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The Relationship Between TOEFL/IELTS Tests Scores and Academic Performance of
Undergraduate Students from American University of Armenia

A thesis submitted in
partial fulfillment of the requirements for the degree
Master of Arts in Teaching English as a Foreign Language

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Abstract

This study investigates possible relationship between TOEFL/IELTS scores and academic performance (GPA) between male and female undergraduate students from the American University of Armenia (AUA). Academic records of 1634 students were included from all four undergraduate programs of AUA. The data included students' GPA, their demographic information, admission tests scores including TOEFL iBT and IELTS. Correlation analyses were conducted by Majors and Gender. The general pattern was shown through expectancy graphs and a table of descriptive statistics. The predictive validity expressed in terms of correlation did not appear to be strong. However, the general image shown in the expectancy graphs indicated that those students who had higher test scores tended to earn higher GPA in the future. So, the test scores are good at predicting future academic success. We concluded that even when there was a small correlation that meant there was an indication of significant relationship between the variables.

Keywords: TOEFL, IELTS, relationship, academic performance, GPA, male, female

CHAPTER ONE: INTRODUCTION

Introduction

English language proficiency is crucial in the 21st century. Especially the demand can be seen in the educational sphere. English-speaking countries require proficiency of English language for higher education. The two worldwide tests which measure English language proficiency are TOEFL iBT and IELTS. Within the last decades the abovementioned international proficiency tests have become widely accepted as entrance exams among world famous universities. Many university entrants strive to get higher scores to be admitted at prestigious universities around the world. However, the question of the measure of the language proficiency exam as a predictor of the further academic success is questionable among scholars.

Many researchers do not consider TOEFL iBT/IELTS score a reliable predictor of academic performance (Ng, 2007, Arcuino, 2013, Fass-Holmes and Vaughn, 2014, Vu, L. and Vu, P., 2013), whereas others (Manganello, 2011, Cho and Bridgeman, 2012, Woodrow, 2006) claim that it could be a prerequisite for future academic achievements during the study at universities. So the idea of the effectiveness of the two tests is unclear. Year by year a lot of studies are dedicated to this topic. However they have not drawn to definite conclusion yet and the need for further investigation is evident.

This literature review describes the effectiveness of the most high stakes tests during the recent decades. It focuses on the relationship between English language proficiency tests, measured by TOEFL iBT and IELTS, and the Academic performance, measured by GPA (Grade Point Average). It also reveals the gender differences of the

abovementioned variables. The study could contribute to the current literature on this topic.

CHAPTER TWO: LITERATURE REVIEW

Literature review

This chapter discusses research on the relationship between TOEFL/IELTS test scores and academic success measured by GPA, as well as the moderating role of gender in this relationship. More specifically it focuses on the relationship between TOEFL/IELTS test scores and the GPA of male and female learners.

TOEFL iBT

TOEFL (Test of English as a Foreign Language) is the test of The Education Testing Service (ETS). It was created as a language assessment tool that would be implemented and recognized worldwide. Its history dates back to the 1960s. It was designed to assess nonnative test-takers' ability to comprehend and use English. The test was designed for those who had an intention to study in educational institutions where English was considered to be the required language (ETS, 2011). At the beginning of its creation, it was a paper-based test (PBT). It included five sections, but in the late 1970s the number of the sections became three. Later it was developed into a computer-based test (CBT). Since 2005 it has become an internet-based test (iBT), the purpose of which is to put the language in use in relevant contexts. So the TOEFL test has been introducing changes in language assessment for nearly 60 years (Wall & Horak, 2008).

The TOEFL iBT test includes language tasks that are to allow test takers to show their skills and abilities. It assesses the knowledge of four macro skills: reading, listening, speaking, and writing. The language that the macro skills are measuring is academic. It is

mentioned that only fair and objective scoring is provided to TOEFL iBT test-takers (Wall & Horak, 2008).

The TOEFL iBT test includes language tasks that are to allow test takers to show their skills and abilities. It assesses the knowledge of four macro skills: reading, listening, speaking, and writing., including the United Kingdom, Canada, Australia, New Zealand and the United States of America (ETS, 2011). A number of studies have been carried out for better understanding of whether the test score is a reliable indicator of the test-takers' English language knowledge or not.

IELTS

IELTS (International English Language Testing System) was originally designed as a test for prospective postgraduate students. The test has experienced several changes since its emergence. It replaced the English Proficiency Test Battery (EPTB). The history of EPBT starts in the 1960s. The purpose of this test was to measure the English language knowledge of foreign students who planned to study in the colleges and universities of the UK. Later, researchers tried to improve the test and the result was the English Language Testing Service (ELTS), which replaced the EPTB in 1980. ELTS included six modules: life sciences, social studies, physical sciences, technology, medicine and general academic (<https://www.ielts.org/>).

In 1980s there were some problems with test administration, so there was a need to create another test, which was the early IELTS. It included three modules: science and technology, life science, and social science. The next change was made in 1995, which had administrative and structural nature. In 2005 the computerized IELTS was suggested (<https://www.ielts.org/>).

Nowadays, the modern IELTS tests reading, listening, writing and speaking skills. It is divided into modules. The reading, listening and writing modules are taken in one day, while the speaking module can be taken either on the same day or during seven days (<https://www.ielts.org/>). The test is used to measure English language proficiency worldwide. Initially, IELTS was accepted by universities from Australia, Canada, New Zealand and the UK, but later universities from the United States came to accept it as well. Nowadays the test is operated in nearly 135 countries and over 1100 test centers. It is widely approved by universities and different institutions in all major English-speaking countries (Arcuino, 2013).

Academic Success

Academic success is the performance of a student during a particular course. A commonly employed indicator of academic success is Grade Point Average (GPA). It measures and summarizes the academic achievement and performance of students during a semester. Over the years many studies have been conducted to determine the factors that have impact on academic success.

There are a number of factors that influence academic success such as motivation, learning habits and skills, learning strategies and approaches, and different traits of character (Cho & Bridgeman, 2012). Motivation is the most broadly used personality variable in academic success. In addition, various demographic features like gender and age were explored in relation to academic success in higher education (Li, Chen, & Duanmu, 2009). All the above-mentioned factors refer to both international and domestic students. However, other factors emerge when we talk about international students' academic performance in higher education. Among those factors are cross-cultural issues.

Put it differently, many students may face culture shocks, feelings of isolation, homesickness and other difficulties, which surely have a negative influence on the academic performance (Li, Chen, & Duanmu, 2009).

Gender Difference

Over the centuries males and females have shown various interests and values in any sphere. When it refers to learning they also perform differently. There are even gender differences in learning styles. Based on the findings of Viriya and Sapsirin (2014), males tend to be more visual learners, while females are more auditory learners. The same research indicates that females prefer to do lifelong learning, while male learners do not. Numerous studies have been carried out on the learning outcomes of both sexes. Pae (2004) claims that items that express mood/feeling/tone tend to be easier for females, whereas items that are logical, are easier for males, regardless of item content.

However, when it refers to the field of language art, according to Schunk and Pajares (2001) findings, male and female students show nearly similar confidence, but female students tend to show higher achievement during the semester. The results of the investigation of the Community Review Committee (2006) show the same image. Female learners outperform their male peers in the field of language art. No significant gender differences in spelling and vocabulary skills were found. The findings also indicate that girls perform better in reading and writing skills.

Another study was done by Ma (2007) the purpose of which was to show gender differences in language learning outcomes. According to the findings, females have advantages in language achievement, especially at younger ages, while males are at risk of not reaching the level of their female counterparts in language achievement. Female

learners have also advantages in reading and writing skills. This research included participants from all over the world and only the participants from the Arabic countries showed the opposite result. That is, the male learners were more successful in reading and writing skills, which was explained by the fact that in the Arab countries females usually have problems with access to education.

Another study was conducted by Gorjian and Javadifar (2013) on gender differences on content of the topics in reading texts. The findings show that male participants outperform their female peers. Moreover, with different topics students perform differently. The plausible interpretation of this result is the background knowledge and the interest between male and female participants. In addition, gender differences in EFL reading comprehension were affected by the topic of the text or passage content.

TOEFL iBT/IELTS test scores and GPA

A lot of universities prefer to create their own admission tests, while other universities rely on IELTS or TOEFL iBT or both of them as English requirement in their admission processes. A number of studies have targeted the correlation between TOEFL/IELTS tests results and the academic performance of students. The results of these studies are quite mixed.

According to Lan Thi Vu and Phu Hoang Vu (2013), TOEFL score was not a reliable indicator of students' GPA. After analyzing the surveys and descriptive statistics of 464 graduate students at a Midwestern public university in the U.S., the researchers have found out that TOEFL score was not an effective predictor of GPA score. Meanwhile, the students' opinion on the topic varied. According to their opinion on the

correlation between the two variables, “TOEFL score and GPA score are similar, and the true correlation between these two scores exist” (2013, p.19). The main reason for these opinions can be the weight of TOEFL, as it is regarded as a high stakes test. After analyzing the general findings of this study, the researcher claims that TOEFL scores can be a good gatekeeper for the test-takers. Meanwhile, the scores cannot properly measure the students’ future academic success and they are only good at measuring who to let in. A similar study with similar result has been carried out by Ng (2007). The research included data from 433 students. The investigation suggests that there is not found a positive relationship between TOEFL scores and GPA of a number of ESL courses. TOEFL results are limited and they are not good indicators of students’ future academic success at community colleges. More comprehensive studies should be held in order ensure the validity of study and opportunity for generalization.

Another study was done by Manganello (2011), who explored the correlation of TOEFL iBT section scores and performance during English classes of 503 participants. Based on the research there is a positive correlation between grades and the scores of each section. As to the scores of the speaking and writing sections, the relationships are more significant than the scores of the listening and reading sections. The main reason is that the writing and speaking sections of iBT involve language production, so that is why they are better indicators of academic performance than the reading and listening sections.

Ai-Wan & Kuzma (2009) conducted research where the participants were 77 undergraduate students. The research includes the overall test score and the scores for each section: Reading, Listening, Speaking and Writing. This was for understanding the

correlations between the GPAs of the first and second semesters with the overall IELTS scores and each section. The research indicates that there exists a positive relationship between students' overall test scores and the GPA of the first semester, but there is a weaker relationship between the test scores and the GPA of the second semester. The results also assume the existence of significant correlations between students' GPA of two semesters and Listening, Writing and Reading sections.

After numerous studies done by Cotton and Conrow (1998, cited in Ai-Wan & Kuzma, (2009)), the researchers found that there is not a positive relationship between IELTS scores and academic performance. But after investigating the relationship between individual skills and the academic success, they concluded that “the reading subtest scores, in particular, were best able to predict subsequent academic performance”.

However the investigation done by Fass-Holmes and Vaughn (2014), claims that TOEFL scores are not correlated with quarterly GPAs. When you compare it with previous study findings (Stoynoff, 1997, as cited in Fass-Holmes & Vaughn, 2014), the results are different. One possible explanation for the difference between these two studies' findings is that the 1990s' TOEFL differed from the modern TOEFL in two potentially important and related dimensions - range of the scoring scale, and mode of administration (<https://www.ets.org/toefl>). The results also claim that previous forms of TOEFL such as paper-based and CBT had some level of correlation. An interpretation for the difference can be the fact that modern TOEFL varies greatly from the old CBT test.

Based on the investigation on the correlation of English academic proficiency and academic performance for international students at the University of Melbourne (Storch & Hill, 2008), the relationship between the results on TOEFL and IELTS exams and

academic performance of the students is weak. The basic reason stems from the type of assignments that students have because they are not always written ones and student compensate lower grades with active discussion and participation. The students were willing to help international ones with their notes and assistance. Thus, there may be different non-linguistic factors affecting the GPA of the students which makes proficiency tests not a reliable predictor of further academic performance.

Arcuino (2013) collected data from 753 graduate students: including final cumulative GPA, students' TOEFL or IELTS scores and demographic information. Based on the findings, we can assume that there is no significant correlation between TOEFL/IELTS tests scores and the cumulative GPA, especially when it refers to TOEFL iBT test. The researcher stated that when you have a linguistic competence, it does not guarantee that you should also have high academic success, as well as high GPA. There are several reasons of these results. One of the reasons may be the fact that language which is being used during classes is considered to be more technical and it is quite challenging for the students for whom English is the second language.

Cho and Bridgeman (2012) conducted a research on the relationship between TOEFL iBT score and future academic performance. The researchers showed the results of the correlation based analyses in terms of individuals through the expectancy graphs. The study consisted of the academic records of 2594 students. The majority of the participants (1850) were graduate students, while the rest (744) were undergraduates. The results indicate that there is a positive correlation between the two variables. In other word, TOEFL iBT test is a good predictor of future academic success of the students. Similar result is shown in the study of Yan and Cheng (2015). Researchers state that

proficiency of language plays a moderate role in the academic performance of Chinese students. This relationship between language proficiency and academic achievement was consistent with the previous investigations that mentioned about a positive significant relationship between the abovementioned measurements. The students had to take Korean and English proficiency tests (TOEFL/IELTS) in order to enter Korean universities. The research reveals that Korean proficiency tests have a positive effect on undergraduate GPA, whereas in case of graduate students both English and Korean proficiency contribute to graduate GPA.

Woodrow, L. (2006) conducted research on academic success and IELTS test. During the research, the data of 82 international students and academic staff were included. Based on the research the language proficiency has a significant correlation with students' achievement and a significant relationship also exists between the academic achievement of the first semester and IELTS test.

Feast (2002) conducted research on the impact of IELTS scores on the academic performance. The study included the data of 101 undergraduate and graduate students. The age of the participants was from 17 to 40. Based on the research, there is a positive and significant correlation between IELTS test score and the GPA, but the correlation is quite weak between the test and the performance of the students. Another research was done by Al-Malki (2014), which focuses on the predictive validity of IELTS test and its correlation with CGPA (Cumulative Grade point Average). The study includes 118 students from Jordanian University. The findings indicate a positive correlation between IELTS test scores and CGPA. Expressing it differently, the students who have high

academic achievement during the semester tend to have high scores in IELTS as well and vice versa.

An investigation done by Reberger & Anderson (2005) includes the data of 331 postgraduate coursework students. The research focuses on the academic performance and the students' English language proficiency and entry type. The results show that there exists a significant positive relationship between the students' mean GPA scores and their IELTS entry score. A positive relationship can also be seen between the reading subtest and the GPA. So the higher is the student's admission score from the reading section and the overall IELTS test, the higher is the GPA as well.

Gender differences between TOEFL iBT/IELTS test scores and GPA

Numerous studies have targeted gender differences between the scores of proficiency tests and academic performance. A study which was done in Turkey by Ergul (2004) shows no positive relationship between the GPA of male and female students. Ergul believes that motivation plays a crucial role in the learner's achievement. Researcher states that the demographic data like age, gender do not have any correlation with the academic performance of the students. For succeeding in academic performance one should have only motivational characteristics like self-regulation, achievement goals. (Ergul, 2004).

A study done by Khwaileh and Zaza (2011) included data of undergraduate students from the academic years 2002-2007. The students were from 46 areas of specialization. Based on the findings female undergraduate students have higher GPAs than their male peers. The results can be due to the Jordanian culture, where females spend their free time on studying at home, while males can spend their free time on

whatever they prefer. So the results indicate significant gender differences between the GPA's of males and females. However, another study done in Nigeria included the academic records of 4517 students. The results reveal no significant gender differences in academic performance of the students. Male and female students perform differently in interaction, drilling. (Goni, Wali, Kaltum Ali & Waziri Bularafa, 2015).

Lin and Wu (2003) conducted a research in China on the EPT (English Proficiency Test), which was done after taking the TOEFL test. Based on the study results, not significant gender differences were found. The research showed that the scores of TOEFL test of males are higher than those of the females. A significant difference is also found between the final GPA of males and females female learners exceeding their male peers. The conclusion of this study is that males are more successful in taking the TOEFL test, while females are better at performing during the academic year. This means that females are better at face to face learning and attending the courses.

There has not been any investigation on test-taking results of IELTS and TOEFL. However, according to Test and Score data of TOEFL IBT (ETS, 2016) the middle score range of male and female test-takers does not vary significantly. The mean of male participants is 70-85, and for female participants it is 73-85. As for the results of IELTS test-takers of 2015 (<https://www.ielts.org/>), the scores are almost the same. As for Academic IELTS, based on the results of 2015, female students' band score is 6.0, whereas men's band score is 5.8. For the GENERAL IELTS, the band score is the same among male and female test-takers – 6.2.

Dayioğlu and Türüt-Aşık (2007) conducted a study on undergraduate students in Turkey for finding out if there were significant gender distinctions in academic

performance and entrance test scores between male and female students. The results of the research indicate that there is a gender gap on the side of male performers for the university entrance exams. One of the major reasons is that the female performers do not succeed in TOEFL/IELTS tests. The other major reason is that females choose departments which are not competitive so the level of the motivation is low as well. As to CGPA (Cumulative Grade Point Average), female performers exceed their male peers. So the grades of female students are higher than those of male students.

Maamoun (2009) found that the IELTS test as an admission criterion plays an important role in academic performance of students. Put it differently, students who do not have high scores from the admission test can be at risk of low academic performance. When it comes to gender differences the results of female students' admission tests and their GPA are higher than those of the males. The reason is that females may study harder and do more efforts to achieve in the program than male students.

By trying to combine the sources into a coherent whole, this study has tried to synthesize all the results from various studies. After analyzing all these findings and results it is evident that there is a need for further investigations. By analyzing the literature review it can be stated that the factors which impact the effectiveness of the worldwide tests differ. A lot of cultural issues can be a reason why students do not succeed in taking the tests and performing better during the academic semester. Especially there is a demand for more research when it refers to the gender differences between the test scores and the academic performance. The current literature on this topic uses methods for which there is room for improvement and this study could contribute to the literature in this respect too.

CHAPTER THREE: METHODOLOGY

Introduction

As it was discussed in the previous chapters, this study seeks to find the relationship between the scores of TOEFL iBT/IELTS tests and the academic performance of undergraduate students from the American University of Armenia. Along with this, the aim of the study is to explore the moderating role of gender in the relationship between the admission tests scores and academic performance.

The research questions proposed were as follows:

1. What is the relationship between TOEFL iBT test scores and Freshman GPA?
2. What is the relationship between IELTS test scores and Freshman GPA?
3. What is the gender difference between the tests scores and Freshman GPA?

To answer all these above-mentioned questions this Chapter introduces the methodology of the current research. It includes information about the research method, participants, data collection, and data analysis.

Setting

The research was done at the American University of Armenia (AUA). This educational institution was established in 1991. At the beginning of its emergence, only graduate programs were offered to the entrants. Since the academic year of 2013, undergraduate programs are offered to everyone. This study includes the data from 2013 to 2017. Consequently the data for the current research was requested for all past and present undergraduate students.

Participants

The participants of the study are 1634 freshmen students from all undergraduate programs: “BA English and Communications”, “BA Business”, “BA Computer science” and “BA Engineering Sciences”. Armenian is the majority’s native language.

Data Collection

To answer all the research questions of the current study, the “Research Data Request Form” was filled out and sent to Institutional Research Office (IRO). The Office compiles and archives data and information from all academic programs of AUA. The requested data included the following points:

1. TOEFL iBT/IELTS entrance tests scores of the students from “BA English and Communications”, “BA Business”, “BA Computer science” and “BA Engineering Sciences”
2. Grade point Average (GPA) of the same set of the students from “Freshman English 1” course, which is being covered during the first semester of the first grade
3. Demographic information (e.g. gender of the same set of the students)

Data Analyses

The data received from IRO were analyzed through IBM SPSS Modeler 16.0 software. The data were analyzed for finding the following correlations:

1. the correlation between TOEFL iBT and Term GPA
2. the correlation between IELTS and Term GPA

3. the correlation between the tests and Term GPA of students according to their Majors
4. the correlation between TOEFL iBT/IELTS and Term GPA for Male and Female students

Pearson's r correlation was computed to address all the three research questions. A table of descriptive statistics was created for including the mean and standard deviation of GPA and admission tests scores according to different Majors. Later the analyses were included in the expectancy graphs.

The relationships between the proficiency tests scores and the academic performance were analyzed separately. First of all, correlation of TOEFL iBT and GPA was conducted. The next step included the correlation between the test and GPA for male and female students. Later a correlation was conducted between the test and GPA according to the participants' Majors.

Then the same activities were conducted for IELTS and GPA. Again the sample sizes varied within Majors and Gender. All this was done for giving more value to the results of the current research.

Expectancy Graphs

Expectancy graphs help better understand the concept of correlations. The graphs can show different scores in a quite comprehensible and easy way. Lawshe and Bolda (1958) proposed the use of expectancy graphs. They mention that the graphs depict the data which show the probability of success at a given score interval.

In our study, the expectancy graphs were used to show the GPA and tests scores which can be comprehensible for everyone. For the expectancy graphs, the participants

were divided into three subgroups: top-25%, middle-50%, bottom-25%. This division was done according to the test scores and the academic standing of the students. Graphs were created based on majors as well.

These subgroups we obtained through analyzing the scores based on quartiles and coded data based on these quartiles which then we used for cross tabulation. Then the graph was drawn for addressing the Research Question 1 (TOEFL iBT and GPA). For addressing Research Question 2, the graph included information about IELTS and GPA. Then graphs were created for showing the results according to different majors. The focus of the graphs was on the students whose test scores and GPA was in the middle 50%, in the top 25% and in the bottom 25% of a score distribution.

CHAPTER FOUR: RESULTS

As was mentioned above, the academic records of 1634 participants were included in the current research. From all the participants, 1382 students entered the university with TOEFL iBT test results, while 252 entered with IELTS test scores.

We can see from Table 1 that IELTS is not so popular among the entrants. The table shows the statistics for GPA and tests scores of each undergraduate program. The average score of TOEFL of the students from the “BA Computer science” program is the highest, while the mean score of the test of “BA Engineering Sciences” students is the lowest among all four programs. The variability of TOEFL test score among other two programs was very small. The standard deviation is smaller for “BA Business”.

As to IELTS test, the mean score of the students from “BA English and Communications” is nearly the same with that of “BA Computer science” and “BA

Business”. Only the mean score and the standard deviation of the students from “BA Engineering Sciences” were low from IELTS.

Students from “BA Engineering Sciences” program have the lowest average GPA, which is 1.65 out of 4. “BA English and Communications” shows the highest mean of GPA among all other programs. The average GPA of the students from “BA Business” favored a little bit to that of “BA Computer science”.

Table 1: Descriptive Statistics of TOEFL iBT/IELTS scores and GPA

Major	GPA		TOEFL iBT		IELTS	
	N	M (SD)	N	M (SD)	N	M (SD)
BAB	913	2.92 (.75)	776	86(10.56)	137	6.63(.51)
BAEC	321	3.18 (.72)	256	87(11.48)	65	6.68(.58)
BSCS	372	2.59 (.94)	327	88(11.96)	45	6.62(.62)
BSENG	28	1.65 (1.26)	23	84(11.43)	5	6.4(.41)

Correlations

The correlation of TOEFL iBT score and Term GPA is not strong, $r = .34$, $p = 0.01$. However the correlation varies according to different Majors. The correlation is stronger for “BA Business”, $r = .41$, $p = 0.01$, and for “BA Engineering Sciences” $r = .38$, $p = 0.01$. The correlation is weak for “BA English and Communications”, $r = .22$, $p = 0.01$, and for “BA Computer science”, $r = .32$, $p = 0.01$.

The results of the descriptive analyses for female and male students show that females tend to have higher scores from both the admission tests and Term GPA. The

total number of female students is 766, while the number of male students is 616. For females the correlation is stronger, $r = .42$, $p = 0.01$, than for the males, $r = .32$, $p = 0.01$.

As to IELTS test, there is not a strong correlation between the test results and the academic performance, $r = .37$, $p = 0.01$. The results again show different correlational pattern among majors. The correlation is strong for “BA Engineering Sciences”, $r = .89$, $p = 0.05$. But the number of the students, who took IELTS for entering this program throughout the five-year period, is only 5. The correlation for “BA Computer science” program is stronger, $r = .57$, $p = 0.01$ than for “BA Business”, $r = .37$, $p = 0.01$. Surprisingly the correlation for “BA English and Communications” is very weak, $r = .13$.

For male students the correlation between IELTS and their term GPA is stronger, $r = .37$, $p = 0.01$, than for female students, $r = .31$, $p = 0.01$. During the five-year period there have been 135 female and 117 male students who took IELTS test.

After these analyses we can see that the correlations are not strong. However, considering that test scores are not the only predictors, we considered to include additional analysis to have a better picture of the relationship between the test scores and GPA.

The relationships between TOEFL iBT/IELTS scores and GPA

The same data were analyzed using expectancy graphs. Due to the space limitations we included graphs which show interesting results, the other ones are in Appendices part. From the expectancy graph (see Figure 1) we can see that those students who are in the Bottom 25% based on their iBT score, have a little chance of earning high GPA, those students who are in the Middle 50% iBT have a more chance to be in the Middle GPA in the future. Those students who are in the Top 25% iBT have a big chance

of earning high GPA, while the chance of earning low GPA is very low. The same result could be seen for other majors as well. Only for BA Engineering program (BSENG, n=23) the image was a little bit different (see Figure 2). Here those students who are in the Bottom 25% iBT have no chance of earning high GPA.

TOEFL iBT (n = 1382)

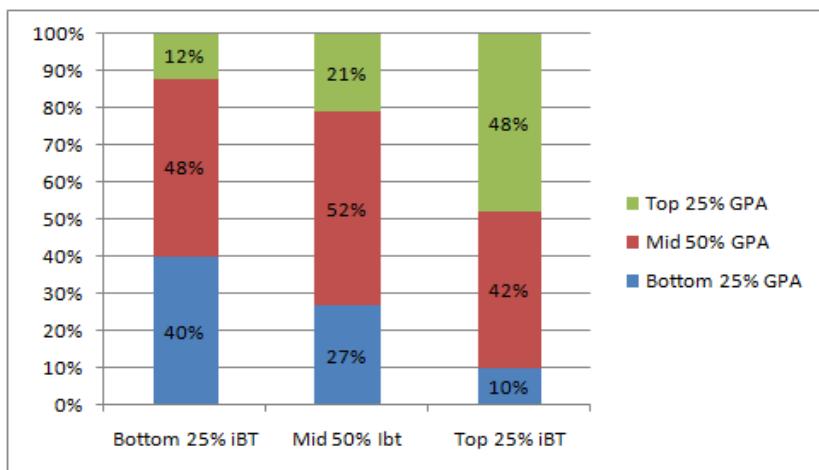


Figure 1. Percentage of the participants earning top 25%, middle 50% and bottom GPA by TOEFL iBT score groups

Major: BSENG (n=23)

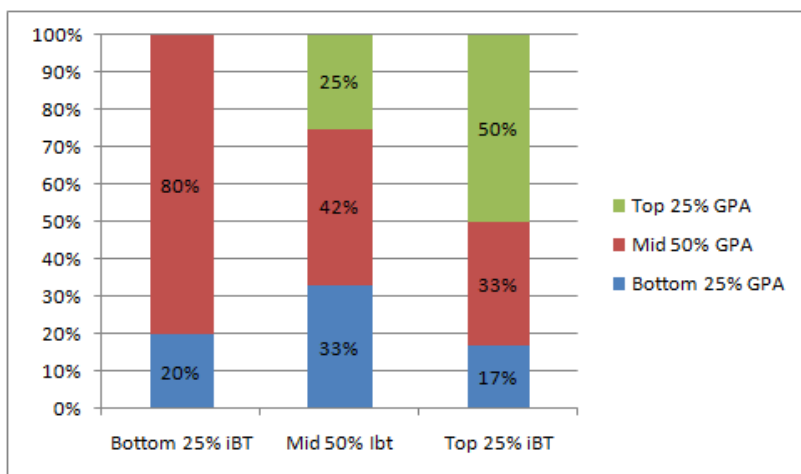


Figure 2. Percentage of the participants earning top 25%, middle 50% and bottom GPA by TOEFL iBT score groups (BA Engineering Sciences)

For IELTS (see Figure 3) the same image can be seen as was for TOEFL iBT. Those students who are in the Bottom 25% IELTS, have a little chance of earning high GPA. Those who are in the Middle 50%, tend to have high GPA, but more likely they will be in the Middle GPA. As for those who are in the Top 25% IELTS, have a big chance of earning high GPA.

IELTS (n = 252)

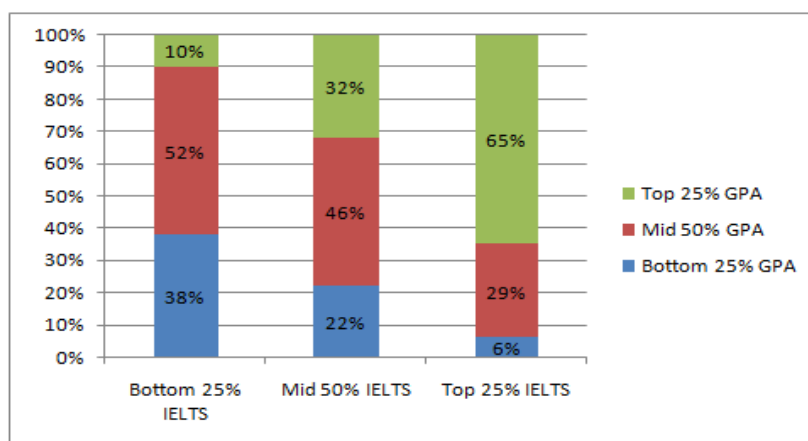


Figure 3. Percentage of the participants earning top 25%, middle 50% and bottom GPA by IELTS score groups

For other majors the image is nearly the same. For BA Computer Science (BSCS, n=45) program the image is a little bit different. Those students, who are in the Top 25% IELTS, have a very big chance to have only high GPA (see Figure 4). The image is very different for BA Engineering Sciences (BSENG) program (see Figure 5). We can see that those students who are in the Bottom 25% IELTS have no chance of earning high GPA; the chance of being in the Middle 50% IELTS is 50 percent. Those students who are in the Middle 50% IELTS, have a chance of earning only high GPA and those who are in the Top 25% IELTS, have a little chance of earning high GPA. But the reason of such

kind of result is that the total number of the students who entered this program with IELTS score is only 5.

Major: BSCS (n=45)

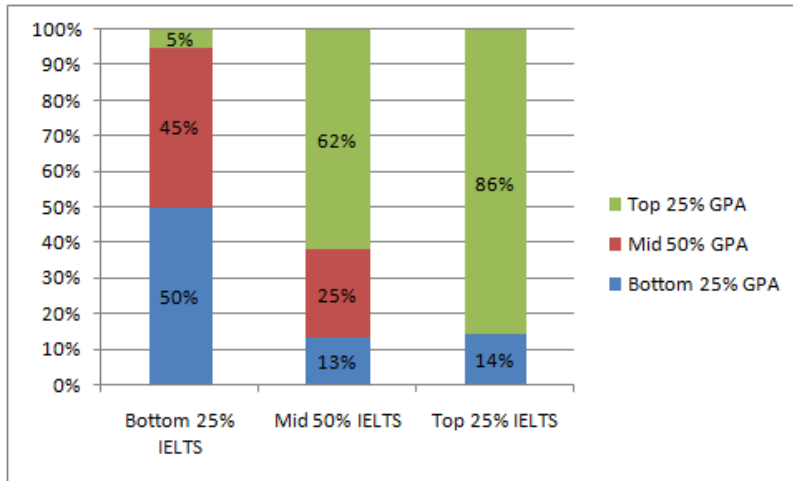


Figure 4. Percentage of the participants earning top 25%, middle 50% and bottom GPA by IELTS score groups (BA Computer Science).

Major: BSENG (n=5)

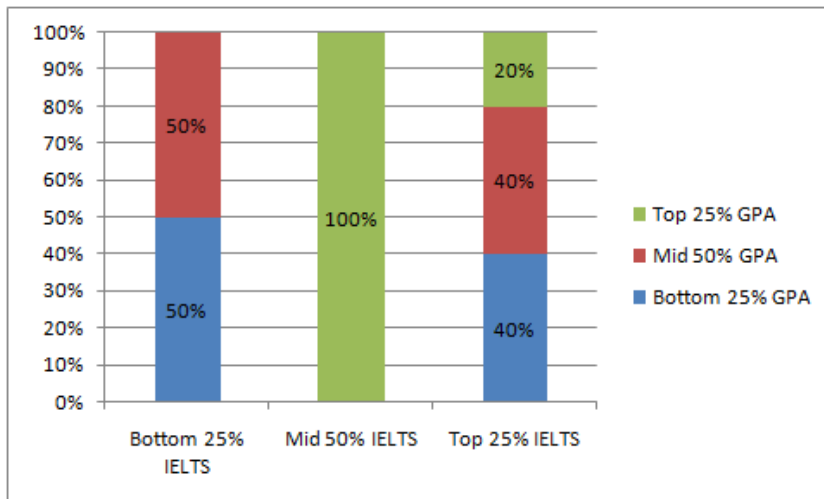


Figure 5. Percentage of the participants earning top 25%, middle 50% and bottom GPA by IELTS score groups (BA Engineering Sciences)

CHAPTER FIVE: DISCUSSION AND CONCLUSION

The current research has tried to find the possible relationships between high stakes tests and academic performance measured by GPA. The analyses were extended to include gender differences in the above-mentioned variables as well. This research included the academic records of 1634 students from the American University of Armenia (AUA). All the participants were from undergraduate programs, and the Term GPA showed their performance during their first semester of study. The data were analyzed by using correlation-based analyses and expectancy graphs.

Based on the general findings of our study we can claim that even when there is a small correlation, there is an indication of significant relationship between the variables. Both TOEFL iBT/IELTS tests scores are good predictors of future academic success of the students.

However, there are researchers (Ng, 2007, Arcuino, 2013, Fass-Holmes and Vaughn, 2014, Vu, L. and Vu, P., 2013) who claim that there is no significant relationship between the tests scores and academic performance. Arcuino (2013) claims that when a student has a linguistic competence, it does not mean that he/she should also have high academic performance during a semester. The reason can be the fact that the language that is being used during the classes is more technical, which causes problems for students.

The results of the current study are in line with the results of a similar study by Cho and Bridgeman (2012) which shows that although the correlation between the test scores are not strong, however there is an indication of significant relationship. Like Cho and Bridgeman's (2012) study, our research also confirms that expectancy graphs can be

valuable in complementing correlation analysis and can provide a finer picture of the relationships between TOEFL iBT/IELTS and academic success.

The result of the study also agrees with the result of Lin and Wu's (2003) research. It claims that the scores of the test of males are higher than those of the females, while female learners exceed their male peers in earning high GPA.

The current study found that those students, who entered the university with high and middle scores, tend to have high GPA as well. Those students who entered the university with low tests scores, the chance of earning high GPA in the future is very small, but there is a chance of being in the Middle 50%.

Although the test scores and students' GPA was moderate, but both TOEFL iBT and IELTS test scores can be good predictors of students' future academic success. The correlations are mainly weak, but we consider them moderate as TOEFL iBT and IELTS tests scores are not the only predictors, the admission office takes into consideration other criteria for accepting the University as well, like school grades, evaluations.

The study sample was limited to Undergraduate students from a single institution (AUA). The reason is that AUA is the only educational Institution in the Republic of Armenia that requires TOEFL iBT/IELTS tests for admission.

Finally, the current research contributes to the literature on the predictive validity research of language tests and confirms that expectancy graphs can be valuable in complementing correlation analysis and can provide a finer picture of the relationship between TOEFL iBT/IELTS and academic success. The current research is important as it introduces an alternative way to evaluate the proficiency language tests in prediction

future academic success. The Institutional Research Office (IRO) can use the expectancy graphs in their analysis.

Future research can examine the predictive validity of TOEFL iBT and IELTS for graduate students of AUA. Other indicators of students' academic performance, such as instructor evaluations and students' course grades, could be included in future studies.

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Appendices

Appendix 1

TOEFL iBT and GPA

Major: BAB (n= 776)

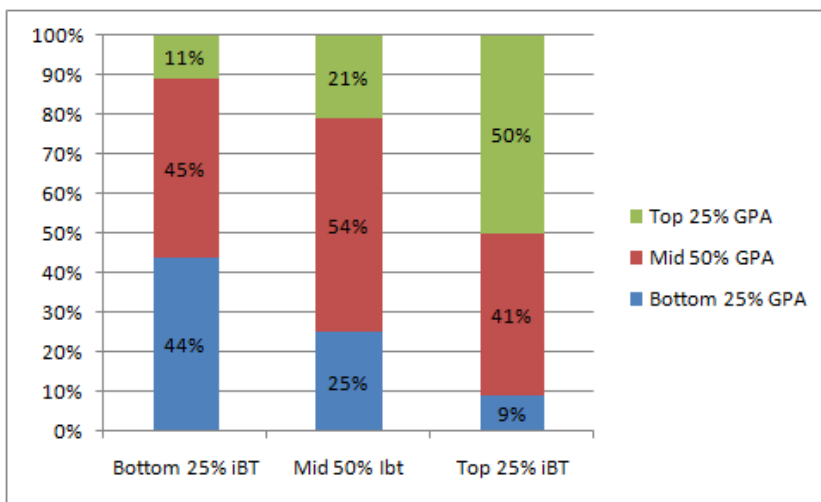


Figure 6. Percentage of the participants earning top 25%, middle 50% and bottom GPA by TOEFL iBT score groups (BA Business)

Major: BAEC (n=256)

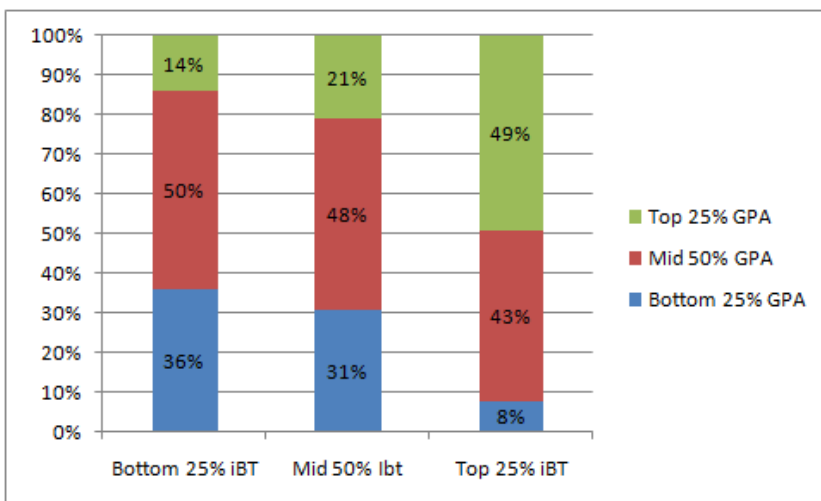


Figure 7. Percentage of the participants earning top 25%, middle 50% and bottom GPA by TOEFL iBT score groups (BA English and Communications)

Major: BSCS (n=327)

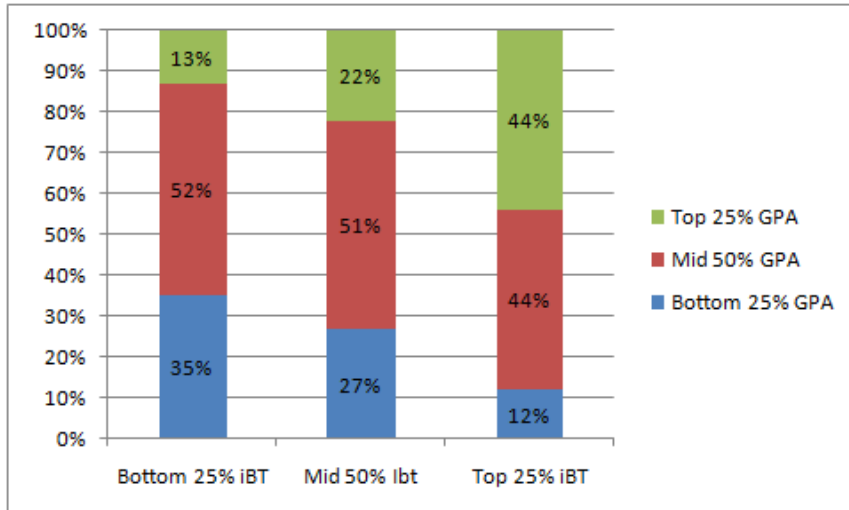


Figure 8. Percentage of the participants earning top 25%, middle 50% and bottom GPA by TOEFL iBT score groups (BA Computer Science)

Appendix 2

IELTS and GPA

Major: BAB (n=137)

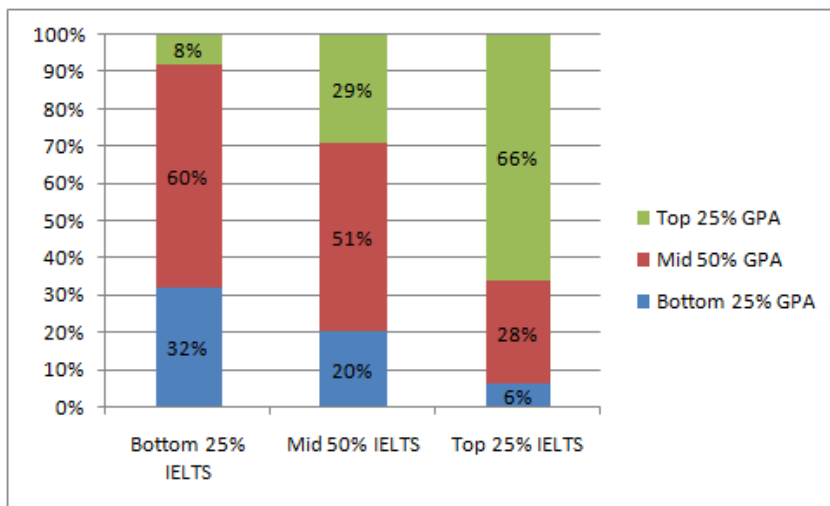


Figure 9. Percentage of the participants earning top 25%, middle 50% and bottom GPA by IELTS score groups (BA Business)

Major: BAEC (n=65)

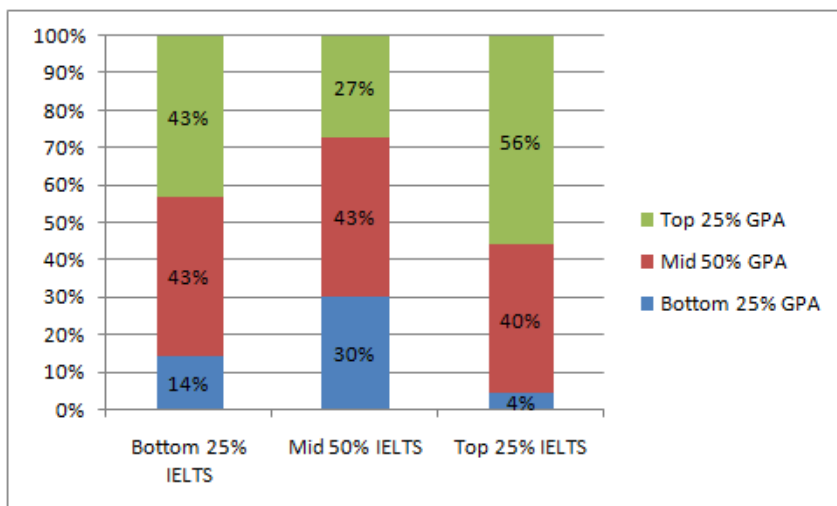


Figure 10. Percentage of the participants earning top 25%, middle 50% and bottom GPA by IELTS score groups (BA English and Communications)