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Therefore, for the sake of economy and avoiding compensation qualifications, it is advised to exclude non-predictor measures (Farsi, Arabic, theology and general English) or to use multiple cutoff scores.

## **VI. Suggestions for Further Research**

Considering the results of this research the following suggestions are made to investigate other aspects of the UEE:

1. In the present study, the criterion against which the UEE was correlated was first-term GPA, or we can say short-term success and some subtests like Farsi were found to have no correlation with short-term success at university, but in the long run they may have correlation with academic success especially for students of translation, therefore another study can be done in which long-term success can be selected as a criterion and its results can be compared with those of this study to find out the UEE's predictive validity with both short-term success and long-term success as criteria.

2. In the present research sex, age and ethnic bias were not considered. A more detailed study of the UEE can shed light on whether the UEE is an equitable means of assessment for younger and older students, for males and females and for candidates from different parts of the country.

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As it was found pre-uni grades improved the prediction rate from ( $R^2=.479$ ) to ( $R^2=.499$ ); therefore, adding pre-uni grades to special English subtest can improve the prediction rate by  $R^2=.02$ .

The results of factor analysis also showed that two important factors were measured by the UEE, the first factor called "cultural" had high loadings on Farsi, Arabic and theology and the second factor called "English language proficiency" had high loadings on general and special English.

In the end, since the overall UEE and pre-uni grades account for 51% of the variation in college grades and almost .479 of this variation belongs to special English subtest, we come to the conclusion that special English subtest is by far the strongest predictor, at least for short-term success at university.

Therefore, by omitting subtests of general English, Farsi, Arabic and theology and also pre-uni grades we lose only 3% of the variation in academic performance.

## **V. Implications**

As the results of this study show subtests of Farsi, Arabic and theology are not much important for success in English major, and since subtest of general English is a kind of CRTs and is devised on the basis of the high school books, its items are easy and predictable by testees, leading to a negative skewed distribution, so it is not a good predictor. Only subtest of special English can be considered as a strong predictor, guaranteeing success at university.

Since pre-uni grades of the subjects have improved the prediction rate they can be considered as the second best predictor.

and also to investigate the predictive power of pre-uni grades at high school which were claimed to be a good predictor. As it was found, because of significant difference between the means of two groups on their UEE scores at the beginning of instructions and also their GPAs at the end of the first term at university, it is proved that the UEE enjoys high predictive power because those done well on the UEE have got higher GPAs than those done poorly on the UEE.

But when we come to correlational studies, we find that the correlation between the UEE scores and GPAs is higher for L-ranking group ( $r=.49$ ) than for H-ranking group ( $r=.004$ ), meaning that the UEE is not predictive for H-ranking group.

Therefore, we are in a dilemma whether the UEE for H-ranking group is predictive or not. Since H-ranking group has achieved significantly higher scores on their UEE and also on their GPAs, it is logical to say that the UEE has an acceptable predictive power; and the reason why validity coefficient of H-ranking group is lower than that of L-ranking group can be the limited spread of grades – skewed distributions - in H-ranking group which can violate the normality assumption of correlation, leading to a low correlation value.

Regression studies also showed that subtests of general English, Farsi, Arabic, and theology had low or no correlation with GPAs, and only special English subtest had a relatively high correlation with academic success. These results may indicate that subtests of Farsi, Arabic, theology and even general English are not as essential as subtest of special English for these groups of students in their academic work.

extracted: factor 1 which has an eigenvalue of 1.56 accounts for 31% of the total variance in the test and factor 2 which has an eigenvalue of 1.22, accounts for 24% of the total variance in the test. Subtests of Farsi, Arabic and theology have high loadings on factor 1, and general and special English have high loadings on factor 2.

Since theology and Arabic in Iran are concerned with religious issues and Farsi with Persian literature, we can call factor 1 "cultural" factor and factor 2 can be called "English language proficiency". As it was found English language proficiency had more relationship with academic success than cultural factor, and cultural factor was found to have a negligible effect on the subjects' success at the end of the first term.

**Table 5: rotated factor analysis of the test scores for the whole sample**

Variable	Factor 1	Factor 2
SPE_ENG	-.213066	.730409*
GEN_ENG	.192955	.796158*
ARABIC	.766834*	.013501
THEOLOGY	.769896*	.083770
FARSI	.553611*	-.22365
Expl, Var	1.569888	1.224010
Prp. Total	.313978	.244802

#### **IV. Discussion**

The major aim of this study was to investigate the predictive validity of the UEE which is used for admission of students into Iranian universities

Thus, we can reduce the number of predictors just to two predictors with almost the same results and little loss of information.

**Table 4: the regression summary for the whole sample**

Regression Summary for Dependent Variable: GPA (data.sta)						
R= .71516334 R <sup>2</sup> = .51145861 Adjusted R <sup>2</sup> = .48551835						
F(6,113)=19.717 p<.00000 Std.Error of estimate: 1.2503						
N=120	BETA	St. Err. of BETA	B	St. Err. of B	t(113)	p-level
Intercept			5.687656	1.931421	2.944804	.003924
SPE_ENG	.641314	.071001	.039131	.004332	9.032410	.000000
GEN_ENG	.072130	.068500	.013075	.012416	1.053001	.294587
ARABIC	.015646	.073051	.001358	.006342	.214186	.830788
THEOLOGY	.062724	.072271	.005944	.006848	.867900	.387289
FARSI	.012303	.068164	.000916	.005074	.180493	.857089
PREUNI_G	.144159	.070853	.154513	.075942	2.034607	.044231

Regression Summary for Dependent Variable: GPA (data.sta)						
R= .70691845 R <sup>2</sup> = .49973369 Adjusted R <sup>2</sup> = .49118213						
F(2,117)=58.438 p<.00000 Std.Error of estimate: 1.2434						
N=120	BETA	St. Err. of BETA	B	St. Err. of B	t(117)	p-level
Intercept			7.779532	1.345177	5.783279	.000000
SPE_ENG	.644894	.068924	.039349	.004206	9.356609	.000000
PREUNI_G	.150263	.068924	.161056	.073874	2.180132	.031250

Regression Summary for Dependent Variable: GPA (data.sta)						
R= .69239513 R <sup>2</sup> = .47941102 Adjusted R <sup>2</sup> = .47499925						
F(1,118)=108.67 p<.00000 Std.Error of estimate: 1.2630						
N=120	BETA	St. Err. of BETA	B	St. Err. of B	t(118)	p-level
Intercept			10.40210	.611525	17.01010	.000000
SPE_ENG	.692395	.066421	.04225	.004053	10.42431	.000000

Finally, to find out what constructs are measured by the UEE, factor analysis was run. As table 5 represents after rotation two factors were



<b>GPA UEE &amp; pre-uni grades</b>	<b>Mean</b>	<b>std. Dv.</b>	<b>r(X,Y)</b>	<b>r<sup>2</sup></b>	<b>t</b>	<b>P H</b>	<b>N</b>
The whole sample	16.6625* 102.9459*	1.74313* 8.64682*	.40281*	.166693*	4.85844*	.00004*	120*
H-ranking	17.2009* 106.6861*	1.44630* 6.83454*	.01724*	.000293*	.14431*	.885661*	73*
L-ranking	15.8262* 97.1367*	1.84710* 7.97666*	.508721*	.258797*	3.963851*	.000261*	47*

To determine the strongest predictor, I subjected the six variables to multiple regression analyses. As table 4 shows The multiple regression computed for the whole sample was  $R^2=.51$ , meaning that we can predict 51% of the variance in GPA by the six independent variables and 49% of the variance is accounted for by other factors. In other words, 51% of the success in GPA is related to the subtests and pre-uni grades and 49% is accounted for by factors such as perseverance, motivation, attitude, personality factors etc. As we can see subtests of general English, Arabic, theology and Farsi have low correlations with their GPAs and their p-values are not significant and only p-values of special English and pre-uni grades are significant ( $p<0.05$ ). Multiple regression computed for special English and pre-uni grades was  $R^2=.499$  which is close to  $R^2=.51$  (six variables), it means that six predictors can be replaced with two predictors with little loss of information.

Then it was decided to run a simple linear regression to predict GPAs just from special English subtest which enjoyed a significant correlation with GPAs.  $R^2$  was found to be almost .479 which was again close to  $R^2=.51$  (with six predictors) and  $R^2=.499$  (with two predictors).

In order to determine whether or not pre-uni grades of English lesson at high school have got any predictive validity, I correlated pre-university grades with GPA and then combination of pre-university grades and the UEE scores with GPA for the whole sample, H-ranking and L-ranking groups respectively.

As table 3 illustrates the correlation between the pre-uni grades and GPA for the whole sample at  $\alpha < .05$  level of significance for the whole sample was statistically significant ( $r = .35$ ). After taking the UEE scores and pre-uni grades into account, the pre-uni grades improved the prediction rate by .01. Table 3 also shows that the correlation coefficients between pre-uni grades and GPA and combination of the UEE score and pre-uni grades with GPA were statistically higher for L-ranking group ( $r = .46$ ), ( $r = .50$ ) than for H-ranking group ( $r = .29$ ), ( $r = .01$ )

**Table 3: the correlation coefficients for the whole sample, H-ranking and L-ranking group between GPA & pre-uni grades and between GPA, UEE scores & pre-uni grades**

GPA Pre-uni grades	Mean	std. Dv.	r(X,Y)	r <sup>2</sup>	t	P H	N
The whole sample	16.6625* 18.9503*	1.74313* 1.62632*	.354127*	.125406*	4.11335*	.000072*	120*
H-ranking	17.2009* 19.0342*	1.44630* 1.73471*	.299844*	.089906*	2.64838*	.009959*	73*
L-ranking	15.8262* 18.8200*	1.84710* 1.45040*	.461554*	.213032*	3.490196*	.001093*	47*

**Table 1: the difference between the means of the groups on the UEE and GPA**

Variable	Mean H	Mean L	Std.Dv.	t-value	Df	p	valid N H	Valid N L
UEE-MEAN	124.2164*	112.8000*	9.499931*	6.997642*	118*	.000000*	73*	47*
GPA	17.20091*	15.82624*	1.847102*	4.553039*	118*	.000013*	73*	47*

Is the new version of the Universities Entrance Examination in Iran for admitting candidates to English major predictively valid? In order to shed light on the foregoing problem, I performed correlational analyses for the whole sample, high-ranking group and low-ranking group respectively. Table 2 shows that the correlation between the UEE and GPA for the whole sample at  $\alpha < .05$  level of significance, though not much high, is statistically significant ( $r = .39$ ) and also the correlation coefficients between the UEE scores and GPA were statistically higher for L-ranking group ( $r = .49$ ) than for H-ranking group ( $r = .004$ ). Thus, we can say that there is a stronger relationship between the UEE scores and academic performance for L-ranking group than for H-ranking group.

**Table 2: the correlation coefficients for the whole sample, H-ranking and L-ranking group between GPA & UEE mean**

GPA & UEE MEAN	Mean	Std. Dv.	r(X,Y)	r <sup>2</sup>	t	P H	N
The whole sample	16.6625* 119.745	1.74313* 10.33333*	.398827*	.159063*	4.72437*	.000006*	120*
H-ranking	17.2009 124.2164*	1.44630 8.18927*	0.004447	.000020	.03747	.970215	73
L-ranking	15.8262* 112.8000*	1.84710* 9.49993*	.498486*	.248488*	3.857370*	.000362*	47*

The Statistical Package for Social Sciences (SPSS) was utilized to analyze the data for this study, and a variety of statistical techniques (e.g. t-test, correlational analysis, regression analysis, etc) was used for assessing the predictive validity of the UEE and pre-uni grades which is best explicated in connection with the results of each of the particular analysis summarized in the following section.

### **III. Results**

Do high-ranking candidates perform better than low-ranking candidates on GPA at the end of the first term? Table 1 presents the means, standard deviations and t-values of two groups on their UEE scores, and their GPA. Table 1 shows that the means of two groups on the UEE are significantly different ( $\alpha < .05$ ). This means that, both groups \_ H-ranking and L-ranking \_ at the beginning of instructions at university were quite different regarding the scores they achieved on the UEE. This means that H-ranking candidates ( $M=124.21$ ) score significantly ( $p < .05$ ) higher than L-ranking candidates ( $M=112.80$ ) on the UEE, Table 1 also shows that there is a significant difference between the means of two groups on their GPA, meaning that at the end of the first term at university H-ranking group ( $M=17.20$ ) score significantly ( $p < .05$ ) higher than L-ranking group ( $M=15.82$ ).

Therefore, it seems logical to say that high-ranking subjects have done a good job and performed better, because they have been successful on the UEE and achieved higher scores on their GPA in comparison with low-ranking subjects.

5) What constructs are assessed by the UEE?

## **II . Method**

### **subjects**

The sample consisted of n=120 Iranian students majoring in English, 55 of them were studying English at Allameh-Tabatabaee University in Tehran and 65 of them at Ferdowsi University in Mashhad. These students got into university in 2002. 73 of these students were high - ranking candidates of the Universities Entrance Examination (students admitted to the day program) and 47 were low-ranking candidates of the UEE(students admitted to the evening program). Subjects were selected randomly and their assignment to two groups was done on the basis of their UEE scores. High – ranking group got higher scores on the UEE in comparison with low-ranking group. 40 of the subjects were males and 80 were females. The subjects ranged in age from 14 to 40 with a mean age of  $M=20$ .

### **Tests and procedure**

The prediction study was based primarily on the test scores of the UEE. This test consists of five subtests which are administered in multiple choice format: special English, general English, Farsi, Arabic and theology. In order to assess the predictive validity of the UEE, I obtained the first - term cumulative GPA of N=120 students , who were enrolled at university. The UEE scores were obtained from the Measurement Organization and GPAs from the Administration Office of the Faculty of Letters and Foreign Languages of Allameh-Tabatabaee and Ferdowsi Universities and pre-uni grades of English lesson at high school were obtained from subjects themselves.

learn English for translation, teaching and literature ; but it seems that most of these students have not enough proficiency to be able to meet the demands of their undergraduate programs (Farhady et al, 1999).

One of the most important reasons that students are not successful at universities is that the UEE is not a good indicator of the future behaviour of students. In a recent study which was conducted at Allameh-Tabatabaee University, the researcher found no significant relationship ( $r=-.11$ ) between the UEE and academic success at the end of the first year at university (Baghaee, 2002). Until 2001, the UEE was comprised of four subtests: English, Farsi, Arabic and theology ; but in the face of the inadequacy of the previous UEEs, authorities in charge tried to make a change in the UEE and added one more English test to the UEE to enhance the predictive power of it. Moreover, it is believed that combination of a language proficiency test with high school grades can predict college grade point average (GPA) more accurately than either measure alone (Ary, Jacobs , and Razavieh , 1996) .

Therefore, the major goal of the present study is to determine the predictive validity of this new version of the UEE, specifically addressing the following five problems:

- 1) Do high-ranking candidates perform better than low-ranking candidates on GPA at the end of the first term?
- 2) Is the new version of the Universities Entrance Examination in Iran for admitting candidates to English major predictively valid?
- 3) Do pre-university grades of English lesson at high school have any predictive validity?
- 4) Which variable (from subtests and pre-university grades) is the strongest predictor for success at university?

# **The Predictive Validity of the New Version of the State Universities Entrance Examination Admitting Candidates to English Major**

**Reza Pishghadam\***

## **Abstract**

The major aim of this study was to examine the predictive validity of the new version of the state Universities Entrance Examination (UEE) which was employed recently for admitting candidates to English major within the Iranian academic scene. The prediction study was based on the UEE scores and GPA of n=120 students ,studying English at Allameh-Tabatabaee and Ferdowsi Universities. A variety of statistical techniques (t-test, correlational analysis, regression anlysis and factor analysis) was used to analyze the data. Results of this study show that this new version of the UEE enjoys high predictive validity and the main reason is the addition of the special English subtest which is the strongest predictor. Adding pre-university grades of English lesson at high school to the UEE score of candidates improves the prediction rate and they are considered to be the second best predictor. Results also show that the UEE assesses two important constructs: "cultural" factor which is not related to short-term academic success and "English language proficiency" factor. It is suggested that admissions officers should either omit non-predictor subtests or set multiple cutoff scores.

## **I. Introduction**

State Universities Entrance Examination (UEE) is employed annually by admissions officers in Iran to admit candidates to English major. Every year hundreds of high school students based on this test, get into universities to

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