Motivation, Integrativeness, Organizational Influence, Anxiety, and English Achievement: Evidence from a Military University

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Abstract: *This study investigated the effect of motivational factors on English achievement in an intensive English course. The participants consisted of 164 Iranian male military staff, aged from 20 to 30. The participants filled a translated and adapted version of the mini-Attitude Motivation Test Battery (α=.70). Factor analysis of the questionnaire yielded four principal variables namely, motivation, integrativeness, organizational influence, and anxiety. Descriptive statistics indicated that the military staff were highly motivated in learning English and had low English learning Anxiety. It also suggested that the military organization was not so much supportive in learners' studying English. Furthermore, path analysis indicated that integrativeness predicted the motivation to learn English positively, and that motivation was a positive predictor of English achievement, whereas organizational influence was a negative predictor of English achievement. This study confirmed that motivation is the single most influential factor of language learning achievement, all other things being equal. The wider concluding argument of this paper is that motivation and its constructs are context dependent and therefore, any language learning context has its own unique motivational model. Finally, based on the context of language learning a path analytic model of L2 motivation was proposed.*

Keywords: *Motivation, Integrativeness, English Achievement, Military, Path analysis*

1 Introduction

Success in learning a foreign language is influenced by both affective and cognitive factors. One of the most widely accepted affective factors in foreign language learning is motivation. Motivation has been called the "neglected heart of language teaching" (Rost 2006, Introduction: para1). Motivation as a multifaceted construct has been defined in many different ways by different scholars. Dornyei & Otto (1998) argue on the exact definition of 'motivation'. They comment "Although 'motivation' is a term frequently used in both educational and research contexts, it is rather surprising how little agreement there is in the literature with regard to the exact meaning of the concept" (ibid., 117). Despite many discussions on position of motivation in learning additional language, as Oxford & Shearin (1994) put it into words, there is no agreement on the exact definition of motivation. Some researchers interpret it in relation to about the other concepts related to motivation, in other words, "viewing it as no more than an absolute umbrella that hosts a wide range of concepts that do not have much in common" (Dornyei 2001a: 7). Sometimes the discrepancy in results of the conducted studies can be attributed to the different interpretations of the

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concept of motivation and the constructs that relate to it. "Motivation refers to the choice people make as to what experience or goals they will approach or avoid and the degree of the effort they exert in this respect" (Keller 1983, cited in Gardner2005: 3). Gardner's (1985) statement about the concept of motivation related to effort, want, desire, reason of behaviors and the affectivity that associated with learning a second language and has a close link with language learning. "Motivation in the present context refers to the combination of efforts plus desire to achieve the goal of learning the language plus favorable attitudes toward learning the language" (Gardner 1985: 10).That is; motivation in SLA refers to the extent to which the language learner strives to achieve a particular goal or to become an indistinguishable member of the target community. Having the desire to achieve a predetermined goal and making effort to achieve this goal are prerequisite factors of motivation. We cannot say that a person who likes to learn a second language is motivated, but when he/she tries to learn second language and makes an effort to do so, it will be possible to say that the individual is motivated in foreign language learning. Therefore, as Gardner (1985) states, "when the desire to achieve the goal and favorable attitudes toward the goal are linked with the effort or the drive" (p.11) we have a motivated organism. Therefore, the concept of 'motivation' is not a simple construct and cannot be measured only by one measure, for instance, just by likes or dislikes.

Motivation is the most used concept for explaining the failure or success of a language learner (Cheng & Dornyei 2007; Crookes & Schmidt 1991; Gardner 1985; 2001; 2005; Dornyei 1994; Yang 2008; Yu & Watkins 2008; Dornyei & Csizer 2002; Gardner and Lambert 1972; Guilloteux & Dornyei 2008; Skehan 1989; 1991). When it comes to language learning, motivation takes on a more crucial role. Oxford and Shearin (1994) claim that motivation influences the amount of input learners receive in the target language, the type of L2 learning strategies they utilize, the extent they interact with native speakers and the extent they maintain L2 skills after language study is over. Gardner as one of the top authorities in motivation researches proposed his socio-educational model of second language acquisition in 1985. According to Gardner (2008), this model has undergone a number of changes over the years, but there is considerable similarity between the earlier versions and the recent ones. In this model, integrativeness and attitudes toward the learning situation are two correlated variables that have an influence on motivation in second language learning and that motivation influence language achievement. Many of the conducted studies (e.g. Bernaus and Gardner 2008; Masgoret & Gardner 2003, Gardner 2006) have used different measures of Gardner's socio-educational model of second language acquisition. "Although these studies have used different conceptualizations of motivation, they all found relationship between motivation and L2 achievement or other indexes of learning" (Bernaus & Gardner 2008: 387). Different studies focused on different variables of motivations. Of different motivational factors, attitude, integrativeness, instrumental motivation, effort, sense of ability, extrinsic/intrinsic motivation, and anxiety were the most widely used variables in the research conducted to date.

The relationship between Motivation and different measures of L2 achievement can be considered as reciprocal cause-effect relationship. ELLIS (2008) states that "motivation

can result from as well as lead to success in L2 learning" (p.684). Gardner (1985) sees motivation as a causative variable. In a review of a number of studies, Spolsky (1989) suggests that "while grater motivation and attitudes lead to better learning, the converse is not true" (P.153). Williams (1994), presenting a constructive approach to L2 motivation, contends that it is impossible to establish whether motivation leads to successful achievement or whether success leads to higher motivation, or whether it is a mixture of both, or whether both are affected by other factors. Other studies suggested that learners' motivation is strongly affected by their achievement. Henmann (1980) suggested that it was the success that contributed to motivation rather than vice versa and develop the 'Resultive Hypothesis', which claims that learners who do well are more likely to develop motivational intensity and tend to be active in the classroom.

Recently, with the advancement of statistical procedures, Gardner and his colleagues evaluate specific "causal models," demonstrating good indices of fit. As Gardner (2009) suggests, "the basic model treats Integrativeness and Attitudes toward the Learning Situation as two exogenous variables that support Motivation while Motivation and Language Aptitude (when included in the study) are viewed as influences of Second Language Achievement" (p.9). Gardner and his colleagues, moreover, have made use of path analysis and hierarchical linear modeling procedure to test specific aspects of the socio-educational model of second language acquisition, and the effects that individual language classes have on the overall patterns identified. The result suggested that characteristics of the class could influence the validity of the model.

Many conducted studies by Gardner and his colleges used Attitude Motivation Test Battery (AMTB) as the instrument of their study to collect the measures of motivational variables. The early studies intended to explore the impact of isolated individual differences' variables such as language aptitude, L2 motivation, or learning style on L2 achievement. In so doing, the researchers made use of a self-report questionnaire like AMTB, and then processed the data by complex statistical procedures. Gardner (2009) notes that, in that studies the dependent variables were generally measures of achievement in second language, and the independent variables or predictors were various measures of aptitude, attitude and motivation, primarily and other scales forming the AMTB. Many of these studies made use of factor analysis to integrate the items, which measure the same construct and to determine the underlying dimensionality of the variables. The relatively recent studies by Gardner and his colleagues (e.g. Bernaus & Gardner 2008) focus on aggregating scores of independent variables of AMTB construct. Masgoret & Gardner's (2003) meta- analysis of Gardner and his colleague's research conducted to that date demonstrated that *motivation* was by far the highest correlate of achievement followed by integrativeness and attitude toward the learning situation. Furthermore, the meta-analysis suggests that the two orientations (i.e. integrative & instrumental), demonstrated much lower correlations with the integrative orientation tending to be a slightly higher correlate than the instrumental orientation, on average.

Bernaus and Gardner (2008) investigate language teaching strategies, and the effects of these strategies on students' motivation and English achievement between 31 Eng-

lish as a foreign language (EFL) teacher and their students (N=694). Using path analysis, they indicate that "integrativeness, attitude toward the learning situation, and instrumental orientation predict the motivation to learn English, and that motivation was a positive predictor of English achievement, whereas attitudes toward the learning situation and language anxiety were negative predictors of English achievement" (p.387). That is, when students were unit of analysis, the correlation between the measures of *Integrativeness, Attitudes toward the Learning Situation, Motivation, instrumental motivation* and the measure of *English Achievement* all were significant. These patterns of relationships confirmed the predictions of Gardner socio-educational model.

Research on the relationship between motivational variables and measures of L2 learning in Iran, have generally been following Gardner socio-educational model of L2 learning. Sadighi and Maghsudi (2000) investigate the effects of integrative and instrumental motivation of undergraduate Iranian English major students and their English proficiency in terms of Toefl score. A significant difference between the means of the English proficiency scores of the integratively motivated students and the instrumentally motivated ones were reported. The findings suggest that the formers were better than the latter on the Toefl test of English proficiency. In a study by Fazel and Ahmadi (2011), the relationship between instrumental/ integrative motivation and the writing proficiency scores of 245 Iranian IELTS candidates who took the actual IELTS test in Iran was investigated. No statistically significant differences between integratively oriented participants and instrumentally oriented ones as far as their writing performance exam is concerned, were found.

Considering the significance of motivation in second language learning, the prominent focus of this study was to see the relationship between motivational factors and overall English achievement in an intensive English course at a relatively homogenous context. The context was homogenous in a sense that, gender, range of age, native language, language background, language-learning context, occupation, type of carriers and even the uniforms of the participants were almost the same. Finding from this study is directly used to test the predictions of the Gardner's latest socio-educational model (2001) and Bernaus & Gardner's path analytic model (2008) of second language motivation. This model shows that integrativeness and attitude toward the learning situation have an influence on the students' motivation and that motivation, language anxiety and attitude toward the learning situation affect the students' performance on the English tests. To test the predictions of this model following hypotheses were proposed:

$H_1$1: Motivation is a positive predictor of Iranian military staff's overall English Achievement in an intensive English course.

$H_1$2: Integrativeness is a positive predictor of Iranian military staff's overall English Achievement in an intensive English course.

$H_1$3: Organizational Influence is a null predictor of Iranian military staff's overall English Achievement in an intensive English course.

$H_1$4: Anxiety is a negative predictor of Iranian military staff's overall English Achievement in an intensive English course.

2 Method

The current study was conducted to see the relationships between Iranian military staff's motivational factors (i.e. Motivation, Integrativeness, Anxiety, and Organizational Influence) as independent variables, and their English achievement in an intensive English course in terms of the total mean score over the course, as the dependent variable. Since the correlation analysis between variables tells nothing about the cause and effect, to answer the questions and to test the hypotheses of the study, a cause-effect analysis between the dependent variables and independent ones were taken into account.

2.1 Participants

The participants of this study was 164 Iranian military personnel aged from 20-30, from an Iranian military university who took part in an intensive English course at the foreign language center of the university. All of participants were male with Persian as their native language.

2.2 Setting

English is an important requirement for Iranian army officers for a variety of purposes. First, they are supposed to do a variety of missions abroad, and then army commanders and officials need knowledgeable and skillful staff to translate foreign military field manuals, technical manuals in various branches and specialties. To meet these objectives, Foreign Languages Center of Army was established by Native experts before the Islamic Revolution. Based on selection test results, the learners are chosen from different units of the army throughout the country. The course is usually taught in four or five levels depending on the total number of the participants. The course lasts for six months. Classes meet six hours a day, five days per week.

2.3 Instrumentation

2.3.1 Background Information Questionnaire

This researcher-developed questionnaire was used to induce demographic, educational, and academic background of the participants. The items used for this purpose were age of the participants, their experience at army, total hours of English study per week outside of classroom, familiarity with other foreign languages and extra English class.

2.3.2 AMTB and Mini-AMTB

The international version of the Attitude Motivation Test Battery for English as a foreign language (AMTB) is a set of more than 130 test items in which respondents are asked to rank one of three scales: Likert, multiple choices and a semantic differential, which is a list of bipolar scales referring to a pair of antonyms (e.g., weak-strong, unfavorable-favorable,

very low-very high). For the present study, a contextualized and translated version of Mini-AMTB (Gardner & M 1991) was used to determine the motivational factors. The mini-AMTB consists of one item corresponding to each scale on the AMTB. The mini-AMTB uses Semantic differential scaling instead of Liker scale to deduce information from the participants.

Back-translation procedure was used to translate the main questionnaire items. First, a specialist in the field of translation translated it into Persian, and then another specialist translated these items back into English to ensure that the two sets of items are comparable. Both questionnaires were checked out with the third specialist who was fluent both in English and Persian. Cronbach internal consistency reliability for each subtest on the data from the participants to ensure that the reliabilities are comparable to those of the original mini-AMTB calculated for each set of constructs. Table 1 shows the constructs of the questionnaire.

Table1: Categorical structure of the questionnaire of the study

Category 1	English Learning Motivation	7 Items
Category 2	Language Learning Motivation	2 Items
Category 3	Integrative motivation	2 Items
Category 4	Organizational influence	1 Items

The questionnaire used in this study consisted of 12 items with responses based on a 5-point Likert scale, with five indicating "strongly agree" and 1 indicating "strongly disagree". Likert scale, invented by an American psychologist Rensis Likert in 1932, is a way of interpreting qualitative data quantitatively. The most common use of Likert scale is 7-or 5-point scales. A commonly used 5 point Likert scale format is: Strongly disagree: 1, disagree: 2, neither agree nor disagree (no idea): 3, agree: 4 strongly agree: 5. According to INFOSURVE (2006), a web based research team, most researchers agree on the use of the neutral rating while conducting survey research. The following comments have been suggested as the reasons for such preferences: Those who fill the questionnaire may feel neutral about a particular statement, and presenting a scale without a neutral midpoint may lead respondents toward a polarity (negative or positive response). The 5-point Likert scale used in this study assumes an average rating of 3.84 as above neutral and 2.71 below. To make the questionnaire valid and to integrate the items which measure the same constructs, factor analysis was used. Furthermore, to estimate the reliability of the questionnaire, internal consistency measures were computed using Cronbach Alpha method for each domain and for the total domains.

2.4 Procedures

First of all, the participants of the study were selected according to placement test scores. This was to ensure that the participants with the same range of English proficiency were selected for the intended study. To ensure that participants were supplied with enough infor-

mation, they were informed of the procedures and the purposes of the research. Then the background questionnaires were distributed among the participants. After responses given to the questionnaire, those who were not in the age range from 20 to 30 were eliminated from the study. Before distributing the questionnaire, a written permission was obtained from the designer of the questionnaire for the current study. To find a quantitative measure of motivational factors, the contextualized and translated versions of the mini-AMTB were given to the participants of the study (n=164).The total mean scores of military personnel during the course were used as an index of English achievement by the participants. After the data collection procedure, the possible association and the degree of significance between independent variables (Motivation, Integrativeness, Anxiety, and Organizational Influence) and dependent variables (English achievement) were investigated by statistical analyses. Furthermore, through the results of path analysis, it was investigated whether motivational factors were positive/negative/null predictors of the Iranian military staff motivation to learn English.

3 Findings

3.1 Factor Analysis

To determine the number of common factors needed to adequately describe the correlation between the observed variables, and to estimate how each factor is related to each observed variable we made use of factor analysis. The resulting descriptive output of the questionnaire is shown in Table 2.

Table 2: Descriptive Statistics for questionnaire variables

Item	N	Min	Max	Mean	Std.Deviation
Item1	164	1	5	3.10	1.51
Item2	164	1	5	2.85	1.26
Item3	164	1	5	4.17	1.03
Item4	164	2	5	4.41	.82
Item5	164	2	5	4.34	.87
Item6	164	1	5	4.10	.98
Item7	164	1	5	3.78	1.07
Item8	164	1	5	2.83	1.30
Item9	164	1	5	3.61	1.17
Item10	164	1	5	2.44	1.43
Item11	164	2	5	4.41	.73
item12	164	1	5	2.98	1.44
Achievement	164	35	91	67.27	13.85
Valid N (listwise)	164				

Each item has been rated on the same Likert scale (1 to 5), and the standard deviations of the item rating did not vary much. It, therefore, seems reasonable on this occasion to model the covariance matrix.

Following were the stages of factor analysis:

Stage 1

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's test (test of Homogeneity of Variances) of the questionnaire yielded .70. This test suggests that we can do factor analysis if the result is above .50. (Table 3)

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.70
Bartlett's Test of Sphericity	Approx. Chi-Square	851.97
	Df	66
	Sig.	.000

The result of Bartlett's Test (851.97), which was significant at .05, shows that there was a relatively high relationship between the constructs of factors.

Stage 2

In this stage, the communality estimates were calculated before and after factor extraction. Table 4 shows the results of "communalities".

Table 4: Principal component analysis output for questionnaires' variables

Item	Initial	Extraction
1	1.000	.707
2	1.000	.743
3	1.000	.685
4	1.000	.891
5	1.000	.708
6	1.000	.609
7	1.000	.464
8	1.000	.823
9	1.000	.395
10	1.000	.825
11	1.000	.787
12	1.000	.940

In this table:

A) The first column shows the total possible variance of every questionnaire item. This value for all the factors is the highest probability (i.e. 100%).

B) The second column (Extraction) shows the observed variance of every factor. This value fluctuates between (0) and (1). The variables which did not yield the value above .30 were omitted from the analysis.

From this table, we see, for example the low value (. 39) of the variance of item 9 (only 39 %) can be comparatively attributed to the common factors.

The second part (Initial Eigenvalues) arranges the total variance of the factors from high to low.

According to Kaiser Criteria, those factors or components that their Eigenvalues is above 1 should be selected.

Table 5: Principal component analysis output for questionnaire variables

Component	Initial Eigenvalues			Extraction of Squared Loadings			Rotation of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**4.540**	**37.836**	37.836	4.540	37.836	37.836	4.245	35.374	35.37
2	**1.715**	**14.290**	52.127	1.715	14.290	52.127	1.602	13.349	48.72
3	**1.303**	**10.858**	62.985	1.303	10.858	62.985	1.588	13.236	61.95
4	**1.019**	**8.495**	71.480	1.019	8.495	71.480	1.142	9.521	**71.48**
5	.916	7.630	79.109						
6	.831	6.925	86.035						
7	.416	3.468	89.503						
8	.378	3.152	92.655						
9	.357	2.977	95.632						
10	.258	2.151	97.782						
11	.179	1.494	99.277						
12	.087	.723	100.000						

As the percentage of variance shows (Table 5), the first principal component had the highest (37.83) contribution in the model. In other words, the first factor determined 37.83 percent of the total variance. The second principal component had a variance of 1.71 accounting for a further 14% of the variance and so on.

The total "cumulative %" column of the table tells us that around 71 percent of the total variance could be accounted for by the first four components altogether.

For each principal component, the corresponding eigenvalue was plotted on the y-axis. To simplify, we should select the components of which their eigenvalues is more than 1; therefore, four principal factors could be identified.

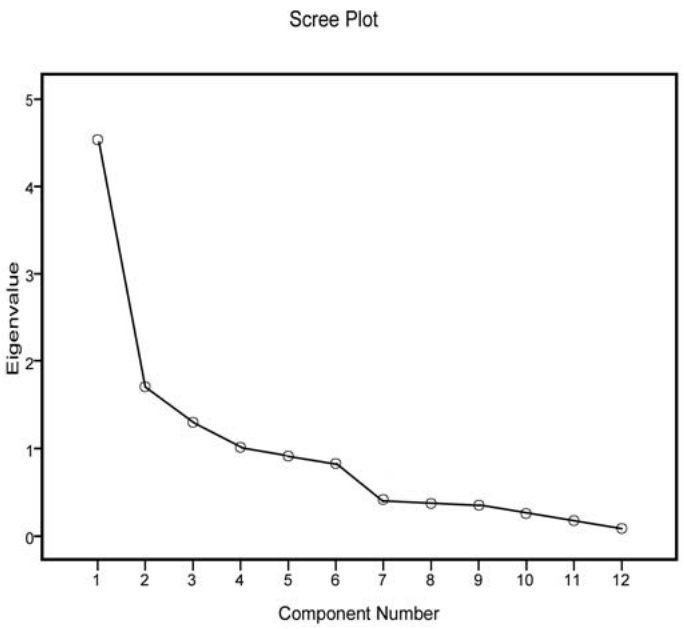

Figure 1: demonstrates this distribution of variance among the components together graphically.

Stage 4

In this stage, the coefficients which specify the linear function of the observed variables for each component were computed before and after rotation. Since for interpretation of the results we used the coefficients after rotation, we consider only the rotated matrix component results (Table 6).

Table 6: Varimax Rotation Component Matrix for variables

	Component			
Item	1	2	3	4
4	**.940**			
11	**.871**			
5	.828			
3	.777			
6	.725			
9	.596			
7	.589			
8		**.896**		
10		**.864**		
12			**.853**	

	Component			
Item	1	2	3	4
11			**.822**	
12				**.959**
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				

Having decided on the four-component solution, we can interpret the components. The first Matrix (column 1) shows high positive correlation with each of the motivational measurements. For example, the correlation between the first component and item11 (i.e. *my motivation to learn English is…*) is. 87; therefore, the first principal factor is simply a weighted average of the Motivation.

The second Matrix (column 2) is highly positively correlated with the two factors: item 8 (i.e. *I worry about speaking English outside of class*) and item10 (i.e. *I worry about speaking in my English class).* Therefore, we labeled this construct as Anxiety.

The third Matrix (column 3) is positively and highly correlated with item1 (*i.e. my motivation to learn English in order to interact with English-speaking people is…*), and item 2 (*my attitude toward English-speaking people is…)*; therefore, we named this construct as Integrativeness.

The last matrix yielded the correlation of .95 with item12 (i.e. my organization encourages me to learn English); therefore, this principal factor can be a good indicator of Organizational Influence.

3.2 Reliability of the Aggregated Variables

The reliability of the questionnaire was assessed through internal consistency reliability. As Table (7) shows the internal consistency reliability for the entire questionnaire yielded .70. Furthermore, the reliabilities of motivation measures were calculated. Cronbach alpha coefficients for four measures ranged from .63 (Integrativeness) to .87 (Motivation).

Table 7: Reliability Statistics for entire questionnaire and the motivation constructs

Construct	Cronbach Alpha	Number of Items
Entire Questionnaire	.70	12
Motivation	.87	7
Integrativeness	.63	2
Anxiety	.72	2

3.3 Path Analysis

The procedures were conducted through the following stages:

Stage 1

In this stage, English Achievement, as the dependent variable and all the other motivational factors (i.e. Motivation, Integrativeness, Organizational Influence, and Anxiety) as independent variables, were inserted into the regressional equation.

Descriptive Statistics

Table 8 shows the quantitative mean of dependent (Achievement), independent variables (INT= Integrativeness, Organizational Influence = OrgInf, Anxiety =ANX, and Motivation=MOT) and the related Standard deviations.

Table 8: Descriptive statistics for the inserted variables

	N	Minimum	Maximum	Mean	Std. Deviation
Achievement	164	35	91	67.27	13.88
MOT	164	1.43	5.00	4.11	.73
INT	164	1.00	5.00	2.97	1.19
ANX	164	1.00	5.00	2.63	1.21
ORGINF	164	1.00	5.00	2.97	1.44
Valid N (listwise)	164				

As descriptive statistics suggests, it seems that the participants were highly motivated in learning English (Mean $_{Mot}$=4.11 ≥. 3.84) and also had low English learning Anxiety (Mean $_{Anx}$=2.63 ≤ 2.71). Moreover, the value of organizational Influence (Mean $_{Org}$=2.97), which is slightly above 2.71, suggests that from military staff point of view, the military organization was not so much supportive of the learners studying English (Mean $_{org}$= 2.97≥ 2.71).

Correlations

Pearson Correlation of .40 (Table 9) shows that there is a positive relationship between English Achievement and Motivation. It also shows that there is a positive relationship between Integrativeness and English Achievement and this correlation is less than that of between Motivation and English Achievement (.40).

Table 9: The Correlations between independent (Integrativeness, Organizational Influence, Anxiety, and Motivation) and dependent (English Achievement) variables

		Achievement	INT	ORG	ANX	MOT
Achievement	Pearson Correlation	1	**.28****	**-.35****	.01	**.40****
	Sig. (2-tailed)		.000	.000	.85	.000
INT	Pearson Correlation	**.28****	1	.03	-.03	.32**
	Sig. (2-tailed)	.000		.72	.65	.000
ORG	Pearson Correlation	-**.35****	.02	1	-**.20***	-.13
	Sig. (2-tailed)	.000	.72		.01	.08

		Achievement	INT	ORG	ANX	MOT
ANX	Pearson Correlation	.01	-.04	-.20*	1	.05
	Sig. (2-tailed)	.85	.65	.01		.51
MOT	Pearson Correlation	**.40****	**.35****	-.14	.05	1
	Sig. (2-tailed)	.000	.000	.08	.51	
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

The results were significant at .05, therefore, we can suggest that an individual with a higher level of motivation and integrativeness tends to have a higher achievement and vice versa. The correlations between Achievement & Integrativeness, and between Integrativeness & Motivation were also significant at .05. This significance suggests that there are relationships between these factors; however, the direction cannot be specified in this stage.

Model Summary

Table 10 shows the summary of model fitness.

Table 10: Model summary (stage 1)

Model	R	R^2	Adjusted R^2
1	**.53**[a]	.28	.20
a. Predictors: (Constant), MOT, ANX, Org, INT			

In this table, the value of coefficient regression (R) shows the fitness of the model; the more R value the more predictive the model. This value (R = .53) suggests that there was a relatively high relationship between the aggregation of the independent (Motivation, Integrativeness, Anxiety, and Organizational Influence) and the dependent (English Achievement) variables. According to this table, Adjusted Regression Square (.28) shows that about .30 of the total variance of English Achievement was dependent on the four independent variables of the study. Therefore, the residual variation (1- .28= .72) suggests that over .70 English Achievement was due to other exogenous variables, which were out of this model (For example, the other independent variables, which were not investigated during this study).

ANOVA

As the results of Analysis of Variances (Table 11) shows the value of F at .05 level was significant (F=16).Therefore, it is suggested that the independent variables are strong predictors of the dependent variable. Alternatively, the regressional model of four independent variables and one dependent variable was an acceptable model.

Table 11: ANOVA results for the first regressional model

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9014.2	4	2253.54	**16**	.000
	Residual	22411.52	159	140.95		
	Total	31425.71	163			
a. Predictors: (Constant), ORG, INT, ANX, MOT						
b. Dependent Variable: Achievement						

Table 12 shows the results of regression coefficient effects of motivational factors as independent variable and English Achievement as the dependent variable.

Table 12: The Coefficients for the first regressional model

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	48.22	6.40		7.53	.000
	MOT	5.70	1.36	**.30**	4.17	.000
	INT	2.23	.82	**.19**	2.68	.008
	ANX	-.67	.78	-.06	-.86	.391
	ORG	-3.11	.66	**-.32**	-4.68	.000
a. Dependent Variable: Achievement						

The standardized coefficients (Beta) help us to determine the contribution of every independent variable on the dependent variable variance. It shows that Motivation as an independent variable had the highest positive beta coefficient (.30). Since the value of *t* (*t*= 4.17) is significant at .05, the first hypothesis is accepted, and we can say that motivation was a positive predictor of English achievement. To interpret we can say that with an increase in one SD unit of Motivation, English Achievement increases .30 of the SD unit.

The value of Beta in the case of Integrativeness (β=.19) was also significant at .05 level, therefore, the second hypothesis was accepted and we could imply that Integrativeness was positive predictor of Iranian military staff's English Achievement.

The value of Beta for Organizational influence at .05 was (β=-.32). Since the value of *t* (t=-4.68) was significant, we can suggest that the third hypothesis was rejected and Organizational Influence was a negative predictor of Iranian military staff's English Achievement.

Considering Anxiety, since the value of *t* was not significant at .05 we can conclude that Anxiety cannot be a predictive of English Achievement, in other words, it is a null predictor of English Achievement and therefore in this stage we could omit it from the path diagram.

Considering the standardized coefficients (Beta) of Independent variables, the following diagram can be proposed (Figure 2).

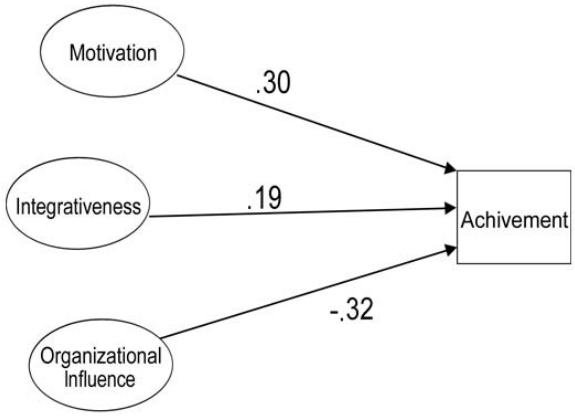

Figure 2

This model suggests that Motivation, Integrativeness, and Organizational Influence directly influence English Achievement. Obviously, while Motivation and Integrativeness as two independent variables were positive predictor of English Achievement, Organizational influence was a negative one.

Stage 2

In this stage, Motivation, which was supposed to have the highest effect on English Achievement, was inserted as the dependent variable and Integrativeness, Organizational Influence, and Anxiety as independent variables of regressional equation, the results of which follow.

Model Summary

Table13 shows the summary of model fitness in the second stage.

Table 13: The Model summary for the second stage

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.36[a]	.13	.11	.68
a. Predictors: (Constant), ORG, INT, ANX				

The multiple coefficient regression of (R = .36) suggests that there is a relatively significant relationship between the aggregation of independent (Integrativeness, Anxiety, and Organizational Influence) and dependent (Motivation) variables at this stage. According to this table, Adjusted Regression Square (R= .11) shows that only .11 of the total variance of Motivation was dependent on the three independent variable of this study. Therefore, the residual variation is due to other exogenous variables, which are out of this model (For example, the other independent variables which are not investigated during this study).

ANOVA

As the results of Analysis of Variances (Table 14) shows, the value of F test statistics (F=8.03) is significant at .05 level. Therefore, it suggests that the independent variables are relatively strong predictor of the dependent variable. This confirms the Adjusted Regression Square results in the model summary, which suggested that only .11 of the total variance of Motivation was dependent on the three independent variable of this study.

Table 14: ANOVA for the second regressional model

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.38	3	3.79	**8.03**	.000[a]
	Residual	75.61	160	.47		
	Total	87.00	163			
a. Predictors: (Constant), ORG, INT, ANX						
b. Dependent Variable: Motivation						

Coefficients

Table (15) shows the results of regression coefficient effects of motivational factors (Integrativeness, Organizational Influence, and Anxiety) as the independent variables and Motivation as the dependent variable.

Table 15: The Coefficients for the second regressional model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.66	.23		15.82	.000
	INT	.20	.04	**.33**	**4.53**	**.000**
	ANX	.02	.04	.03	.46	.642
	ORG	-.07	.03	-.13	-1.85	.066
a. Dependent Variable: Motivation						

The standardized coefficient of Integrativeness (Beta=.33) was significant at .05. It showed that Integrativeness was a positive predicator of Motivation. This confirms that integrative oriented individual is also a motivated one.

The results of Beta coefficients for Organizational Influence and Anxiety were not significant at .05. Therefore, they could be left out from the path analytic model (Figure 3).

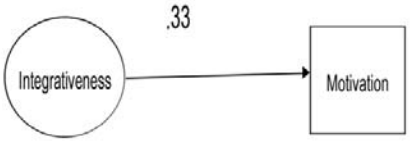

Figure 3

Stage 3

In this stage, Integrativeness as the dependent and Organizational Influence/ Anxiety as independent variables were inserted into the regressional Equation. As Table 16 suggests, the results were not significant at .05, therefore, no meaningful interpretation could be proposed.

Table 16: ANOVA for the third regressional model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.40	2	.20	**.14**	**.870**[a]
	Residual	231.50	161	1.43		
	Total	231.90	163			
a. Predictors: (Constant), ORG,ANX						
b. Dependent Variable: INT						

4 Discussion

Considering the results of the four stages we can now report all of the results in the final path analytic model (Figure 4).

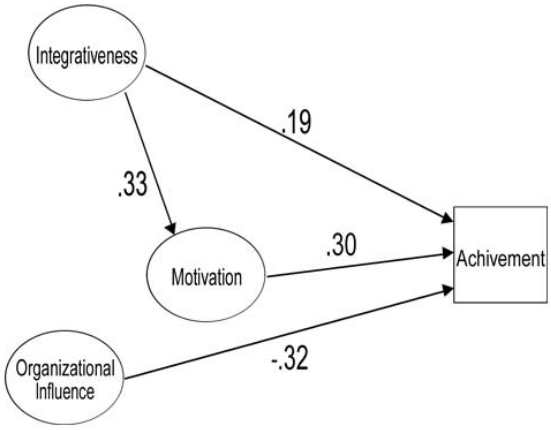

Figure 4

Considering the final path analytic model, we can divide the variables into two categories:

1. The variables which only directly influenced English achievement as a dependent variable:

As the model suggests, the variables Motivation, Integrativeness, and Organizational Influence were the independent variables that affected English achievement directly. The Beta coefficient .30 for Motivation, and the Beta coefficient .19 in the case of Integrativeness suggest that Motivation and Integrativeness as the independent variables were positive

predictors of English Achievement. On the other hand, the variable Organizational Influence with Beta coefficient (-.32) directly influenced English Achievement. Therefore, it was a negative predictor of English achievement. This suggests that, from military staff's point of view, the military organization was not generally supportive and encouraging for studying English and rather it is a debilitative factor.

2. The variables that indirectly influenced English achievement as a dependent variable.

Integrativeness as an independent variable was the only variable that had an indirect effect on English Achievement through Motivation. The Beta coefficient for the effect of Integrativeness on Motivation was .33. This suggests that Integrativeness is a positive predictor of Motivation.

In this study, the path analysis depicted three independent variables, Integrativeness, Motivation, and Organizational Influence. As the model suggests, Integrativeness supports Motivation and Motivation effect English Achievement directly. The results from this investigation can be used to test directly the predictions from the Gardner socio-educational model of L2 acquisition. This model predicted that Integrativeness serves as the foundation of Motivation, whereas Motivation as an Independent variable account for individual differences in L2 achievement. In subsequent formulations, Gardner (2001) hypothesized that language Anxiety could play a direct role in influencing L2 achievement, depending upon the setting and the other variables.

The coefficients linking Motivation to English Achievement was positive, whereas that of Organizational Influence was negative. The positive effect of Motivation was expected, but the negative effect of Organizational Influence was not. The negative effect of Organizational Influence suggests that those military staff that considers the military organization supportive and encouraging for studying English tend to have low English Achievement. To interpret this phenomenon, we can suggest that the military organization was not so much supportive in English learning, or that supports and encouragements given by military organization military staff for learning English not effective.

Close examination of the path analysis reveals that it, in essence, reflects two regression equations. In one equation, Integrativeness is viewed as a predictor of Motivation, whereas in the other equation, Motivation and Organizational Influence are considered predictors of English Achievement. The results confirmed that overall Integrativeness contributed significantly to the prediction of Motivation as indicated by tests of significance, and that Motivation significantly predicted English Achievement. However, none of the coefficients between Integrativeness & English Achievement, Organizational Influence & Motivation, and Anxiety & English Achievement was significant, so simply their paths were omitted from the final path analytic model.

The results of correlation analysis confirmed that the results of path analysis were significant. Table 9 reveals that there is a positive correlation between Integrativeness and Motivation (r=.33). From that table, we can see that the correlation between Motivation and English Achievement was .40, whereas the correlation between Organizational Influence

and English Achievement was -.34. The only correlation that was significant in correlation analysis, but not in path analysis, was the correlation between Integrativeness and English Achievement (r=.28 p< .05). This suggests that Integrativeness and English Achievement were correlated, but the direction of this relationship could not be determined by correlation analysis; however, path analysis indicates that Integrativeness affects English Achievement indirectly through Motivation. Since all of the coefficients in these paths were significant and positive, we can suggest that highly integratively motivated individual tend to gain higher English Achievement. This fact confirms the importance of integrative motivation in SLA even in a social setting such as Iranian Military Foreign Language Center, in which there is practically no opportunity to integrate into the target language community.

The findings from this research did not stray far from the results of the previous findings of research into the role of motivational factors in SLA. This study, like many conducted studies by Gardner and his colleagues (e.g. Bernaus and Gardner 2008), focused on aggregating scores of independent variables of AMTB constructs. The results from this study are also consistent with Masgoret & Gardner's (2003) meta-analysis of Gardner, and his colleague's research conducted to that date who suggested that *motivation* is by far the highest correlate of achievement followed by Integrativeness and Attitude toward the Learning Situation. The only exception was in the case of the role of Anxiety in SLA. Bernaus and Gardner (2008) found that Anxiety is a negative predictor of English Achievement. That is, anxiety directly has a negative effect on English achievement. However, thus study did not yield such straightforward results. This study suggested that Anxiety could not be a significant predicator of either English Achievement or Motivation. In a possible explanation for this discrepancy, we can relate the results to the nature of language anxiety. In our study, the results of descriptive statistics suggested that the participants had relatively low anxiety; therefor, the anxiety level did not have much significant effect on English achievement, either directly or indirectly.

5 Conclusion

This study investigated the effect of motivational factors on English achievement in an intensive English course. Overall, the findings confirmed that motivation is the single best predictor of English achievement, all other things being equal. The results, moreover, indicated that Integrativeness predicted the motivation to learn English positively, and that motivation was a positive predictor of English achievement, whereas organizational influence was a negative predictor of English achievement. Furthermore, this study confirmed that Gardner's socio-educational model of L2 motivation could also be applicable in a relatively homogeneous context such as Iranian military university. The current study also supported the importance of integrativeness as the main focus of many motivational researches in SLA. It suggested that even in a social setting in which practically language learners do not have any opportunity to integrate with target community, integrative motivation can have a significant effect on motivation and therefor on English achievement.

Nevertheless, this study suffered from some limitations and delimitations. First, the nature of gender cannot be taken into account since only males were the participants of the study. The second limitation refers to scaling were used in this study. Whether individual Likert item can be considered as an interval data or whether they should be considered as ordinal data is the subject of disagreement. The third limitation was inherent in self-report based surveys. It is assumed that respondent will make a good faith effort to respond as truthfully as possible .The delimitations of this study could be attributed to the nature of the study. First, this study overlooked the role of the teacher in learning process and that the contributions of the teacher to the course were ignored. The second delimitation of this study related to the design of the study since the motivational factors were observed through cross-sectional design, the process and changes in motivational factors during the course could not be investigated. The last delimitation of this study was that different types of anxiety could not be measured and anxiety was only treated as a debilitative factor.

Based on the present study following suggestions for further research can be proposed:

The results from this study were only based on the military staff's perception of motivational factors. Because teachers have also important role in any L2 learning context, one possible area of research can be the consideration for the role of teachers as well as learners in L2 learning process. Therefore, a more educational friendly model, which would focus on a variety of motivational factors, can be proposed. In the current study, we suggested that motivation, Integrativeness, and their definitions are context dependent, so before conducting any research in the field of motivation and L2 acquisition research, it is highly recommended to operationally define motivation and motivational factors according to the context in which they are being studied. The third suggestion for further study can be doing longitudinal- qualitative studies in a variety of educational settings in general, and in a military context, in particular. Since motivation in such studies is viewed as a process-oriented phenomenon rather product oriented one, the findings would help teachers become aware of the role of motivation in the process of language learning. Finally, other investigations can be conducted with other motivational factors such as attitudes toward learning situation, attitudes toward language learning, and attitudes toward target language community, instrumental motivation, demotivation, and intrinsic/extrinsic motivation with different measures of English achievement or proficiency and with the other introduced L2 motivational theories such as self-determination theory to investigate the effectiveness of the proposed models.

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Appendix: The contextualized version of mini-AMTB questionnaire

The purpose of this questionnaire is to determine your feelings about different aspects of learning English. Each item is followed by a scale that has a label on the left and another on the right, and the numbers 1 to 5 between two ends. For each item, please circle any one of the numbers from 1 to 5 that best describes you.

1. My motivation to learn English in order to communicate with English speaking people is:
   WEAK.....1…….2……3……..4…….5 STRONG
2. My attitude toward English speaking people is:
   UNFAVORABLE.....1…….2……3……..4…….5 FAVORABLE
3. My interest in foreign language is:
   VERY LOW.....1…….2……3……..4…….5 VERY HIGH
4. My desire to learn English is:
   WEAK.....1…….2……3……..4…….5 STRONG
5. My attitude toward leaning English is:
   UNFAVORABLE.....1…….2……3……..4…….5 FAVORABLE
6. My attitude toward my English teacher is:
   UNFAVORABLE.....1…….2……3……..4…….5 FAVORABLE
7. My motivation to learn English for practical purposes (e.g., to get a good job) is:
   WEAK.....1…….2……3……..4…….5 STRONG
8. I worry about speaking English outside of class:
   VERY LITTLE.....1…….2……3……..4…….5 VEY MUCH

9. My attitude toward my English course is:
   UNFAVORABLE.....1…….2……3……..4……5 FAVORABLE
10. I worry about speaking in my English class:
   VERY LITTLE.....1…….2……3……..4……5 VEY MUCH
11. My motivation to learn English is:
   VERY LITTLE.....1…….2……3……..4……5 VEY MUCH
12. My organization encourages me to learn English:
   VERY LITTLE.....1…….2……3……..4……5 VEY MUCH

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