An Investigation of the Relationship between Motivation and Language Learning Strategies

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Abstract

This study investigated the relationship between motivation and the use of language learning strategies by university students. Furthermore, variables such as sex, the level of proficiency were also investigated. The instruments used in the study consisted of: (a) a questionnaire on motivation which was developed by Vallerand et al. (1992), (b) a questionnaire on language learning strategies developed by Oxford (1990), and (c) a TOEFL developed by ETS (Educational Testing service). The results of this study revealed that extrinsic motivation did not correlate meaningfully with the choice of language learning strategies. On the other hand, intrinsic motivation correlated meaningfully with the choice of language learning strategies. Also, there was no difference between males and females in terms of strategy choice and strategy use. Furthermore, the level of proficiency did not make any difference in the type of strategies students used. It was also found out that Iranian learners were intrinsically rather than extrinsically motivated.

Key Words: Motivation, Langauge Learning Strategies, Extrinsic Motivation, Intrinsic Motivation, Level of Proficiency.

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1.Introduction

1.1. Language Learning Strategies

Ehrman and Oxford (1989) suggest that conscious use of appropriate learning strategies typifies good language learners. Strategies, by definition, are "the often conscious steps or behaviors used by language learners to enhance the acquisition, storage, retention, recall, and use of new information (Ehrman and Oxford, 1990).

1980s was the time when researchers continued to identify techniques learners use to facilitate their learning. They analyzed data extracted from a wide range of sources including questionnaires, interviews and "think-aloud" procedures. O'Malley et al. (1985) and Oxford (1990), among others, came up with lists of strategies to assess learners' use of strategies.

1.2. Motivation

Motivation is a factor determining the extent of people's desire to do an activity. A great deal of research has dealt with defining, analyzing, and conceptualizing motivational factors. Many definitions come under the rubic of the term "motivation". Keller (1983:289) indicates that "Motivation refers to the choices people make as to what experiences or goals they will approach or avoid, and the degree of effort they will exert in that respect."

Brown (1987: 117) defines it as: "commonly thought of as an inner drive, impulse, emotion, or desire that moves one toward a particular action." Oxford and Shearin (1994: 12) maintained that "Motivation determines the extent of active, personal involvement in L2 learning."

1.3. Objectives of the Study

Many factors, including cognitive and affective ones influence the use of language learning strategies. Motivation is an affective variable which affects the use of language learning strategies (See, e.g. Ehrman and Oxford 1989, Oxford and Nykios, 1989, Oxford and Ehrman, 1995).

In this study intrinsic/extrinsic approach to motivation has been chosen for investigation. The study aims at finding whether there is any meaningful relationship between different kinds of motivation and language learning strategies. In other words, the purpose is to find out whether students who are intrinsically or extrinsically motivated will choose specific kinds of language learning strategies. Gender, proficiency level will also be investigated to see whether they hold significant with regards to the choice of language learning strategies.

1.5. Research Questions

1. Which strategy is the most commonly used strategy and which one is shunned?

2. Is there any relationship between gender and frequency of strategy use?

3. Is there a relationship between the type of motivation (intrinsic / extrinsic motivation) and the learners' choice of language learning strategies?

4. Is there any relationship between proficiency level and the choice of language learning strategies?

5. Are Iranain learners intrinsically motivated or are they amotivated?

6. Is there any realtionship between degree of motivation and the choice of langauge learning strategies?

1.6. Statement of the Null Hypotheses

The first two questions are descriptive and do not lend themselves to hypothesis testing, but based on the other questions the following null hypotheses can be formulated to be answered by the researcher:

H01: There is no meaningful relationship between gender and frequency of strategy use.

H02: There is no meaningful relationship between the type of motivation and the choice of language learning strategies.

H03: There is no meaningful relationship between the level of proficiency and the choice of language learning strategies.

H04: Among Iranian learners, there is no significant difference in terms of type of motivation.

H05: There is no meaningful relationship between the degree of motivation and the choice of language learning strategies

2.Review of The Related Literature

2.1. Definitions of Language Learning Strategies

Cohen (1998:1) maintains that "the term strategies, in the second-language-learning sense, has come to be applied to the conscious moves made by second-language speakers intended to be useful either in learning or using the second language."

Chamot (1984:71) maintains that "learning strategies are techniques, approaches, or deliberate actions that students take in order to facilitate the learning and recall of both linguistic and content area information."

2.2. Language Learning Strategies

Recent approaches tend to stress the role of the learner as the most important factor in the learning process. Therefore, learner variables such as motivation, aptitude, age, gender, career choice, cultural background, cognitive style, and learning strategies were investigated as the role of the learner received due emphasis. Among these, learning strategy research has been a promising area of research for educators and has experienced tremendous growth.

2.5. Language Learning Strategies: Classification, Assessment, Strategy Training and Successful versus Unsuccessful Language Learning

Interest in the investigation of students' learning strategies is relatively a recent undertaking. But a great body of research is emerging. Learning strategies have seen various classifications. (e.g. Oxford, 1990, O'Malley et al., 1985).

Researchers have employed various techniques and procedures to assess how often the learners use certain strategies. Research has also focused on teachability of

language learning strategies. In other words, if less successful learners naturally opt for less effective strategies, is there any way by which we can ensure effective strategy use by these learners?

Next to consider is the issue of successful versus unsuccessful learners. This is very important since this issue was the very incentive which gave rise to language learning strategies (Nunan, 1995).

2.5.1. Classification

O'Malley et al. (1985) came up with an extensive list of twenty-six learning strategies which fell into three different categories: 1) Metacognitive strategies, 2) Cognitive strategies, and 3) Socio-affective strategies. Another classification scheme for learning strategies has been proposed by Oxford (1990). She divided learning strategies into six groups.

2.5.2. Assessment of Language Learning Strategies

2.5.2.1. Observations

Certain strategies which are mentalistic are unobservable.

There are, however, activities which lend themselves to observation. These activities include cooperating with peers, asking for clarification or verification, and overcoming limitations in speaking.

2.5.2.2. Interviews and Think - Aloud Procedures

These techniques can be used together or separately. Totally unstructured interviews, in which there is no particular questioning technique or no data coding form, are difficult to use because they require one to create all his/her categories for analyzing and interpreting after the interviews. Slightly more structured interviews are easier to handle.

2.5.2.3. Diaries or Journals

Diaries or journals are forms of self-report which allow learners to record their thoughts, feelings, achievements, and problems, as well as their impressions of teachers, fellow students and native speakers.

2.5.2.4. Self-Report Surveys

Self-report surveys are instruments which allow for systematic and written gathering of data on learning strategy use. These surveys vary from less structured to more structured ones.

2.6. Motivation as an Affective Variable Influencing the Choice of Language Learning Strategies

2.6.1. Preliminary

Motivation has always been considered as an important factor in learning. Brown (1987: 114) maintains that "Countless studies and experiments in human learning have shown that motivation is a key to learning."

Vallerand et al. (1992: 1004) also assert that "One of the most important psychological concepts in education is certainly that of motivation."

According to Bandura (1986), motivation is a goal-oriented behavior instigated and sustained by expectations concerning the anticipated outcomes of actions and self-efficacy for performing those actions. Motivation influences how and why people learn as well as their performances (Pintrich and Schunk, 1996).

With regards to the importance of motivation in language learning, a lot of studies have been carried out including Gardner and Lambert, 1972; Lukmani, 1972; Brown, 1987; Crookes and Schmidt, 1991; Dornyei, 1990; Oxford and Shearin, 1994; Dickinson, 1995).

2.6.2. Intrinsic / Extrinsic Motivation Scale

Intrinsic motivation refers to the fact of doing an activity for itself, and the

pleasure and satisfaction derived from participation (Deci, 1975; Deci and Ryan, 1985).Contrary to intrinsic motivation, extrinsic motivation is related to a wide variety of behaviors which are engaged in as a means to an end and not for their own sake (Deci, 1975).

Various Intrinsic/ Extrinsic Motivation Scales have been presented (see, for example, Harter 1981, Gottfried, 1985) but recently Vallerand et al. (1992) provided a scale known as Academic Motivation Scale (AMS) with high school and college versions which have been claimed to tap learners' academic intrinsic and extrinsic motivation. Furthermore, this scale is the most comprehensive measure of the Intrinsic/Extrinsic dichotomy. It also "represents a reliable and valid scale in its own right" (Vallerand et al., 1992: 1016).

So, the present study uses this measure as the instrument to assess the subjects' motivational orientation.

2.6.3. Language Learning Strategies

Language learning motivation helps determine the frequency with which learners use strategies. Motivation was the most significant factor influencing language learning strategy use in a study of 1200 university students (Oxford and Nykios, 1989), and was also strongly related to learning strategy use among 107 high school students of Japanese (Oxford, Park-Oh, Ito and Sumrall, 1993 a).

Oxford and Ehrman (1995) found that SILL (Strategy Inventory for Language Learning) mean correlated positively and significantly with many aspects of the Affective Survey or AS: total motivation (rho=0.44, p<0.005), intrinsic motivation (rho=0.33, p<0.01) and desire to use the language outside class (rho= 0.31, p<0.05). Therefore, the overall use of language learning strategies was linked with rather strong motivation, particularly internally generated motivation, and desire to use the language outside of class. This study was also revealing in that it signified that "users of cognitive strategies for language learning are a confident, positive, highly motivated lot who exhibit strong arousal (p.377). The same study demonstrated that the use of metacognitive strategies was positively correlated with intrinsic

motivation (rho= 0.46, p<0.001). To put it differently, users of metacognitive strategies tended to be internally motivated, self-confident and emotionally energized.

Finally, Guthrie et al. (1996) found that all students who increased in intrinsic motivation during a year increased in strategy use as well.

3. Methods

3.1. Subjects

The subjects of the present study consisted of 100 English students at Allalamah Tabatabaei and Tehran Universities. The sample consisted of available junior and senior students. Both literature and translation students were included. The number of male and female students were 60 and 40 respectively.

3.2. Instrumentation

The three instruments used in the study include the following:

a) a questionnaire on motivation which is called the Academic Motivation Scale,

b) a questionnaire on language learning strategies called SILL (Strategy Inventory for Language Learning); and c) a TOEFL test (Test of English as a Foreign Language).

Below is a full account of the characteristics of each of the instruments.

3.2.1.The Academic Motivation Scale

As part of the instrumentational procedure this study had recourse to a questionnaire which is the college version of a standard motivation scale called Academic Motivation Scale (AMS) (Vallerand et al., 1992). This questionnaire was originally written in French and called French Echelle de Motivation on Education (EME) Scale. The scale consists of 28 items with 12 items tapping students' intrinsic motivation, and 12 items measuring students' extrinsic motivation. The remaining

four items belong to amotivation.

The items are distributed randomly throughout the questionnaire . The questionnaire was developed on the basis of Cognitive Evaluation Theory (Deci and Ryan, 1985).

The original French version was constructed by Vallerand et al. (1989), then translated into English through appropriate methodological procedures by themselves in 1992. It was validated on university students. The results revealed a satisfactory level of internal consistency (R=. 81) and temporal stability over a one-month period (mean test-retest correlation .79).

The researcher translated the questionnaire into Persian, then it was backtranslated by two experts. It was pilot tested with 40 students. The Cronbach alpha turned out to be .94, which is quite satisfactory.

The items in the questionnaire are related to the learners' reasons for going to college. In fact, it had been developed for a more general educational purpose.

The instrument included a 1 to 7 scale for each item showing the extent it corresponded to the learners' reasons for learning English. Scale 1 means that the item does not refer to the learners' reasons <u>at all.</u> Scales 2 and 3 indicate that the reason represented by the items is <u>a little</u> true about the learners. The learners who mark scale 4 show that the item <u>moderately</u> represents their reason for studying English. Scales 5 and 6 with a little difference in degree represent that the item corresponds <u>a lot</u> to the students' reason for learning English. Finally, scale 7 shows that the testee has <u>exactly</u> the same reason mentioned in the item for learning English.

The translated version was administered to the students in case some of the items proved difficult to understand.

3.2.2. The SILL (Strategy Inventory for Language Learning)

Questionnaires or inventories are commonly used to assess the learners' use of language learning strategies. The most recent and complete strategy scale often used around the world at this time is SILL (the Strategy Inventory for Language

Learning).

Primarily, the SILL was 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 Monterrey, California. According to research reports and articles, published in the English language within the last ten to fifteen years, the SILL appears to be the only language learning strategy questionnaire that has been extensively checked for reliability and validated in multiple ways (Oxford, 1996).

As for the SILL, Cronbach alpha has been chosen as the most appropriate reliability index (Oxford, 1996). In general, the ESL/EFL SILL reliabilities have been very high. A number of studies have revealed high reliabilities of the SILL. To name a few, it was .92 with a sample of 255 Japanese university and college learners (Watanabe, 1990), .93 with 332 Korean university EFL learners (Park, 1994), and in the range of .91 to .95 for the 80-item questionnaire (Oxford and Ehrman, 1995, Oxford and Nykios, 1989).

The questionnaire was carefully translated into Persian, then it was revised by some MA students. The pilot testing of the questionnaire with a sample of 40 students revealed satisfactory Cronbach alpha coefficient (r=. 79)

3.2.3. The Language Proficiency Test

This was a TOEFL developed by ETS (English Testing Service). It consisted of 40 grammar items and 50 items about vocabulary and reading comprehension.

3.3. Procedures

3.3.1. Data Collection

The TOEFL and the questionnaires were administered to the students. The test of proficiency was answered within the allotted time. But to avoid a perfunctory job, students took the questionnaires home. Prior to this, they were fully briefed on how to fill out the questionnaires. The questionnaires were collected within a month. Some of them were discarded because they were not completed satisfactorily.

3.3.1. Data Analysis

The items were codified and entered into SPSS program for windows, version 10. A correlational analysis was used to determine whether there was a meaningful relationship between types of motivation and categories of language learning strategies. Descriptive statistics was used to determine the mean and standard deviations in both questionnaires. A paired t-test was run to determine the pattern of motivation among Iranian learners. A t-test was used to see whether there was a difference among males and females in terms of types of strategies they used. Another t-test was run to determine whether high and low motivation groups chose different kinds of language learning strategies.

4.Findings and Results

4.1. Descriptive Statistics

Descriptive statistics aimed at:

a) arriving at an answer to the first research question which stated, "Which strategy is the most commonly used strategy and which one is shunned?"

b) arriving at an answer to the second research question which stated, "Is there any relationship between gender and frequency of strategy use?"

4.1.1. Frequency of the Use of Language Learning Strategies

Comparing the means of the strategies, it turned out that metacognitive strategies were most frequently used (mean=4.04) (See table 4.1). The lowest frequency went to the affective strategies (mean=2.46).

Table 4.1 Frequency of Use for Language Learning Strategies

Strategy Category	Mean	N
Metacognitive	4.04	100
Cognitive	3.34	100
Compensation	3.31	100
Social	3.17	100
Memory	2.84	100
Affective	2.46	100

There is a contrast between this frequency-based strategy ranking and the one which resulted from Oxford and Ehrman's (1995) study, where compensation strategies were the most frequently used category of strategies among 855 adults in an intensive training in a wide variety of languages at the US Department of State.

Oxford et al. (1989) found affective and memory strategies to be receiving the lowest frequencies, while the highest frequencies went to social, metacognitive, cognitive, and compensation strategies.

In Philips' (1990, 1991) study, cognitive, affective, and memory strategies were found to receive the lowest frequency of strategy use. In the same study, metacognitive, social, and compensation strategies had the highest frequency ranking.

4.1.2. Language Learning Strategies Across Gender

By calculating the mean scores of strategy ratings for both males and females, it was found that there were no significant differences between them, although men were slightly better than women. (Table 4.2)

Table 4.2: Grand Mean Scores for both Males and Females Related to Strategy Use

Gender	Grand mean for SILL
Males	27.50
Females	25.66

This finding contradicts the previous research results in the literature which have often shown women to be using more strategies than men (Oxford and Nykios, 1989; Oxford, Park-Oh, and Sumrall 1993; Ehrman and Oxford, 1995; Green and Oxford, 1995).

4.2. Correlational Analysis

4.2.1. Types of Motivation and Language Learning Strategies

To test the null hypothesis, "H01: There is no meaningful relationship between the type of motivation and language learners' choice of language learning strategies.", a correlational analysis was run. As table 4.4 shows, a positive and significant correlation was arrived at between intrinsic motivation and categories of language learning strategies (except for compensation strategies).

Table 4.3. Pearson Correlation between Intrinsic/Extrinsic Motivation and Language Learning Strategies

Strategies Motivation	Metacognitive	Cognitive	Memory	Compensation	Affective	Social
Intrinsic	.27	.24	.28	.03	.20	.20
Extrinsic	.05	.01	.17	-.07	.15	.08

The highest significant correlation belongs to that of memory strategies and intrinsic motivation ($r = .28$, $p = .004$ $p < .01$). Not very high but a statistically significant correlation was found between metacognitive strategies and intrinsic

motivation (r = .27, p = .006, p < .01). This finding is supported by findings of Oxford and Ehrman (1995) who found that metacognitive strategies were positively correlated with intrinsic motivation (r = .46, p < .001).

There was a statistically significant, though little, correlation between intrinsic motivation and cognitive strategies (r = .24, p = .015, p < .05) intrinsic motivation and social strategies (r = .20, p = .04, p < .05) and intrinsic motivation and affective strategies (r = .20, p = .04, p < .05).

No significant correlation was found between intrinsic motivation and compensation strategies.

Extrinsic motivation did not show any significant correlation with strategy categories. In case of compensation strategies, it was even negative (r = -.07, p = .46, p > .01).

Therefore, the above hypothesis is both rejected and accepted.

4.2.2. The Level of Proficiency and Language Learning Strategies

Doing correlational analysis was one way to accept or reject the null hypothesis which stated, "H04: There is no meaningful relationship between the level of proficiency and choice of language learning strategies."

The results showed that TOEFL score correlated negatively with memory strategies (r = -.18), compensation strategies (r = -. 03), affective strategies (r = -.12). It did not have any significant correlations with cognitive strategies (r = .08), and social strategies (r = .008). In this way, the above null hypothesis is accepted.

There is a contrast between these findings and those of Dreyer and Oxford (1996) who, in a regression analysis, demonstrated that the greatest part of the variance in language proficiency was explained by strategy use. In the same token, findings of Oxford and Ehrman (1995) and Green and Oxford (1995), Park (1994) revealed results which are different from the results of this study.

4.3. T-Tests

4.3.1. Total Motivation

An index, total motivation, was arrived at taking the median point into account. Two motivation groups, high and low, were considered.

Using a t-test, the null hypothesis, "H02: There is no meaningful relationship between the degree of motivation and choice of language learning strategies.", was tested. As shown in tables 4.4 and 4.5, this null hypothesis was accepted. Although, there was a little difference in mean scores of high and low motivation groups, no significant difference was revealed between the two groups in terms of strategy choice.

Table 4.4: Descriptive Statistics for Two Motivation Groups

Group Statistics

Motivation		N	Mean	Std.Deviation
Memory	low	50	24.7800	4.9910
	High	50	26.4000	4.9239
Cognitive	low	50	46.0800	7.0214
	high	50	47.6400	7.0934
Compensation	low	50	20.2000	3.6701
	High	50	19.5800	4.0713
Metacognitive	low	50	35.7400	4.0497
	High	50	37.000	5.1824
Affective	low	50	14.2000	3.4700
	High	50	15.4000	4.3378
Social	low	50	18.4400	3.7534
	High	50	19.6600	4.7664

Table 4.5. T-Test for Low and High Motivation Groups Related to the Choice of

Language Learning Strategies

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	T	df	Sig. (2-tailed)
Memory	.217	.642	-1.634	98	.105
Cognitive	.071	.790	-1.105	98	.272
Compensation	.231	.632	.800	98	.426
Metacognitive	2.054	.155	-1.355	98	.179
Affective	2.070	.153	-1.528	98	.130
Social	1.546	.217	-1.422	98	.158

There is a contrast between the findings of this study and those of Oxford and Nykios' (1989) study who found that the more motivated the students were, the more strategies of all kinds they used.

4.3.2. Gender and the Choice of Language Learning Strategies

Another t-test was run to test the null hypothesis which stated, "H03: There is no meaningful relationship between gender and choice of language learning strategies." The results obtained did not reject the above null hypothesis. Table 4.6 shows that there is a little difference between males and females in terms of strategy choice.

Table 4.6. Descriptive Statistics for Males and Females Related to the Choice of Language Learning Strategies

Sex		N	Mean	Std.Deviation
Memory	female	40	26.2750	5.1837
Male		60	25.1333	4.8624
Cognitive	female	40	47.1500	6.7503
Male		60	46.6667	7.3177
Compensation	female	40	20.6500	3.8601
Male		60	19.3833	3.8227
Metacognitive	female	40	36.2750	3.8563
Male		60	36.4333	5.1728
Affective	female	40	14.8000	3.7567
Male		60	14.8000	4.1120
Social	female	40	19.9000	3.6711
Male		60	18.4833	4.6340

But the results obtained from t-test analysis (Table 4.8) are more revealing in that they show there is no significant difference between males and females in terms of strategy choice.

The review of the related literature suggests different findings. For example, Oxford and Nykios (1989) found that women used general study strategies and formal rule-related practice strategies-significantly more often than men.

Table 4.7. T-Test for Males and Females Related to the choice of Language Learning Strategies

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	T	df	Sig. (2-tailed)
Memory	.001	.976	1.120	98	.265
Cognitive	.061	.805	.334	98	.739
Compensation	.021	.885	1.617	98	.109
Metacognitive	3.200	.077	-.165	98	.869
Affective	.291	.591	.000	98	1.000
Social	1.126	.291	1.623	98	.108

The findings of Maccoby et al. (1974) suggest that women use more social strategies. The fact that women are inclined to use more social strategies is also supported by research findings of Oxford (1993).

Oxford, Park-oh, Ito, and Sumrall (1993) maintained that the three strategies: cognitive, social, and memory were used differently by men and women.

Ehrman and Oxford (1989) discovered significant gender differences in the following strategy classifications: general study strategies, strategies for authentic language use, strategies for searching for meaning and communicating meaning, and metacognitive or self-management strategies.

4.3.3. Patterns of Motivation

To test the null hypothesis, "HO5: Among Iranian learners, there is no significant difference in gender in terms of type of motivation.", a paired t-test was performed.

The null hypothesis was rejected. Both descriptive statistics (Table 4.8) and paired t-test (Table 4.9) showed that there was a significant difference between

males and females in terms of type of motivation.

The descriptive statistics calculated for intrinsic motivation and extrinsic motivation types as shown in table 4.9, yielded the means of 53.88, 44.42 and SDS of 16.24, 16.57 for each of them respectively. The mean of amotivation was very small (4.45), so it was overlooked.

Table 4.8. Descriptive Statistics for Two Types of Motivation

Subscale	N	Mean	SD
Intrinsic	100	53.88	16.24
Extrinsic	100	44.42	16.57

As can be seen in table 4.9 , the t-value of a paired t-test showed a significant difference between the means of the two categories (Intrinsic Motivation and Extrinsic Motivation).

So, the findings of this procedure prove that Iranian EFL learners are intrinsically motivated.

Table 4.9. A Paired T-Test for Intrinsic/ Extrinsic Motivation Categories

	Paired Differences		T	df	Sig. (2-tailed)
	Mean	Std.Deviation			
extrinsic-intrinsic	-9.4600	16.1185	-5.869	99	.000

5.Conclusions

5.1. Conclusions

The following conclusions can be drawn from the study:

There is not necessarily a meaningful relationship between the degree of motivation and choice of language learning strategies.

Despite the extrinsic motivational orientation, Iranian EFL learners are intrinsically motivated.

Gender differences are not really significant. Both men and women equally make use of language learning strategies.

Extrinsic motivation is not associated with the use of language learning strategies.

Proficiency score does not make a difference in the choice of language learning strategies.

Intrinsic motivation is significantly correlated with the choice of language learning strategies.

Some strategies are more frequently used than the others which necessitates prioritizing teaching sequences, with the most frequent strategies receiving more emphasis than the least frequent strategies.

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