated, 5 indicated significant relationship with learning strategies employed by
participants. Thus, given the results obtained from Chi square analysis, it can be concluded that there is a statistically significant relationship between EFL learners' learning strategies and their preferences for assessment techniques.

According to the results presented earlier, learners who sought cognitive strategies preferred exam tasks resembling as closely as possible to their textbooks’ tasks (39 participants). Moreover, these learners liked to be assessed by questions that require drawing conclusions (40 participants). Furthermore, EFL learners who used meta-cognitive strategies had a great tendency for multiple-choice questions (40 learners), written tests with supporting materials (37 participants), and portfolio assessment (20 learners).

On the other hand, the results did not show any statistically significant relationship between learners who sought cognitive strategies and their preferences for take-home.

**Research question 2:** Which assessment technique was more preferred by learners who used cognitive strategies?

Given the results of this study, it can be interpreted that EFL learners who sought cognitive strategies were more in favor of tasks resembling as closely as possible to their textbooks’ tasks (39 participants). On the other hand, learners who used cognitive strategies preferred not to be assessed by portfolio assessment in that just 7 out of 42 learners liked this assessment technique. This result can be explained by Koretz, (1994) who stated, “Another problem with portfolio assessment is that it takes time to be carried out properly” as well as Dudley (2001) and Hewitt (2001) who expressed their idea about portfolio assessment “as with all performance assessment formats, it is quite difficult to come up with consistent evaluations of different students’ portfolios”.

Nevertheless, this finding is against the notion of Oxford (1995) who explained

The perceived benefits [of portfolios as an assessment format] are that the collection of multiple samples of student work over time enables us to (a) get a broader, more in-depth look at what the students know and can do; (b) base assessment on more "authentic" work; (c) have a
supplement or alternative to report cards and standardized tests; and (d) have a better way to communicate student progress to parents. (p. 2)

Research question 3: Which assessment technique was more preferred by EFL learners who used meta-cognitive strategies?

The most consistent and significant relationships were evidenced between EFL learners who used meta-cognitive strategies and their preferences for multiple-choice questions, and written tests with supporting materials. Between these two, multiple-choice exams was the most preferred technique in that 40 out of 45 learners preferred this technique.

In a study, high school students tended to prefer the multiple-choice format to the oral test, viewing it as being significant easier, less complex and clearer, more interesting and less tricky and fair. Results favoring the multiple-choice type were also reported by Anderson (1987) with respect to university undergraduates.

In addition, learners preferred multiple-choice questions since they thought they could get better grades. As discussed by Scouller and Prosser (1994), “students’ perceptions, based on previous experiences with multiple-choice questions, lead to a strong association between multiple-choice examinations and the employment of surface learning approaches, leading to successful outcomes.” Traub and McRury explained that written assessments, especially the multiple-choice format, are often preferred because students think they reduce stress, and test anxiety and are easy to prepare for and to take (1990).

The preference for assessment formats with the use of supporting material is in line with the studies of Traub and McRury (1990) in which students prefer easy-to-take and stress reducing assessment formats in which, generally speaking, supports (by means of materials and fellow students) are allowed.

7. Conclusions

The purpose of the current study was to reveal an in-depth relationship between cognitive and meta-cognitive learning strategies used by EFL learners and their preferences for different assessment techniques. The best attempts were made to provide the most comprehensive answers to
the three research questions. Two revised forms of questionnaires were involved: Strategy Inventory for Language Learning (SILL) and Assessment Preference Inventory (API). In addition, more than 100 participants, both male and female, from two English institutes in Shiraz and EFL learners from different countries took part.

After collecting data, the chi square analysis was run through SPSS software. The findings from this study showed that there exists a statistically significant relationship between these two variables, learning strategies and learners preferences for assessment techniques. Evidence from the present study proved that there are statistically significant relationships between these two variables, which have been ignored so far. Regarding the students’ preferences for assessment techniques, the followings can be concluded.

First, students who used cognitive strategies preferred questions that require drawing conclusion. It can be stated that these learners are good at application of the learnt materials more than reproduction. These learners perceived the assessment more as applying, understanding, and analyzing than remembering.

Second, as was presented before these results do exactly agree with the definition of learners who employed cognitive strategies. They preferred questions resembling closely to those they had before since they used problem-solving skills in that they applied the learnt materials with some changes to new situations so to obtain the wanted score.

Third, it can concluded that, to some extent, they used higher order thinking in that they try apply the learnt materials into more complex and constructivist type of tests. Teachers, who use higher order thinking assessment techniques, require their students to apply deep learning approaches which will bring about critical thinking. By using deep learning approaches, learners would be more successful in their future lives.

Fourth is about learners who used meta-cognitive strategies. They preferred multiple-choice questions, and written test with supporting materials. Since multiple-choice questions do not demand the application of learnt materials, it can be expressed that these learners favored reproduction based questions. These learners perceived the assessment more as remembering than applying so by memorizing important mate-
Fifth, simple-multiple choice assessment type refers to require lower order thinking skills and memorization is the most significant one. Using assessment methods, which aim to assess lower order thinking skills, lead students to apply surface learning approaches. Therefore, they just remember the learnt materials for a while and then forget them little by little. Such process cannot be named as learning since it is temporary and not useful for learners’ future.

To conclude, it is hoped that the present study has not only helped make a contribution to a theory of cognitive and metacognitive strategies use and preferences for various assessment techniques, but has also offered some possible ways to look at some theoretical and methodological perspectives about these two important issues.

8. Limitations and Suggestions for Further Research

Although existing research has already investigated numerous variables that might play a part in affecting language learning strategies use and assessment preferences by different age groups of learners, more study is needed, especially in comparison with different age group, and in different contexts for different cultural or social specifics. In addition to the general strategy use on the SILL, language-learning strategies used for specific language tasks should be a focus of future investigation.

For example, future studies could center on any of the following language-area or task-based strategies: vocabulary learning strategies, grammar-learning strategies, test-taking strategies, reading strategies, listening strategies, writing strategies, and speaking strategies (both conversational and oral-presentational). Specific task-based strategy use will allow researchers to either observe, collect or record specific strategies used on authentic tasks in various areas of language learning. However, more studies are needed in the field to consider more fully the implications for young learners. The current study investigated only adults. Do middle and younger grade students who employ these learning strategies have the same preferences for assessment techniques as adults do? What might be the same or different factors that affect their
strategy use and preferences? Additionally, are there any developmental changes in their strategy use and preferences? A longitudinal rather than a cross-sectional study will help provide more insights into such issues.

The types of cognitive and metacognitive strategies in the study were only part of the possible strategies the students might have used during completion of the questionnaires.

Long story short, this study has opened further areas of investigation into the relationship of cognitive and metacognitive strategies used by EFL learners and their preferences for assessment techniques.

First, given the assumption that cognitive and metacognitive strategies in an operational test setting change over time, the construct definition inquiry process is to observe the consistency of test-takers’ use of these strategies at different times in various test method facets. It is recommended that replications of the present study will be carried out.

Second, effects of test methods and text difficulty on cognitive and meta-cognitive strategy use at various English proficiency levels should be examined since levels they might result in different processing of meta-cognitive and cognitive strategies.

The last but not the least suggestion is about the assessment techniques. Since a great number of assessment techniques are used by assessors day by day, it is recommended that more research with assessment techniques other than those used in this study should be conducted in order to reach a comprehensive results in this vast field.
References


Appendix A

A revised version of Strategy Inventory for Language Learning (SILL)

Please check statement of the responses (1, 2, 3, 4, or 5) that tells HOW TRUE THE STATEMENT IS for you. Answer in terms of how well the statement describes you. Do not answers how you think should be or what other people do. There are no right or wrong answers to these statements. Thanks for your kind participation.

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
Part A

1. I say or write new SL/FL words several times. 1 □ 2 □ 3 □ 4 □ 5 □
2. I try to talk like native SL/FL speakers. 1 □ 2 □ 3 □ 4 □ 5 □
3. I practice the sounds of SL/FL. 1 □ 2 □ 3 □ 4 □ 5 □
4. I use the SL/FL words I know in different ways. 1 □ 2 □ 3 □ 4 □ 5 □
5. I start conversations in the SL/FL. 1 □ 2 □ 3 □ 4 □ 5 □
6. I watch SL/FL language TV shows spoken in SL/FL or go to movies spoken SL/FL. 1 □ 2 □ 3 □ 4 □ 5 □
7. I read for pleasure in the SL/FL. 1 □ 2 □ 3 □ 4 □ 5 □
8. I write notes, message, letters, or responses in the SL/FL. 1 □ 2 □ 3 □ 4 □ 5 □
9. I first skim an SL/FL passage (read over it quickly) then go back and read carefully. 1 □ 2 □ 3 □ 4 □ 5 □
10. I look for words that are similar to new words in SL/FL. 1 □ 2 □ 3 □ 4 □ 5 □
11. I try to find patterns in the SL/FL. 1 □ 2 □ 3 □ 4 □ 5 □
12. I find the meaning of an SL/FL word by driving it into parts that I understand. 1 □ 2 □ 3 □ 4 □ 5 □
13. I try not to translate word by word. 1 □ 2 □ 3 □ 4 □ 5 □
14. I make summaries of information that I hear or read in the SL/FL. 1 □ 2 □ 3 □ 4 □ 5 □
Part B

15. I try to find as many ways as I can to use my SL/FL. 

16. I notice my SL/FL mistakes and use that information to help meta-cognitive do better.

17. I pay attention to someone is speaking SL/FL. 

18. I try to find out to be a better learner of SL/FL. 

19. I plan my schedule so I will have enough time to study SL/FL.

20. I look for people I can talk to in SL/FL. 

21. I look for opportunities to read as much as possible in SL/FL.

22. I have clear goals for improving my SL/FL skills.

23. I think about my progress in learning SL/FL.

Appendix B

ASSESSMENT PREFERENCES INVENTORY (API)

This inventory addresses various aspects of the academic achievements. Please read each of the statements and indicate to what extent you would like your achievements assessment to be based on them. Please note that there is no correct or incorrect answer. For each assessment item, indicate to what extent it suits you personally. If a particular item is not applicable to your particular field of study, indicate N/A. for your response use the following key:
To what extent would you want your achievement in the course to be assessed by each of the following methods?

1. N/A  5  4  3  2  1 Multiple-choice exams
2. N/A  5  4  3  2  1 Portfolio Assessment
3. N/A  5  4  3  2  1 Tasks resembling as closely as possible to text books’ tasks
4. N/A  5  4  3  2  1 Questions that require drawing conclusion
5. N/A  5  4  3  2  1 Written tests with supporting materials
6. N/A  5  4  3  2  1 Take home exams