



CORRELATING ENGLISH PROFICIENCY TESTS (TOEFL, IBT, PBT AND IELTS) SCORES WITH PLACEMENT TEST SCORES AT RAK MEDICAL & HEALTH SCIENCES UNIVERSITY, IN UAE (UNITED ARAB EMIRATES)

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ABSTRACT

English proficiency tests are extremely important in determining the students' potential and capacities to pursue higher education where the medium of instruction is predominantly English. Consequently, it is necessary to find homogeneity in all skills of the English language. These skills are required in higher education, especially for professional disciplines such as medical and other health sciences.

This study focused on building a validity of the accepted proficiency tests, TOEFL (PBT and iBT) and IELTS, and compared them to the placement test administered to all admitted students of RAK Medical and Health Sciences University (RAKMHSU), United Arab Emirates (UAE) to investigate the existence of a correlation between the proficiency tests and the English Placement Test (EPT). The main objective was to determine the need to change the benchmark scores of proficiency tests and/or to select the most appropriate proficiency test for admission in RAKMHSU.

The study found that as compared to TOEFL PBT and iBT, there is a significant statistical correlation between the scores of test takers of IELTS and their performance in the English Placement Test.

Keywords: English proficiency tests, placement test, validation, correlation

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INTRODUCTION

Proficiency in English language is of prime importance in the education sector in the Middle East. As more and more educational institutions adopt English as the medium of instruction, one of the criteria of the admissions to colleges and universities is a minimum proficiency score regulated by the institution.

One of the primary concerns in the language evaluation tests is how successful the test

scores are, in determining the linguistic abilities of the students necessary for good academic performance in a course conducted in English language. It is particularly important when the students' admissions depend on reaching a certain score. Two particular English language proficiency tests that are widely used in academic institutions are TOEFL (Test of English as Foreign Language), the oldest testing service devised by ETS (Educational Testing Service) in 1964 (Stevenson, 1987) and IELTS

(International English Language Testing System). TOEFL-Paper Based Test (PBT) tests the students in three domains; listening comprehension, structure and written expression, and reading comprehension. On the other hand, TOEFL iBT (internet-based test) tests the students in four domains; listening, reading, writing and speaking. IELTS, like TOEFL-iBT, evaluates the students in all four language domains. Such tests are devised to, as holistically as possible, assess non-native English speakers' command on English language in an academic setting. With the help of these tests the educational institutions can infer the degree of success these applicants will achieve in a course taught in English language which requires the important condition of readiness for participating in content based assessments necessitated in a Medical and Health Sciences University.

Ideally, academic institutions should be satisfied with the students who obtain the desired score to be equipped with the required language skills tested by these extensively researched testing systems. However, it is a dogma of language assessment that one language test cannot, no matter how painstakingly designed it may be, or how powerful an argument may be presented for its validity, be taken as the perfect measure of the skills that it is meant to estimate. It has therefore become a common practice for many universities to conduct an institutional test of English proficiency for the non-native speakers of English. The universities conduct these tests to assess the non-native speakers' mastery of the four skills, reading, writing, listening and speaking. The results of these tests make sure that the students are placed in English language programs which will suit their ability level. RAKMHSU is an international university with multi-cultural and multi-lingual population. The expected outcome of such heterogeneity is the polarities in

linguistic skills. A placement test is administered to minimize these linguistic polarities and to select students who need to take an English language course that prepares them to develop the linguistic skills required in a professional college.

The research was designed and carried out with the aim of answering the following questions:

- Is there a correlation between students' scores in standard proficiency tests (TOEFL and IELTS) and their performance in the English Placement Test (EPT)?
- If there is a correlation between the standard proficiency test scores and EPT results, should there be a change in the benchmarks set for minimum required scores at the time of admission?

As mentioned above, the TOEFL PBT has three sections. The listening comprehension section tests the candidates' ability to understand English as spoken in North America. The structure and written expression measures the ability to recognize language appropriate for standard written English and the third section comprises of passages for reading comprehension to measure the ability to understand academic reading material. This is administered with a time limit of 35 minutes, 25 minutes and 55 minutes for each section, respectively. The TOEFL PBT is being phased out and is only administered in countries without viable Internet testing.

TOEFL Internet based test includes four sections: reading, listening, speaking and writing. Each section is scored on a scale of 0-30, resulting in a total score of 120, as shown in Table 1. The test takes about 4 hours to complete. A detailed description of the content of each section is as follows: .

Table 1: Detailed scores of TOEFL iBT

Section	No of items/tasks	Testing time	Score scale
Reading	36-70	60-100 minutes	0-30
Listening	34-51	60-90 minutes	0-30
Speaking	6 tasks	20 minutes	0-30
Writing	2 tasks	50 minutes	0-30
Total time		Approximately 4 hours	0-120

IELTS, the International English Language Testing System, has four parts – Listening (30 minutes), Reading (60 minutes), Writing (60 minutes) and Speaking (11–14 minutes). The total test time is 2 hours and 45 minutes.

Although the timing and the structures of the above mentioned proficiency tests differ, Table 2 shows the equivalent scores of these proficiency tests.

Table 2: Equivalent scores of various proficiency tests

TOEFL Paper	TOEFLIBT	IELTS
0 - 310	0 – 8	0 - 1.0
310 - 343	9 – 18	1.0 - 1.5
347 - 393	19 – 29	2.0 - 2.5
397 - 433	30 – 40	3.0 - 3.5
437 - 473	41 – 52	4.0
477 - 510	53 – 64	4.5 - 5.0
513 - 547	65 – 78	5.5 - 6.0
550 - 587	79 - 95	6.5 - 7.0
590 - 677	96 - 120	7.5 - 9.0
Top Score	Top Score	Top Score
677	120	9

The minimum acceptable scores in the proficiency tests at RAKMHSU are:

TOEFL PBT---500

TOEFL iBT –70

IELTS ---Band 5

Although there are variations in the testing methods and tasks in the TOEFL and IELTS tests, the equivalency scores suggest similarities in the linguistic abilities of the students. The range of limitations in Band Descriptors in IELTS is similar to the score descriptors of TOEFL. A band description of band 5 in IELTS places the candidate capable of partially addressing the task, inappropriately using the format, writes irrelevant details, and not sufficiently developed in Task Responses. They lack overall progression in paragraphing and exhibit inaccuracy in Coherence and Cohesion. The use of vocabulary is limited in range and they make noticeable errors in Lexical Resource. They also use limited range of structures, and make frequent grammatical errors.

RAKMHSU English Placement Test: The RAKMHSU English Placement Test (EPT) administered to all admitted students at the beginning of the academic year is designed to determine whether a student needs to take a specially developed English language course Eng101 to further improve their language skills as required in RAKMHSU medical and health sciences programs. This course prepares them in Professional use of English with emphasis on medical vocabulary and writing skills special to the medical field. The EPT comprises of three sections with the following grade distribution:

Reading comprehension: 45 marks

Structure and written expression: 25 marks

Writing skills to test college level English: 30 marks

Total marks: 100

Students who score 70 or more marks in EPT are exempted from taking the English language course Eng101.

The placement test focuses on testing the writing skills in addition to the reading comprehension, structure and written expression. In the written skill the tasks selected are general skills of letter writing, summarizing, written compositions ranging from descriptive to argumentative. These skills are found imperative for medical professional who have to format and write referral letters, take notes and make notes and use the skills of descriptions and argumentations.

Methodology

First the similarities and differences between the three proficiency tests, TOEFL PBT, iBT and its British counterpart IELTS will be taken into account. The TOEFL tests are built on the framework of communicative competency based on current second language acquisition theory and practice. The scores are linked and compared according to the standards set by the ETS as the test taker population. They have the same relative position with the other test takers who are admitted to different programs of the university. As discussed earlier TOEFL iBT is more comprehensive in task types compared to TOEFL PBT although all TOEFL scores are mapped according to the Council of Europe's common European Framework of Reference for languages (CEF), which describes

proficiency in listening, speaking, reading and writing in an internationally comparable manner.

Data collection: The participants in this study were local and international students who had studied English either as a second language or foreign language. There were a total 901 students, admitted from 2009 to 2014, who had qualified one of the standard proficiency tests and appeared in RAKMHSU EPT. Quantitative data of the standard proficiency test scores of students from the four colleges namely, Medical, Dental, Pharmaceutical and Nursing sciences were obtained from the Admissions Department of RAKMHSU whereas the quantitative data of RAKMHSU EPT scores for these students were obtained from the Examinations Department at RAKMHSU. Among the 901 students considered in this study, 67% were female and 33% were male.

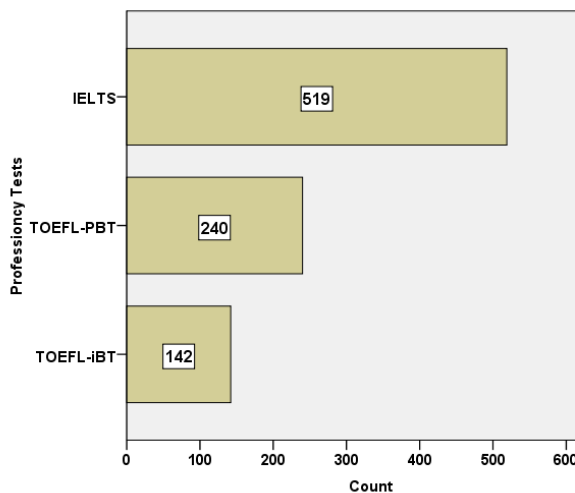


Figure 1: Distribution of Students-Proficiency test wise

Figure (1) shows the distribution of the sample based on the proficiency tests.

Table (3): Descriptive Statistics of proficiency tests

proficiency test	N	Minimum	Maximum	Mean	Std. Deviation
IELTS	519	5.00	8.50	5.9027	0.94628
TOEFL-iBT	142	61.00	117.00	86.6775	14.77398
TOEFL-PBT	240	500.00	677.00	554.9542	44.71970

Where proficiency test of IELTS (N=519) averaged (M=5.903,SD=0.946), proficiency test of

TOEFL-PBT (N=142) averaged (M=86.076, SD=14.774) and proficiency test of TOEFL-PBT (N=240) averaged (M=554.954,SD=4.720) got admitted in RAKMHSU as shown in Table 3, where 901 students appeared for the placement test from year 2009-2014.

Figure (2) depicts the distribution of the sample program-wise for the same academic years.

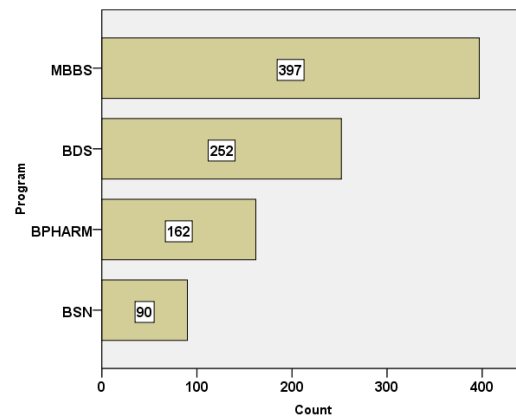


Figure 2: Sample Distribution Program wise

Analysis Approach: Descriptive statistics were computed to evaluate the information on the scores of students in both proficiency tests and placement test. The detailed analyses can be found in the discussion and results section. To evaluate the correlation between TOEFL IBT/PBT, IELTS and placement test we used the Pearson Correlation Coefficient (r). This tool was found most appropriate for our research to link the performance of proficiency tests and the placement test. Whisker plot of placement test results were plotted program-wise as well as proficiency tests-wise to determine the median values. ANOVA test was applied to identify which group showed the best performance in the placement test.

Results and Discussion

The analysis results are shown in Table 4 below. The table gives the Pass/Fail and the minimum and maximum scores obtained in EPT as well as the mean, standard error, and standard deviation for students who had qualified one of the standard proficiency tests.

Table 4: Scores in RAKMHSU EPT for qualified test takers of Standard Proficiency Tests

Qualified Standard Proficiency Test / EPT	No. of Students (N)	Pass/Fail	Score in RAKMHSU EPT				
			Minimum	Maximum	Mean	Std. Error	Std. Dev.
IELTS	519	191/328	10.00	92.00	57.550	0.881	20.072
TOEFL- PBT	240	125/115	13.50	92.00	62.114	1.401	21.697
TOEFL- iBT	142	105/37	5.00	93.00	71.197	1.448	17.252
RAKMHSU EPT	901	421/480	5.00	93.00	60.917	0.689	20.667

Where students with IELTS (N=519) averaged (M=92.00, SD=20.072), students with TOEFL-PBT (N=240) averaged (M=62.114,SD=21.697) and students with TOEFL-iBT (N=142) averaged (71.197,SD=17.252).

Figure (3) depicts the Whisker plot of placement test results program-wise, where we can see that the median of MBBS students is the highest followed by BDS, B. Pharm and BSN.

Figure 3: Program- wise Whisker plot

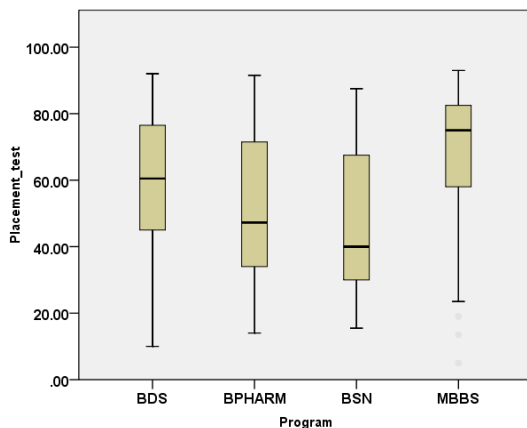


Figure (4) shows the Whisker plot of placement test

results with respect to proficiency tests, where we can see that the median of TOEFL iBT test takers is the highest followed by those of TOEFL PBT and IELTS. Figure 4: Whisker plot with respect to proficiency tests

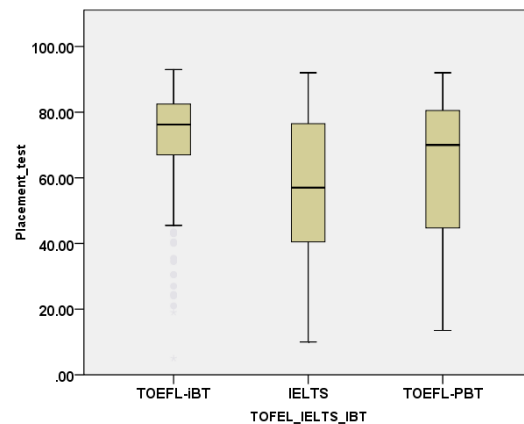


Table 5. summarizes the correlation between the proficiency tests and EPT scores.

Table 5: Correlation between Proficiency tests and EPT scores

	EPT scores	
	<i>r</i>	<i>P value*</i>
IELTS	.794**	0.000
TOEFL-PBT	.580**	0.000
TOEFL-iBT	.388**	0.000

*Pearson correlation

** Correlation is significant at the 0.01 level (2-tailed).

Figure (5) displays the straight-line regression with $r^2 = 0.63$. A correlation was computed to determine if there exists a statistically significant association between IELTS and EPT scores. revealed that $r(519) = 0.794$, $p = 0.000$. Although the correlation was significant, it only explained 63% of the

variability between the IELTS and EPT ($r^2 = 0.63$).

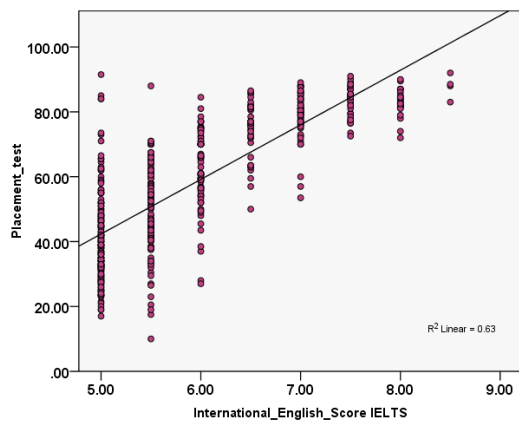


Figure 5: IELTS and EPT scores

Figure (6) displays the straight-line regression with $r^2 = 0.336$. A correlation was computed to determine if there exists a statistically significant association between TOEFL PBT and EPT scores. Pearson revealed that $r(240) = 0.58$, $p = 0.000$. Although the correlation was significant, it only explained 33.6% of the variability between the TOEFL PBT and EPT ($r^2 = 0.336$).

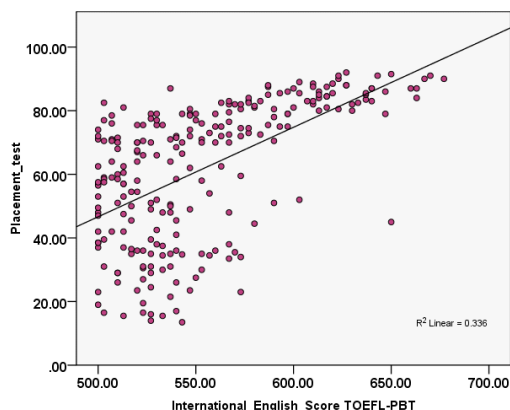


Figure 6: TOEFL PBT and EPT scores

Figure (7) displays the straight-line

Table 6: ANOVA test of the EPT scores of different Proficiency Test-takers

Proficiency tests	Frequency (%)	EPT Scores Mean(SD)	F Statistics(df)	p value ^a
TOEFL-iBT	142(16%)	71.20(17.25)	26.252(2,898)	0.00
TOEFL- PBT	240(27%)	62.11(21.70)		
IELTS	519(58%)	57.55(20.07)		

^aone way ANOVA

Post hoc analysis: The mean difference of EPT score is significant between TOEFL iBT and TOEFL PBT but there are no significant differences in the other pairs.

In order to determine the minimum thresholds of different proficiency tests that will exempt the students from taking EPT, the following

regression with $r^2 = 0.15$. A correlation was computed to determine if there exists a statistically significant association between TOEFL-iBT and EPT scores. Pearson revealed that $r(142) = 0.338$, $p = 0.000$. Although the correlation was medium, it only explained 15% of the variability between the TOEFL-iBT and EPT ($r^2 = 0.15$).

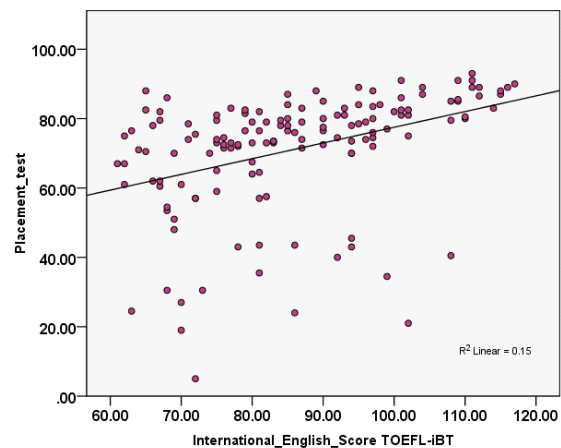


Figure 7: TOEFL-iBT and EPT scores

To identify which group has the best performance in the placement test, ANOVA test was applied. There was a statistically significant difference between the proficiency test and EPT scores. $F(2,898, 26.252, p=0.00)$. Student-Newman-Kuels post hoc analysis revealed that students from TOEFL iBT [71.20(17.25)] have significantly higher EPT score than TOEFL- PBT [62.11(21.70)] which in turn is higher than IELTS [57.55(20.07)] as illustrated in Table 6.

procedure was adopted. Since the passing mark in EPT is 70, the intersection of horizontal line drawn at EPT score of 70 with the regression line will determine the threshold value of proficiency test under consideration. If a vertical line is drawn at the intersection point then the students in the upper right portion can be exempted from the

placement test. This is shown below for TOEFL-iBT, TOEFL-PBT, and IELTS.

Figure (8) shows the determination of threshold of TOEFL-iBT for exemption from taking the EPT. Students who have scored 83 or more in TOEFL-iBT may be exempted from taking RAKMHSU EPT.

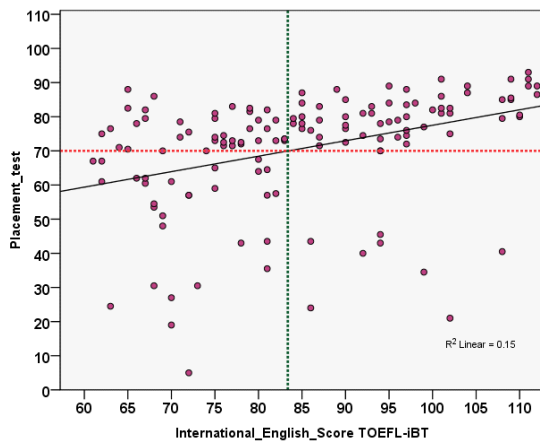


Figure 8: Determination of threshold for TOEFL-iBT

Figure (9) shows the determination of threshold of TOEFL-PBT for exemption from taking the EPT. Students who have scored 582 or more in TOEFL-PBT may be exempted from taking RAKMHSU EPT.

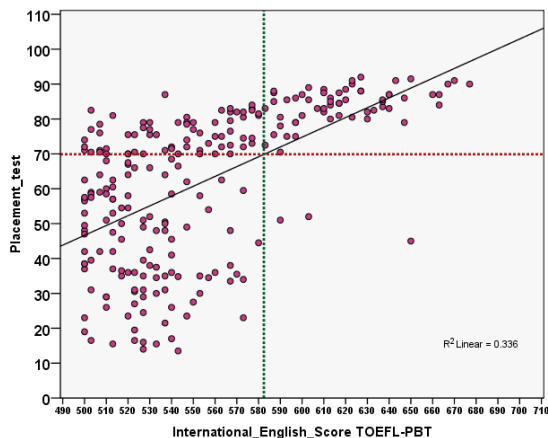


Figure 9: Determination of threshold for TOEFL-PBT

Figure (10) shows the determination of threshold of IELTS for exemption from taking the EPT. Students who have obtained band 6.5 or higher in IELTS may be exempted from taking RAKMHSU EPT.

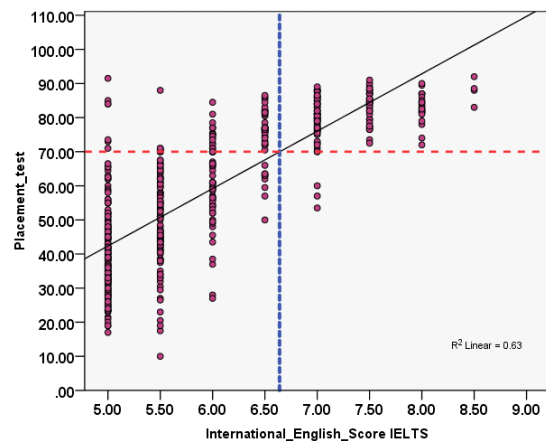


Figure 10: Determination of threshold for IELTS

Conclusion

This paper has presented a case study conducted at RAK Medical & Health Sciences University (RAKMHSU) to determine the correlation between students' scores of English Proficiency Tests (TOEFL: iBT & PBT and IELTS) and their scores in the University's English Placement Test (EPT). The study focused on building a validity of the accepted proficiency tests, TOEFL (PBT and iBT) and IELTS, and compared them to the placement test administered to all admitted students of RAKMHSU in order to investigate the existence of a correlation between the proficiency tests and EPT.

The study found that out of TOEFL PBT and iBT, there is a significant statistical relationship between the score of test takers of iBT and their performance in EPT. On the other hand, it was also determined that a significant statistical correlation existed between the test takers of IELTS and EPT. The students who score high in IELTS exam score well in the EPT also. Based on these results we recommend that the University change the admission criteria (benchmark scores) for the English proficiency tests as follows; IELTS-6.5, TOEFL iBT-83, TOEFL PBT 582. We also recommend that the students who score more than the above mentioned bench mark scores should be exempted from the Institutional EPT.

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