



Research Monograph

MAJLIS PEPERIKSAAN MALAYSIA

A Correlational Study between MUET and IELTS

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EXECUTIVE SUMMARY

The present century has seen the rapid globalisation of Higher Education, and increasing numbers of Malaysian students are seeking to study in universities abroad, and increasing numbers of students from abroad are seeking to enter universities in Malaysia. The MUET has long been established as the English test for university entrance in Malaysia, and in the context of globalisation, it is essential to know how it compares with other established English tests. The overall aim of this study is to compare MUET Band scores with IELTS Band scores. A correlational study was undertaken to measure the statistical association between MUET and IELTS Band scores.

The research addressed the following research questions:

Research Question 1:

Comparing the MUET and IELTS Overall Band Scores

How do the overall band scores obtained by the test takers in the MUET test correlate with the overall band scores for the same test takers in the IELTS test?

Research Question 2:

Comparing the MUET and IELTS Band Scores according to Performance in Language Skills

How do the MUET band scores for each language skill (Listening, Speaking, Reading, and Writing) correlate with the IELTS band scores for the same test takers?

Research Question 3:

Ascertaining the performance of test takers according to gender and SPM English results

How does the performance of the MUET and IELTS test takers vary according to gender and SPM English results?

The study involved a quantitative research design, and systematic purposive sampling. The participants were 468 students from Malaysian universities and Form

6 colleges who took MUET in March 2017 and then IELTS in July, August, and September 2017.

The participants were selected from the top 25 percent in each MUET band who were attending government schools or matriculation centres, or who were taking university foundation studies. The test takers were required to attend a one day IELTS familiarisation workshop, which informed them before taking the test about IELTS format, task types, and expected responses. The IELTS results and the MUET results were merged and screened. Descriptive analysis and correlation analysis were conducted on the overall band scores and scores for the different language skills separately using *Kendall's Tau*, the significance of the correlation being evaluated at $\alpha = 0.05$.

The key findings from the correlational analysis of MUET and IELTS Band scores are as follows:

1. There is a positive and significant correlation between the overall MUET and IELTS Band scores (Kendall's Tau = 0.8413**, p-value < 0.001). This indicates that test takers who obtained low overall scores in MUET also tended to obtain low overall scores in IELTS, while those who obtained high overall scores in overall MUET also tended to obtain high overall scores in IELTS. The significant correlation also suggests that the MUET and IELTS provide similar information concerning test takers' overall ability in the four skills.
2. The relationships between the MUET and IELTS Band scores for the four separate skills are all positive and significant. The strength of the relationships between the two tests ranges from 0.6428 to 0.7795. The strength of the relationship ordered from the highest to the lowest was
 - a. Listening (Kendall's Tau= 0.7700**, p-value < 0.001).
 - b. Reading (Kendall's Tau= 0.7044**, p-value < 0.001)
 - c. Speaking (Kendall's Tau= 0.6804**, p-value < 0.001) and
 - d. Writing (Kendall's Tau = 0.6444**, p-value < 0.001).

This suggests that of the four skills, the two receptive skills have stronger relationships than the productive skills.

3. The correlational findings between MUET and IELTS suggest that the equivalent tests provide similar information concerning the test takers' ability in the four skills (Listening, Speaking, Reading and Writing). This enables us to make a meaningful comparison of the scores for the two tests.

The findings for the MUET and IELTS Band scores according to gender and SPM English results can be summarised as follows:

1. On the whole, male test takers seemed to do better than their female counterparts in overall MUET and overall IELTS. Male test takers also did better for all four skills in the MUET and IELTS tests.
2. There seems to be a positive relationship between the SPM English results and overall performance in MUET, the better SPM results being generally associated with better overall performance in MUET. A similar pattern is also observed for IELTS.
3. The overall pattern for the MUET Reading scores seems to be consistent with the pattern for IELTS Reading scores. In the lower bands there were more test takers with a Pass or Fail in SPM English, and in the higher bands there were more test takers with a Distinction in SPM.
4. The majority of those with a Distinction in SPM English also fall into the High Performers category for MUET Reading. However, only about half of those with a Distinction in SPM English fall into the High Performers category for IELTS Reading.
5. It appears that an excellent grade in SPM English does not necessarily lead to an excellent score in MUET or IELTS Writing. Less than a quarter of those with a Distinction in SPM English fall into the High Performer category for both Writing tests.

Chapter 1 Introduction

1.1 Introduction

This research monograph presents the analysis of the performance of those who took both the MUET (Malaysian University English Test) and the IELTS (International English Language Testing System) tests. The monograph includes the overall band scores for both tests, together with separate band scores for Listening, Speaking, Reading and Writing, and for score profiles according to gender and SPM English results. It was decided to compare student performance in MUET with IELTS because of the popularity of IELTS as evidence of international students' English language proficiency for entry to Malaysian universities.

1.2 Background of Study

1.2.1 MUET

The MUET is an English language proficiency test introduced in 1999 for Malaysian pre-university students seeking entry to university. It tests the four skills, Listening, Speaking, Reading, and Writing. The MUET Regulations, Test Specifications, Test Format and Sample Questions document (2015) states that the objective of MUET is "to measure the English language proficiency of pre-university students for entry into tertiary education". The MUET syllabus seeks to prepare pre-university students to meet the English requirements of their university courses.

The aggregated scores ranging from 0 to 300 are placed on a Band scale ranging from 1 (lowest) to 6 (highest). Reaching the stipulated Band is for Malaysian students a mandatory requirement for admission to Malaysian public universities (Malaysian Examinations Council, 2006; Rethinasamy & Chuah, 2011). On entering university, local undergraduates are required to register for a certain number of credit-bearing English courses according to their MUET results.

Although foreign students at present take other tests such as IELTS and TOEFL (Buniyamin, Abu Kassim, & Mat, 2015), the work on aligning the MUET with the

Common European Framework of Reference (henceforth CEFR) has just been completed. Thus, foreign students will also be able to take the new CEFR-aligned MUET beginning 2021. It is hoped that findings from this study will provide useful feedback to the work in order to improve assessment practice.

1.2.2 IELTS

The IELTS test measures the English language proficiency of students wishing to study or work using English as the language of communication. The score test takers obtained indicates whether they have a sufficient level of English to cope with the linguistic demands of academic studies in higher education.

We chose the IELTS Academic because it is more appropriate for university admission. Except for the subject matter of the Reading and Writing components, the IELTS academic and IELTS General are the same. The IELTS test contains four components Listening, Speaking, Reading, and Writing, and uses a nine-band scale to assess the full range of ability to use English from non-user (Band 1) to expert user (Band 9).

The Listening component consists of four recorded monologues and conversations with 40 questions of different types (e.g. multiple choice, plan/map/diagram labelling, matching, sentence completion, form/note/table/flow-chart/summary completion). Its duration is approximately 30 minutes with an additional 10 minutes transfer times. The recordings are played only once.

The Speaking component, which assesses test takers' use of spoken English, is conducted in a one-to-one interview. It has three parts. Part 1, which lasts for about four to five minutes, contains general questions on topics that the test taker is familiar with. Part 2, which lasts for about 2 minutes with 1 minute preparation time, requires the test taker to talk about a particular topic given on a card. In Part 3, which is an extension of part 2 and lasts for about 4 or 5 minutes, test takers are asked questions on the same topic, requiring them to discuss more abstract ideas and issues.

The Reading test, to be completed in 60 minutes, consists of three long texts taken from material appropriate for test takers wishing to enter university, including journals, books, newspapers and magazines. There are different texts ranging from descriptive and factual to discursive and analytical, and 40 questions which test a wide range of reading skills.

The Writing test, to be completed in 60 minutes, is made up of two tasks on topics of general interest appropriate for students entering university. Task 1 requires test takers to respond to a diagram, graph, table or chart by describing, summarising or explaining the information in their own words. Task 2 requires them to write an essay in response to a point of view, argument or problem.

There has been much research conducted to align IELTS to CEFR (see for example www.ielts.org/usa for IELTS and CEFR align details). Many efforts have also been made to align other standardised English tests to the CEFR (O'Sullivan, 2015) including MUET.

1.3 Statement of the Problem

Although the MUET has been the subject of an increasing number of validation studies, the majority of these have focused on the extent to which the overall MUET scores predict students' academic performance (see e.g. Abd. Samad, Syed Abd Rahman & Yahya, 2008; Rahmat et al., 2015). While there is a perceived connection between students' level of English proficiency and their performance on the MUET oral test (Lateh, Shamsudin & Mat Said, 2015), there has been little empirical evidence for the correlation between MUET and IELTS. The exception is the study conducted by MEC in 2005, which focused on selected students from secondary schools in Kuala Lumpur in Bands 4, 5 and 6. The aim was to ascertain the correlation between the performance of test takers in the MUET test and in the IELTS test. Unlike the earlier study, this present study includes both high and low performing students in Bands 1 to 6. Another earlier study by Cambridge English (Cambridge English Evaluation of MUET, 2015) examined the link between MUET and the CEFR, 457 MUET candidates taking the Reading, Listening and Writing Cambridge English: Advanced tests in November 2014. To contribute to making the findings more reliable, an important

advantage of the present study is that all the candidates took both the MUET and IELTS, and also the MUET speaking test which was not included in the CE evaluation study.

1.4 Research Objectives

The objectives of this study are as follows:

Research Objective 1

To measure the correlation between the MUET and IELTS Overall Band Scores by the same test takers.

Research Objective 2

To compare the MUET and IELTS Band Scores according to performance in the separate language skills.

Research Objective 3

To ascertain the performance of test takers according to gender and SPM English results.

1.5 Aim and Research Questions

The overall aim of this study is to compare the MUET Band scores with the IELTS Band scores. A correlational study was undertaken to investigate the statistical association between the MUET and IELTS band scores. The following research questions are addressed to limit the scope of the project:

Research Question 1:

Comparing the MUET and IELTS Overall Band Scores

How do the overall band scores obtained by the test takers in the MUET test correlate with the overall band scores for the same test takers in the IELTS test?

Research Question 2:

Comparing the MUET and IELTS Band Scores according to Performance in Language Skills

How do the MUET band scores for each language skill (Listening, Speaking, Reading, and Writing) correlate with the IELTS band scores for the same test takers?

Research Question 3:

Ascertaining the performance of test takers according to gender and SPM English results

How does the performance of the MUET and IELTS test takers vary according to gender and SPM English results?

1.6 Scope of the Study

The scope of the study covers the overall band scores, band scores for each skill separately, and students' performance according to gender and SPM English results. The study involved 468 students from universities and Form 6 colleges who took MUET in March 2017 and then IELTS in July, August, and September 2017.

1.7 Significance of the Study

The main question for the study is to what extent MUET correlates with IELTS, and measures up to international standards using the IELTS test as the exemplar. In view of the increasing numbers of international students wishing to study in Malaysian universities, we need an internationally recognised test to measure their readiness for academic work at this level. This explains why MUET is now in the process of being aligned to the CEFR. Findings from the study will provide valuable information for this ongoing work.

Comparing the MUET with the IELTS tests will show whether low and high performing students perform at the expected levels in both tests given their level of proficiency in

English. Student performance in the different skills will reveal what skills pose a problem to low performing and high performing students. The tests can also measure student achievement of standards targeted for instruction. In so doing, they indicate what students have accomplished when given appropriate learning opportunities. Teachers and administrators may use the results of that assessment to plan and implement interventions to address areas in which students may not have displayed achievement of standards as measured by the test. For instance, an intervention programme focussing on certain aspects of speaking can be designed to help students improve their ability to communicate verbally in English to meet the required standards. The present study can provide valuable data about student achievement and growth throughout the year to be used by teachers, administrators, specialists, and parents in the context of initiatives to improve instructional effectiveness and student learning. It is hoped that relevant findings will also inform decisions on language policy, especially with respect to the teaching and assessment of English in Higher Education.

Chapter 2 Review of the Literature

2.1 Introduction

This chapter makes an overview of the literature on topics and issues relevant to this research. It is divided into several parts. The first part of the chapter reviews the literature dealing with the two most basic concepts in language testing, namely reliability and validity. This is followed by a review of studies investigating different test scores and test performances for different groups of test takers.

2.2 Testing of Language Skills (Listening, Speaking, Reading, Writing)

This section answers the question why language proficiency tests deal with the four language skills. One of the main reasons is a consequence of the way language learning theories conceptualise communication. According to conventional theory, communication mainly involves Listening, Speaking, Reading, and Writing, and this view has an impact on the way language is taught and assessed.

It is argued that in the assessment of English language proficiency, the measure of no single skill (such as Reading) can sufficiently determine a test taker's overall proficiency in all four skills. In the context in which test takers have to demonstrate their English language ability at the point of entry to university, it is considered necessary to provide evidence for each of these skills separately to ensure that students have the communication skills they need for academic purposes. Ponniah and Tay (1992) and Saidatul and Asiah (2015) point out that in Malaysian tertiary institutions, students are expected to achieve communication skills in English that go beyond coping with academic needs (such as for academic reading) and meet the requirements of the workplace. In these circumstances, English proficiency tests for these purposes have always included the four skills.

2.3 Test Validity

Test validity is traditionally defined as evidence to show that a test measures what it is supposed to measure (Hughes, 1989). Concepts of validity began within the

traditional validity framework, and involved content, construct and criterion-related validity. Messick (1989) shifts the perspective from validity as a property of a test to a property of test score interpretation. Validity has since been closely associated with the interpretation of test scores. Messick (1989) states that "validity is an integrated evaluative judgement of the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of inferences and actions based on test scores or other modes of assessment" (p. 13).

However, in the context of alternative uses of tests, criterion-related evidence of validity is important to ensure the comparability of test scores across different tests used for the same purposes. More specifically, this involves the concurrent validity evidence. Concurrent validity evidence is demonstrated when different tests correlate well, so that the inference can be made that they measure related constructs. Similarly, when concurrent validity is established, decisions based on comparable tests are defensible.

2.4 Studies on Correlational and Comparative Language Proficiency Tests

One of the prerequisites to enter universities in many countries all over the world is the demonstration of proficiency in English. For this reason, universities require prospective students to take established English proficiency tests such as IELTS or TOEFL, or in the case of Malaysia, the Malaysian University English Test (MUET).

As Malaysian universities have gradually increased their intake of international students, different English proficiency test scores have been used interchangeably to screen students for admission to degree programmes. While MUET test scores are used for Malaysian candidates, IELTS test scores have mainly been used for international candidates. In view of the use of different test scores, it is necessary to make a comparability study of the two tests, in order to provide evidence for criterion validity.

Among early comparability studies of tests for criterion-related validity are those of Davies (1984), Criper and Davies (1988) and Lynch (1994), all involving equivalent tests. In Lynch's study (1994), the comparison across tests was important to address

the comparability of test scores used for placement purposes, namely the TEAM (Test of English at Matriculation), ELTS (English Language Testing System), EPTT (English Placement Test) and the IALS (International Auxiliary Languages) cloze Reading test.

The study by Geranpayeh (1994) is another comparability study that compares two influential English language proficiency tests, namely TOEFL and IELTS, which are widely used for university entrance in English-speaking countries. His study attempted to find out whether the corresponding test scores were justified. This is important because of the high stakes involved in decisions based on performance in these two tests. In order to measure the degree to which the two tests draw on the same proficiency, a correlation was made of the overall TOEFL and IELTS band scores obtained by over a thousand Iranian graduate students who had taken both tests. The two tests showed positive and moderate to high correlations for different subsets of test takers. Geranpayeh (1994) stressed the need for concurrent validity evidence of test takers' performance across different test batteries used for selection or placement.

The prevalence of high-stakes testing and its impact on test takers has been well documented in education (Stobart, 2003; Cheng, 2008). In addition, several studies have examined test takers' motivation, test anxiety, and performance in different high-stakes language tests (Cheng et al., 2014). High-stakes language tests have now become a pervasive phenomenon in decision making, and their scores influence university admission, immigration, programme placement, and graduation (Shohamy and McNamara, 2009). For this reason, some studies either compare the two tests or examine the correlations between them.

2.4.1 Examining High-Stakes Language Tests

A correlation study by Strand (2004) analysed scores obtained by students aged 11 in the Cognitive Abilities Test (CAT) and in Key Stage 2. The analysis was repeated for the CAT and Key Stage 3, and for the CAT and the General Certificate of Secondary Education (GCSE), to trace student development at different educational levels.

2.5 Empirical Evidence of Correlational Studies involving MUET

The MEC correlational study conducted in 2005 found a positive correlation between MUET and IELTS for 441 students from secondary schools in Kuala Lumpur in MUET Bands 4, 5 and 6. It was also found that Writing had the highest correlation with IELTS followed by Reading, Speaking and Listening.

In contrast, the present study is more comprehensive, since it has utilised all MUET Bands 1 to 6, the top 25 percent of the band scores being selected for each band. A total of 468 test takers (161 males and 307 females) took MUET and IELTS.

Cambridge English Language Assessment (2015) examined the statistical link between MUET with the CEFR by using Cambridge English: Advanced (CAE) test taken by 457 MUET candidates in November 2014. It was found that MUET Bands 5 and 6 “align closely”, with CEFR levels C1 and C2 respectively. The upper Band 4 was found to align approximately with B2. However, the research has not given ‘a definitive picture’ of the linking because the MUET candidates did not take the CAE speaking component.

2.5.1 Studies on Correlational and Comparative Language Proficiency Tests

Brown (2004, p. 24) argues that the most complex criterion and yet the most important principle of an effective test is validity, which requires five types of evidence, namely content-related evidence, criterion-related evidence, construct-related evidence, consequential validity and face validity. This study focuses on the second form of evidence, namely criterion-related validity, or the extent to which the ‘criterion’ of the test has actually been reached. There are two categories of criterion-related evidence, and these are predictive validity and concurrent validity. A test has concurrent validity if its results are supported by other concurrent performance beyond the assessment itself. For this reason, the present study aims to determine the concurrent validity in terms of correlational relationship between MUET and IELTS overall bands and the bands for each language skill.

Grondlund (1998, p.226) defines validity as 'the extent to which inferences made from assessment results are appropriate, meaningful, and useful in terms of the purpose of assessment'. Brown (2004, p. 22) recommends that 'statistical correlation with other related but independent measures' is another widely accepted form of evidence. This study seeks to investigate the contextual parameters involved in IELTS and MUET.

2.5.2 Related Studies

Most international testing bodies such as Educational Testing Services (ETS) and Cambridge ESOL regularly publish documents on the validity and reliability of their tests (Milanovic, 2009). ETS recently compared the scores obtained on the TOEFL test and IELTS test. As a best practice required by the Guidelines for Practice by the International Language Testing Association (ILTA, 2007), the Standards for Educational and Psychological Testing (AERA, APA, NCME, 1999), and the ETS standards (ETS, 2002, p. 45), appropriate psychometric procedures should always be used to link scores from two different assessments if the scores are to be compared. To comply with this standard, ETS psychometric staff established empirical relationships between scores on the two tests. This research was designed and carried out to answer the following two research questions:

1. What TOEFL iBT section scores are comparable to IELTS section scores? and
2. What TOEFL iBT total scores are comparable to IELTS total scores?

ETS obtained a sample of 1,153 students who had both IELTS and TOEFL scores. Equipercentile linking was used to obtain the corresponding TOEFL score that would pass the same percentage of test takers for each IELTS score. The results for each section (Listening, Speaking, Reading and Writing) and the total test showed that most of the students scored in the middle to mid-high score ranges on both tests.

A related study involved benchmarking between IELTS and HKDSE (Hong Kong Diploma of Secondary Education) English Language Examination in 2012. The study compared students' performance in IELTS and their results in the 2012 HKDSE English Language Examination. The benchmarking study provided useful information to help overseas universities understand the English proficiency of HKDSE candidates and set their admission requirements accordingly. A group of students obtaining level

2 to level 5 in the 2012 HKDSE English Language Examination also took IELTS and their results were collected by the HKEAA (Hong Kong Examinations and Assessment Authority). The mean value of the IELTS results was calculated for the candidates achieving each HKDSE English Language level. Based on this mean value, a range of scores was then calculated taking the distribution error of the sample into account. However, levels of the HKDSE English Language Examination should not be converted into IELTS band scores directly as the assessment objectives, curricula, assessment formats and examination design of the HKDSE English Language and IELTS are different, even though both are tests of English language proficiency.

Khabbazbashi et al. (2017) conducted a study on how a representative sample of learners at two key school stages – Primary Year 5 and Secondary Form 4 in Malta – was currently performing against internationally English language standards. It was found that a large proportion of learners were in CEFR B1 or B2, and could be considered independent users of English (65.8% for Speaking, 45.3% for Writing, 41.3% for Listening and 20.1% for Reading). Speaking was the strongest skill, for which 18% of candidates achieved C1 or above.

The MEC conducts validation and reliability checks on MUET from time to time. This usually involves analysing the test and rater training programmes for the assessors (Rethinasamy and Chuah, 2011). However, there has been only one study which examines the correlation between MUET and IELTS scores of pre-university students (MPM, 2005). The study involved higher band achievers who went for a familiarisation session on the IELTS test format, procedure and questions before taking the test. The findings of the study revealed a good positive correlation ($r=0.662$) between MUET and IELTS overall bands. In terms of individual skills, Writing had the highest correlation ($r=0.521$) followed by Reading ($r=0.504$), Speaking ($r=0.464$) and Listening ($r=0.295$) (MPM, 2005). It could be inferred that MUET Writing, Reading and Speaking components could be reliably used as a good measure of test-takers' ability. However, this study was carried out 15 years ago, and the MUET has since undergone some changes. A study examining the correlation between the two high stakes tests is therefore timely.

Chapter 3 Methodology

3.1 Introduction

This chapter describes the systematic procedure used to collect the information and data, and the research method adopted to answer the following research questions:

- (i) How do the overall band scores obtained by the test takers in the MUET test correlate with the overall band scores for the same test takers in the IELTS test?
- (ii) How do the MUET band scores for each language skill (Listening, Speaking, Reading, and Writing) correlate with the IELTS band scores for the same test takers?
- (iii) How does the performance of the MUET and IELTS test takers vary according to gender and SPM English results?

These research questions were addressed by means of the quantitative research design shown in Figure 3-1. Relevant methods of analysis were selected to meet the research objectives. A sampling frame was used to ensure that only appropriate individuals in the target population were reached to provide the means for the analyses. Data was collected and used in the analysis. Finally, a report was prepared to compile and discuss the results. The remainder of this chapter reports the details of the process.

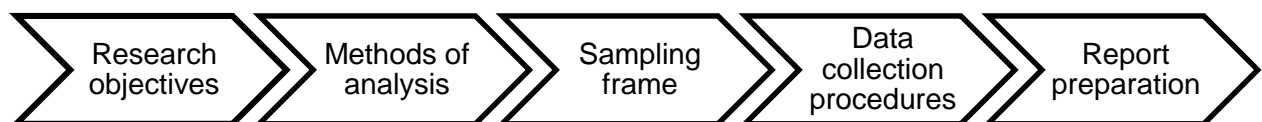


Figure 3-1 The Research Process

3.2 Research Design

3.2.1 Quantitative Research Design

The aim of this research is to measure the correlation between MUET Bands and IELTS Bands. For this purpose, the research design considered only relevant variables, statistics, and the data collection process. The research design is presented in Figure 3-2.

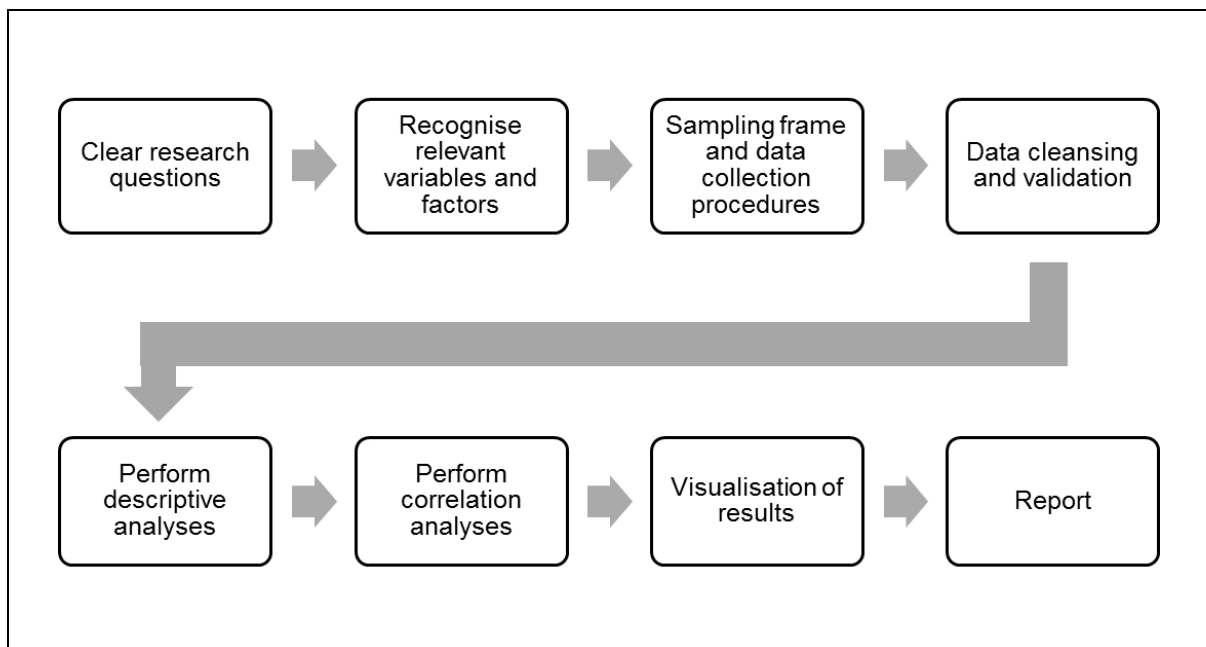


Figure 3-2. Quantitative Research Design

In general, the quantitative research design used secondary data obtained from the Malaysian Examinations Council (MEC) and the British Council (BC). All the data received from these sources were screened through a data cleansing process to avoid bias.

The first step in data cleansing was to complete all participants' biodata, including their background and English language proficiency based on MUET and IELTS. Background and MUET information were obtained from the MEC, IELTS results from the BC. Any anomalies in the data were corrected by means of a 100% observation check and the execution of descriptive statistics such as minimum and maximum

statistics. Identified anomalies were corrected by scrutinising participants' MEC or BC records.

As the data came from two different sources, the information from the two sources was integrated, using the National Registration Identity Card Number (NRIC) and name as references. As a control mechanism, descriptive statistics, i.e. minimum and maximum statistics and tables, were repeatedly produced in order to identify possible anomalies in the data set. The cleaned-up data was subsequently used in the correlational study.

3.3 Quantitative Research Methodology

3.3.1 Instruments and Measurements

The instruments used to measure English proficiency are MUET and IELTS. These are high-stake tests covering Listening, Speaking, Reading and Writing. Scores are given both for overall performance and for individual skills. Results for both tests are grouped in Bands on an ordinal scale, from 1 to 6 in the case of MUET, and from 1.0 to 9.0 (including 0.5 scores) in the case of IELTS. Table 3.1 shows the correspondence between MUET and IELTS Bands and the CEFR levels.

Table 3.1. IELTS and MUET Bands and CEFR level (British Council; Saidatul, 2015)

MUET	CEFR	IELTS	CEFR & IELTS (Interlingua, 2017)
1 & 2	Basic user A1 & A2	1.0	A1 & A2 – Band < 4.0
		1.5	
2.0			
2.5			
3		3.0	
		3.5	
4	Independent user B1 & B2	4.0	B1 – Band 4.0 – 5.0
		4.5	
		5.0	B2 – Band 5.0- 6.5
		5.5	
		6.0	
		6.5	
5	Proficient user C1 & C2	7.0	C1 – Band 7.0 – 8.0
		7.5	
8.0		C2- Band > 8.0	
6			8.5
			9.0

The CEFR levels were used as the reference for comparison.

3.3.2 Test Band Scores

Test band scores were used for the present study rather than raw marks because IELTS test takers frequently do not have access to the actual marks. The analyses were based on data which was readily available to the test takers, and which could be measured using available methods of analysis.

3.3.3 Methods of Analysis

The quantitative analysis combined descriptive and inferential statistics. The corresponding MUET and IELTS scores were then analysed statistically, drawing where relevant on the demographic background. The analysis is summarised in Table 3.2.

Table 3.2. Description of Statistical Tools Used in the Quantitative Research Design

Analysis type	Statistical tool	Purpose
Descriptive analysis	<ul style="list-style-type: none">• Visual displays using tables and graphs• Numerical statistics including median, range, minimum value etc.• Cross tabulation	To report the performance of test takers in MUET and IELTS, and to give the test takers a profile according to gender and SPM English
Correlation analysis	<ul style="list-style-type: none">• Plot visualisation• Correlation score: <i>Kendall's Tau and Spearman's Rho</i>• Correlation test	To visualise and measure statistically the correlation between MUET and IELTS. The significance of the correlation was evaluated at $\alpha = 0.05$

Preference was given in this study to Kendall's Tau, which is a non-parametric rank correlation, on the grounds that the variables of interest, namely MUET and IELTS

band scores, are ranks of data. In addition, Kendall's Tau computes the correlation according to agreeable (concordant) and non-agreeable (discordant) score pairs, which are relevant to visualise the agreement between the MUET band scores and the IELTS band scores.

- (a) Understanding the association between MUET band scores and IELTS band scores

We used two approaches to explain the association between the IELTS band scores and the MUET band scores namely a descriptive approach and an inferential approach. The former aims to explain the association of the two band scores using box and whisker plot, and the latter aims to test the significant level of association between the MUET band scores and the IELTS band scores using Kendall's Tau test.

The descriptive approach utilised a box and whisker plot (See pages 40, 44, 48 and 52). This plot shows the distribution of an IELTS band score, its median value and variability for each band of MUET. The ends of the box show the lower and the upper quartiles of IELTS where the box spans the interquartile range. The whiskers (the two lines on the side of the box) indicate the lowest and the highest IELTS band score.

This study used a non-parametric rank correlation measure, Kendall's Tau, to evaluate statistical association based on the ranks of the MUET band scores and the IELTS band scores. A well-known Kendall's Tau formula is written as:

$$\tau_K = \frac{n_c - n_d}{\sqrt{(n_0 - n_1)(n_0 - n_2)}} \quad \text{Eq.1}$$

where

$n_0 = n(n - 1)/2$ which n is a sample size

n_c = number of concordant (*MUET band score, IELTS band score*) pairs

n_d = number of discordant pairs

$n_1 = \sum_j \frac{t_j(t_j-1)}{2}$, t_j is the number of *MUET* values that tied at j th value

$n_2 = \sum_k \frac{u_k(u_k-1)}{2}$, u_k is the number of *IELTS* values that tied at k th value

Mathematically, Kendall's Tau correlation coefficient is based on the probabilities of observing the concordance and discordance of pairs (the MUET band scores and the IELTS band scores). The computed τ_K is thus an agreement (or association) between the two band scores: where $\tau_K \approx +1$ implies that the concordance between the MUET band scores and the IELTS band scores is perfect, $\tau_K \approx -1$ indicates that the discordance between the two tests is perfect, and τ_K close to 0 indicates non-association between the tests.

Under the null hypothesis that $\tau_K = 0$, the computed τ_K was tested against an approximate normal distribution at $\alpha = 0.05$.

- (b) Alternative measures to indicate the association between MUET band scores and IELTS band scores

It is appropriate to consider alternative statistical approaches to confirm the association between the MUET band scores and the IELTS band scores. The following, are the approaches used in order to confirm the pattern of association between the MUET band scores and the IELTS band scores:

- (i) Spearman's correlation coefficient

Spearman's correlation coefficient (also known as Spearman's Rho, ρ) is much similar to Pearson correlation, but it uses ranks instead of ratio variables. The coefficient takes value $[-1, +1]$ where $\rho \approx +1$ indicates that two variables are association, $\rho \approx -1$ indicates that two variables are association in reverse direction, and ρ close to zero tells that the two variables are not associated. Unlike Kendall's Tau, Spearman's Rho computes the strength of two rank variables by calculating the difference between the ranks.

(ii) Truncated linear regression

Both Kendall's Tau and Spearman's Rho explain the association of the MUET band scores and the IELTS band scores based on the monotonic increasing pattern showed by the two tests. This pattern has enabled this study to measure the linear relationship between the IELTS band scores and the MUET band scores. A simple linear regression will suffice, but realizing that the IELTS band scores are only limited to 9 (the highest band score that can be achieved), thus truncated linear regression was much suitable. Assuming that both IELTS band scores and MUET band scores form a continuum, a simple truncated linear regression was permissible to be constructed. The model of truncated linear regression has considered the IELTS band scores as a dependent variable where its behaviour is explained by the MUET band scores. Using this method, a complete concordance table that depicts the relationship between the two tests was produced.

3.3.4 Sampling Frame

The sampling frame gives a list of all the test takers who can be sampled for the study. This allows the researchers to derive reasonable statistical estimates and to make inferences that can be put in the appropriate context. The population frame for the study consisted of all MUET test takers (67,385) who took the MUET in March 2017. In view of financial and logistical constraints, the target sample size was limited to 500, which was considered sufficient for both the descriptive statistics and the correlational statistics used in the study.

The first step in taking a sample was to rank the test takers according to their overall performance in MUET from highest (Band 6) to lowest (Band 1). A systematic purposive sampling was then taken from those in the top 25 percent in each band attending government schools, matriculation centres, or taking foundation studies. However, in view of the very small number in MUET Band 6, all those in this band were included in the sample. Those selected were then contacted and asked for their consent to participate in this research.

Table 3.3 presents the number and percentage of the population frame, the number in the top 25 per cent of each band, the target number of samples for each MUET band, and the actual number of eventual test takers.

Table 3.3. The Frequency of Test Takers in Population Frame, Target Sample, and Actual Sample

MUET Band	Size of population	Size of sample		
		Top 25%	Target sample	Sample obtained
Band 1	1,160	290	95	88
Band 2	12,717	3,179	95	80
Band 3	30,093	7,523	95	97
Band 4	19,617	4,904	95	95
Band 5	3,772	943	95	95
Band 6	26	7	25	13
Total	67,385	16,846	500	468 (93.60%)

It proved possible to obtain 468 test takers who had successfully completed IELTS, which fell just short of the target 500. The samples taken of those in MUET Bands 3, 4, and 5 met the targets. Some of those in MUET Bands 1 and 2 withdrew from taking the IELTS, while some of those in MUET Band 6 were reluctant to take part in this research.

3.3.5 Data Collection Procedure

Data on those who took MUET in March 2017 was obtained from the MEC, which is the body authorised to make MUET results available. The MEC provided the MUET overall band, separate band scores for Listening, Speaking, Reading, and Writing, and

also background information, including gender. The SPM English results were provided by the Malaysian Examinations Syndicate at the Ministry of Education.

In order to obtain comparable IELTS results, the 114 test takers in the preliminary study took the IELTS test within four months of the MUET. The British Council provided the IELTS band scores, including separate results for Listening, Speaking, Reading, and Writing.

Before taking IELTS, test takers attended a one-day familiarisation workshop to get the necessary exposure and detailed information about the IELTS format, task types, and expected responses. These workshops were conducted in different states throughout Malaysia by a group of 12 experienced English language instructors and lecturers from public universities. They were held first for students in Bands 4, 5 and 6, because some of those in Bands 1, 2 and 3 might want to re-sit the MUET in August 2017. The training for Bands 1, 2 and 3 was held separately from Bands 4, 5 and 6, so that the trainers could adjust the training to the appropriate pace, and to avoid lower proficiency students being intimidated by those with higher proficiency.

Before holding the workshops, the 12 trainers underwent a Training of Trainers (ToT) session conducted by four research group members. The ToT was done on the 13th and 14th of June 2017. Table 3.4 and Table 3.5 show the details of the familiarisation workshops and the dates of IELTS.

Table 3.4 IELTS Familiarisation Workshop Participants and IELTS Test Takers

No.	Test Takers' Schools/ Institutions	IELTS Familiarisation Workshop Date	Written Test Date and Time	Speaking Test Date and Time*	IELTS Test Centre	No. of Test Takers
1.	<ul style="list-style-type: none"> • SMK Kuala Lanar, Kuala Lipis • SMK Clifford, Kuala Lipis • SMK Seri Lipis, Kuala Lipis 	24 July 2017	<p>Saturday 12 August 2017</p> <p>9.00 a.m – 12.00 p.m</p>	<p>Friday 11 August 2017 9.00AM – 1.00PM</p> <p>And</p> <p>Saturday 12 August 2017 1.20 p.m – 4.20 p.m</p>	SMK Kuala Lanar, Kuala Lipis, Pahang	35
2.	<ul style="list-style-type: none"> • SMK Tinggi Melaka • Universiti Teknikal Malaysia Melaka • SMK Munshi Abdullah Batu Berendam, Melaka • SMK Dato Sri Amar DiRaja Muar, Johor • SMK Tinggi Muar, Johor • Kolej Matrikulasi Kuala Pilah 	10 July 2017	<p>Saturday 12 August 2017</p> <p>9.00 a.m – 12.00 p.m</p>	<p>Saturday 12 August 2017</p> <p>1.20 p.m – 9.20 p.m</p>	Ayer Keroh Country Resort, Melaka	53
3.	SMK Mat Salleh, Ranau, Sabah	24 July 2017	<p>Saturday 12 August 2017</p> <p>9.00 a.m – 12.00 p.m</p>	<p>Fri 11 Aug 2017</p> <p>9.00 a.m – 3.00 p.m</p>	SMK Mat Salleh, Ranau, Sabah	29

No.	Test Takers' Schools/ Institutions	IELTS Familiarisation Workshop Date	Written Test Date and Time	Speaking Test Date and Time*	IELTS Test Centre	No. of Test Takers
4.	<ul style="list-style-type: none"> • SMK Sultan Ibrahim (1), Pasir Mas, Kelantan • SMK Sultan Ibrahim (2), Pasir Mas, Kelantan 	24 July 2017	Saturday 12 August 2017 9.00 a.m – 12.00 p.m	Friday 11 August 2017 9.00 a.m – 1.00 p.m	SMK Sultan Ibrahim (2), Pasir Mas, Kelantan	28
5.	<ul style="list-style-type: none"> • SMK Tok Janggut, Pasir Puteh, Kelantan • SMK Bukit Jawa, Pasir Puteh, Kelantan • SMK Long Yunus, Bachok, Kelantan 	24 July 2017	Saturday 12 August 2017 9.00 a.m – 12.00 p.m	Saturday 12 August 2017 1.20 p.m – 9.20 p.m	SMK Tok Janggut, Pasir Puteh, Kelantan	56
6.	Kolej Tingkatan Enam Haji Zainul Abidin, Georgetown	24 July 2017	Saturday 12 August 2017 9.00 a.m – 12.00 p.m	Saturday 12 August 2017 1.20 p.m – 7.20 p.m	British Council Penang (Sentral College)	24
7.	<ul style="list-style-type: none"> • SMK Agama (P), Kangar • SMK Dato' Sheikh Ahmad, Arau 	24 July 2017	Saturday 12 August 2017 9.00 a.m – 12.00 p.m	Saturday 12 August 2017 1.20 p.m – 8.00 p.m	Universiti Utara Malaysia	32
8.	SMK Seri Serdang, Seri Kembangan	24 July 2017	Saturday 19 August 2017 9.00 a.m – 12.00 p.m	Saturday 19 August 2017 1.20 p.m – 6.00 p.m	Written Test: Park Royal Hotel Kuala Lumpur	34

No.	Test Takers' Schools/ Institutions	IELTS Familiarisation Workshop Date	Written Test Date and Time	Speaking Test Date and Time*	IELTS Test Centre	No. of Test Takers
					Speaking Test: British Council Exam Hall, Level 2, South Block, Wisma Selangor Dredging, Kuala Lumpur	
9.	Kolej Tingkatan 6 Tunku Abdul Rahman Putra, Sabak Bernam	10 July 2017	Saturday 19 August 2017 9.00 a.m – 12.00 p.m	Saturday 19 August 2017 1.20 p.m – 5.00 p.m	Kolej Tingkatan 6 Tunku Abdul Rahman Putra, Sabak Bernam	18
10.	Penang Free School	6 July 2017	Saturday 19 August 2017 9.00 a.m – 12.00 p.m	Saturday 19 August 2017 1.20 p.m – 5.00 p.m	British Council Penang (Sentral College)	18
12.	N/A		Saturday 19 August 2017 9.00 a.m – 12.00 p.m	Saturday 19 August 2017 1.20 p.m – 5.00 p.m	Kinta Riverfront Hotel & Suites, Ipoh	1
13.	N/A		Saturday 19 August 2017 9.00 a.m – 12.00 p.m	Saturday 19 August 2017 1.20 p.m – 5.00 p.m	Written Test: InterContinental Hotel Kuala Lumpur	1

No.	Test Takers' Schools/ Institutions	IELTS Familiarisation Workshop Date	Written Test Date and Time	Speaking Test Date and Time*	IELTS Test Centre	No. of Test Takers
					Speaking Test: British Council Exam Hall, Level 2, South Block, Wisma Selangor Dredging, Kuala Lumpur	
14.	SMK Tasek Utara, JB	10 July 2017	Saturday 26 August 2017 9.00 a.m – 12.00 p.m	Saturday 26 August 2017 1.20 p.m – 5.00 p.m	Sunway College Johor Bahru	1
15.	N/A		Saturday 26 August 2017 9.00 a.m – 12.00 p.m	Saturday 26 August 2017 1.20 p.m – 5.00 p.m	Written Test: Park Royal Hotel Kuala Lumpur Speaking Test: British Council Exam Hall, Level 2, South Block, Wisma Selangor Dredging, Kuala Lumpur	3

No.	Test Takers' Schools/ Institutions	IELTS Familiarisation Workshop Date	Written Test Date and Time	Speaking Test Date and Time*	IELTS Test Centre	No. of Test Takers
16.	<ul style="list-style-type: none"> • SMK Agama (P), Kangar • SMK Dato' Sheikh Ahmad, Arau 		Saturday 12 August 2017 9.00 a.m – 12.00 p.m	Saturday 12 August 2017 1.20 p.m – 8.00 p.m	Universiti Utara Malaysia	32
17.	SMK St. Xavier, Penang	10 August 2017	Saturday 26 August 2017 9.00 a.m – 12.00 p.m	Saturday 26 August 2017 1.20 p.m – 6.20 p.m	British Council Penang (Sentral College)	27
18.	SMK Sultan Ibrahim (2), Pasir Mas, Kelantan	24 July 2017	Saturday 26 August 2017 9.00 a.m – 12.00 p.m	Saturday 26 August 2017 1.20 p.m – 6.40 p.m	SMK Sultan Ibrahim (2), Pasir Mas, Kelantan	25

No.	Test Takers' School/ Institution	Familiarisation Workshop Date	Written Test Date and Start Time	Speaking Test Date and Start Time	IELTS Test Centre	Number of Participants / Test Takers
19.	<ul style="list-style-type: none"> • SMK Bandar Puchong 1 • Kolej Matrikulasi Gopeng 	10 July 2017	15 July 2017 9.00 a.m	15 July 2017 1.20 p.m	Holiday Villa Subang	23
20.	<ul style="list-style-type: none"> • SMK Seri Serdang, Seri Kembangan • SMJK Yu Hua, Kajang • SMK Taman Tasik Ampang • Kolej Matrikulasi Kuala Pilah 	10 July 2017	15 July 2017 9.00 a.m	15 July 2017 1.20 p.m	InterContinental Hotel Kuala Lumpur	50
21.	<ul style="list-style-type: none"> • Kolej Tingkatan 6 Tunku Abdul Rahman Putra, Sabak Bernam 	10 July 2017	15 July 2017 9.00 a.m	15 July 2017 1.20 p.m	Kolej Tingkatan 6 Tunku Abdul Rahman Putra, Sabak Bernam	18

No.	Test Takers' School/ Institution	Familiarisation Workshop Date	Written Test Date and Start Time	Speaking Test Date and Start Time	IELTS Test Centre	Number of Participants / Test Takers
22.	<ul style="list-style-type: none"> • Penang Free School • SMJK Heng Ee • Kolej Matrikulasi Penang • SMK (L) Methodist, Georgetown • SM Chung Hwa Confucian 	6 July 2017.	15 July 2017 9.00 a.m	15 July 2017 1.20 p.m	Sentral College, Penang	15
23.	<ul style="list-style-type: none"> • SMK Tasek Utara, JB • SMK Sultan Ismail, JB • Maktab Sultan Abu Bakar, JB • SMK Taman Daya, Pasir Gudang 	10 July 2017	15 July 2017 9.00 a.m	15 July 2017 1.20 p.m	Sunway College Johor Bahru	14
24.	<ul style="list-style-type: none"> • UNIMAS Kota Samarahan 	10 July 2017	15 July 2017 9.00 a.m	15 July 2017 1.20 p.m	The Meeting Place, Kuching	14

No.	Test Takers' School/ Institution	Familiarisation Workshop Date	Written Test Date and Start Time	Speaking Test Date and Start Time	IELTS Test Centre	Number of Participants / Test Takers
25.	<ul style="list-style-type: none"> • SMK St. Paul, Seremban 	10 July 2017	12 August 2017 9.00 a.m	12 August 2017 1.20 p.m	SMK St. Paul, Seremban	25
26.	<ul style="list-style-type: none"> • SMK Tinggi Melaka • SMK Munsyi Abdullah • UTeM, Durian Tunggal • Kolej Matrikulasi Kuala Pilah 	10 July 2017	12 August 2017 9.00 a.m	12 August 2017 1.20 p.m	Ayer Keroh Country Resort.	29

3.4 Reliability and Validity

In order to ensure reliability, the same group of people took both MUET and IELTS, and were familiarised in advance with the format and task types of both tests. To reduce any intervention effect, they took IELTS within four months of MUET. To make an independent verification of the research methodology including the sampling frame, methods of data analyses and the interpretation of the findings, a senior professor in Data Analytics and Statistics, who is also the Dean of a Quantitative Sciences faculty at a Malaysian public university was consulted and further improvements were made.

The statistical results were validated by means of alternative analyses, including Spearman correlation analysis and validating of the estimated statistics using a resampling strategy called the leave-one-out procedure. In this procedure, each test taker was taken out in turn and Kendall's Tau was calculated. Finally, the mean of Kendall's Tau was calculated and compared with the actual sample based on the correlation of the collected data (Konishi & Kitagawa, 2008).

3.5 Ethical Considerations

The test takers were briefed on the purpose of the research, and signed an informed consent form which stated that all personal data and test results would be treated as strictly confidential. They also signed a letter authorising the MEC to obtain the official results from the British Council.

3.6 Summary of Research Process

The research was undertaken systematically, starting with explicit research questions followed by the sampling frame from the total population and data collection procedures. Having been screened and validated, the data was subjected to descriptive and correlation analyses.

3.7 Conclusion

Chapter three has described the research methodology, including the research design, sampling process, data collection procedures, data and statistical analyses and visualisation in the present study.

Chapter 4 Findings

4.1 Introduction

This chapter presents the quantitative findings, and is divided into two parts. The first part presents the Band scores for the 468 participants who took both MUET and IELTS. Comparisons of the overall Band scores for both tests are followed by comparisons of the scores for the separate skills (Listening, Speaking, Reading and Writing). The second part presents the findings based on the performance of the test takers.

The later part of this chapter compares MUET and IELTS scores in relation to the CEFR levels Basic User, Independent User and Proficient User. This is an exploratory analysis, and the objective is to investigate the distribution of test takers at each CEFR level in relation to MUET and IELTS results overall and for individual skills.

The last part of this chapter presents the findings to research question 3. Description of performance of test takers in MUET and IELTS is made according to gender and SPM English results.

4.2 Comparing MUET and IELTS Overall Band Scores

Overall performances are reported first.

Figure 4-1 presents the overall MUET Band scores for the 468 participants.

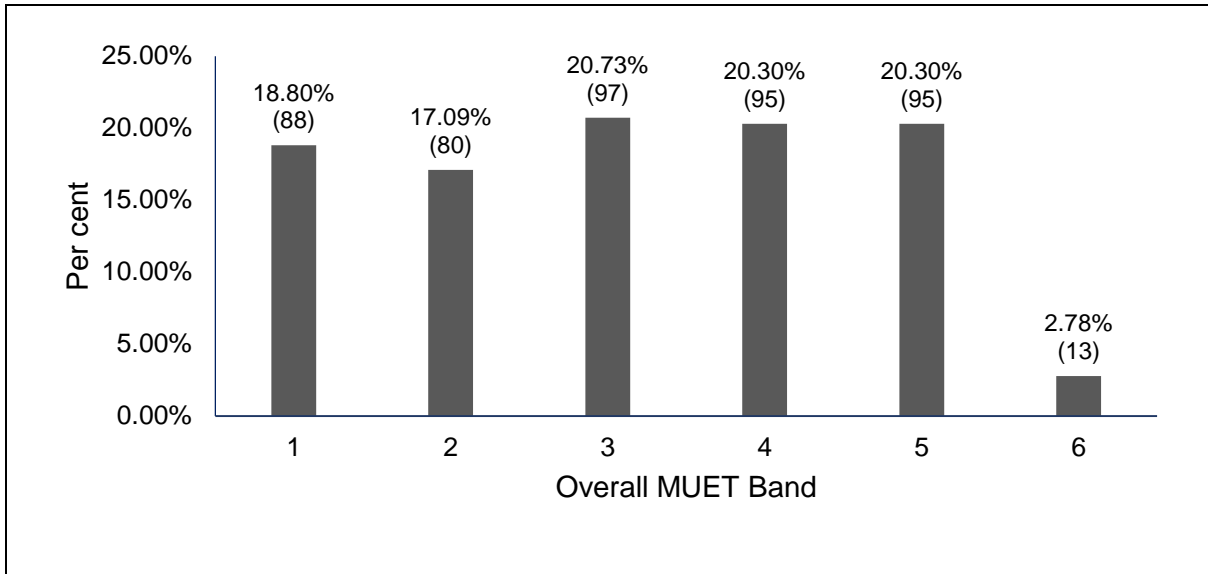


Figure 4-1 The Distribution of Overall MUET Band Scores

Band 3 includes the largest number of test takers ($n=97$, 20.73%), and is followed by Band 4 ($n=95$, 20.30%) and Band 5 ($n=95$, 20.3%), and only 13 (2.78%) in Band 6. In other words, 43.4 percent are in Bands 4 to 6, and the rest in Band 3 or below.

Figure 4-2 presents the overall IELTS Band scores for the same participants.

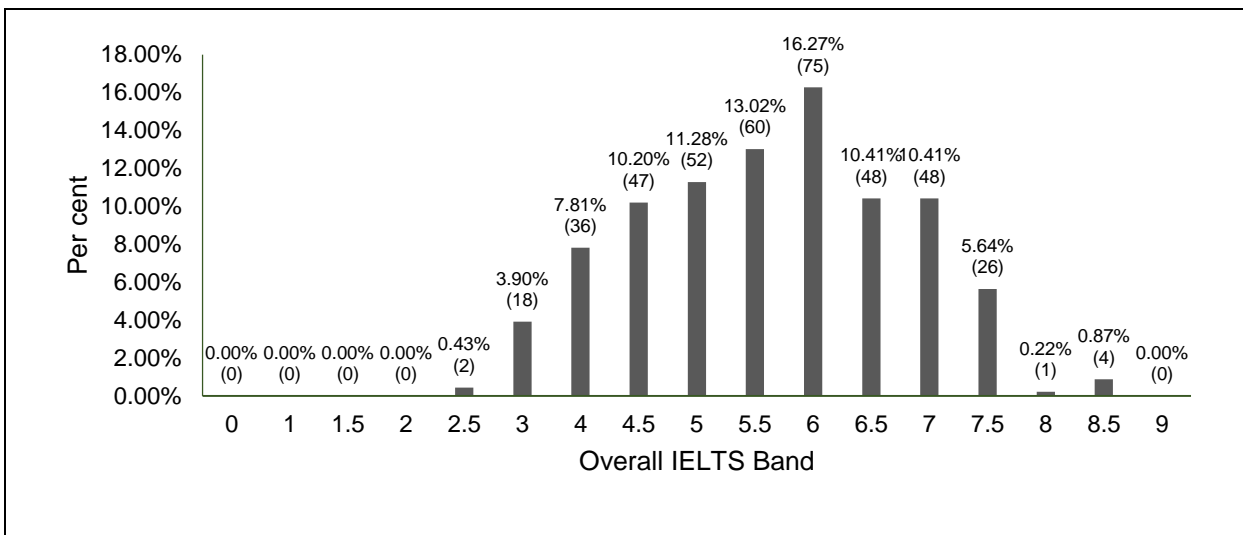


Figure 4-2 The Distribution of Overall IELTS Band Scores

Band 6 is the biggest group ($n=75$, 16.27%), followed by Band 5.5 ($n=60$, 13.02%) and Band 6.5 ($n=48$, 10.41%). One participant obtains Band 8 (0.22%), and four obtain Band 8.5 (0.87%). At the lower end, two (0.45%) are in Band 2.5.

Table 4.1 cross-tabulates the MUET and IELTS scores, and presents the MUET scores in the columns and the IELTS scores in the rows.

Table 4.1. Cross Tabulation between MUET and IELTS Overall Band Scores

		Overall MUET Band					
		1	2	3	4	5	6
Overall IELTS Band	9						
	8.5					1	3
	8					4	4
	7.5				1	22	3
	7				13	33	2
	6.5			1	24	22	1
	6			21	42	12	
	5.5		5	40	14	1	
	5		23	28	1		
	4.5	11	29	7			
	4	22	14				
	3.5	35	9				
	3	18					
	2.5	2					
	2						
	1						

It can be seen from Table 4.1 that there is a general gradual increase in overall IELTS band scores corresponding to increasing overall MUET band scores. Those in MUET Band 1 overall tend to obtain IELTS 2.5 to 4.5, and those in MUET Band 2 range from IELTS 3.5 to 5.5. At the upper end, those in MUET Band 5 tend to obtain IELTS 5.5 to 8.5. Those in MUET Band 6 tend to obtain IELTS 6.5 to 8.5.

The degree of relationship between the MUET and IELTS band scores was measured using the non-parametric Kendall's Tau coefficient, and the relationship was found to be positive and significant (Kendall's Tau=0.8413**, p -value < 0.001). In other words, there is a tendency for test takers who score low in overall MUET also score low in overall IELTS, while those who score high in overall MUET tend to score high in overall IELTS. The fact that the correlation is significant also suggests that the overall MUET and IELTS provide similar information concerning the overall ability of the test takers in the four skills, which enables us to make overall band score comparisons across the two tests in a meaningful way.

4.3 Comparing MUET and IELTS according to Skills

This section reports the comparison between MUET and IELTS Band scores according to individual skills in accordance with the following research question:

How do the MUET band scores for each language skill (Listening, Speaking, Reading, and Writing) correlate with the IELTS band scores for the same test takers?

4.3.1 Listening

The table below presents the test takers' results for the MUET Listening Test.

Table 4.2. The Distribution of MUET Band Scores for Listening Skill

MUET Band: Listening	Frequency	Per cent
1	99	21.15
2	62	13.25
3	53	11.32
4	82	17.52
5	68	14.53
6	104	22.22
TOTAL	468	100.00

The results range from Band 1 to Band 6. The largest group is in Band 6 ($n=104$, 22.22%), followed by Bands 1 ($n=99$, 21.15%) and 4 ($n=82$, 17.52%). The smallest group is in Band 3 ($n=53$, 11.32%). These results show that just over half of the test takers (54.27%) are in Band 4, and the rest are in the lower Bands.

The corresponding IELTS results are presented in Table 4.3.

Table 4.3. The Distribution of IELTS Band Scores for Listening

IELTS Band: Listening	Frequency	Per cent
1.0	0	0.00
1.5	0	0.00
2.0	0	0.00
2.5	0	0.00
3.0	7	1.50
3.5	55	11.75
4.0	59	12.61

IELTS Band: Listening	Frequency	Per cent
4.5	49	10.47
5.0	58	12.39
5.5	65	13.89
6.0	39	8.33
6.5	34	7.26
7.0	25	5.34
7.5	32	6.84
8.0	23	4.91
8.5	18	3.85
9.0	4	0.85
TOTAL	468	100.00

These results range from Band 3.0 to the highest Band 9. The largest group is in Band 5.5 ($n=65$, 13.89%), followed by Band 4 ($n=59$, 12.61%). The smallest groups are in Bands 9 ($n=4$, 0.85%) and 3 ($n=7$, 1.5%). The comparison of the MUET and IELTS results indicates that some test takers obtain the highest Band for Listening in both MUET and IELTS, i.e. Bands 6 and 9 respectively.

The next set of results compares the MUET and IELTS results across the different Bands. Table 4.4 presents the cross tabulation of results for Listening.

Table 4.4. Cross Tabulation between MUET Band and IELTS Band for Listening

		MUET BAND					
		1	2	3	4	5	6
IELTS Band	9						4
	8.5				1	2	15
	8					4	19
	7.5					6	26
	7				7	6	12
	6.5			1	5	17	11
	6			1	13	13	12
	5.5	1	3	18	27	13	3
	5	1	12	15	23	6	1
	4.5	14	20	11	3		1
	4	29	21	6	2	1	
	3.5	47	6	1	1		
	3	7					
	2.5						
	2						
	1.5						
1							
TOTAL		99	62	53	82	68	104

Table 4.4 shows a gradual trend across the two tests in that the higher the MUET Band for Listening, the higher the Band that tends to be achieved for IELTS. MUET scores between Band 1 and Band 3 tend to correspond to IELTS Bands 3.0 to 6.5. At the upper end, MUET Bands 4 to 6 tend to correspond to IELTS Bands 3.5 to 9.0.

The degree of relationship between the MUET and IELTS Band scores for Listening was measured using the non-parametric Kendall's Tau coefficient, and found to be positive (Kendall's Tau= 0.7700, p -value < 0.001) and significant. In other words, the scores for the two tests are positively correlated, which indicates a significant tendency

for test takers to score high in MUET and high in IELTS for Listening or low in MUET and low in IELTS.

The findings suggest that the MUET and IELTS Listening tests provide similar information about the listening ability of test takers, which enables us to compare the results of the two tests in a meaningful way.

The relationship can be similarly seen in the box and whisker plot below.

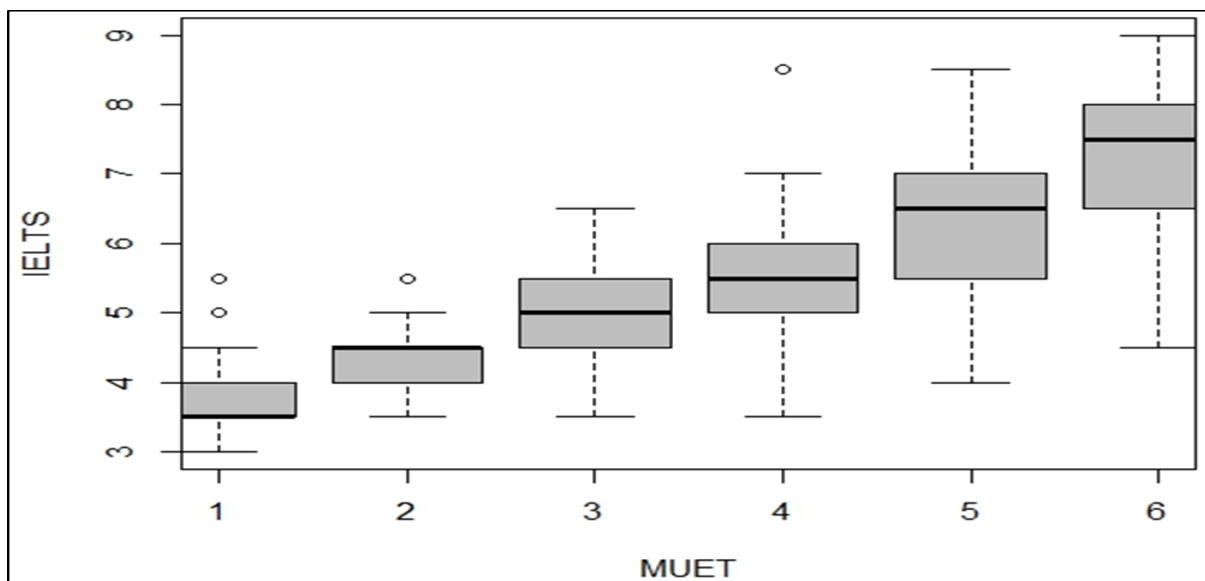


Figure 4-3 The Relationship between MUET Band Scores and IELTS Band Scores for Listening

The plot in Figure 4-3 illustrates the correlation between the scores, showing that the higher the score in one test, the higher the score tends to be in the other. It also shows that the range of IELTS scores corresponding to the higher MUET Bands 5 and 6 are greater than IELTS scores corresponding to the lower MUET Bands.

4.3.2 Speaking

Table 4.5 presents the MUET results for speaking spread across the whole range from Bands 1 to Band 6.

Table 4.5. The Distribution of MUET Band Scores for Speaking

MUET Band: Speaking	Frequency	Per cent
1	63	13.46
2	99	21.15
3	105	22.44
4	140	29.91
5	57	12.18
6	4	0.85
TOTAL	468	100.00

The largest group is in Band 4 ($n=140$, 29.91%), followed by Bands 3 ($n=105$, 22.44%) and 2 ($n=99$, 21.15%). Band 6 has the lowest number of test takers ($n=4$, 0.85%). The above results also show that a little over forty per cent of the test takers (42.94%) obtain Band 4 and above for speaking while the rest come into the lower Bands.

Table 4.6 presents the distribution of scores for Speaking in each IELTS Band.

Table 4.6. The Distribution of IELTS Band Scores for Speaking

IELTS Band: Speaking	Frequency	Per cent
0	1	0.21
1.0	1	0.21
1.5	3	0.64
2.0	12	2.56
2.5	13	2.78
3.0	24	5.13
3.5	26	5.56

IELTS Band: Speaking	Frequency	Per cent
4.0	31	6.62
4.5	36	7.69
5.0	46	9.83
5.5	75	16.03
6.0	73	15.60
6.5	62	13.25
7.0	41	8.76
7.5	16	3.42
8.0	7	1.50
8.5	0	0.00
9.0	1	0.21
TOTAL	468	100.00

The IELTS Speaking results range from Band 0.0 to the highest Band (Band 9). The largest group is in Band 5.5 ($n=75$, 16.06%), followed by Band 6 ($n=73$, 15.60%). Bands 0, 1 and 9 each contains just one test taker (0.21%).

Table 4.7 cross-tabulates the MUET and IELTS Band scores for Speaking

Table 4.7. Cross Tabulation between MUET Band and IELTS Band for Speaking

		MUET Band					
		1	2	3	4	5	6
IELTS Band	9					1	
	8.5						
	8				1	4	2
	7.5				8	7	1
	7			3	16	21	1
	6.5		1	11	35	15	
	6		7	21	39	6	
	5.5	4	15	29	25	2	
	5		15	14	16	1	
	4.5	4	17	15			
	4	8	16	7			
	3.5	12	10	4			
	3	16	7	1			
	2.5	5	8				
	2	9	3				
	1.5	3					
	1	1					
	0	1					
TOTAL		63	99	105	140	57	4

Preliminary examination of the table indicates a correlation between the results for the two tests, since in general the higher the MUET Band for Speaking test, the higher the corresponding IELTS Band. The table also shows that MUET scores between Band

1.0 to Band 3.0 tend to correspond to IELTS scores between Band 0.0 and Band 7.0. At the upper end, MUET Bands 4 to 6 tend to correspond to IELTS scores between Band 5.0 and Band 9.0.

The degree of relationship between the MUET and IELTS scores for Speaking test was measured using Kendall's Tau, and was found to be positive (Kendall's Tau= 0.6804, p -value<0.001) and significant. The Band scores of the two tests are positively correlated, and there is a tendency for high MUET scores for Speaking to correspond to high scores in IELTS, or for low scores in MUET to correspond to low scores in IELTS.

The findings also suggest that the MUET and IELTS Speaking tests provide similar information about the speaking ability of test takers, and enable us to compare the results of the two tests in a meaningful way.

The relationship between the MUET and IELTS Speaking scores is represented in the box and whisker plot shown in Figure 4-4.

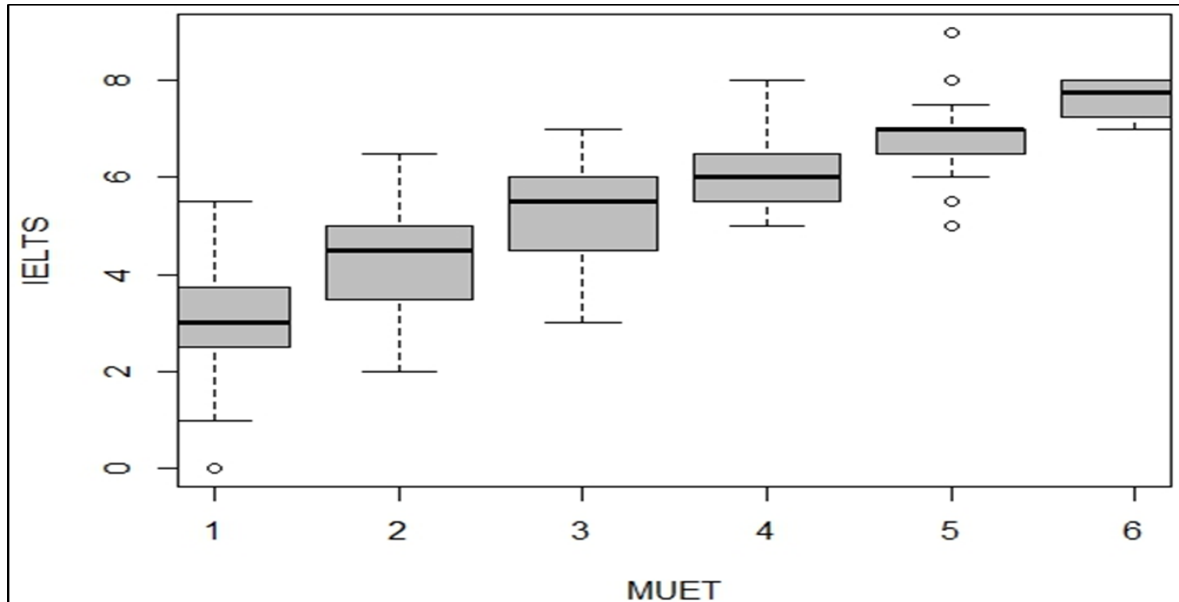


Figure 4-4 The Relationship between MUET Band Scores and IELTS Band Scores for Speaking

The plot illustrates the positive correlation between the scores for Speaking, in that the higher the MUET score, the higher the IELTS score. The figure also shows that although MUET Band 4 and IELTS Band 5 have similar ranges, the whisker for MUET Band 4 is larger, indicating the larger number of students in this range.

4.3.3 Reading

Table 4.8 presents the frequency of MUET Reading scores in each Band.

Table 4.8. The Distribution of MUET Band Scores for Reading

MUET Band: Reading	Frequency	Per cent
1	72	15.38
2	100	21.37
3	86	18.38
4	76	16.24
5	109	23.29
6	25	5.34
TOTAL	468	100.00

MUET scores for Reading range from Band 1 to Band 6. The largest group is in Band 5 (23.29%, $n=109$), followed by Bands 2 (21.37%, $n=100$), 4 (16.24%, $n=76$), 1 (15.38%, $n=72$) and 3 (18.38%, $n=86$). The smallest group is Band 6, which contains only 25 test takers (5.34%).

Table 4.9 presents the corresponding results for IELTS Reading.

Table 4.9. The Distribution of IELTS Band Scores for Reading

IELTS Band: Reading	Frequency	Per cent
0	0	0.00
1.0	0	0.00
1.5	0	0.00
2.0	2	0.43
2.5	0	0.00
3.0	4	0.85
3.5	19	4.06
4.0	48	10.26
4.5	80	17.09
5.0	61	13.03
5.5	57	12.18
6.0	50	10.68
6.5	59	12.61
7.0	37	7.91
7.5	18	3.85
8.0	14	2.99
8.5	15	3.21
9.0	4	0.85
TOTAL	468	100.00

The scores for IELTS Reading range from Band 2.0 to Band 9.0. The largest group is in Band 4.5 (17.09%, $n=80$), followed by Bands 5 (13.03%, $n=61$) and 5.5 (12.18%, $n=57$). The smallest group is in Band 2 (0.43%, $n=2$). As for MUET, some test takers

(0.85%, $n=4$) manage to obtain the highest Band score for IELTS Reading, namely Band 9.

Table 4.10 cross-tabulates the MUET and IELTS Band scores for Reading.

Table 4.10. Cross Tabulation between MUET Band and IELTS Bands for Reading

		MUET Band					
		1	2	3	4	5	6
IELTS Band	9					3	1
	8.5				1	8	6
	8				1	6	7
	7.5				2	10	6
	7			1	9	24	3
	6.5			8	21	29	1
	6		2	11	17	19	1
	5.5	2	12	20	15	8	
	5	8	22	22	8	1	
	4.5	27	34	17	1	1	
	4	24	16	7	1		
	3.5	9	10				
	3	1	3				
	2.5						
	2	1	1				
	1.5						
1							
TOTAL		72	100	86	76	109	25

The cross tabulation table shows a general gradual increase in the IELTS Band scores for Reading corresponding to an increase in MUET Band Scores, so that the higher the MUET score, the higher the corresponding IELTS score. MUET scores between Bands 1 and 3 tend to correspond to IELTS Bands 2.0 to 7.0. At the upper end, MUET Bands 4 to 6 in MUET tend to correspond to IELTS Bands 4.0 to 9.0.

The degree of relationship between the MUET and IELTS Band scores for Reading was measured using Kendall's Tau, and was found to be positive (Kendall's Tau= 0.7044, p -value<0.001) and significant. The positive correlation between the Band scores for the two tests for Reading indicates a tendency for test takers to score high in MUET and high in IELTS or low in MUET and low in IELTS.

As in the case of Listening and Speaking, this finding also suggests that MUET and IELTS provide similar information about the reading ability of test takers, which enables us to compare the test scores in a meaningful way.

Figure 4-5 provides a visual illustration of the relationship between the MUET and IELTS scores in the form of a box and whisker plot.

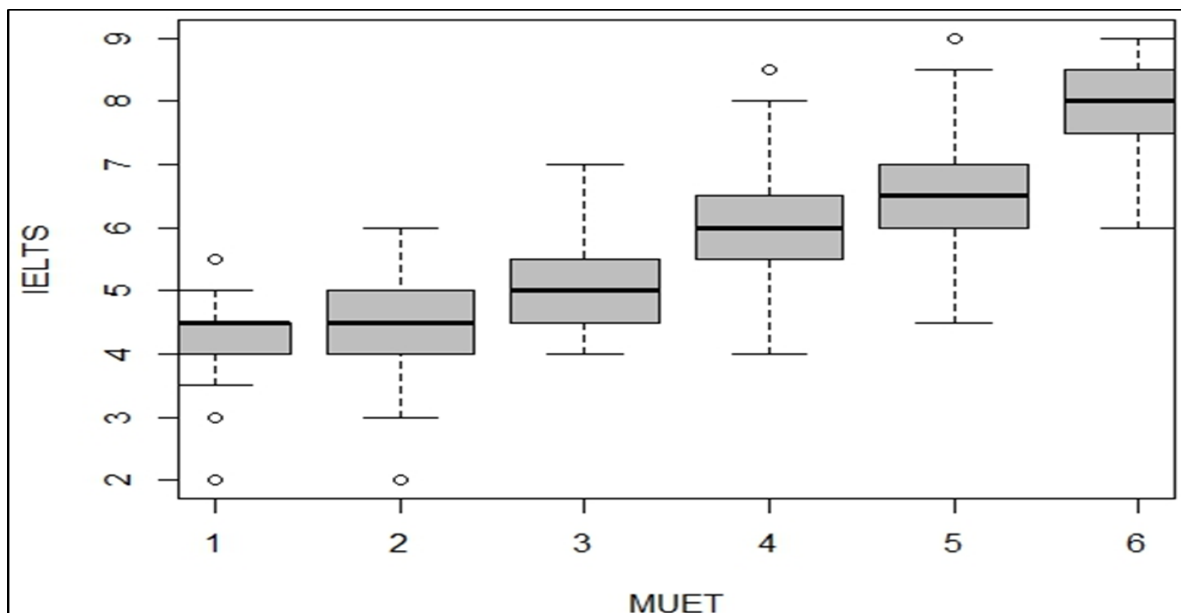


Figure 4-5 The Relationship between MUET and IELTS Band Scores for Reading

The largest whisker corresponds to MUET Band 5, indicating that MUET Band 5 corresponds to the widest range of IELTS scores (Band 4.5 to Band 9.0). In addition, there are more test takers within this range than in the other MUET Bands.

4.3.4 Writing

Table 4.11 presents the results ranging from Band 1 to Band 6 for MUET Writing.

Table 4.11. The Distribution of MUET Band Scores for Writing

MUET Band: Writing	Frequency	Per cent
1	61	13.03
2	51	10.90
3	174	37.18
4	140	29.91
5	42	8.97
6	0	0.00
TOTAL	468	100.00

The largest group is in Band 3 ($n=174$, 37.18%), followed by Bands 4 ($n=140$, 29.91%) and 1 ($n=61$, 13.03%). The highest Band obtained for Writing is Band 5 ($n=42$, 8.97%), and no test takers are in the highest Band (Band 6). Table 4.12 presents the corresponding scores for IELTS.

Table 4.12. The Distribution of IELTS Band Scores for Writing

IELTS Band: Writing	Frequency	Per cent
0	0	0.00
1.0	0	0.00
1.5	2	0.43
2.0	11	2.35
2.5	21	4.49
3.0	27	5.77
3.5	27	5.77
4.0	23	4.91
4.5	40	8.55
5.0	49	10.47
5.5	74	15.81
6.0	80	17.09
6.5	76	16.24
7.0	25	5.34
7.5	9	1.92
8.0	4	0.85
8.5	0	0.00
9.0	0	0.00
TOTAL	468	100.00

IELTS scores for Writing range from Band 1.5 to Band 8.0. The largest group is in Band 6.0 ($n=80$, 17.09%), followed by Bands 6.5 ($n=76$, 16.24%) and 5.5 ($n=74$, 15.81%). No test takers come below IELTS Band 1.5 or above 8.0 for Writing. Table 4.13 cross-tabulates the MUET and IELTS results for Writing.

Table 4.13. Cross Tabulation between MUET Band and IELTS Band for Writing

		MUET Band					
		1	2	3	4	5	6
IELTS Band	9						
	8.5						
	8			1		3	
	7.5			1	3	5	
	7			4	16	5	
	6.5		1	13	49	13	
	6		1	25	40	14	
	5.5		7	45	20	2	
	5	1	10	31	7		
	4.5	3	11	23	3		
	4	7	4	12			
	3.5	11	5	10	1		
	3	14	6	7			
	2.5	13	6	1	1		
	2	10		1			
	1.5	2					
	1						
TOTAL		61	51	174	140	42	0

As for the first three skills, preliminary examination suggests a positive correlation between the sets of scores, but in this case there are wide ranges in the IELTS results corresponding to MUET Bands. Those who obtain Band 1 to Band 3 for MUET obtain

Band 1.5 to Band 8.0 for IELTS. MUET Bands 4 and 5 correspond to the range from IELTS 2.5 to 8.0. No test takers get beyond MUET Band 5 or IELTS Band 8.0.

The degree of relationship between the MUET and IELTS scores was measured using Kendall's Tau, and was found to be positive (Kendall's Tau= 0.6444, p -value<0.001) and significant, thus confirming the positive correlation between the sets of scores. As for Listening, Speaking and Reading, these findings suggest that the MUET and IELTS Writing tests provide similar information about the writing ability of test takers, which enables us to make a meaningful comparison of the writing test scores.

Figure 4-6 is a box and whisker plot which is intended to help visualise the relationship between the MUET and IELTS scores for Writing.

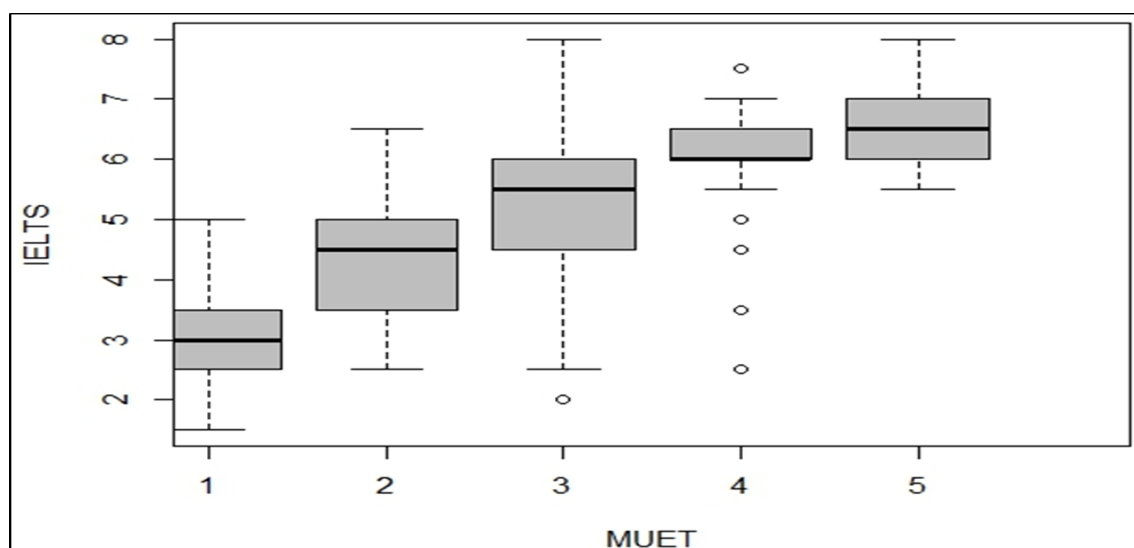


Figure 4-6 The Relationship between MUET and IELTS Band Scores for Writing

Figure 4-6 illustrates the correlation between the writing test scores. When scores are high in one test, they tend to be high in the other. The box and whisker plot also shows that MUET Band 3 corresponds to the widest range of IELTS scores. It also has the largest whisker, which indicates the large number of test takers in this Band.

4.4 Comparing MUET and IELTS using the CEFR Levels

This part of the study is exploratory in nature. The objective is to compare MUET and IELTS results when the corresponding scores are calibrated to the three CEFR levels

(Basic, Independent and Proficient users). The comparison is made for the overall Band scores as well as the four separate skills.

The calibration of IELTS against the CEFR is based on the British Council IELTS website (<https://takeielts.britishcouncil.org/find-out-about-results/understand-your-ielts-scores/common-european-framework-equivalencies>). It is generally used for the overall band scores, and for the individual skills for the purposes of this study.

The correspondences of CEFR levels to IELTS Band scores are as follows:

1. Basic User (A1 and A2) = IELTS Band 1.0 to Band 3.5
2. Independent User (B1 and B2) = IELTS Band 4.0 to Band 6.5
3. Proficient User (C1 and C2) = IELTS Band 7.0 to Band 9.0

Taking into account the findings of the local study by Saidatul and Asiah (2015), the correspondence for CEFR and MUET Band scores are provisionally as follows:

1. Basic User (A1 and A2) = MUET Bands 1 to 3
2. Independent User (B1 and B2) = MUET Band 4
3. Proficient User (C1 and C2) = MUET Bands 5 and 6

The two sets of correspondences are summarised in Table 4.14.

Table 4.14. Mapping of MUET and IELTS to CEFR Levels

MUET	CEFR	IELTS	
1 & 2	Basic user A1 & A2	1.0	
		1.5	
3		2.0	
		2.5	
		3.0	
		3.5	
4		Independent user B1 & B2	4.0
			4.5
	5.0		
	5.5		
	6.0		
	6.5		
5	Proficient user C1 & C2		7.0
			7.5
6			8.0
			8.5
			9.0

4.4.1 The Overall Comparison of MUET and IELTS with the CEFR

The MUET and IELTS Band scores were converted to CEFR levels using the correspondences detailed in Table 4.14.

Figure 4-7 illustrates the resulting positioning of the Band scores on the CEFR scale.

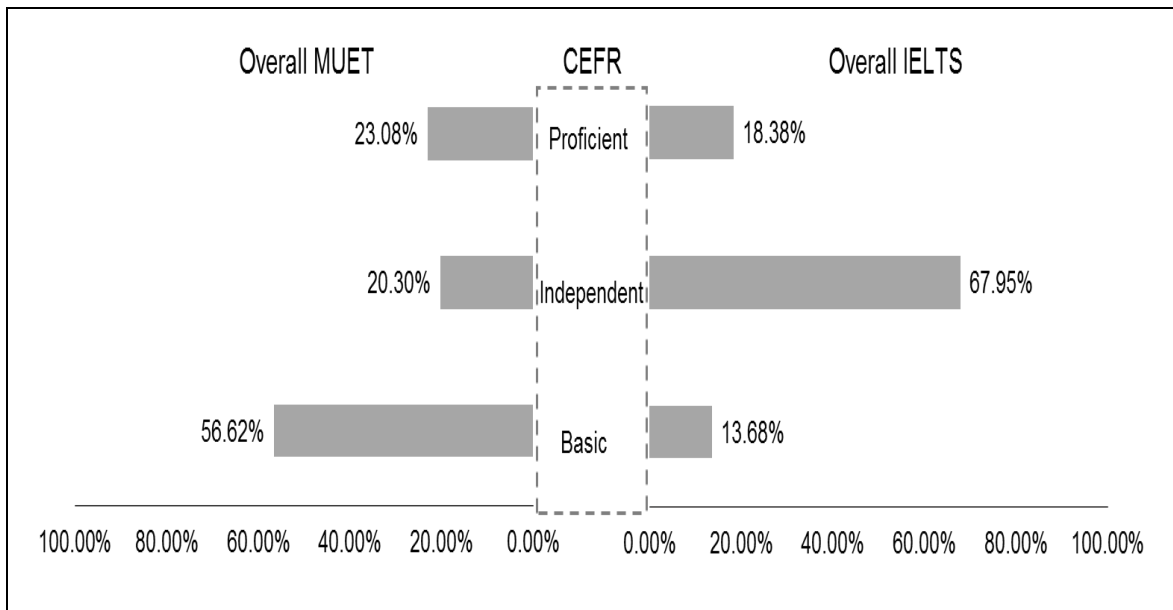


Figure 4-7 Overall MUET and IELTS Band Scores and CEFR Levels

The figure shows that whereas 56.62% are Basic Users according to the MUET Band scores, only 13.68% are at this level according to IELTS. Although 67.95% are Independent Users according to IELTS, only 20.30% are at this level according to MUET. In other words, when overall Band scores are compared, more test takers tend to be placed in the Basic User Level (A1 and A2) according to MUET than IELTS, while IELTS categorises more test takers as Independent Users than MUET. It can also be seen that there is not much difference between MUET and IELTS in categorising test takers as Proficient Users (23.08% and 18.38%, respectively).

Figure 4-8 presents the MUET and IELTS Band scores for Listening with the corresponding CEFR levels.

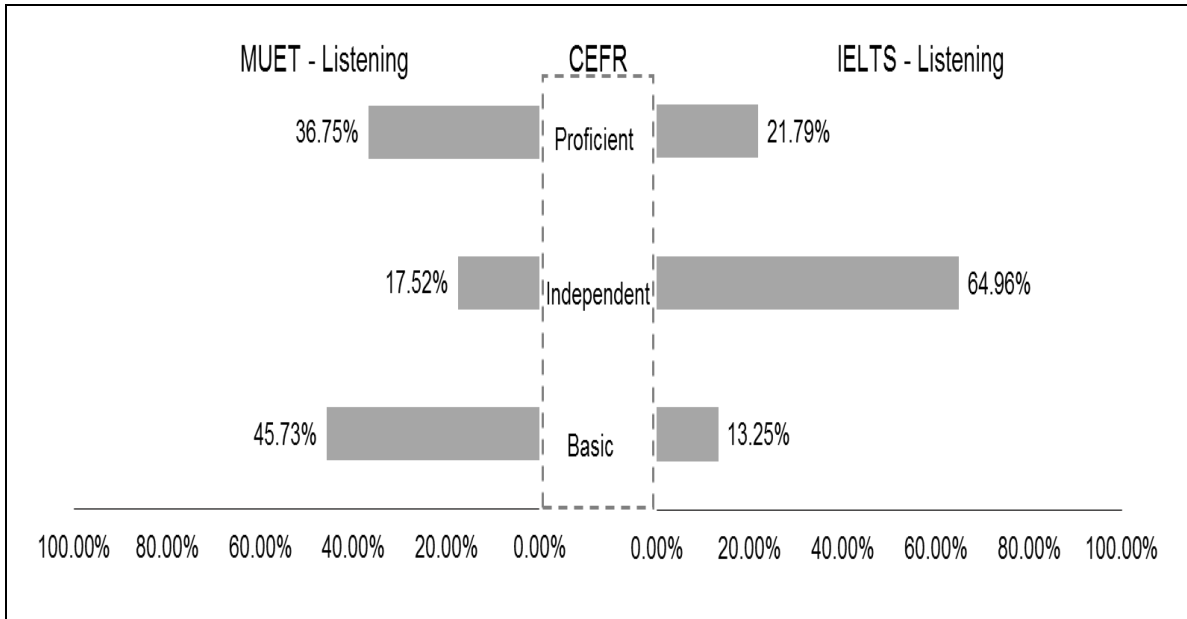


Figure 4-8 MUET and IELTS Band Scores for Listening and CEFR Levels

Figure 4-8 shows that MUET tends to categorise test takers as Basic Users (45.73%) or Proficient Users (36.75%) in the CEFR for Listening. By contrast, IELTS categorises most test takers (64.96%) as Independent Users.

Figure 4-9 compares MUET and IELTS results for Speaking in relation to the CEFR levels.

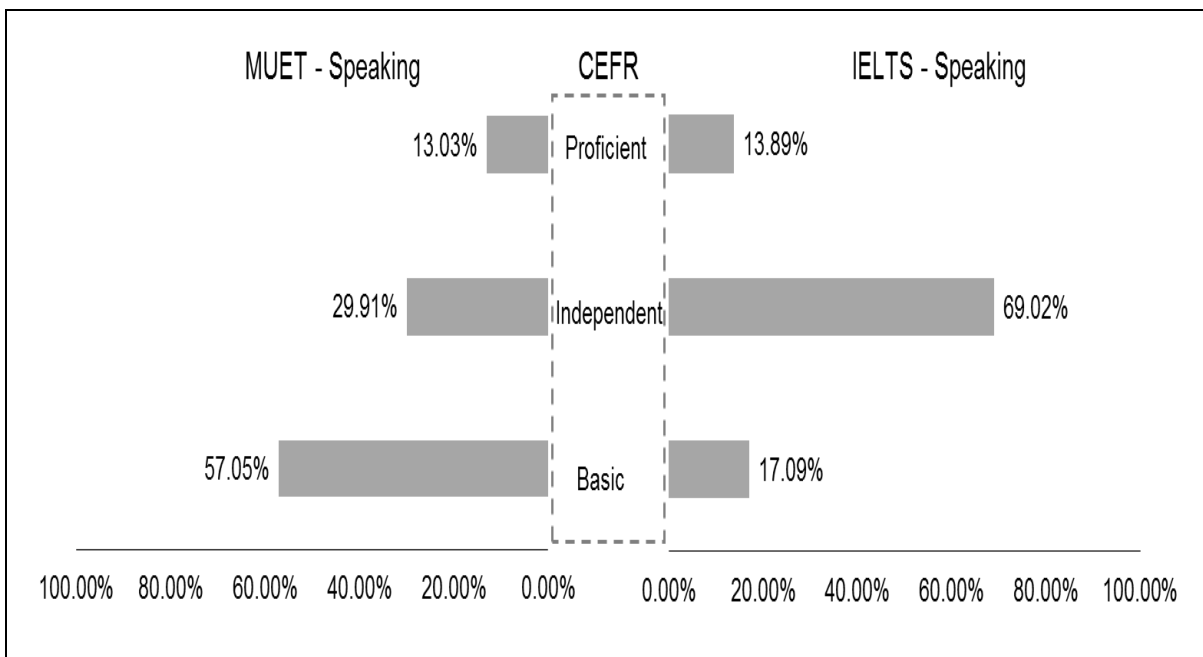


Figure 4-9 MUET and IELTS Band Scores for Speaking and CEFR Levels

MUET tends to place test takers at the Basic User level for Speaking (57.05%), while IELTS places more at the Independent User level (69.2%). Only a small proportion of test takers are categorised as Proficient Users by either test.

Figure 4-10 relates MUET and IELTS scores for Reading to CEFR levels.

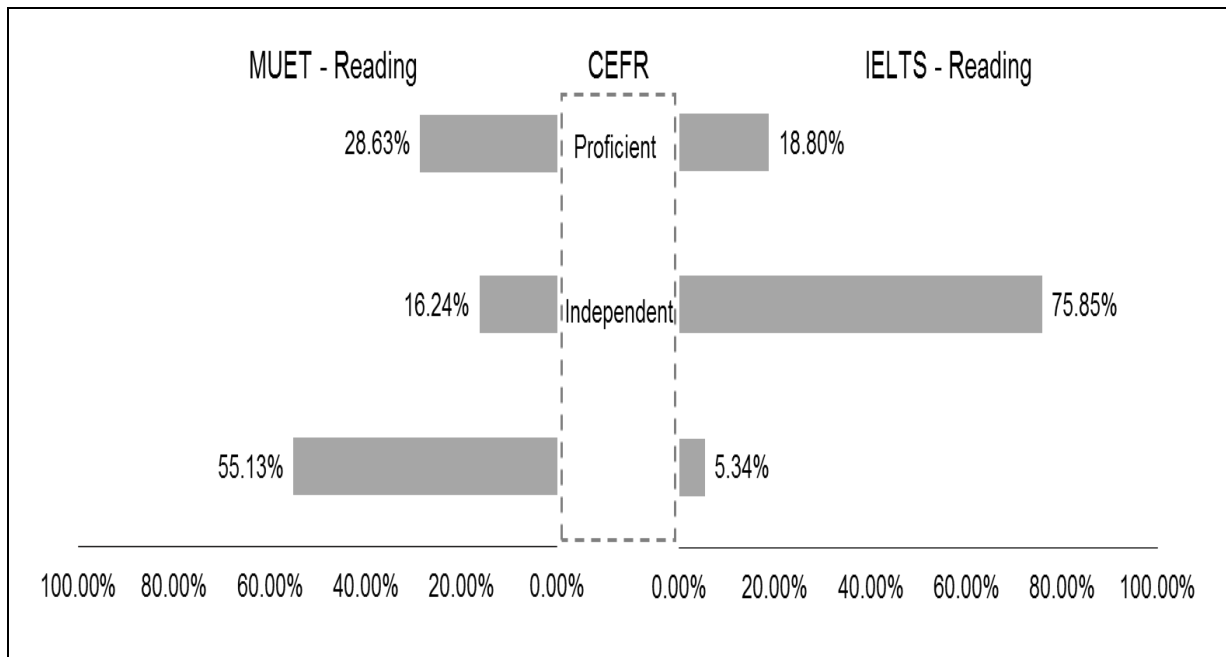


Figure 4-10 MUET and IELTS Band Scores for Reading and CEFR Levels

MUET categorises most test takers as Basic Users (55.13%), while IELTS categorises most as Independent Users (75.85%). It is interesting to note that MUET categorises more test takers as Proficient User than IELTS.

Finally, Figure 4-11 relates MUET and IELTS scores for Writing to the CEFR.

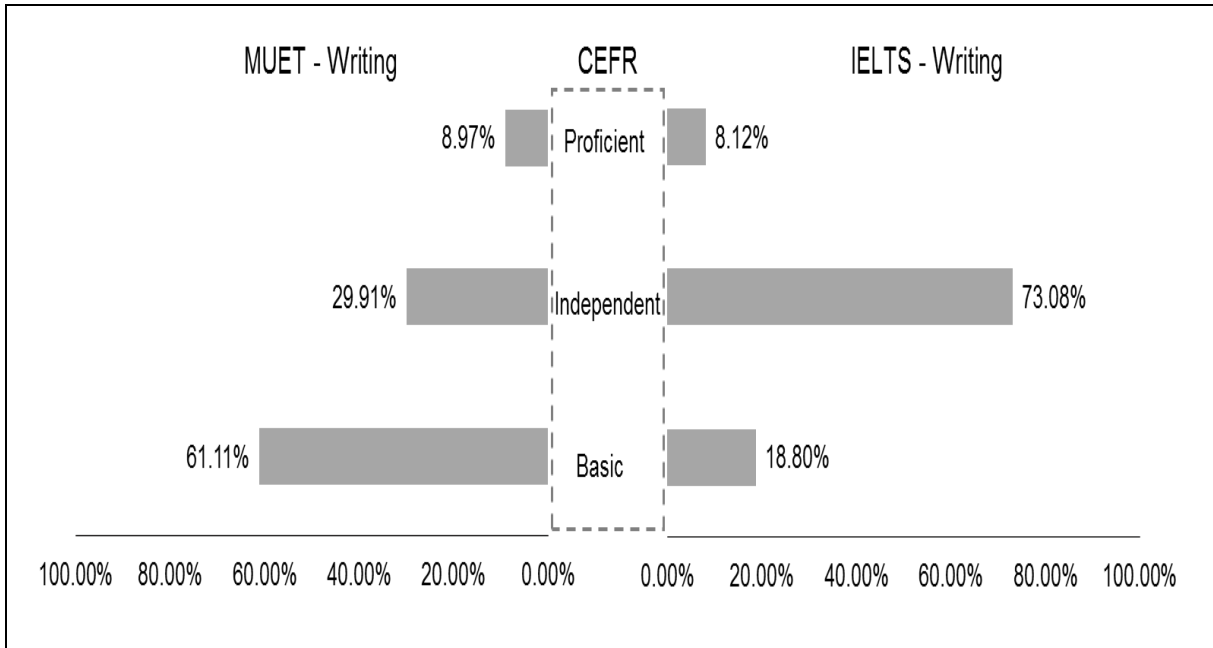


Figure 4-11 MUET and IELTS Band Scores for Writing and CEFR Levels

Figure 4-11 shows that while most MUET test takers are categorised as Basic Users (61.11%) for Writing, IELTS places the majority at the Independent User level (73.08%). MUET and IELTS categorise similar numbers of test takers as Proficient Users (8.97% and 8.12% respectively).

To summarise, the results of the mapping of the MUET and IELTS scales to the CEFR levels for each skill seem to indicate that

1. MUET has a greater tendency than IELTS to categorise test takers as Basic Users for all four skills.
2. IELTS categorises the majority of the test takers as Independent Users (ranging from 65% to 76%) for all four skills, whereas MUET places a minority (ranging from 16% to 30%) in this category.
3. There is not much of a difference between MUET and IELTS in placing just a small proportion of test takers in the Proficient User category. The proportion for MUET ranges from 8.7% to 36.75%, while the proportion for IELTS ranges from 8.12% to 21.79%.

Figure 4-12 below compares the figures for all four skills together.

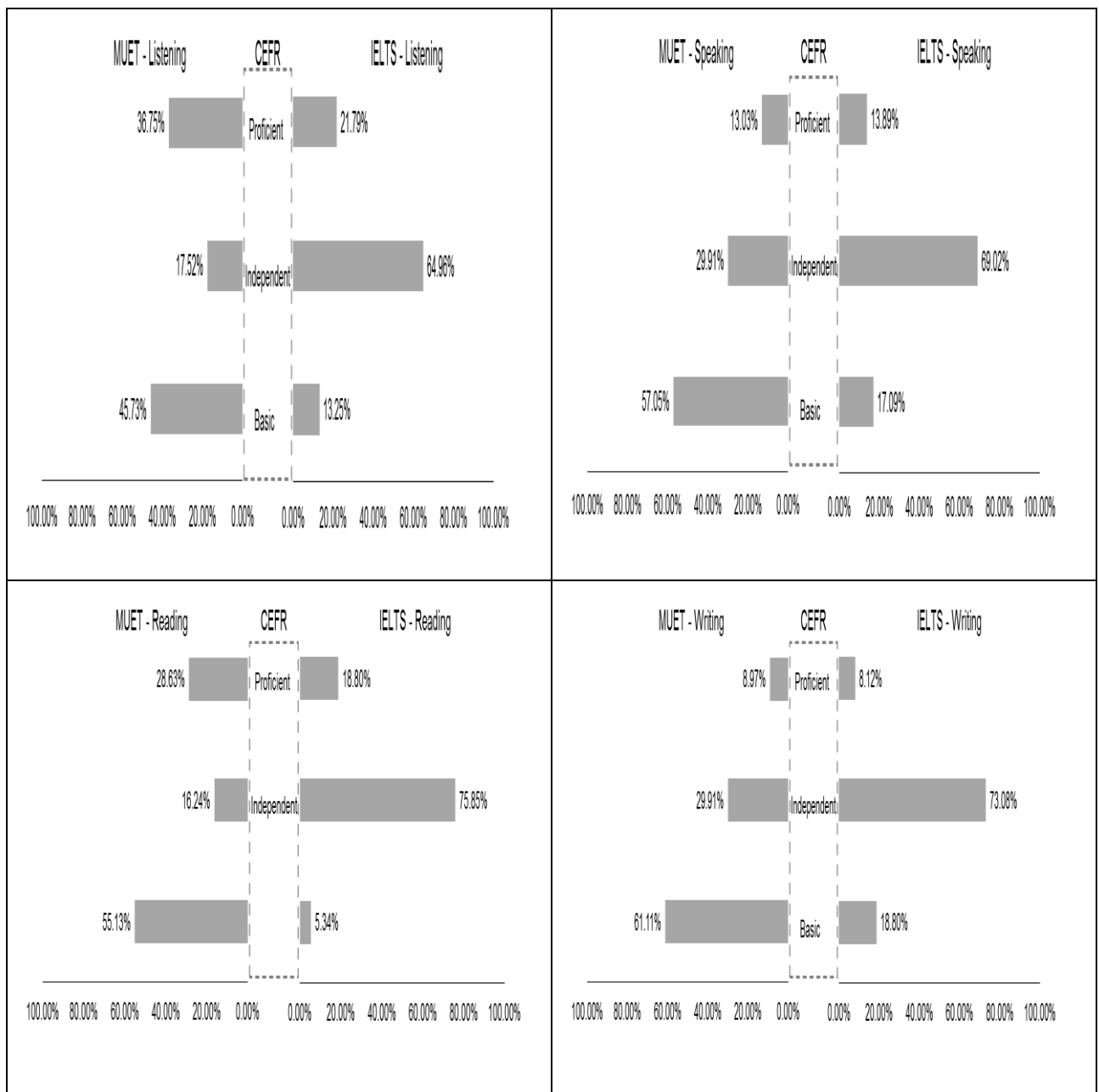


Figure 4-12 Overall Mapping of MUET and IELTS to the CEFR

4.5 Performance of test takers in MUET and IELTS Scores according to Gender, and SPM English Results

Research Question 3: How does the performance of the MUET and IELTS test takers vary according to gender and SPM English results?

The purpose of providing information on the performance of the test takers is to analyse their performance in MUET and IELTS in relation to gender and SPM English results.

The total number of test takers who sat for both MUET and IELTS was 468, of whom two thirds were female. Table 4.15 shows the distribution of test takers according to gender.

Table 4.15. Number of Test Takers according to Gender

Gender	Frequency	Per cent
Male	161	34.4
Female	307	65.6
TOTAL	468	100.00

The discussion which follows focuses on the performance of the test takers with respect to gender and SPM English results. The method of analysis used is frequency count and percentages presented in tabular form.

4.5.1 Performance of Test Takers according to Gender measured by Overall Band Scores

Table 4.16 below presents the overall MUET scores according to gender. Although the range is from Bands 1 to 6 for both genders, a large number of male test takers (50.8%) are in Bands 4 and 5, while a large number of female test takers (44%) are in Band 1 (21.5%) or Band 3 (22.5%). On the whole, the male test takers seem to do better than their female counterparts.

Table 4.16. Overall MUET Band Scores by Gender of Test Takers

Overall MUET Band Score	Gender			
	Male		Female	
	Frequency	Per cent	Frequency	Per cent
1	22	13.7%	66	21.5
2	22	13.7%	58	18.9
3	28	17.4%	69	22.5
4	37	22.9%	58	18.9
5	45	27.9%	50	16.3
6	7	4.4%	6	1.9
TOTAL	161	100.00%	307	100.00

Table 4.17 presents the overall IELTS results according to gender. The ranges are almost the same for males and females, and in both cases the highest band obtained is 8.5. There is a slight difference in the lowest band obtained, which is 3.0 and 2.5 for males and females respectively.

Just about 50% of the male test takers are in Bands 6.0 to 7.0, while slightly more than 30% of the female test takers come within this range. More female (31.5%) than male (23.6%) test takers are in Band 5.5 or 6.0. These figures confirm the finding that male test takers do better than female test takers.

Table 4.17. Overall IELTS Band Scores by Gender of Test Takers

Overall IELTS Band Score	Gender			
	Male		Female	
	Frequency	Per cent	Frequency	Per cent
1.0	0	0.0%	0	0.0
1.5	0	0.0%	0	0.0
2.0	0	0.0%	0	0.0
2.5	0	0.0%	2	0.6
3.0	4	2.5%	14	4.6
3.5	10	6.2%	34	11.1
4.0	11	6.8%	25	8.2
4.5	10	6.2%	37	12.1
5.0	18	11.2%	34	11.1
5.5	11	6.8%	49	15.9
6.0	27	16.8%	48	15.6
6.5	23	14.3%	25	8.1
7.0	25	15.5%	23	7.5
7.5	15	9.3%	11	3.6
8.0	5	3.1%	3	1.0
8.5	2	1.3%	2	0.6
9.0	0	0.0%	0	0.0
TOTAL	161	100.00%	307	100.00

4.5.2 Performance of Test Takers according to Gender measured by the Four Language Skills

This section analyses the performance of the male and female test takers with respect to the different language skills on both tests. The question is whether the pattern observed so far applies to the different language skills analysed separately. Table 4.18 analyses the MUET results according to the language skills and gender.

Table 4.18. MUET Performance by Language Skills and Gender

Skill	Gender	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6
Listening	Male	22	15	18	29	29	48
		13.7%	9.3%	11.2%	18%	18%	29.8%
	Female	77	47	35	53	39	56
		25.1%	15.3%	11.4%	17.3%	12.7%	18.2%
Speaking	Male	13	23	31	63	30	1
		8.1%	14.3%	19.2%	39.1%	18.6%	0.6%
	Female	50	76	74	77	27	3
		16.3%	24.8%	24.1%	25.1%	8.8%	0.9%
Reading	Male	19	22	28	29	52	11
		11.8%	13.7%	17.4%	18%	32.3%	6.8%
	Female	53	78	58	47	57	14
		17.3%	25.4%	18.9%	15.3%	18.6%	4.5%
Writing	Male	15	15	57	60	14	0
		9.3%	9.3%	35.4%	37.3%	8.7%	-
	Female	46	36	117	80	28	0
		15%	11.7%	38.1%	26.1%	9.1%	-

n (Male) = 161, n (Female) = 307

The largest percentage of male test takers for Listening is 29.8 in Band 6, the highest band. By comparison, only 18.2% of the female test takers reach this band. The largest percentage of female test takers for Listening is 25.1%, which is in Band 1, the lowest band. Only 13.7% of male test takers are in this band.

For Speaking, the largest percentage for male test takers is 39.1 in Band 4. Only 25.1% of the female test takers are in this band. A new pattern that emerges at this point is that about a quarter of the female test takers are in each of Bands 2, 3 and 4, amounting to a total of 74%.

The results for Reading show yet another pattern. The largest percentage of male test takers is 32.3 in Band 5, while the largest percentage for the female test takers is 25.4% in Band 2.

In the case of Writing, although the largest percentage is about 38 for both genders, the corresponding band is Band 4 for the male test takers, and only Band 3 for the female test takers. On the whole, the male test takers do better for all four skills.

Table 4.19 presents the performance of test takers in IELTS according to language skills and gender.

The largest percentage of male test takers for Listening is 13.7% in Band 7.5. The corresponding figure for female test takers is just 3.2%. The largest percentage for female test takers is 15.3% in Band 5.5. Only 11.2% of the male test takers are in this band.

A different pattern appears for Speaking, in that there are large percentages for both genders and for two Bands, 5.5 and 6.0. The figures for male test takers are 18% and 17.4% respectively, and the corresponding figures for female test takers are 15% and 14.6% respectively.

A similar pattern is found for Reading, but only for male test takers, for whom there are two large percentages, 13.7 and 14.3, in Bands 5 and 7.0 respectively. The largest figure for female test takers is 20% in Band 4.5.

In the case of Writing, the largest percentage for male test takers is 22.4 in Band 6.5. There are two large percentages for female test takers, 17.9 and 16.9 in Bands 5.5 and 6.0 respectively.

Taken as a whole, the IELTS data indicates that male test takers do better than the female test takers on the tests for all four skills (see Table 4.19).

Table 4.19. IELTS Performance by Language Skills and Gender

Skill	Gender	0	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0
		Listening	M						2	12	15	10	17	18 (11.2%)	13	17	15	22 (13.7%)	10
F							5	43	44	39	41	47 (15.3%)	26	17	10	10 (3.2%)	13	10	2
Speaking	M			1	2	3	5	6	6	9	16	29 (18%)	28 (17.4%)	22	22	8	4	0	0
	F	1	1	2	10	10	19	20	25	27	30	46 (15%)	45 (14.6%)	40	19	8	3	0	1
Reading	M				1	0	2	5	12	17	22 (13.7%)	10	18	19	23 (14.3%)	12	8	9	3

Skill	Gender	0	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0
	F				1	0	2	14	36	63 (20.5%)	39	47	32	40	14	6	6	6	1
Writing	M			2	1	3	6	7	9	7	18	19	28	36 (22.4%)	17	6	2	0	0
	F			0	10	18	21	20	14	33	31	55 (17.9%)	52 (16.9%)	40	8	3	2	0	0

n (Male) = 161, n (Female) = 307

Table 4.20 summarises the performance of the test takers according to language skills and gender, and grouped according to the three CEFR categories.

Table 4.20. MUET and IELTS Performance by Skills and Gender

		Listening		Speaking		Reading		Writing	
		Male	Female	Male	Female	Male	Female	Male	Female
Basic User	MUET	34.2%	51.8%	41.6%	65.1%	42.9%	61.6%	54%	64.8%
	IELTS	8.7%	15.6%	10.6%	20.5%	4.9%	5.5%	11.8%	22.5%
Independent User	MUET	18%	17.3%	39.1%	25.1%	18%	15.3%	37.3%	26.1%
	IELTS	55.9%	69.7%	68.3%	69.4%	60.9%	83.7%	72.7%	73.3%
Proficient User	MUET	47.8%	30.9%	19.3%	9.8%	39.1%	23.1%	8.7%	9.1%
	IELTS	35.4%	14.7%	21.1%	10.1%	34.2%	10.8%	15.5%	4.2%

There are more female test takers in the Basic User category for both tests and for all four skills. The opposite is true in the case of the Proficient User category, in which there are many more male than female test takers for all four skills and for both tests. The only exception is for Writing, for which there are slightly more female (9.1%) than male (8.7%) test takers for MUET in the Proficient User category. However, in the Independent User group there are more males in all the skills for MUET, while the opposite is true of IELTS, for which there are more female than male test takers for all four skills. On the whole, male test takers perform better than female test takers in IELTS as in MUET for all four skills.

4.5.3 Performance of Test Takers according to SPM English Results

4.5.3.1 The Distribution of Test Takers based on SPM English Results

The last set of background information analysed was the SPM English results on a scale ranging from A+ (highest) to G (lowest), as shown in Table 4.21.

Table 4.21. The Distribution of Test Takers according to SPM English Results

SPM English Grade	Frequency	Per cent
A+	39	8.42
A	101	21.81
A-	28	6.05
B+	45	9.72
B	51	11.02
C+	31	6.70
C	32	6.91
D	64	13.82
E	53	11.45
G	19	4.10
TOTAL	463	100.00

The total number of test takers is 463 in this case, since the SPM English results of five of the total group of 468 could not be verified. It can be seen from the table that slightly more than a third (n=168) got a Distinction (A+ to A-), while only 4.1 percent (n=19) failed (G).

Table 4.22 presents the overall MUET scores against the SPM English results. The majority of the 106 (23%) who come into the High Performers category (Bands 5 and 6) get a distinction in SPM English. More (n=190, 41%) come into the Average Performers category (Bands 3 and 4). Most of those in MUET Band 4 overall get a

Distinction in SPM English, while for Band 3 it is those who obtain a Credit B or B+. Most of those in the Low Performers category (n=167, 36%) with Bands 1 and 2 getting a Pass or Fail grade as expected in SPM English.

Table 4.22. Overall MUET Band Scores and SPM English Results

	SPM English	Overall MUET Band					
		1	2	3	4	5	6
Distinction	A+				2.13% (2)	31.91% (30)	58.33% (7)
	A			4.17% (4)	41.49% (39)	56.38% (53)	41.67% (5)
	A-			5.21% (5)	17.02% (16)	7.45% (7)	
Credit	B+		2.50% (2)	28.13% (27)	14.89% (14)	2.13% (2)	
	B		5.00% (4)	27.08% (26)	20.21% (19)	2.13% (2)	
	C+		18.75% (15)	12.50% (12)	4.26% (4)		
	C	4.60% (4)	18.75% (15)	13.54% (13)			
Pass	D	22.99% (20)	43.75% (35)	9.38% (9)			
	E	52.87% (46)	8.75% (7)				
Fail	G	19.54% (17)	2.50% (2)				
	TOTAL	87	80	96	94	94	12

Preliminary inspection of the table suggests a positive relationship between the SPM English results and overall performance in MUET, the better SPM results being generally associated with better overall performance in MUET.

Of the 168 with a Distinction in SPM English, 12 (7.14%) achieve the highest possible overall band, while 90 (53.57%) achieve Band 5. Altogether, 60.71 percent come into the High Performers category. It is interesting to note that four test takers who obtain a credit in SPM English also come into the High Performers category. At the lower end of the scale, 61.03 percent of those with a Pass or Fail in SPM only manage to get Band 1 in MUET overall.

Table 4.23 indicates a similar pattern for IELTS, since the better SPM results are generally associated with better overall performance in IELTS. Of the 84 (18.14%) in the High Performers category (Bands 7.0 – 9.0), all but four obtain a Distinction in SPM English. At the lower end, the 63 (13.61%) in the Low Performers category (Band 3.5 and below), all obtain either a Pass or Fail in SPM.

Table 4.23. Overall IELTS Band Scores and SPM English Results

	SPM English	Overall IELTS Band													
		2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0
Distinction	A+								2.7% (2)	4.2% (2)	25% (12)	56% (14)	71.4% (5)	100% (4)	-
	A							5.1% (3)	34.7% (26)	64.6% (31)	62.5% (30)	40% (10)	14.3% (1)		
	A-							6.8% (4)	18.7% (14)	12.5% (6)	6.2% (3)	-	14.3% (1)		
Credit	B+					2.2% (1)	9.6% (5)	35.6% (21)	14.7% (11)	10.4% (5)	4.2% (2)	-			
	B					2.2% (1)	28.8% (15)	22% (13)	22.7% (17)	6.2% (3)	2.1% (1)	4% (1)			
	C+				2.8% (1)	10.9% (5)	19.2% (10)	16.9% (10)	5.3% (4)	2.1% (1)					
	C			2.3% (1)	8.3% (3)	19.6% (9)	25% (13)	8.5% (5)	1.3% (1)						
Pass	D		16.7% (3)	20.9% (9)	44.4% (16)	54.3% (25)	15.4% (8)	5.1% (3)							
	E		44.4% (8)	60.5% (26)	41.7% (15)	6.5% (3)	1.9% (1)								
Fail	G	100% (2)	38.9% (7)	16.3% (7)	2.8% (1)	4.3% (2)									
TOTAL		2	18	43	36	46	52	59	75	48	48	25	7	4	-

4.5.3.2 SPM English Results: Reading

Since SPM is a written examination, it is possible to make a meaningful comparison between the SPM results for English and the Band scores for MUET and IELTS for Reading and Writing, but not of course for Listening and Speaking. The remaining two sub-sections are consequently restricted to Reading and Writing.

Table 4.24 presents the correspondences between SPM results and MUET Reading scores. The overall pattern seems to be consistent with the trend for the overall MUET band scores. Corresponding to the lower MUET bands there were more test takers with a Pass or Fail in SPM, and corresponding to the higher bands there were more test takers with a Distinction in SPM.

Table 4.24. MUET Reading Band Scores and SPM English Results

MUET Reading Band	SPM English	Frequency	Total
1	C+	5	98
	C	5	
	D	30	
	E	41	
	G	17	
2	B+	4	62
	B	3	
	C+	8	
	C	10	
	D	23	
	E	12	
	G	2	
3	A+	0	53
	A	1	
	A-	3	
	B+	5	
	B	15	
	C+	10	
	C	12	
	D	7	
4	A+	0	80
	A	17	
	A-	5	
	B+	21	

MUET Reading Band	SPM English	Frequency	Total
	B	25	
	C+	4	
	C	4	
	D	4	
5	A+	4	68
	A	30	
	A-	12	
	B+	13	
	B	5	
	C+	3	
	C	1	
6	A+	35	102
	A	53	
	A-	8	
	B+	2	
	B	3	
	C+	1	

Table 4.25 presents the corresponding figures for SPM results and IELTS Reading scores.

Table 4.25. IELTS Reading Band Scores and SPM English Results

IELTS Reading Band	SPM English	Frequency	Total
2.0	D	2	2
	E	0	
	G	0	
2.5	-	-	-
3.0	E	1	4
	G	3	
3.5	C+	1	18
	C	2	
	D	3	
	E	9	
	G	3	
4.0	B+	2	48
	B	0	
	C+	0	
	C	2	
	D	18	

IELTS Reading Band	SPM English	Frequency	Total
	E	21	
	G	5	
4.5	B+	4	83
	B	9	
	C+	14	
	C	10	
	D	22	
	E	18	
	G	6	
5.0	A-	3	62
	B+	10	
	B	11	
	C+	6	
	C	12	
	D	14	
	E	4	
G	2		
5.5	A+	1	56
	A	5	
	A-	4	
	B+	13	
	B	15	
	C+	9	
	C	5	
D	4		
6.0	A+	1	50
	A	17	
	A-	11	
	B+	8	
	B	8	
	C+	3	
	C	1	
D	1		
6.5	A+	11	59
	A	32	
	A-	4	
	B+	3	
	B	8	
	C+	0	
C	1		
7.0	A+	7	37
	A	24	
	A-	3	
	B+	2	
7.5	B	1	18
	A+	6	

IELTS Reading Band	SPM English	Frequency	Total
	A	10	
	A-	0	
	B+	2	
8.0	A+	5	13
	A	6	
	A-	1	
	B+	1	
8.5	A+	7	14
	A	5	
	A-	2	
9	A+	1	4
	A	2	
	A-	0	
	B+	0	
	B	1	

The overall pattern for the overall IELTS scores seems to be consistent with the pattern for MUET. In the lower bands there were more test takers with a Pass or Fail in SPM English, and in the higher bands there were more test takers with a Distinction in SPM English.

Table 4.26 brings to light an important difference in the High Performers categories of MUET and IELTS. The majority of those with a Distinction in SPM English also come into the High Performers category for MUET. However, only about half of those with a Distinction in SPM English come into the High Performers category for IELTS.

Table 4.26. High Performers in MUET and IELTS Reading and SPM English Results

	SPM English	MUET Reading Band 5 - 6		IELTS Reading Band 7.0 – 9.0	
Distinction	A+	39	142 (84.52%)	26	77 (45.83%)
	A	83		47	
	A-	20		4	
Credit	B+	15		5	
	B	8		2	
	C+	4		-	
	C	1		-	
TOTAL		170		86	

4.5.3.3 SPM English Results: Writing

This section compares the SPM English results with the MUET and IELTS scores for Writing. The pattern for Writing is rather different than for Reading. The highest band that a test taker can get for Writing in MUET is Band 5. Table 4.27 shows that only 41 (8.86%) attain this level, all but one of whom got a Distinction in SPM English.

Further analysis indicates that of the 39 with A+ in SPM English only 11 (28.21%) reached Band 5 in MUET Writing. The majority are in Band 4, and a few who are in Band 3. This raises questions concerning the quality of the A+, the differences in the writing test tasks, and the rubrics used in MUET and SPM English.

Table 4.27. MUET Writing Band Scores and SPM English Results

MUET Writing Band	SPM English	Frequency	Total
1	A+ to B	0	60
	C	2	
	D	12	
	E	32	
	G	14	
2	A-	1	51
	B+	5	
	B	3	
	C+	3	
	C	5	
	D	15	
	E	16	
	G	3	
3	A+	3	173
	A	17	
	A-	10	
	B+	26	
	B	31	
	C+	23	
	C	23	
	D	34	
	E	4	
	G	2	
4	A+	25	138
	A	57	
	A-	15	
	B+	14	
	B	16	
	C+	5	
	C	2	
	D	3	
	E	1	
	G	0	
5	A+	11	41
	A	27	
	A-	2	
	B+	0	
	B	1	
6	-	-	-

Table 4.28 presents the corresponding figures for IELTS Writing. The highest band that a test taker can get in the IELTS Writing is Band 8.0, which is reached by just four

(0.86%), all of whom get A+ for SPM English. Of the 39 with A+ in SPM, 17 (43.59%) are in Band 7.0 or higher for IELTS Writing, which is a much better performance than for MUET. As in the case of MUET, this raises questions concerning the tasks set for the writing test tasks, and the rubrics used.

Table 4.28. IELTS Writing Band Scores and SPM English Results

IELTS Writing Band	SPM English	Frequency	Total
1.5	G	2	2
2.0	D	2	11
	E	4	
	G	5	
2.5	D	6	21
	E	12	
	G	3	
3.0	C	1	25
	D	7	
	E	13	
	G	4	
3.5	B	1	27
	C+	2	
	C	1	
	D	9	
	E	11	
	G	3	
4.0	B+	2	23
	B	0	
	C+	0	
	C	4	
	D	10	
	E	6	
	G	1	
4.5	B+	4	40
	B	5	
	C+	4	
	C	9	
	D	12	
	E	6	
	G	0	
5.0	A	2	54
	A-	2	
	B+	3	
	B	13	

IELTS Writing Band	SPM English	Frequency	Total
	C+	9	
	C	9	
	D	14	
	E	1	
	G	1	
5.5	A+	0	74
	A	9	
	A-	7	
	B+	18	
	B	16	
	C+	13	
	C	7	
6.0	D	4	79
	A+	4	
	A	37	
	A-	10	
	B+	10	
	B	13	
	C+	3	
C	2		
6.5	A+	18	76
	A	39	
	A-	8	
	B+	6	
	B	3	
	C+	2	
7.0	A+	10	24
	A	10	
	A-	0	
	B+	2	
	B	2	
7.5	A+	3	8
	A	4	
	A-	1	
8.0	A+	4	4
8.5	-	-	-
9	-	-	-

Table 4.29 brings to light an important difference in the High Performers categories of MUET and IELTS, corresponding to the difference for Reading presented in Table 4.26. Less than a quarter of those with a Distinction in SPM English come into the High Performers category for MUET Writing. The percentage is even smaller (19%) for

IELTS. In contrast to Reading, it appears that an excellent grade in SPM English does not necessarily lead to an excellent score in MUET Writing.

Table 4.29. High Performers in MUET and IELTS Writing and SPM English Results

	SPM English	MUET Writing Band 5 - 6		IELTS Writing Band 7.0 – 9.0	
Distinction	A+	11	40 (23.81%)	17	32 (19.05%)
	A	27		14	
	A-	2		1	
Credit	B+	-		2	
	B	1		2	
TOTAL		41		36	

(a) Kendall's Tau vs Spearman's Rho

Table 4.30 below summarises the estimated Kendall's Tau coefficient and Spearman's Rho coefficient for each language skill (Listening, Writing, Reading, and Speaking) and the overall band score. Both coefficients indicate that there is a significant clear that the association coefficients for Spearman's Rho are higher than for Kendall's Tau.

Table 4.30 Estimated Kendall's Tau Coefficient and Spearman's Rho Coefficient for each Language Skill

Skills	Kendall's Tau		Spearman's Rho	
	Coefficient	Sig.	Coefficient	Sig.
Listening	0.7700	< 0.01	0.8839	< 0.01
Writing	0.6444	< 0.01	0.7571	< 0.01
Reading	0.7044	< 0.01	0.8334	< 0.01
Speaking	0.6804	< 0.01	0.7995	< 0.01
Overall	0.8413	< 0.01	0.9283	< 0.01

Although Spearman's Rho gives higher association value than Kendall's Tau, it was decided to proceed using the results from the latter. Kendall's Tau has been shown to be robust and efficient (Croux & Dehon, 2010). In addition, Spearman's Rho computes the proportion of variability accounted for, whereas, Kendall's Tau represents a probability on the difference between the probabilities that the observed data are in the same order versus the probability that the observed data are not in the same order.

In summary, based on these two statistical analyses, the correlation between the MUET band scores and the IELTS band scores is high.

(b) Truncated regression analysis

The monotonic pattern that describes the association (correlation) between the MUET band scores and the IELTS band scores is as depicted in Figure 4.13 below. The linear pattern obtained enables truncated linear regression to be constructed.

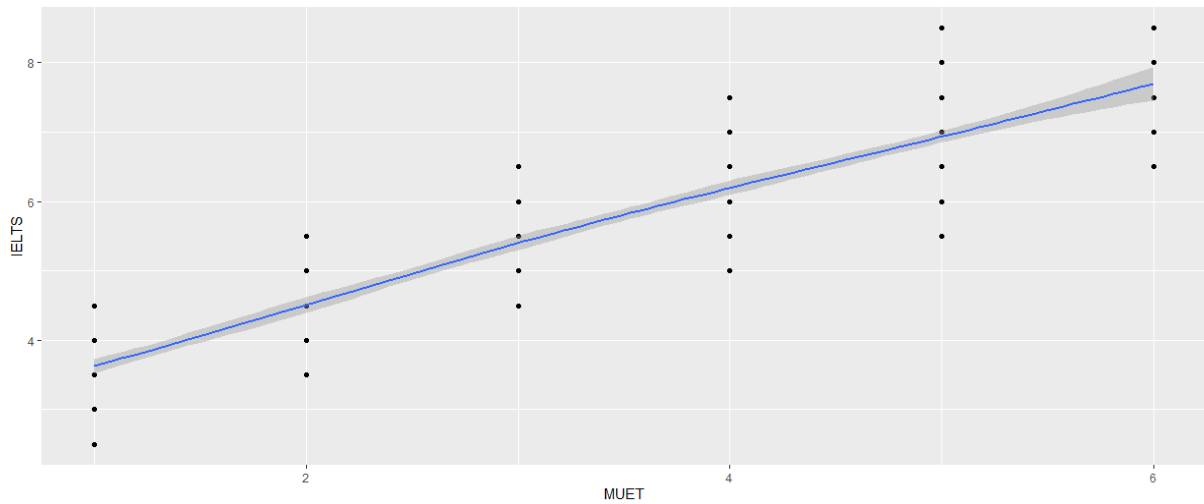


Figure 4-13 Truncated Regression for MUET Band Scores and IELTS Band Scores

The estimated truncated linear regression for overall IELTS band score is given in Table 4.31 below. The second column displays the estimated coefficient in the constructed truncated regression while the third column gives the p -value associated with z-test for each component in the constructed model (shown as t -value).

Table 4.31 Estimated Truncated Linear Regression for Overall IELTS Band Score

	Overall IELTS	
	Estimated coefficient	t -value
Intercept	2.856	50.894***
MUET	0.824	50.888***
Sigma	0.514	30.490***

*** sig. at $\alpha=0.001$

Based on Table 4.31, the estimated coefficient of MUET is statistically significant. The estimated coefficient explains that a unit increase in a MUET band score leads to a 0.824 increment in a predicted IELTS band score. The Sigma (ancillary statistic) is equivalent to the standard error of estimate in the Ordinary Least Square (OLS) linear regression, which is 0.514, a modest reduction of error in an IELTS band score. OLS linear regression is perhaps a good model to use if value of the IELTS band score is not truncated to 9.

Similar findings were found for each constructed truncated linear regression on Listening, Reading, Writing, and Speaking IELTS. The estimated coefficients for MUET are all significant, which tells that the MUET band scores do have a high correlation with the IELTS band scores.

Table 4.32 Estimated Coefficients in Truncated Regression for each IELTS Test Skill

	Listening	Reading	Writing	Speaking
Intercept	2.972 (38.496 ^{***})	3.241 (38.241 ^{***})	2.242 (18.420 ^{***})	2.416 (21.978 ^{***})
MUET	0.700 (36.180 ^{***})	0.714 (30.096 ^{***})	0.947 (25.602 ^{***})	0.927 (27.838 ^{***})
Sigma	0.763 (29.849 ^{***})	0.772 (29.965 ^{***})	0.895 (30.123 ^{***})	0.893 (29.863 ^{***})

The results collected from the constructed truncated regression analysis tend to indicate that the MUET band scores have an agreement to the IELTS band scores. However, it is not recommended to use the results from the constructed truncated regression analysis to explain the relationship between IELTS and MUET. This is due to the fact that performance in the MUET does not directly influence performance in IELTS, and vice versa. Since the objective of this study was to measure the association between the two tests, simply using the regressed truncated to predict the IELTS band scores using the MUET band scores could be inappropriate as the two language tests are independent of each other.

4.6 Summary of Main Findings

The key findings from the correlational analysis of MUET and IELTS Band scores are as follows:

1. There is a positive and significant correlation between the overall Band scores in MUET and IELTS (Kendall's Tau=0.8406, p-value < 0.001). This indicates that test takers who scored low in overall MUET tend also to score low in overall IELTS, while those who scored high in overall MUET had the tendency to also score high in overall IELTS. The significant correlation also suggests that the overall MUET and IELTS provide similar information concerning test takers' overall ability in the four skills.

2. The relationship between the MUET and IELTS Band scores in the four skills are all positive and significant. The strength of the relationships between the two tests ranges from 0.6428 to 0.7795. The order of the strength of relationships from the least to the highest by skills is

- a. Writing (Kendall's Tau = 0.6428** (p-value < 0.001)
- b. Speaking (Kendall's Tau= 0.6795**, p-value < 0.001).
- c. Reading (Kendall's Tau= 0.7032**, p-value < 0.001) and
- d. Listening (Kendall's Tau= 0.7695**, p-value < 0.001).

This suggests that of the four skills, the two receptive skills have stronger relationships than the productive skills.

3. The correlational findings between MUET and IELTS suggest that the equivalent tests provide similar information of the test takers' ability in the four skills (listening, speaking, reading and writing). It therefore allows us to do score comparison across the two tests in a meaningful way.

The key findings of mapping of the MUET and IELTS scales to the CEFR levels:

1. MUET skill tests tend to place more test takers in the Basic User level (A1 and A2) for all four skills as compared to IELTS.
2. IELTS tends to place majority of the test takers in the Independent User level (B1 and B2) (ranging from 65% to 76%) as compared to MUET (ranging from 16% to 30%) in all the four skills.
3. The placements of test takers in the highest CEFR level (Proficient User) based on MUET and IELTS are consistently low in the four skills. MUET placed test takers at the Proficient level from 8.7% to 36.75% while IELTS from 8.12% to 21.79%.

Summary of findings of MUET and IELTS according to gender and SPM English results:

1. On the whole, male test takers seem to do better than their female counterparts in the overall MUET and overall IELTS band scores. Male test takers also do better on all four skills in the MUET and IELTS.
2. There seems to be a positive relationship between the SPM English results and overall performance in MUET, the better SPM results being generally associated with better overall performance in MUET. A similar pattern is also observed for the IELTS.
3. The overall pattern for the MUET Reading scores seems to be consistent with the pattern for IELTS Reading scores. In the lower bands there are more test takers with a Pass or Fail in SPM English, and in the higher bands there are more test takers with a Distinction in SPM.
4. The majority of those with a Distinction in SPM English also come into the High Performers category for MUET Reading. However, only about half of those with a Distinction in SPM English come into the High Performers category for IELTS Reading.
5. It appears that an excellent grade in SPM English does not necessarily lead to an excellent score in MUET or IELTS Writing. Less than a quarter of those with a Distinction in SPM English come into the High Performer category for both Writing tests.

Chapter 5 Discussion and Recommendations

5.1 Introduction

This study examines the correlation between MUET and IELTS band scores, comparing the performance of the same test takers in the two tests, and presenting their performance in each of the four language skills, further broken down according to gender and performance in the SPM English test. Adopting a quantitative research design, the research involves obtaining test scores from 468 test takers who took the MUET and IELTS tests in 2017 (see Chapter 3 for a detailed description of the methodology). The scores for both tests were subjected to statistical and correlational analyses to address the research questions relating to (1) the correlation between the MUET and IELTS Overall Band Scores by the same test takers, (2) performance in the separate language skills in the MUET and IELTS tests and their correlation, (3) performance in both tests according to gender and SPM English results and their correlation.

A correlational analysis of the MUET and IELTS band scores was necessary to provide evidence for concurrent validity (c.f. Chapter 2, section 2.4) since both test scores can and have been used for the same purposes. The findings from the correlational analysis provide evidence that both tests are comparable in placing students at the different levels for overall proficiency and for the four skills. Decisions based on the two tests are thus defensible.

5.2 Summary of Findings

The findings described in detail in Chapter 4 and summarised here are as follows:

RQ1: Overall Band

How do the overall band scores obtained by test takers in MUET correlate with the overall band scores of the same test takers in IELTS?

There is a positive correlation between the MUET and IELTS tests and the correlation is statistically significant.

RQ2: Performance in the Listening, Speaking, Reading and Writing Tests

How do the MUET band scores for Listening, Speaking, Reading and Writing correlate with the IELTS band scores for the same test takers?

The band scores in the MUET Listening, Speaking, Reading and Writing tests correlate with the band scores in IELTS, the receptive skills (Listening and Reading) being more highly correlated than the productive skills (Speaking and Writing).

RQ 3: How does the performance of the MUET and IELTS test takers vary according to gender and SPM English results?

In general, male test takers perform better than female test takers both in MUET and in IELTS for all four skills. The overall MUET band scores seem to be consistent with the pattern for IELTS. In the lower bands there are more test takers with a Pass or Fail in SPM English, and in the higher bands there are more test takers with a Distinction in SPM English. The majority of those with a Distinction in SPM English also come into the High Performers category for MUET. However, only about half of those with a Distinction in SPM English come into the High Performers category for IELTS.

5.3 Comparison of MUET and IELTS Individual Skill Performance

The MUET band scores for Listening, Speaking, Reading, and Writing correlate with the IELTS band scores for the same test takers. The test scores are more highly correlated for Listening and Reading than for Speaking and Writing. This could be because there is a subjective element in the assessment of Speaking and Writing and in the rating scale. In addition, the MUET Speaking format which includes group interaction is different from the IELTS Speaking, which takes the form of a one-to-one interview.

5.4 Performance of Test Takers in MUET and IELTS

The male test takers do better than female test takers in both tests despite the fact that two thirds of the participants are female. In contrast to Reading, it appears that an excellent grade in SPM English does not necessarily lead to an excellent score in the MUET Writing test. Only about half of the test takers obtaining A+ in SPM English performed as expected in Writing in both the MUET and IELTS. The possible reasons for this rather unexpected poor performance include issues relating to what the A+ in SPM English measures, and the different writing tasks and rating criteria for SPM English and the MUET.

5.5 Implications of the Study

5.5.1 Policy

The findings seem to suggest that the MUET test is fit for its purpose to be used as a university entry requirement not only for Malaysian students but also for foreign students. Although the six MUET bands already have descriptors, these have to be aligned with international standards for the MUET test to be used for high-stake decisions for entry into foreign universities. This explains why MEC collaborated with Cambridge English to align the MUET with the CEFR in 2017 - 2019. The revised MUET has taken into consideration the CEFR and best practice in ESL/EFL assessment, including test development and validation. The CEFR-aligned MUET will be administered in 2021 onwards.

5.5.2 Testing

One of the implications of the study concerns the Speaking test. As a testing procedure, the examiners for IELTS Speaking seemed to guide the test takers' participation in the conversation according to their level of ability, and put them at ease and made them more active in the interaction. There is thus an adaptive element in IELTS.

5.5.3 Teaching and Learning

The backwash effect of the study focuses on teachers facilitating Malaysian students' language proficiency in improving specific language skills such as listening and writing and familiarity with the format of the tests. There should be more exposure to different accents of English and writing opportunities for different genres or topics. The majority of those in MUET Bands 1, 2 and 3 have not developed the language skills required for tertiary level study, and teachers could focus on improving specific skills such as listening and reading strategies, and on vocabulary enhancement.

5.6 Comparison of MUET and IELTS Overall Performance

Given that there is a positive significant correlation between the overall MUET and IELTS band scores, it is possible to conclude that the test takers obtaining high band scores in the MUET would be more likely to obtain high band scores in IELTS. The positive significant correlation in the overall band scores seems to suggest that the MUET and IELTS tests are to a certain extent comparable. The correlation value in this study is also higher than the previous correlational study conducted by MEC in 2005.

The IELTS test was chosen to examine its correlation with the MUET test in terms of test takers' performance in both because the IELTS is already aligned to the CEFR. Drawing on the Cambridge English Evaluation of MUET 2015, although it is not definitive it is perhaps possible to show some kind of relationship between the MUET Bands and scores with the CEFR levels. Below is a table comparing MUET with IELTS and the CEFR is linked here to the IELTS.

Table 5.1 Table of Concordance of MUET with IELTS and CEFR

MUET			IELTS	CEFR	English Level
Range score	Average score	Band	Band	Level	Proficiency
260 – 300	264.39	6	> 8.0	C2	Advanced
220 – 259	232.90	5	7.0 – 8.0	C1	
180 – 219	202.60	4	6.0 – 6.5	B2	Upper intermediate
140 – 179	163.40	3	5.5		
100 – 139	125.90	2	4.0 – 5.0	B1	Lower intermediate
Below 100	83.32	1	< 4.0	A2	Elementary

5.7 Comparison of MUET and IELTS Performance by Components

Tables 5.2, 5.3, 5.4, and 5.5 show comparison of the band scores between MUET and IELTS based on the box and whisker plots in Chapter 4 (See pages 40, 44, 48 and 52).

Table 5.2 MUET and IELTS Concordance Table for Listening Skill

Range	MUET	IELTS range	Median IELTS Band	CEFR Level
39 - 45	6	6.5 – 8.0	7.5	C1
33 - 38	5	5.5 – 7.0	6.5	B2
27 - 32	4	5.0 – 6.0	5.5	B2
21 - 26	3	4.5 – 5.5	5.0	B1
15 - 20	2	4.0 – 4.5	4.5	B1
14 and below	1	3.5 – 4.0	3.5	A2

Table 5.3 MUET and IELTS Concordance Table for Speaking Skill

Range	MUET	IELTS range	Median IELTS Band	CEFR Level
42 - 45	6	7.0 – 8.0	7.5	C1
35 - 41	5	6.5 – 7.0	7.0	C1
28 - 34	4	5.5 – 6.5	6.0	B2
22 - 27	3	4.5 – 6.0	5.5	B2
15 - 21	2	3.5 – 5.0	4.5	B1
14 and below	1	2.5 – 3.5	3.0	A2

Table 5.4 MUET and IELTS Concordance Table for Reading Skill

Range	MUET	IELTS range	Median IELTS Band	CEFR Level
104 - 120	6	7.5 – 8.5	8.0	C1
88 - 103	5	6.0 – 7.0	6.5	B2
72 - 87	4	5.5 – 6.5	6.0	B2
56 - 71	3	4.5 - 5.5	5.0	B1
40 - 55	2	4.0 – 5.0	4.5	B1
39 and below	1	4.0 – 4.5	4.5	B1

Table 5.5 MUET and IELTS Concordance Table for Writing Skill

<i>Range</i>	<i>MUET</i>	<i>IELTS range</i>	<i>Median IELTS Band</i>	<i>CEFR Level</i>
81 - 100	6	-	-	-
68 - 80	5	6.0 – 7.0	6.5	B2
56 - 67	4	6.0 – 6.5	6.0	B2
43 - 55	3	4.5 – 6.0	5.5	B2
31 - 42	2	3.5 – 5.0	4.5	B1
30 and below	1	2.5 – 3.5	3.0	A2

5.8 Recommendations

There are several recommendations to be made arising from this study which have the potential to contribute to the future improvement of MUET. Firstly, international students should be taking MUET as an entry requirement. Secondly, this current correlational study provides possible baseline data for future studies, since it presents empirical evidence of the relationship between MUET, IELTS and SPM English. Thirdly, future studies of MUET and IELTS could use the same sampling procedure since it allows for correlational studies using the same samples. In addition, it is recommended that future studies should be conducted on the new CEFR-aligned MUET, which will enable the comparison of the content of the test, the items, the scores and the rating scheme. Finally, subject to financial constraints, it would be preferable to use a larger sample than has been possible for the present study.

5.9 Strengths and Limitations of the Study

The main strength of the present study is in the systematic use of the sampling frame and the selection of test takers from many different states in Malaysia. Another strength is in the provision of training for selected senior English language practitioners before they conducted IELTS familiarisation workshops. The study also obtained verified data on SPM English results, and made a three-way comparison of MUET band scores, IELTS band scores and SPM English results. In addition, the present correlational study utilised appropriate and robust statistical tools and statistical analyses.

One of the limitations of the study is that it was not possible to access the test content and raw scores for IELTS, and for this reason the researchers had to use a non-parametric correlation test. The timing and collection of data three months after the participants had taken the MUET could have exposed them to extraneous influences which could have affected their English proficiency. A further limitation is that the CEFR could not be used to make a direct comparison between IELTS and MUET at this stage, because the alignment of the MUET with the CEFR was just completed in 2019.

5.10 Conclusion

In conclusion, MUET band scores and IELTS band scores have a positive correlation which is also significant. The correlations between MUET and IELTS suggest that both tests provide similar information about the ability of the test takers with respect to the four skills (Listening, Speaking, Reading and Writing). It therefore enables us to make some meaningful comparisons of the scores for the two tests.

This study has provided strong empirical evidence to support the recent completed work on the alignment of the MUET with the CEFR, and prepares the way for the possible wider adoption of MUET for English language entry requirement for universities abroad.

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APPENDIX

(A) Description about MUET Band

BAND DESCRIPTION

The following is a band description indicating MUET candidates' level of English proficiency that tests the four skills, namely Listening, Speaking, Reading and Writing. This band description has been developed to help candidates and other stakeholders to understand the level of performance required to attain a particular band score in each of the criterion areas.

AGGREGATED SCORE	BAND	USER	LISTENING ABILITY	COMMUNICATIVE ABILITY	COMPREHENSION	TASK PERFORMANCE
260 - 300	6	Excellent user	Able to understand and convey information accurately	Highly expressive, fluent, accurate and appropriate language: hardly any inaccuracies	Very good understanding of language and contexts	Language always accurate and able to link ideas very effectively; uses wide variety of sentence structures effectively with varied vocabulary
220 – 259	5	Very good user	Able to understand and convey most information with minimal errors	Expressive, fluent, accurate and appropriate language but with minor inaccuracies	Good understanding of language and contexts	Language mostly accurate with few minor errors and able to link ideas effectively; uses some variety of sentence structures with appropriate vocabulary
180 – 219	4	Good user	Able to understand the information but lacks the ability to convey the message accurately	Satisfactorily expressive and fluent, appropriate language but with occasional inaccuracies	Satisfactory understanding of language and contexts	Language fairly accurate with some minor errors and able to link ideas satisfactorily; tendency to use simple sentence structures and vocabulary
140 – 179	3	Modest user	Understand information but makes grammatical and spelling errors when conveying information	Modestly expressive and fluent, appropriate language but with noticeable inaccuracies	Modest understanding of language and contexts	Language sometimes accurate with some errors and attempts to link ideas; limited variety of sentence structures and vocabulary
100 – 139	2	Limited user	May have understood information but makes grammatical and spelling errors resulting in inaccuracies when conveying information	Lacks expressiveness, fluency and appropriacy: inaccurate use of the language resulting in breakdown in communication	Limited understanding of language and contexts	Language largely inaccurate with many errors and hardly any attempt to link ideas; hardly any variety of sentence structures and vocabulary
Below 100	1	Extremely limited user	Have difficulties understanding most information and makes grammatical and spelling errors resulting in distortion	Unable to use language to express ideas: inaccurate use of the language resulting in frequent breakdown in communication	Little or poor understanding of language and contexts	Language grossly inaccurate with serious errors and no attempt at linking ideas; no variety of sentence structures at all and uses inappropriate vocabulary

(B) Description about IELTS Band

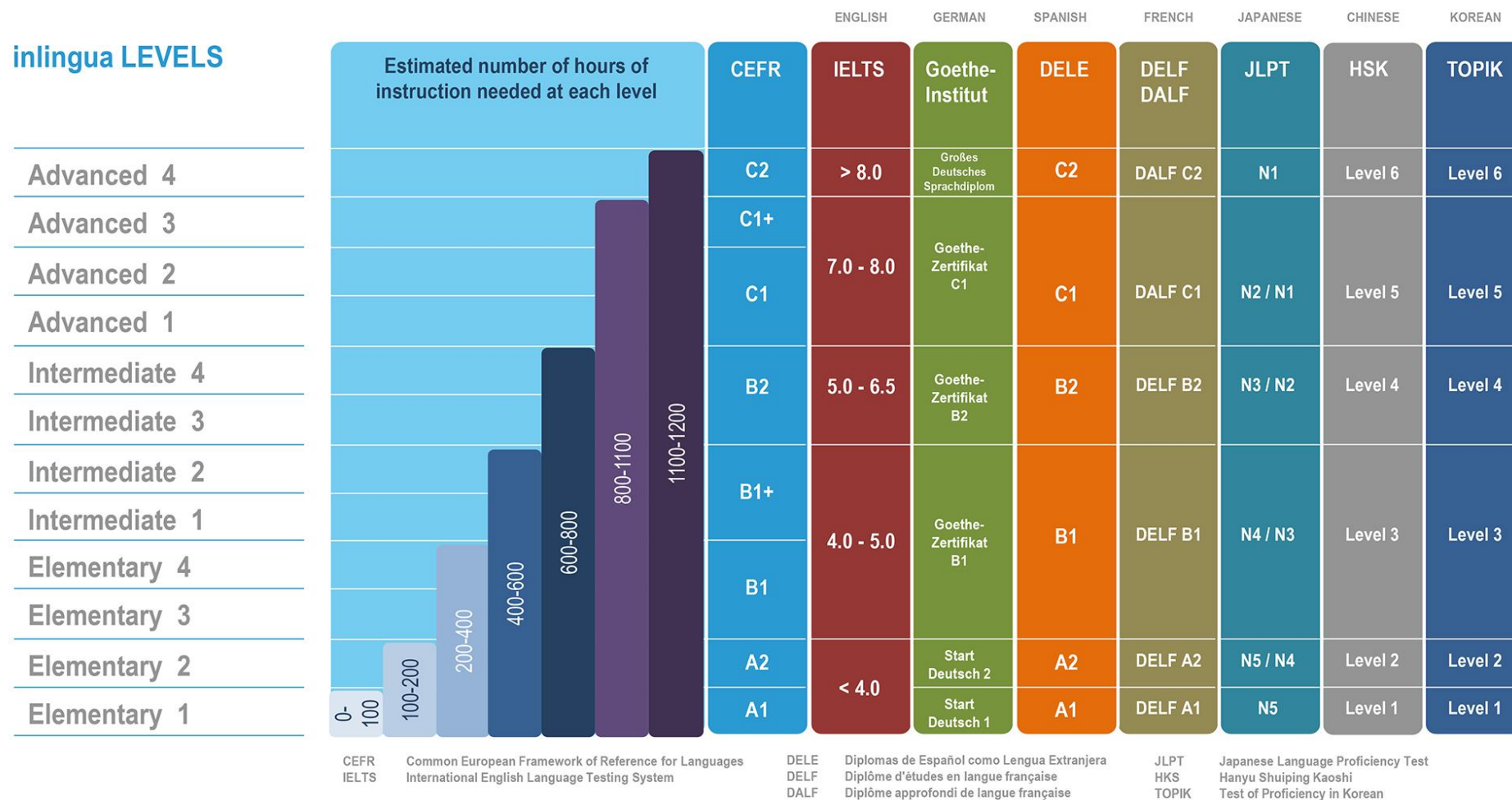
The IELTS scale

Band score	Skill level	Description
9	Expert user	The test taker has fully operational command of the language. Their use of English is appropriate, accurate and fluent, and shows complete understanding.
8	Very good user	The test taker has fully operational command of the language with only occasional unsystematic inaccuracies and inappropriate usage. They may misunderstand some things in unfamiliar situations. They handle complex and detailed argumentation well.
7	Good user	The test taker has operational command of the language, though with occasional inaccuracies, inappropriate usage and misunderstandings in some situations. They generally handle complex language well and understand detailed reasoning.
6	Competent user	The test taker has an effective command of the language despite some inaccuracies, inappropriate usage and misunderstandings. They can use and understand fairly complex language, particularly in familiar situations.
5	Modest user	The test taker has a partial command of the language and copes with overall meaning in most situations, although they are likely to make many mistakes. They should be able to handle basic communication in their own field.
4	Limited user	The test taker's basic competence is limited to familiar situations. They frequently show problems in understanding and expression. They are not able to use complex language.
3	Extremely limited user	The test taker conveys and understands only general meaning in very familiar situations. There are frequent breakdowns in communication.
2	Intermittent user	The test taker has great difficulty understanding spoken and written English.
1	Non-user	The test taker has no ability to use the language except a few isolated words.
0	Did not attempt the test	The test taker did not answer the questions.

(C) Description about CEFR Level

Level			General description
Proficient user	C2	Mastery	Highly proficient – can use English very fluently, precisely and sensitively in most contexts
	C1	Effective Operational Proficiency	Able to use English fluently and flexibly in a wide range of contexts
Independent user	B2	Vantage	Can use English effectively, with some fluency, in a range of contexts
	B1	Threshold	Can communicate essential points and ideas in familiar contexts
Basic user	A2	Waystage	Can communicate in English within a limited range of contexts
	A1	Breakthrough	Can communicate in basic English with help from the listener

(D) Table of Comparison of CEFR with Other International Standards



Please note that Language schools and certificate bodies evaluate their own equivalences against these frameworks. Differences of estimation may exist.

GLOSSARY

Band

A measure or description of the proficiency or ability of a test taker, normally described on some kind of scale and determined on the basis of test performance.

Benchmark

The establishing of a standard (in experiments and evaluation projects) against which to measure subsequent progress.

CEFR

The Common European Framework of Reference for Languages (CEFR) is an international standard for describing language ability. It describes language ability on a six-point scale, from A1 for beginners, up to C2 for those who have mastered a language. This makes it easy for anyone involved in language teaching and testing, such as teachers or learners, to see the level of different qualifications. It also means that employers and educational institutions can easily compare our qualifications to other exams in their country.

Correlation

A procedure which measures the strength of the relationship between two (or more) sets of measures which are thought to be related. This relationship is usually expressed as a numerical value known as correlation coefficient.

Correlation is a measure of relatedness and does not in itself provide evidence of causality. Determining whether one of the variables has an effect on the other requires different methods of evaluation.

IELTS

The International English Language Testing System (IELTS) is a battery of tests designed to assess the language proficiency of non-native speakers of English seeking entry to English-medium courses in institutions of higher or further education.

The IELTS test covers the four skills of listening, speaking, reading and writing. Global proficiency and results on each of the four macroskills are reported on a 9-point scale, with native-speaker-like competence (Band 9) as the highest level.

Language Skills

An aspect of ability underlying language use. Language tests are often characterised according to which of the four skills is involved in its performance. The four skills are sometimes grouped as receptive (reading and listening) and productive (speaking and writing) skills.

MUET

The Malaysian University English Test (MUET) is a test of English language proficiency set and run by the Malaysian Examinations Council. Most candidates who sit for MUET do so to apply for admissions in public and private universities and colleges. Universities set different target band scores for different courses. For instance, most courses in the Malaysian universities set the minimal requirement of a Band 3 in MUET, while students who want to study Medicine, Law, TESL, English Linguistics, and English Literature are required to obtain at least a Band 4.

The MUET test covers the four skills of Listening, Speaking, Reading and Writing. Global proficiency and results on each of the four skills are reported on a 6-point scale, with Band 6 as the highest level.

Performance

The behaviour exhibited by a test candidate in completing a particular task, a rateable sample of language. While the assessment of ability is based on this observable

behaviour, it is recognised that aspects of the testing situation may cause the candidate to perform in a way that does not allow an accurate measure of his/her ability to be obtained.

Proficiency Test

A test which measures how much of a language someone has learned. Unlike an achievement test, a proficiency test is not based on a particular course of instruction. A proficiency test often measures what the candidate has learned relative to a specific real world purpose.

Reliability

The actual level of agreement between the results of one test with itself or with another test. Such agreement, ideally, would be the same if there were no measurement error, which may arise from bias of item selection, from bias due to time of testing or from examiner bias. It is common to say that reliability is a necessary but not a sufficient quality of a test. While reliability focuses on the empirical aspects of the measurement process, validity focuses on the theoretical aspects and seeks to interweave these concepts with the empirical ones.

Validity

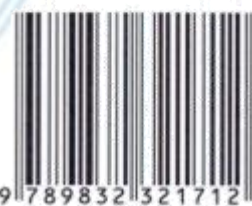
The quality which most affects the value of a test, prior to, though dependent on, reliability. A measure is valid if it does what it is intended to do, which is typically to act as an indicator of an abstract concept which it claims to measure. The validity of a language test therefore is established by the extent to which it succeeds in providing an accurate concrete representation of an abstract concept (for example proficiency, achievement, aptitude).

The most commonly referred to types of validity are content, construct, concurrent, and predictive. The first two are conceptual, the latter ones are statistical.

Criterion-related validity is established statistically in terms of the closeness of a test to its criterion. This may be an existing test or some other measure within the same domain (concurrent validity) or a future test other measure (predictive validity). In both cases validity is judged in terms of how closely the new test correlates with the criterion measure.

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