

MUET As A Predictor Of Academic Achievement In ESL Teacher Education

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ABSTRACT

One of the indicators of English language proficiency used by Malaysian public universities is the Malaysian University English Test (MUET). This study seeks to examine whether MUET is an accurate predictor of academic performance of a group of English teacher education students. The participants for this study consisted of 111 first and second year students who were enrolled in a B. Ed Teaching English as a Second Language (TESL) program at a local public university. A general linear multivariate regression was conducted using the SPSS for the overall score of the MUET together with their scores on each of the test components and the students CGPA (Cumulative Grade Point Average). The analysis was carried out to identify important predictors of academic achievement by correlating each of the independent predictor variables with each other as well as with the academic achievement criterion. The results of the multiple regression analysis revealed that reading and listening components were significant predictors of students' academic achievement. These findings seem to indicate that the different components of the MUET can be used to predict students' academic performance more accurately than the overall MUET score itself. However, there is a need for continuing predictive validity studies in different contexts. Context specific studies are important as they provide empirical evidence and contribute to an increasing literature on the relevance of MUET in higher education settings.

Keywords: MUET; English language testing; predictor; academic achievement; correlation

INTRODUCTION

The importance of English language competency in the academic contexts has led universities in Malaysia to incorporate English language proficiency requirements into admissions and placement in academic programmes. It has been argued that a certain level of English language proficiency is required for students to cope with the linguistic demands of their respective course of study. Competency in English is required in Malaysian tertiary institutions as students are expected to have a near-native reading competence in order to read academic reading texts prescribed for the respective disciplines (Ponniah & Tay, 1992). Thus, there is a need for each discipline to carefully

consider the appropriate language level required for students to enrol in a particular academic programme.

At present, the Malaysian University English Test (MUET) is widely used as a benchmark in determining one's English language proficiency for the purpose of admission into Malaysian public universities. The test is developed and administered by the Malaysian Examination Council and recognized only in Malaysia and Singapore. According to the Malaysian Examination Council (1999, p. 11), the MUET syllabus "seeks to consolidate the English language ability of pre-university students to enable them to perform effectively in their academic pursuits at tertiary level, in line with the aspirations of the National Education Philosophy".

Proficiency in the MUET is measured in terms of ability to operate in the four skill areas of listening, speaking, reading and writing. The comprehension skills are assessed through multiple choice comprehension questions based on listening and reading texts. As for communicative ability, specific oral and written tasks are designed to elicit prompt students' language output that is assessed according to grammatical accuracy, contextual appropriateness and communicative effectiveness.

Each MUET sub-test is scored separately where the listening and speaking component carries 45 maximum score each, 75 for writing and 135 for reading comprehension. The sub-test scores are then averaged to obtain the overall band score. Candidates are placed on a band of 1 to 6 based on the aggregated band score of the four language components (see Appendix). However, since November 2008, the Malaysian Examinations council has made a few changes to the MUET format. Compared to the old format, the new format sees an increase weight in writing component (90) and a decrease in reading component (120). Meanwhile the weight age of listening and speaking component remains the same.

A student's overall result on all four language components of the MUET often determines the number and nature of English language courses he or she has to attend in the university. The minimum MUET scores for university entrance is a score of Band 3 although some universities require higher scores for programs such as English Studies and Teaching English as a Second Language. This is because these programmes are taught in English and linguistically demanding. It is assumed that students' ability to study in the medium of English language may have an influence on their academic performance. Despite these requirements, there is a degree of uncertainty about the reliability of MUET score in predicting students' ability to cope with academic English and overall academic achievement.

THE RELATIONSHIP BETWEEN LANGUAGE PROFICIENCY AND ACADEMIC ACHIEVEMENT

Numerous predictive validity studies (Dooley & Oliver, 2002; Feast, 2002; Yen & Kuzma, 2009) have been carried out to investigate the link between English proficiency levels and academic achievement. This is usually calculated using students first or second semester GPA as a measure of their academic achievement. Two most widely used tests to measure English language learners' proficiency are Test of English as a Foreign Language (TOEFL) and International English Language Testing Service (IELTS). The TOEFL is internationally recognized and widely used assessment to determine the extent to which international students have attained the English language

proficiency required for successful tertiary level study in the United States and Canada. Previous studies conducted on TOEFL scores as determinants of academic achievement had produced contradictory findings. Some concluded that the TOEFL can be a predictor of academic success (Ayers & Peters, 1977; Stoyhoff, 1991; Hu, 1991; Spitzer, 2001) but several others (Yule & Hoffman, 1990; Neal, 1998; Person, 2002) found no significant correlation between TOEFL scores and international students' academic performance. Hirsch (2007) points out two possible shortcomings in interpreting these results. First, TOEFL had undergone periodic revisions and as a result, older studies may not be relevant today. Secondly, student samples are truncated as only those who have satisfied the entry requirements for tertiary study were selected.

IELTS is commonly used as an admission tool in the United Kingdom, Australian and New Zealand universities. Studies that investigate the predictive validity of IELTS have also reported varied results.

Several studies (Criper & Davies, 1988; Elder, 1993; Kerstjens & Nevy, 2000) have found a weak positive correlation between IELTS and academic performance. Kerstjens and Nevy (2000) examined 113 IELTS band scores of first year international students in an Australian university and compared them with the students' first year GPA. They found significant correlations between reading and writing tests and GPA. On the other hand, speaking and listening scores were not found to be predictive of academic achievement. Similarly, in a research conducted by Woodrow (2006), predictive validity of IELTS subtest scores of postgraduate students were correlated against their semester 1 GPA. Her findings showed weak but significant correlations between overall IELTS bands and GPA. In a more recent study, Yen and Kuzma (2009) examined the IELTS band scores of 77 Chinese undergraduates studying at a British university against their GPA. They reported significant correlations between IELTS scores and students' GPA. They found that IELTS scores could be better used to predict students' GPA in the first semester rather than the second semester.

Studies by Cotton and Conrow (1998) and Dooley and Oliver (2002) on the other hand, found no positive correlations between IELTS scores and academic performance. In fact Dooley (1999) in her study found that overseas students whose IELTS scores were below the cut-off point, despite being considered as 'at risk', generally succeeded. On the other hand, out of 23 native English speakers who are admitted into Science and Engineering classes on the basis of an IELTS score, 15 of them failed to achieve a pass mark, despite their high proficiency in English language. It seems evident that high IELTS scores alone did not guarantee success.

The inability of language proficiency measures particularly in the case of English to predict success in learning of other subjects could be due to a number of factors. Among them are the variability in test formats, lack of consistency of prediction performance, the varied nature of the test items, the dependability of construct validity of one test against another test and the inability of any one test to adequately perform any prediction (Messick, 1989; Weir, 1988; Spolsky, 1995).

As for the MUET, there have been very few predictive validity studies (Moon & Siew, 2004; Abd Samad, A., Syed Abd Rahman & Yahya, 2008; Zulkifli, M. N., Nur Azilah, I., Nuraini, K., Shahrum, A. & Mohd Marzuki, M., 2011) which examined the relationship between the test scores and their subsequent academic success. Moon and Siew's (2004) study looked at the factors that could affect academic performance of

Computer Science students at a local university. They found that high proficiency in English does contribute to better academic performance. They also reported that academic attainment may also be influenced by students' level of intelligence, teaching and learning approach.

In another study, Abd Samad, A., et al. (2008) examined the ability of the MUET scores to predict students' academic success as measured by their composite CGPA. The researchers examined 52 third year TESL undergraduates studying at a local university. The results of the study showed inconclusive evidence with regards to the validity of MUET as a predictor of academic achievements. They reported that the Reading component of MUET seemed to be the most valid predictor of academic success. They suggested the use of combinations of scores on the language components in the MUET as admission requirements rather than the single band score. Findings from this study suggest that further studies need to be carried out on other variables relating to academic achievement and therefore provide greater accuracy in the selection of undergraduates at the university. A recent study by Zulkifli Mohd Nopial et. al (2011) looked at the relationship between MUET and credit hours taken per semester with the academic performance of first year Engineering students. They found that MUET has a higher correlation to students' academic performance than the students' number of credit hour taken per semester.

CONTEXT OF THE STUDY

The issue of English language proficiency admission levels for undergraduate programs in Malaysian institutes of higher education remains an ongoing debate. There is a wide range of entry requirements between universities and disciplines. Thus, there is a need for continuing predictive validity studies in different contexts. Context specific studies are important as they provide empirical evidence and contribute to an increasing literature on the relevance of MUET in higher education settings.

In teacher education program such as B.Ed Teaching English as a Second Language (TESL) where students are trained to be teachers of English, the task of setting the appropriate language proficiency level for university admission is a difficult one. Academic performance in TESL program depends very much on grades achieved on oral presentations; report writings, academic essays and school based teaching practicum.

As prospective English teachers, the students should be able to speak English fluently and accurately. They need to give clear explanations and instructions to their learners. Without high competency in English language, it is unlikely that these teacher trainees will perform effectively as English teachers in their classrooms.

As such, the purpose of the current study is to determine the ability of English language proficiency (MUET) score as a whole and its components listening, speaking, reading and writing skills in predicting English teacher education undergraduates' academic success as measured by the cumulative grade point average (CGPA). This study also examined which individual scores on the MUET would be better predictors on students' academic performance.

The study conducted was intended to answer the following research questions:

1. What is the relationship between English language proficiency as measured by the MUET and the students' academic performance as measured by the students' CGPA?

2. What is the relationship between individual scores on the MUET and the students' academic performance as measured by the students' CGPA?

As MUET scores have been utilised to measure a candidate's English language proficiency, research into the use of the test scores and meanings ascribed to them is vital. Templer (2004) rightly points out that MUET's use in measuring students' English proficiency should be furthered examined. Although the score a student achieves in a MUET test is meant to indicate whether he/she has sufficient English proficiency to cope with the linguistic demands of tertiary studies, it does not imply that they will succeed academically or that they will not struggle linguistically. Graham (1987: p. 515) argues that "English proficiency is only one among many factors that affect academic success".

METHODOLOGY

The participants for this study consisted of 56 first year and 55 second year undergraduates who were enrolled in a B. Ed TESL program at a local public university. Their degree is based on a credited system of university education. Students need to complete 128 credits in order to graduate, 92 (72%) of which are studied within the students' major and minor subject specialization in English medium. Of the 111 respondents, 23 are males and 88 are females. The respondents are homogeneous in terms of age (20-21 years old) and educational background.

The data for this study were collected from students' records during the academic year of 2009/2010. Data comprised of : students' background which includes gender, age, ethnic origin, academic background; scores on subjects taken and their grade point average (GPA) and cumulative grade point average (CGPA); and scores (band) on MUET. It is important to note that the participants sat for their MUET paper prior November 2008. Their results are reported according to the old MUET format.

Data analysis was carried out in two stages. The first stage is to provide the results of the students' scores on MUET as a whole and the scores on CGPA and this is accompanied by the results of the scores on each components of MUET. The results in the forms of descriptive and also bivariate statistics would be able to provide an overall picture of the performance of the students in all the measures used in the study.

The second stage of the analysis is to determine the ability of MUET as a whole and its components to predict academic success as measured by CGPA. For this part, a multiple regression analysis using CGPA as the dependent variable was employed. A stepwise regression was conducted for which predictive variables were entered in the following order: MUET overall score, speaking, reading, writing and listening scores. In addition to examining the predictive power of MUET and its components on CGPA, SPM results and selected English usage variables were analysed for comparative reason. These variables were part of the antecedent variables in students' daily pursuit of the TESL programme.

RESULTS

Part one of the analysis is to show the status of students' performance on MUET and their CGPA. Table 1 shows the means and the standard deviations of the MUET and CGPA

scores of the respondents. The minimum MUET scores obtained by the students was Band 3 and the maximum scores was Band 5. On average, the respondents scored 3.98 (highest score is Band 6) in the MUET. As for their academic performance in Semester 1 of academic year 2008/2009, on average the respondents obtained CGPA of 3.16. The maximum CGPA achieved was 3.94.

TABLE 1. Means and standard deviations scores on MUET and CGPA

	N	Min	Max	Mean	Std. Dev
MUET	111	3.00	5.00	3.98	0.632
CGPA	111	2.08	3.94	3.16	0.413

Table 2 displays the MUET scores obtained by the respondents of this study. Of the 111 students, 23 (20.7%) scored Band 3. These students are categorised as modest user of the English language in the MUET descriptor. 67 (60.4%) of the participants obtained MUET Band 4 and 21 (18.9%) achieved Band 5, indicating good level of competence in the English language skills.

TABLE 2. Frequency and percentage of MUET aggregated band scores of participants

MUET Band	Frequency	%
3	23	20.7
4	67	60.4
5	21	18.9
Total	111	100.0

The results of descriptive analysis of the MUET sub-component scores as found in Table 3 shows that the mean of Speaking and Listening scores were 30.22 (maximum score is 43) and 31.71(maximum score is 45) while the standard deviations were 5.68 and 7.71 respectively. The mean scores for Reading and Writing component was 98.07 (maximum score is 134) and 44.50 (maximum score is 73).

TABLE 3. Means and standard deviations achieved on sub-components of MUET scores

	N	Min	Max	Mean	SD
Speaking	111	11.00	43.00	30.22	5.68
Reading	111	59.00	134.00	98.07	13.95
Writing	111	28.00	73.00	44.50	9.59
Listening	111	15.00	45.00	31.71	7.71

In attempting to establish MUET as predictor of academic performance, two types of analysis were conducted. In the first analysis, correlations between MUET and its component scores and CGPA were calculated. Next, a multiple regression was carried out. Results derived from correlating MUET aggregated band score and sub-component scores with students' CGPA are displayed in Table 4. The correlation between overall MUET score and CGPA is: $r=0.435$, $p < 0.01$, $n=111$. The analysis below also indicated that each of the students' MUET component scores has significant correlation with their CGPA ($p < 0.01$).

TABLE 4. Correlations between MUET components and Cumulative Grade Point Average (CGPA)

	CGPA
Listening	0.322**
Speaking	0.234**
Reading	0.327**
Writing	0.276*
Overall MUET score	0.435*

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

* Correlation is significant at the 0.05 level (2 tailed)

From the analysis in Table 4, the correlation between MUET and CGPA as mentioned above is 0.435 while the two highest correlations for its components are the correlations between CGPA and reading ($r = 0.327$, $p < 0.01$) and between CGPA and listening ($r = 0.322$, $p < 0.01$). The significantly high positive correlations as shown between CGPA and overall MUET and particularly the reading and the listening components could possibly be due to the fact that many of the coursework's in the B. Ed TESL programme put heavy demands on reading and listening in English. That being the case, then it is probable to suggest that there is a causal relationship between MUET and CGPA. Hence, the former may have predictive ability on CGPA achievement.

Previous predictive validation studies (Criper & Davies, 1988; Graham, 1987) suggest that 0.30 is as high a correlation as can be expected given the plethora of factors other than language which are likely to contribute to students' academic performance. Taking these limitations into account, it can be safely concluded that with the highly positive relationships and causal in nature as shown in Table 4, MUET components can be regarded as a reasonably good predictor of short term performance in ESL teacher education courses.

For the second part of the analysis, in order to determine which of the MUET components proved to be the best predictor of academic achievement as measured by CGPA, a stepwise multiple regressions was carried out. In the calculated equations, predictor variables such as students' overall MUET scores, scores on components of MUET, SPM scores and lastly, scores on a number of variables related to English usage were analysed against students' CGPA which was used as dependent variable.

TABLE 5. Adjusted R^2 , and β weight of MUET with CGPA as dependent variable

Variable	β	R^2	t-value	F-value	Sig.
MUET	0.435	0.182	5.044	25.439	0.00**

** significant at a confidence level of $p < 0.01$ (2 tailed)

Table 5 displays the results of the stepwise regression predicting students' CGPA using MUET scores alone as independent variable. The result in Table 5 indicates that the aggregated MUET score is a salient predictor of academic performance (CGPA), $F(1, 109) = 25.439$ or $t(1,109) = 5.044$, $p < 0.00$. The aggregated MUET score accounts for 18.2 % of the variance of success in CGPA.

TABLE 6. Adjusted R², and β weight of MUET components with CGPA as dependent variable

Variables	β	R ²	t- value	Sig.
Listening	0.249	0.068	2.777	0.00**
Speaking	0.111	0.012	1.176	0.24
Reading	0.199	0.038	2.061	0.04*
Writing	0.134	0.016	1.326	0.19

* significant at a confidence level of $p < 0.05$ (2 tailed)

** significant at a confidence level of $p < 0.01$ (2 tailed)

Table 6 displays the results of the stepwise regression predicting students' CGPA using the components of the MUET scores as independent variables. Results in Table 6 indicated that total variance of CGPA scores accounted by the four components of MUET is 14.4 % in which $F(4, 106) = 0.679$, $p < 0.01$. Listening and reading components proved to be the significant predictors of success in CGPA in which variance accounted were 6.8 %, $t(4, 106) = 2.77$, $p < 0.00$ and 3.8 %, $t(4, 106) = 2.061$, $p < 0.04$ respectively. From the data shown, it was clear that the MUET components could predict CGPA results. In particular, listening and reading components combined accounted for a larger proportion of the CGPA variance.

Thus, it can be said that MUET scores on listening and reading components showed clear predictive evidence than the other two components.

TABLE 7. Adjusted R², and β weight of MUET and SPM scores with CGPA as dependent variable

Variables	β	R ²	t-value	Sig.
SPM	- 0.012	0.001	- 0.131	0.89
MUET	0.433	0.183	4.923	0.00**

**significant at a confidence level of $p < 0.01$ (2 tailed)

Since the process of students' selection into BEd. TESL programme involves the use of SPM results in English as one of the criteria that is important to determine CGPA variance accounted for by SPM vis-a-vis MUET. As can be seen in Table 7, variance accountable to SPM is 0.01%. This is statistically not significant, $t(2, 8) = 0.131$, $p > 0.05$ as opposed to 18.3 % of MUET, $t(2, 8) = 4.923$, $p = < 0.00$. This seems to indicate that SPM score is not a good predictor in predicting CGPA achievement. This can be confirmed from the low correlation of 0.086 between SPM and CGPA scores.

TABLE 8. Adjusted R², and β weight of MUET components, SPM and daily English usage scores with CGPA as dependent variable

Variable	β	R ²	t-value	Sig.
SPM	0.024	0.007	0.2692.786	0.77
Listening	0.253	0.103	1.190	0.00**
Speaking	0.114	0.054	2.070	0.18
Reading	0.206	0.107	1.356	0.04*
Writing	0.004	0.076	-1.423	0.18
Daily Usage	0.011	0.015	2.377	0.34
Academic Usage	0.023	0.077		0.02*

* significant at a confidence level of $p < 0.05$ (2 tailed)

** significant at a confidence level of $p < 0.01$ (2 tailed)

Prior to admission in the B. Ed TESL program, and during the course of their study, students took part in various activities in which English was used as means of communication. These activities may have contributed to the improvement of their English language proficiency. Thus, it is also important to determine CGPA variance accounted by those factors which may then be predictable of CGPA performance. As shown in Table 8 of the 7 variables were entered in the equation, only three variables accounted for about 26.0% of the CGPA variance. Among the variables entered into the equation, listening and reading components accounted for the CGPA variance significantly 10.3% ($t = 2.786, p < 0.01$) and 10.7% ($t = 2.070, p < 0.05$) respectively. However, MUET speaking and writing components do not significantly contribute to the CGPA variance as well as all other variables except academic usage variable.

From the correlation results, it is clear that MUET and CGPA are significantly related. This relationship is much more than just the fact that the two measures contain overlapping elements which makes it predictable of one over the other. But this could be due to the sequence of events in which MUET is used as entry requirement. This relationship then is inadvertently causal in nature. To further substantiate this claim, regression analysis was carried out. The results in Table 5, 6, 7 and 8 consistently showed that MUET and its components are able to significantly predict academic performance as measured by students' CGPA. As the results shown, listening and reading emerged as significant predictors over the other two components. Hence it is safe to say that MUET particularly the listening and reading components are able predictors of students' academic achievement in B. Ed. TESL programme as measured by their CGPA. In addition, it appears that students' English academic usage could also be used to predict their CGPA.

DISCUSSION AND CONCLUSION

The goal of this research was to determine the relationship between language proficiency as measured by MUET overall score and its components and academic performance of B. Ed TESL students at a local university. The findings of the multiple regression analysis indicate that among the four components, the reading and listening components emerged as the strongest predictors of students' academic achievement. These results seem to corroborate with Yen and Kuzma (2009) findings related to the predictive ability of the IELTS test. They found significant correlations between students GPA in the first semester and their IELTS listening and reading scores. This seems to imply that in order to do well academically, students need to attain good competence in reading and listening skills. Lee King Siong (2004, p. 41) rightly points out that "the importance of reading for university education is reflected in the weight age given to the reading comprehension component in the MUET: it is 45% of the total marks". Based on these findings, the validity of reading and listening components in predicting academic performance in teacher education courses should be further investigated.

As for the stepwise analysis regarding the best predictor of students' academic achievement at the University, results of the present study indicated that attainment of students' CGPA following this B. ED TESL program is highly predicted by their ability in scoring high on the reading, listening and aggregated band score of the test. These results are in line with other studies (Zulkifli Mohd Nopial et al., 2011; Abd Samad, A.,

et al., 2008; Moon & Siew, 2004) indicating that English language proficiency as measured by MUET is moderately predictive of academic performance. A study by Abd Samad, et al. (2008) reported that MUET reading component as the most highly related skill to academic achievement. This and comparable findings from previous studies on the relationship between the language components of MUET and academic performance seem to suggest the need to consider selection decisions based on scores for each language component or combination of different component scores. The selection of appropriate language component could be based on the language skills requirement for respective academic programs. Each institution should conduct its own studies to examine the link between different English language components and academic performance and make its own decisions on acceptable MUET language component scores for admission requirements. Future research could also use MUET scores obtained from the new version of the test introduced in November 2008 to predict students' academic performance in their respective field of study.

As previous researchers (Graham, 1987; Moon & Siew, 2004) have noted, there are a number of factors other than language proficiency that could contribute to students' academic achievement. One of the factors which may influence the results of the findings is the exposure to English medium instruction the students received in their B.ED TESL courses. Other factors such as scholastic aptitude, motivation, attitude and previous academic performance are likely to contribute to students' academic achievement. Bearing these limitations in mind, MUET could still be regarded as a reasonably good predictor of students' academic performance in teacher education courses.

Future studies could look at these predictors and examine the extent these non-language factors account for students' academic performance and influence their admission to Malaysian institute of higher education.

ACKNOWLEDGEMENT

The authors would like to thank University Malaya for sponsoring this research under the University Malaya Short Term Grant FS347/2008C.

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APPENDIX

Candidates are rated into six bands – band one being the lowest and band six being the highest -- according to their test scores. The total score is 300 and the table below shows **MUET band description**.

Band	Aggregated Score	Description
6	260 - 300	<i>Very good user</i> - Very good command of the language. Highly expressive, fluent, accurate and appropriate language: hardly any inaccuracies. Very good understanding of language and contexts. Functions extremely well in the language.
5	220 - 259	<i>Good user</i> - Good command of the language. Expressive, fluent, accurate and appropriate language but with minor inaccuracies. Good understanding of language and contexts. Functions well in the language.
4	180 - 219	<i>Competent user</i> - Satisfactory command of the language. Satisfactory expressive and fluent, appropriate language but with occasional inaccuracies. Satisfactory understanding of language and contexts. Functions satisfactorily in the language.
3	140 - 179	<i>Modest user</i> - Modest command of the language. Modestly expressive and fluent, appropriate language but with noticeable inaccuracies. Modest understanding of language and contexts. Able to function modestly in the language.
2	100 - 139	<i>Limited user</i> - Limited command of the language. Lacks expressiveness, fluency and appropriacy: inaccurate use of the language resulting in breakdown in communication. Limited understanding of language and contexts. Limited ability to function in the language.
1	Below 100	<i>Extremely limited user</i> - Poor command of the language. Unable to use language to express ideas: inaccurate use of the language resulting in frequent breakdowns in communication. Little or poor understanding of language and contexts. Hardly able to function in the language.

ABOUT THE AUTHORS

Assoc Prof Dr. Juliana Othman has been involved in language education at various levels for the past 15 years. Currently a teacher educator at the Faculty of Education, University of Malaya. Her areas of specialization include teacher education, TESL methodology and second language acquisition.

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