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RELATIONSHIPS AMONG LANGUAGE TESTS, PORTFOLIO, PARTICIPATION, ABSENCE AND LATER ACADEMIC ACHIEVEMENT AT HIGHER EDUCATION

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ABSTRACT

The value of using multiple means in assessment for decision making has been expressed for a long time. Different types of assessment have been proposed for a fair evaluation of student progress or achievement level. Even though undergraduate achievement in social sciences implies dependency on language proficiency, where medium instruction is a foreign language, it appears that it is more dependent on study habits, attendance, and language achievement scores rather than foreign language proficiency scores. Scores in language, portfolio, attendance and GPAs over three years of 1208 students who have been studying at different faculties have been analyzed to see the relationship between language test results, portfolios, attendance, gender, department and academic achievement in the undergraduate education. Portfolio, attendance and participation in prep school correlated with GPAs in an increasing trend and the predictive value of different means of language assessment on academic achievement with regard to faculties produced different results.

Key Words: Regression; foreign language; academic achievement.

INTRODUCTION

Teaching of English as a foreign language is common in Turkish universities, some of which use English as medium of instruction. These universities make exams to test students' level of English to see whether they are ready for undergraduate studies held in the foreign language. Those who cannot succeed at these proficiency tests have to study preparation class for at least one semester, depending on their level of English. Few students pass their language classes in one term, and most study for a complete year. Preparation classes use multiple means of assessment to aid student progress. Their proficiency in foreign language is expected to impact on their undergraduate studies which is also reflected in students' having language problems in tertiary education. A study concerning international students in the UK, Australia and the United States shows English language proficiency and subsequent academic achievement of international students a concern for higher education institutions (Rochecouste et. al.,2012). Some even question the value of preparation year due to its negative impact on academic achievement due to delay (Bahar, 2013). A sound assessment is expected to help decide what to do and how language assessment should be. Considering the significant role of assessments in guiding decisions about organizations and individuals, it is of paramount importance to establish a valid assessment system (Wolf et al., 2008).

In many universities, especially at the undergraduate level, the scores from language tests may be the only evidence of English language ability used (O'Loughlin, 2013). But, for both theoretical and technical reasons, the predictive validity coefficients between placement test scores and final grades or retention in a course generally demonstrate a weak relationship (Armstrong, 2000).

Language testing and Academic Achievement

Investigating the relationships between language skills and academic achievement might help decision makers on how much to focus on language learning prior to undergraduate studies. Higher correlations would imply stronger relationships. Testing the relationship between achievement and language skills is not a new concept.

Studies have found correlation between academic achievement and language skills (Kato et al., 2004), which is quite understandable.

Alternative forms of assessment in addition to conventional standardized tests have increased their use for a more accurate picture of student ability. These new forms of assessment function as an ongoing process and are used more frequently to assess students' growth in language ability and content knowledge (Chisega-Negrila, 2011). The assessment and evaluation practices instructors report using within university-based ESL=EFL courses vary both within and across the different settings (Cheng, Rogers & Hu, 2004). A study found also found students of the lower proficiency were least satisfied with the foreign language medium instruction while those of the upper proficiency were most satisfied (Han, 2001), which implies low achievers are influenced negatively by foreign language medium education.

Portfolio, Participation and Absence

Among the types of assessment is participation, attendance, project and portfolio. Portfolio use is widespread in language teaching especially to assess skills in reading and writing in language classes (Bryant & Timmins, 2002; Cole et al., 2000). A study that compared portfolio and traditional assessment with respect to test anxiety, attitude, study behavior found statistically significant difference between the two favoring portfolios (Bahçeci 2009) and in another study portfolio was found to decrease test anxiety (Aka İ. E., Güven, E., Göksu, V. & Aydoğdu, M., 2011). However, portfolios are also criticized in that students make use of materials from their classmates or other friends, which makes dependence on portfolio scores a problematic one.

Although the relationship between attendance and academic achievement has been well-documented (Roby, D. E., 2004; Torenbeeka, M., Jansena, E. & Suhre, C., 2012; Sawyer, R. & Gibson, N., 2012; Spradlin, T., Cierniak, K., Shi, D. & Chen, M., 2012; Morrisey, T. W., Hutchison, L. & Winsler, A., 2014) relationship between prior attendance and later achievement needs more focus. Moore, Armstrong and Pearson (2008) discuss studies that place importance to the relationship between attendance and achievement and those that question this relationship. Of those that claim against Marburger (2001) has been critical of some approaches to exploring links between lecture attendance and academic performance.

There is wide consensus on the relationship between absence and underachievement. Most of the literature on underachievement suggests that underachievers have lower academic self-perceptions, lower self-motivation and self-regulation, less goal-directed behavior, and more negative attitudes toward school than high achievers do (Reis & McCoach, 2000). In a longitudinal study of underachievers, McCall, Evahn, and Kratzer (1992) found that 13 years after high school, the educational and occupational status of high school underachievers paralleled their grades in high school, rather than their abilities. Many studies found underachievers are less likely to complete college and remain in their jobs (Credé & Kuncel, 2008).

This study aims to shed more light on the relationship between preparation class achievement factors and later academic achievement focusing on module scores, exit exam scores, participation, portfolio and absence.

METHOD

Participants

There is a need to compare the results of different assessment types see which one better predicts academic achievement. Usually what has been reported is, proficiency tests correlate more with academic achievement than do other tests that depend on the content taught. The study used convenience sampling, and for this end, results of 1223 students from a university preparatory school were used for analysis. Data of 15 students were excluded due to insufficient information. This data included module scores, foreign language exit exam results, participation, portfolio, absence and achievement results of students from five faculties.

Data collection

Data from the preparatory school were matched with student GPAs at four different terms in their undergraduate studies; after the first term, second term, second year second term and third year first term

GPAs. Student gender, attendance, portfolio scores, module scores, participation scores, exit exam scores, faculties and departments were gathered from the preparatory school. Data with missing GPAs were cleared and 1208 students were included in the study.

Process

Descriptive statistics for the data were drawn and checked for kurtosis and skewness and bivariate correlations between all variables were sought. Significance of difference between correlations as terms changed was analyzed with Fisher's z test. Because student GPAs could be affected in different ways in five departments due to different levels of dependence on language proficiency, multiple regression was carried out with faculties in focus, so that dependency on language in undergraduate studies could be seen.

FINDINGS

Correlations between different assessment types and GPAs have been given in the following table.

Table 1: Bivariate Correlations among Preparatory Class Data and GPAs

	Gender	Module Score	Exit Score	Portfolio	Participation	Total Absence	GPA1	GPA2	GPA3
Module Score	,069*								
	,015								
Exit Score	-,014	,816**							
	,634	,001							
Portfolio	,127**	,810**	,407**						
	,001	,001	,001						
Participation	,179**	,693**	,286**	,734**					
	,001	,001	,001	,001					
Total Absence	-,171**	-,615**	-,260**	-,666**	-,841**				
	,001	,001	,001	,001	,001				
GPA1	,050	,506**	,458**	,358**	,286**	-,245**			
	,082	,001	,001	,001	,001	,001			
GPA2	,050	,515**	,469**	,372**	,298**	-,264**	,965**		
	,079	,001	,001	,001	,000	,001	,001		
GPA3	,064*	,515**	,459**	,384**	,315**	-,289**	,926**	,968**	
	,026	,001	,001	,001	,001	,001	,001	,001	
GPA4	0,069*	,509	,438**	,394**	,331	-,298**	,890**	,931**	,977**
	,017	,001	,001	,001	,001	,001	,001	,001	,001

*p>0,05, **p>0,01

Bivariate correlations between the given variables produced the following results: There was positive low correlation between gender and portfolio (r=0,127) and participation (r=0,179) (*p= <,001)*, on the other hand there was negative correlation between gender and absence (r=-,171). Although there was no correlation between gender and GPA1, correlation moved from no correlation to insignificant correlation over three years. On the other hand, there was no correlation between gender and passing the preparatory class.

Module score and exit exam score, which are a result of achievement in language tests during preparatory year, correlated moderately over the years consistently. As would be expected, module score had high correlation with portfolio (r=,810) and participation (r=,693), but exit exam score did have moderate correlation with portfolio and had low correlation with participation.

Module score had consistent moderate correlation (r=,506, ,515, ,515 and ,509) with GPAs over three years like exit exam score but, Module score which is a result of studies in prep classes correlated with GPAs higher than the exit exam which is independent of content taught.

Correlation of portfolio and participation with GPAs increased over three years, which imply students' achievement habits have more to do with achievement. Besides, negative correlation between total absence and GPAs increased over three terms as well. Negative correlation between total absence in prep school and GPA moved from low to moderate over time (-0,298, p>0,001).

Because GPA4 is the most distant grade to preparation school scores, relation of portfolio to GPA4 was sought. Scatterplot shows the distribution of GPA-4 and portfolio scores with respect to one another. Linear relationship increases especially after portfolio score increases.

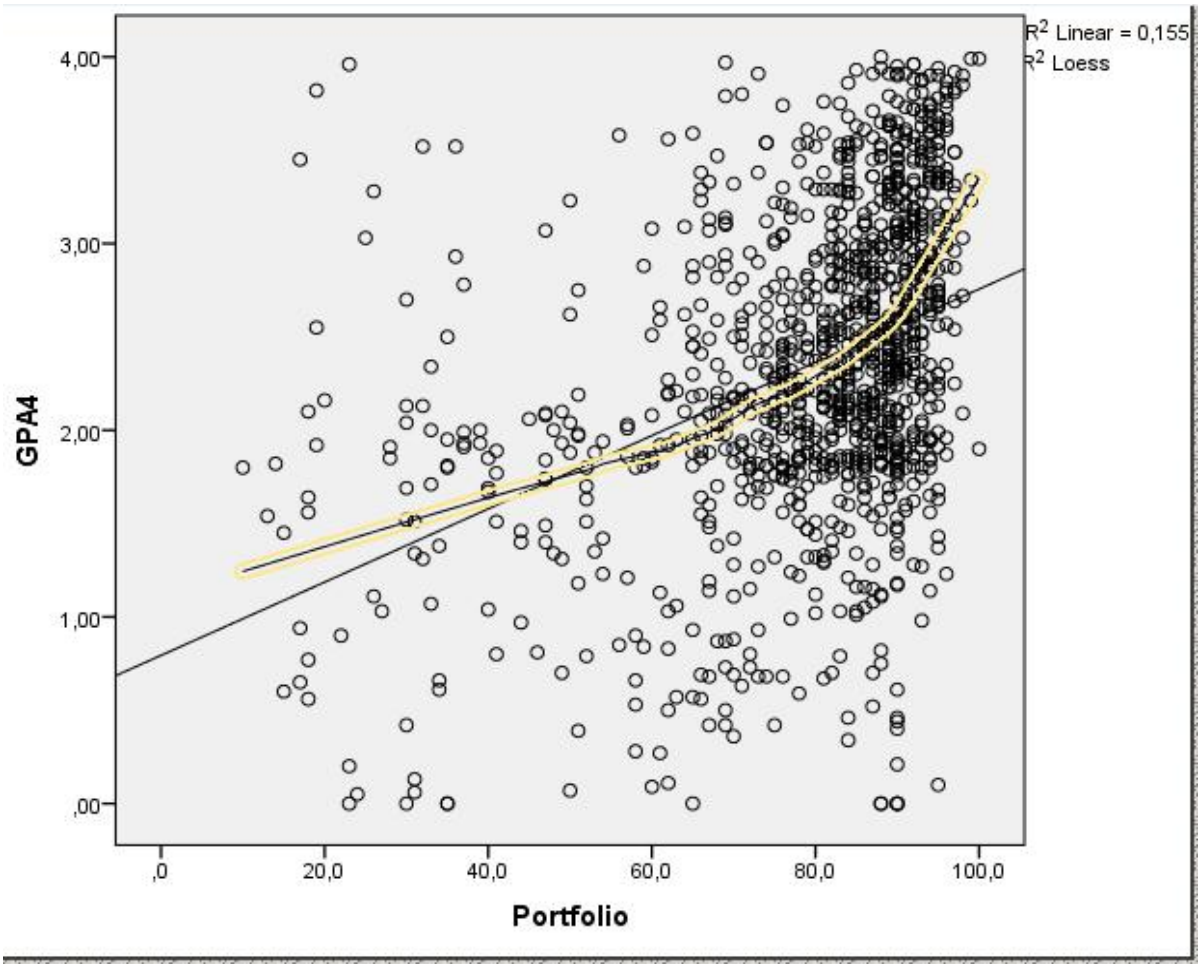

Figure 1 Scatterplot for Correlation between Portfolio and GPA4

Local regression (loess) fit line on the graph shows the higher the portfolio score the higher the correlation with GPA is. Students with lower GPAs have less consistent scores with regard to portfolio, which may be due to the common problems expressed by students and instructors alike; copying from others, irrelevant submissions etc.

Fisher's z statistic produced significant difference between correlations of the module scores and exit exam scores with respect to portfolio and participation scores and total absence, which is understandable. Test of significance of difference between correlations of module score and exit exam score with GPA1 did not produce a significant result (z=1,535) but two tailed test of difference between correlations of the module

(0,509) and exit exams (0,438) with GPA4 produced significant difference (z=2,249, p>0,025) meaning module scores began to correlate higher with GPA4 scores in time as opposed to exit exam score.

In the second place multiple regression for GPAs was carried out to follow how the dependent GPA variables were predicted by the models.

Table 2: Linear Multiple Regression Models with Backward Method to Predict GPA1 and GPA4

Faculty		Model	t	p	β	VIF	F	df	p	adj.R^2
Education	GPA1	Overall Model					15,681	3 (95)	,001	,319
		Absence	1,606	,001	,194	2,011				
		Participation	1,395	,001	,184	2,402				
		Module Score	5,406	,001	,541	1,381				
	GPA4	Overall Model					41,329	1 (95)	,001	,298
		Module Score	6,429	,001	,553	-				
Arts & Sciences	GPA1	Overall Model					216,706	1 (500)	,001	,301
		Module Score	14,721	,001	,550	-				
	GPA4	Overall Model					79,176	3 (503)	,001	,318
		Gender	2,636	,009	,097					
		Participation	2,284	,023	,117					
		Module Score	9,068	,001	,464	2,011				
Econ & Admin.	GPA1	Overall Model					58,564	2 (275)	0,001	,295
		Gender	1,966	,05	,100	1,00				
		Module Score	10,633	,001	,538	1,00				
	GPA4	Overall Model					116,292	1 (281)	,001	0,291
		Module Score	10,784	,001	,542	-				
Engineering	GPA1	Overall Model					32,314	3 (224)	,001	0,295
		Gender	-1,576	,116	-,090	1,032				
		Participation	-2,564	,011	-,186	1,669				
		Module Score	8,999	,001	,644	1,630				
	GPA4	Overall Model					69,435	1 (224)	,001	,234
		Module Score	8,333	,001	,487	-				

A multiple regression with backward method was carried out questioning predictive value of scores in preparation school with faculties in focus. Predictors of GPAs changed from absence, participation and module score to only module score between GPA1 and GPA4 in Faculty of Education and the variance explained decreased from %31,9 to %29,8. The situation was somewhat different for Faculty of Arts and Sciences; Although module score only predicted GPA1 explaining %30,1 of the variance, gender, participation and module score began to predict GPA4 with a variance of %31,8.

In Faculty of Economics and Administrative Sciences gender and module score explained %29,5 of the variance in GPA1 but only module score predicted %29,1 of the variance in GPA4. As for Faculty of Engineering the

variance explained by gender, participation and module score was %29,5 for GPA1. But %23,4 of the variance was explained by module score, a decrease over time. The difference between correlations of module and exit scores with GPAs was significant in faculty of science and faculty of economics and administration, as Fisher's z test showed.

DISCUSSION

Correlation of absence with GPA1 was low in prep school whereas it had moderate correlation with GPA4. Attendance (absence) and GPAs had increasingly significant correlations which imply that student practices/habits about attendance have a lot to do with achievement in general.

As multiple regression results show, in Faculty of Arts and Sciences predictive value of preparation school predictors increased over time, which may be due to dependence on language proficiency in this faculty. In Faculty of Education and Faculty of Economics and Administrative Sciences alike predictive value of preparation class factors decreased over time as expected.

Even if language proficiency is utmost importance where medium of instruction is the foreign language, other student factors seem to play their role distinctively. Module score had higher correlations than exit exam score, implying achievement tests' predictive value.

As the scatterplot indicates students with scores of low to moderate scores of portfolio have less correlation with GPAs compared to high achieving students. This might imply the problem addressed by teachers who do not favor use of portfolio in account of its being a source of easy cheating by especially low achieving students. Significantly higher correlation between module score and GPA4 than with exit exam score may be interpreted as students' studies, study habits and the resulting academic achievement are more determining than is English language proficiency. It is more likely to expect higher correlation between social sciences and foreign language proficiency, which is the medium of instruction in some departments, and, that is the case for Faculty of Arts and sciences where participation, gender and module score predicted GPA4.

Results from Faculty of Engineering imply the following: Changes in correlations between language tests and GPAs and between portfolio, participation, absence and GPAs show that effect of language over time decreases, whereas other factors (e.g. portfolio, participation and absence) continue to influence. Yet, regression results show Findings of a study by Dafouz, Camacho and Urquia (2014) show that English and native language classes obtain similar results, suggesting that the language of instruction does not seem to compromise students' learning of academic content. Differences, however, are found regarding learners' performance in the three disciplinary subjects under scrutiny, with history yielding slightly higher results than accounting and finance (Dafouz, Camacho & Urquia, 2014).

Although Baldwin (1980) and Gatherer and Manning (1998) found local evidence that lecture attendance has a statistically significant relationship with subsequent academic performance, they also highlighted that the statistical significance was not particularly strong. Results of this study express a similar conclusion. More recently, Van Walbeek (2004) has suggested that the link may be weaker than previously assumed or confirmed. Marburger (2001) has been critical of some approaches to exploring links between lecture attendance and academic performance. He argues that methodologies typically used to explore the link generally just regress some broad measure of academic achievement against some, often, blunt measure of attendance. Yet isolated correlations among faculties are evidence that they are not 'blunt' in that faculty of education or economics and administrative sciences depend more on foreign language proficiency than faculty of engineering where regression results indicated the differences when faculties are parted.

Study motivation and study skills exhibit the strongest relationships with both grade point average and grades in individual classes (Credé, & Kuncel, 2008). This may have something to do with correlation of preparation school attendance and undergraduate GPAs.

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