

# TECHNICAL MANUAL & USER GUIDE

## BUSINESS ENGLISH TEST

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## Introduction

Effective communication skills are an essential requirement for an employee in any organisation. An individual who can express their views clearly and concisely in written as well as oral format is considered, undoubtedly, to be an asset to the organisation, especially with English being the internationally acclaimed language that is spoken worldwide. Certain professions in the print media industry and other roles involving sales, managerial positions, content writing, etc. require superior knowledge of English, wherein the individual needs to be precise and lucid in the way they communicate. Organisations, therefore, are using every possible means to assess and recruit the right individual. Keeping this need in mind, the Business English Test was developed to help organisations identify individuals with excellent English language skills.

## 1. General Description and Applicability

The **BUSINESS ENGLISH TEST** is designed to assess key aspects of the English language, which are most significant and instrumental in a corporate setting – *Grammar, Reading Comprehension* and *Vocabulary*. The focus of the assessment is on communication, i.e. getting a message across in an appropriate form and receiving messages in their intended sense.

Some benefits of the **BUSINESS ENGLISH TEST** that most distinguish it from other English language proficiency tools in the market are the following:

- Summary of the individual's overall performance
- Overall language proficiency score on a scale of zero to twenty, including the number of correct responses by the individual
- Personalised interpretation of the individual's overall score
- Graphical representation of scores on each of the three factors – *Grammar, Reading Comprehension* and *Vocabulary*
- Detailed comments on each factor's score

### 1.1. Factor Descriptions

The **BUSINESS ENGLISH TEST** is constructed in such a way as to measure three important components, i.e. *Grammar, Reading Comprehension* and *Vocabulary*. These three factors form the crux of language development.

**Grammar** - *Grammar* is the set of rules governing a particular language such as in word usage, sentence construction, etc. Awareness of English grammar is important as it enhances both reading and writing skills, and facilitates effective communication.

**Reading Comprehension** - *Reading Comprehension* is the level of understanding of a passage or text. It is the capacity of an individual to perceive and understand the meaning communicated in written texts and includes the ability to respond accurately to questions posted from the reading material.

**Vocabulary** - *Vocabulary* is a set of words belonging to a specific language. It refers to the words one must know in order to understand and communicate effectively in that language.

### 1.2. Main Areas of Application

The **BUSINESS ENGLISH TEST** provides a norm-based objective assessment of the individual's level of proficiency in the English language as used in business settings. This test is recommended for the recruitment of technical positions like programmers, technicians, engineers, etc. It is equally applicable as a recruitment and pretraining assessment of students or employees at different levels.

The **BUSINESS ENGLISH TEST** is especially reserved for professionals in the Human Resource departments of organizations, schools and colleges, as well as trainers.

### 1.3. Administration and Questionnaire Structure

#### *Remote Administration of the BUSINESS ENGLISH TEST*

It is recommended that the **BUSINESS ENGLISH TEST** is administered under supervised settings, but if it has to be taken in a non-supervised remote administration mode, appropriate care should be taken by the test administrator to minimize the possibility of getting external aid (dictionary, books or experts) on the part of the test-taker.

#### *Format of the BUSINESS ENGLISH TEST*

- Number of Questions: 60
- Assessment Format: Multiple Choice Questionnaire
- Duration: 40 minutes (Timed)
- Administration: Online

### 1.4. Technical and Security Issues

The following points serve as guidelines for securely administering the **BUSINESS ENGLISH TEST**. These are useful for ensuring that the **BUSINESS ENGLISH TEST** is administered in an objective and fair manner. Security specifications are also important for protecting the candidate's information, both during administration and after the completion of the assessment.

#### *Respecting the Ethical Charter*

As a publisher of online assessment tools, *Central Test* respects the legal conventions of French labour law and the regulatory provisions resulting from the law of 6 January 1978 pertaining to information technology, files and freedoms: Declaration N°1834067. Additionally, as of 25th May, 2018, *Central Test* complies with the GDPR (General Data Protection Regulation) regulations made by the European Parliament & Council.

Test results and personal data cannot be shared with third parties without explicit consent from the candidate. Candidates have the right to access their results and the assessor must grant them access when requested. Furthermore, if the candidate requests it, all data must be permanently deleted; to do so the candidate must contact either the organisation or *Central Test* directly.

#### *Confidentiality and Security*

*Central Test* guarantees the security and confidentiality of data generated during the administration of online tests: access codes are encrypted in the database and cannot be accessed by anyone. Passwords are computationally generated and not visible to companies. A URL rewriting module (secure link generator) has been installed and has transparent parameter passing for the user.

Browsing and data exchanged via the *Central Test* application can be secured and represented by an icon in the form of a padlock on the internet browser. The *Central Test* application has a "GeoTrust SSL TRUE BusinessID" digital signature, issued and certified by GeoTrust®. This certificate protects all *Central Test* assessments from phishing attacks, and serves as proof of our dedication to providing a secure platform.

Invitations to take tests are made via secure links that are of limited use (in terms of numbers and duration). The tests are timed and IP addresses are tracked.

## 2. Psychometric Properties

At *Central Test*, assessments are continuously subjected to revision in order to ensure applicability as well as efficiency, and such is also the case with the **BUSINESS ENGLISH TEST**. The questionnaire was pretested several times to ensure that it met the criteria for reliability and validity established by internationally recognised psychological institutions.

Pretests were conducted with a range of male and female professionals across the globe to ensure items were accurate, relevant, clear, concise and that they reflected the targeted construct. After two prior pretests, the current pretest comprises of 29,598 English-speaking professionals from around 150 countries. Pretest samples comprise English speakers from different continents in order to establish the questionnaire as an international measure of English language proficiency.

Reliabilities for each factor were calculated from generated item factor loadings. Factors were flagged if reliabilities were less than 0.55. The overall scale reliability for the present study is 0.94.

### 2.1. Sample Descriptives

*Table 1. Descriptives based on Gender.*

| Gender      | Percentage (%) | N      |
|-------------|----------------|--------|
| Not Defined | 1.01           | 298    |
| Female      | 49.32          | 14,598 |
| Male        | 49.67          | 14,702 |

*Table 2. Descriptives based on Age Group.*

| Age Group   | Percentage (%) | N      |
|-------------|----------------|--------|
| Not Defined | 3.56           | 1,054  |
| 18 – 25     | 34.72          | 10,276 |
| 26 – 33     | 30.01          | 8,883  |
| 34 – 41     | 17.28          | 5,114  |
| 42 – 49     | 9.64           | 2,852  |
| 50 +        | 4.79           | 1,419  |

*Table 3. Descriptives based on Country of Origin.*

| Country of Origin         | Percentage (%) | N     |
|---------------------------|----------------|-------|
| Not Defined               | 0.02           | 7     |
| Algeria                   | 2.03           | 600   |
| Argentina                 | 0.18           | 52    |
| Bangladesh                | 0.19           | 55    |
| Brazil                    | 0.30           | 88    |
| Cameroon                  | 1.45           | 428   |
| Canada                    | 0.25           | 74    |
| Colombia                  | 0.43           | 127   |
| Congo                     | 0.18           | 54    |
| Congo Democratic Republic | 2.76           | 816   |
| Côte d'Ivoire             | 3.09           | 915   |
| France                    | 59.45          | 17596 |
| Gabon                     | 0.20           | 58    |
| Germany                   | 0.20           | 60    |
| Greece                    | 0.20           | 60    |
| India                     | 6.11           | 1809  |
| Italy                     | 1.21           | 359   |
| Madagascar                | 1.50           | 444   |
| Martinique                | 0.20           | 59    |
| Mauritius                 | 0.66           | 194   |
| Mexico                    | 0.56           | 167   |
| Mongolia                  | 0.33           | 97    |
| Morocco                   | 1.65           | 488   |
| Oman                      | 2.11           | 624   |
| Pakistan                  | 0.30           | 90    |
| Philippines               | 0.50           | 149   |
| Portugal                  | 0.19           | 57    |
| Qatar                     | 0.42           | 123   |

|                      |      |     |
|----------------------|------|-----|
| Réunion              | 0.60 | 178 |
| Saudi Arabia         | 0.93 | 276 |
| Senegal              | 0.25 | 73  |
| Spain                | 3.16 | 936 |
| State of Palestine   | 0.49 | 146 |
| Tunisia              | 1.72 | 508 |
| Turkey               | 0.31 | 93  |
| United Arab Emirates | 1.65 | 487 |
| United Kingdom       | 0.29 | 87  |
| USA                  | 1.10 | 325 |
| Others               | 2.83 | 839 |

## 2.2. Norms

Norms help us to compare an individual's score on a test with the scores of others who complete the same assessment, usually under similar conditions. These individuals are representative of the population for which an assessment is intended, and are therefore referred to as the norm group. The closer the match between the characteristics of the sample and the target population, the more accurate the distribution will be as a ranking guide. With norms, test developers and psychologists are able to establish comparisons between individuals and make more objective decisions. Norm groups enable us to attribute meaning to test scores and quantify an individual's performance, level of an attribute or trait relative to his/her peers.

Tables 4 to 7 detail the Mean, Standard Deviation (SD), Median, Minimum (Min), Maximum (Max), Range and Standard Estimate (SE) scores for the sample, on factors of the **BUSINESS ENGLISH TEST**. These tables are divided into categories based on age group, gender and country of origin.

*Table 4. Factor Score Norms for the Whole Sample.*

| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
|-----------------------|------|------|--------|------|-------|-------|------|
| Grammar               | 4.74 | 2.28 | 4.40   | 0.00 | 10.00 | 10.00 | 0.01 |
| Reading Comprehension | 5.21 | 2.34 | 5.00   | 0.00 | 10.00 | 10.00 | 0.01 |
| Vocabulary            | 4.84 | 2.61 | 4.80   | 0.00 | 10.00 | 10.00 | 0.02 |

Table 5. Factor Score Norms based on Age Group.

| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
|-----------------------|------|------|--------|------|-------|-------|------|
| <b>18 – 25</b>        |      |      |        |      |       |       |      |
| Grammar               | 4.20 | 2.04 | 3.60   | 0.00 | 10.00 | 10.00 | 0.02 |
| Reading Comprehension | 4.75 | 2.22 | 5.00   | 0.00 | 10.00 | 10.00 | 0.02 |
| Vocabulary            | 4.48 | 2.18 | 4.40   | 0.00 | 10.00 | 10.00 | 0.02 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <b>26 – 33</b>        |      |      |        |      |       |       |      |
| Grammar               | 4.96 | 2.31 | 4.80   | 0.00 | 10.00 | 10.00 | 0.02 |
| Reading Comprehension | 5.36 | 2.34 | 6.00   | 0.00 | 10.00 | 10.00 | 0.02 |
| Vocabulary            | 5.05 | 2.69 | 5.20   | 0.00 | 10.00 | 10.00 | 0.03 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <b>34 – 41</b>        |      |      |        |      |       |       |      |
| Grammar               | 5.03 | 2.35 | 4.80   | 0.00 | 10.00 | 10.00 | 0.03 |
| Reading Comprehension | 5.52 | 2.37 | 6.00   | 0.00 | 10.00 | 10.00 | 0.03 |
| Vocabulary            | 4.94 | 2.82 | 5.20   | 0.00 | 10.00 | 10.00 | 0.04 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <b>42 – 49</b>        |      |      |        |      |       |       |      |
| Grammar               | 5.02 | 2.33 | 5.20   | 0.00 | 10.00 | 10.00 | 0.04 |
| Reading Comprehension | 5.54 | 2.39 | 6.00   | 0.00 | 10.00 | 10.00 | 0.04 |
| Vocabulary            | 4.86 | 2.83 | 5.20   | 0.00 | 10.00 | 10.00 | 0.05 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <b>50+</b>            |      |      |        |      |       |       |      |

|                              |      |      |      |      |       |       |      |
|------------------------------|------|------|------|------|-------|-------|------|
| <b>Grammar</b>               | 5.07 | 2.42 | 5.20 | 0.00 | 10.00 | 10.00 | 0.06 |
| <b>Reading Comprehension</b> | 5.50 | 2.33 | 6.00 | 0.00 | 10.00 | 10.00 | 0.06 |
| <b>Vocabulary</b>            | 4.86 | 2.96 | 5.20 | 0.00 | 10.00 | 10.00 | 0.08 |

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| <b>Factor</b> | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
|---------------|-------------|-----------|---------------|------------|------------|--------------|-----------|
|---------------|-------------|-----------|---------------|------------|------------|--------------|-----------|

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***Not Defined***

|                              |      |      |      |      |       |       |      |
|------------------------------|------|------|------|------|-------|-------|------|
| <b>Grammar</b>               | 5.69 | 2.48 | 6.00 | 0.00 | 10.00 | 10.00 | 0.08 |
| <b>Reading Comprehension</b> | 5.54 | 2.39 | 6.00 | 0.00 | 10.00 | 10.00 | 0.07 |
| <b>Vocabulary</b>            | 6.00 | 2.93 | 6.40 | 0.00 | 10.00 | 10.00 | 0.09 |

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*Table 6. Factor Score Norms based on Gender.*

| <b>Factor</b> | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
|---------------|-------------|-----------|---------------|------------|------------|--------------|-----------|
|---------------|-------------|-----------|---------------|------------|------------|--------------|-----------|

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***Females***

|                              |      |      |      |      |       |       |      |
|------------------------------|------|------|------|------|-------|-------|------|
| <b>Grammar</b>               | 4.77 | 2.30 | 4.40 | 0.00 | 10.00 | 10.00 | 0.02 |
| <b>Reading Comprehension</b> | 5.22 | 2.33 | 5.00 | 0.00 | 10.00 | 10.00 | 0.02 |
| <b>Vocabulary</b>            | 4.81 | 2.55 | 4.80 | 0.00 | 10.00 | 10.00 | 0.02 |

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| <b>Factor</b> | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
|---------------|-------------|-----------|---------------|------------|------------|--------------|-----------|
|---------------|-------------|-----------|---------------|------------|------------|--------------|-----------|

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***Males***

|                              |      |      |      |      |       |       |      |
|------------------------------|------|------|------|------|-------|-------|------|
| <b>Grammar</b>               | 4.65 | 2.23 | 4.40 | 0.00 | 10.00 | 10.00 | 0.02 |
| <b>Reading Comprehension</b> | 5.16 | 2.34 | 5.00 | 0.00 | 10.00 | 10.00 | 0.02 |
| <b>Vocabulary</b>            | 4.78 | 2.62 | 4.80 | 0.00 | 10.00 | 10.00 | 0.02 |

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*Table7. Factor Score Norm based on Country of Origin.*

| <b>Factor</b> | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
|---------------|-------------|-----------|---------------|------------|------------|--------------|-----------|
|---------------|-------------|-----------|---------------|------------|------------|--------------|-----------|

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***Algeria***

|                |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|
| <b>Grammar</b> | 3.98 | 2.13 | 3.60 | 0.00 | 9.60 | 9.60 | 0.09 |
|----------------|------|------|------|------|------|------|------|

|                       |      |      |        |      |       |       |      |
|-----------------------|------|------|--------|------|-------|-------|------|
| Reading Comprehension | 4.43 | 2.37 | 4.00   | 0.00 | 10.00 | 10.00 | 0.10 |
| Vocabulary            | 3.71 | 2.50 | 3.60   | 0.00 | 9.60  | 9.60  | 0.10 |
|                       |      |      |        |      |       |       |      |
|                       |      |      |        |      |       |       |      |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Argentina</i>      |      |      |        |      |       |       |      |
| Grammar               | 4.95 | 2.70 | 5.20   | 0.00 | 9.60  | 9.60  | 0.37 |
| Reading Comprehension | 5.83 | 2.32 | 6.00   | 0.00 | 10.00 | 10.00 | 0.32 |
| Vocabulary            | 4.12 | 3.30 | 4.00   | 0.00 | 9.20  | 9.20  | 0.46 |
|                       |      |      |        |      |       |       |      |
|                       |      |      |        |      |       |       |      |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Bangladesh</i>     |      |      |        |      |       |       |      |
| Grammar               | 6.10 | 2.20 | 6.00   | 0.00 | 9.60  | 9.60  | 0.30 |
| Reading Comprehension | 5.87 | 2.46 | 6.00   | 0.00 | 10.00 | 10.00 | 0.33 |
| Vocabulary            | 6.04 | 2.94 | 6.40   | 0.00 | 10.00 | 10.00 | 0.40 |
|                       |      |      |        |      |       |       |      |
|                       |      |      |        |      |       |       |      |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Brazil</i>         |      |      |        |      |       |       |      |
| Grammar               | 5.15 | 2.18 | 5.00   | 0.00 | 10.00 | 10.00 | 0.23 |
| Reading Comprehension | 6.01 | 1.83 | 6.00   | 0.00 | 9.00  | 9.00  | 0.19 |
| Vocabulary            | 5.35 | 2.72 | 6.00   | 0.00 | 9.60  | 9.60  | 0.29 |
|                       |      |      |        |      |       |       |      |
|                       |      |      |        |      |       |       |      |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Cameroon</i>       |      |      |        |      |       |       |      |
| Grammar               | 3.79 | 2.04 | 3.60   | 0.00 | 9.60  | 9.60  | 0.10 |
| Reading Comprehension | 4.04 | 2.04 | 4.00   | 0.00 | 10.00 | 10.00 | 0.10 |
| Vocabulary            | 2.91 | 2.33 | 2.80   | 0.00 | 9.60  | 9.60  | 0.11 |

| Factor                           | Mean | SD   | Median | Min  | Max   | Range | SE   |
|----------------------------------|------|------|--------|------|-------|-------|------|
| <i>Canada</i>                    |      |      |        |      |       |       |      |
| Grammar                          | 5.40 | 2.39 | 5.60   | 0.00 | 10.00 | 10.00 | 0.28 |
| Reading Comprehension            | 6.03 | 2.53 | 7.00   | 0.00 | 10.00 | 10.00 | 0.29 |
| Vocabulary                       | 5.81 | 2.74 | 6.40   | 0.00 | 10.00 | 10.00 | 0.32 |
| Factor                           | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Colombia</i>                  |      |      |        |      |       |       |      |
| Grammar                          | 6.36 | 2.18 | 6.80   | 0.00 | 10.00 | 10.00 | 0.19 |
| Reading Comprehension            | 6.01 | 2.00 | 6.00   | 0.00 | 10.00 | 10.00 | 0.18 |
| Vocabulary                       | 6.03 | 2.60 | 6.80   | 0.00 | 10.00 | 10.00 | 0.23 |
| Factor                           | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Congo</i>                     |      |      |        |      |       |       |      |
| Grammar                          | 3.38 | 1.80 | 3.20   | 0.00 | 7.20  | 7.20  | 0.24 |
| Reading Comprehension            | 3.41 | 1.97 | 3.00   | 0.00 | 8.00  | 8.00  | 0.27 |
| Vocabulary                       | 2.73 | 2.30 | 2.60   | 0.00 | 8.00  | 8.00  | 0.31 |
| Factor                           | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Congo Democratic Republic</i> |      |      |        |      |       |       |      |
| Grammar                          | 2.99 | 1.63 | 2.80   | 0.00 | 9.60  | 9.60  | 0.06 |
| Reading Comprehension            | 3.36 | 1.90 | 3.00   | 0.00 | 10.00 | 10.00 | 0.07 |
| Vocabulary                       | 2.37 | 1.96 | 2.00   | 0.00 | 9.60  | 9.60  | 0.07 |
| Factor                           | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Cote d'Ivoire</i>             |      |      |        |      |       |       |      |
| Grammar                          | 4.00 | 2.23 | 4.00   | 0.00 | 9.60  | 9.60  | 0.07 |

|                       |      |      |        |      |       |       |      |
|-----------------------|------|------|--------|------|-------|-------|------|
| Reading Comprehension | 4.79 | 2.34 | 5.00   | 0.00 | 10.00 | 10.00 | 0.08 |
| Vocabulary            | 3.13 | 2.72 | 2.80   | 0.00 | 10.00 | 10.00 | 0.09 |
|                       |      |      |        |      |       |       |      |
|                       |      |      |        |      |       |       |      |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| France                |      |      |        |      |       |       |      |
| Grammar               | 4.55 | 2.17 | 4.40   | 0.00 | 10.00 | 10.00 | 0.02 |
| Reading Comprehension | 5.28 | 2.33 | 5.00   | 0.00 | 10.00 | 10.00 | 0.02 |
| Vocabulary            | 4.79 | 2.38 | 4.80   | 0.00 | 10.00 | 10.00 | 0.02 |
|                       |      |      |        |      |       |       |      |
|                       |      |      |        |      |       |       |      |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| Gabon                 |      |      |        |      |       |       |      |
| Grammar               | 3.32 | 2.10 | 3.20   | 0.00 | 8.40  | 8.40  | 0.28 |
| Reading Comprehension | 3.50 | 2.36 | 3.50   | 0.00 | 8.00  | 8.00  | 0.31 |
| Vocabulary            | 2.68 | 2.01 | 2.40   | 0.00 | 6.80  | 6.80  | 0.26 |
|                       |      |      |        |      |       |       |      |
|                       |      |      |        |      |       |       |      |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| Germany               |      |      |        |      |       |       |      |
| Grammar               | 5.61 | 2.48 | 5.80   | 0.00 | 10.00 | 10.00 | 0.32 |
| Reading Comprehension | 6.08 | 2.60 | 6.50   | 0.00 | 10.00 | 10.00 | 0.34 |
| Vocabulary            | 5.94 | 2.84 | 6.60   | 0.00 | 9.60  | 9.60  | 0.37 |
|                       |      |      |        |      |       |       |      |
|                       |      |      |        |      |       |       |      |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| Greece                |      |      |        |      |       |       |      |
| Grammar               | 6.45 | 2.30 | 6.80   | 0.00 | 9.20  | 9.20  | 0.30 |
| Reading Comprehension | 5.93 | 2.43 | 7.00   | 0.00 | 9.00  | 9.00  | 0.31 |
| Vocabulary            | 6.35 | 2.71 | 7.20   | 0.00 | 9.20  | 9.20  | 0.35 |

| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
|-----------------------|------|------|--------|------|-------|-------|------|
| <i>India</i>          |      |      |        |      |       |       |      |
| Grammar               | 6.07 | 2.14 | 6.40   | 0.00 | 10.00 | 10.00 | 0.05 |
| Reading Comprehension | 5.54 | 2.17 | 6.00   | 0.00 | 10.00 | 10.00 | 0.05 |
| Vocabulary            | 6.39 | 2.49 | 6.80   | 0.00 | 10.00 | 10.00 | 0.06 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Madagascar</i>     |      |      |        |      |       |       |      |
| Grammar               | 3.63 | 1.98 | 3.60   | 0.00 | 10.00 | 10.00 | 0.09 |
| Reading Comprehension | 4.00 | 2.24 | 4.00   | 0.00 | 9.00  | 9.00  | 0.11 |
| Vocabulary            | 3.39 | 2.35 | 3.20   | 0.00 | 9.60  | 9.60  | 0.11 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Martinique</i>     |      |      |        |      |       |       |      |
| Grammar               | 4.31 | 2.61 | 4.40   | 0.00 | 9.60  | 9.60  | 0.34 |
| Reading Comprehension | 4.85 | 2.57 | 5.00   | 0.00 | 10.00 | 10.00 | 0.33 |
| Vocabulary            | 4.22 | 2.88 | 4.00   | 0.00 | 10.00 | 10.00 | 0.38 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Mauritius</i>      |      |      |        |      |       |       |      |
| Grammar               | 6.58 | 2.14 | 6.80   | 0.00 | 10.00 | 10.00 | 0.15 |
| Reading Comprehension | 5.43 | 2.05 | 5.50   | 0.00 | 10.00 | 10.00 | 0.15 |
| Vocabulary            | 6.75 | 2.19 | 7.20   | 0.00 | 10.00 | 10.00 | 0.16 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Mexico</i>         |      |      |        |      |       |       |      |
| Grammar               | 5.20 | 2.15 | 5.20   | 0.00 | 10.00 | 10.00 | 0.17 |

|                              |             |           |               |            |            |              |           |
|------------------------------|-------------|-----------|---------------|------------|------------|--------------|-----------|
| <b>Reading Comprehension</b> | 5.35        | 2.06      | 5.00          | 0.00       | 10.00      | 10.00        | 0.16      |
| <b>Vocabulary</b>            | 5.34        | 2.60      | 5.60          | 0.00       | 9.60       | 9.60         | 0.20      |
|                              |             |           |               |            |            |              |           |
|                              |             |           |               |            |            |              |           |
| <b>Factor</b>                | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
| <b>Morocco</b>               |             |           |               |            |            |              |           |
| <b>Grammar</b>               | 4.60        | 2.01      | 4.40          | 0.00       | 10.00      | 10.00        | 0.09      |
| <b>Reading Comprehension</b> | 4.70        | 2.43      | 5.00          | 0.00       | 10.00      | 10.00        | 0.11      |
| <b>Vocabulary</b>            | 4.21        | 2.42      | 4.20          | 0.00       | 10.00      | 10.00        | 0.11      |
|                              |             |           |               |            |            |              |           |
|                              |             |           |               |            |            |              |           |
| <b>Factor</b>                | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
| <b>Oman</b>                  |             |           |               |            |            |              |           |
| <b>Grammar</b>               | 3.56        | 1.35      | 3.40          | 0.00       | 8.00       | 8.00         | 0.05      |
| <b>Reading Comprehension</b> | 3.91        | 1.76      | 4.00          | 0.00       | 9.00       | 9.00         | 0.07      |
| <b>Vocabulary</b>            | 3.42        | 1.72      | 3.20          | 0.00       | 8.80       | 8.80         | 0.07      |
|                              |             |           |               |            |            |              |           |
|                              |             |           |               |            |            |              |           |
| <b>Factor</b>                | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
| <b>Pakistan</b>              |             |           |               |            |            |              |           |
| <b>Grammar</b>               | 6.97        | 1.81      | 7.20          | 0.00       | 9.60       | 9.60         | 0.19      |
| <b>Reading Comprehension</b> | 6.49        | 1.79      | 7.00          | 2.00       | 10.00      | 8.00         | 0.19      |
| <b>Vocabulary</b>            | 6.81        | 2.54      | 7.60          | 0.00       | 10.00      | 10.00        | 0.27      |
|                              |             |           |               |            |            |              |           |
|                              |             |           |               |            |            |              |           |
| <b>Factor</b>                | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
| <b>Philippines</b>           |             |           |               |            |            |              |           |
| <b>Grammar</b>               | 7.15        | 1.50      | 7.20          | 0.00       | 9.60       | 9.60         | 0.12      |
| <b>Reading Comprehension</b> | 6.27        | 1.62      | 7.00          | 1.00       | 10.00      | 9.00         | 0.13      |
| <b>Vocabulary</b>            | 8.20        | 1.58      | 8.40          | 0.00       | 10.00      | 10.00        | 0.13      |

| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
|-----------------------|------|------|--------|------|-------|-------|------|
| <i>Portugal</i>       |      |      |        |      |       |       |      |
| Grammar               | 5.71 | 2.30 | 6.00   | 0.00 | 9.60  | 9.60  | 0.30 |
| Reading Comprehension | 5.95 | 2.45 | 6.00   | 0.00 | 10.00 | 10.00 | 0.32 |
| Vocabulary            | 5.75 | 2.90 | 6.40   | 0.00 | 10.00 | 10.00 | 0.38 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Qatar</i>          |      |      |        |      |       |       |      |
| Grammar               | 5.48 | 2.42 | 6.00   | 0.00 | 9.60  | 9.60  | 0.22 |
| Reading Comprehension | 5.64 | 2.46 | 6.00   | 0.00 | 10.00 | 10.00 | 0.22 |
| Vocabulary            | 5.66 | 2.91 | 6.40   | 0.00 | 10.00 | 10.00 | 0.26 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Réunion</i>        |      |      |        |      |       |       |      |
| Grammar               | 5.48 | 2.42 | 6.00   | 0.00 | 9.60  | 9.60  | 0.22 |
| Reading Comprehension | 5.64 | 2.46 | 6.00   | 0.00 | 10.00 | 10.00 | 0.22 |
| Vocabulary            | 5.66 | 2.91 | 6.40   | 0.00 | 10.00 | 10.00 | 0.26 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Saudi Arabia</i>   |      |      |        |      |       |       |      |
| Grammar               | 3.43 | 1.69 | 3.20   | 0.00 | 9.20  | 9.20  | 0.13 |
| Reading Comprehension | 4.17 | 2.08 | 4.00   | 0.00 | 10.00 | 10.00 | 0.16 |
| Vocabulary            | 3.66 | 1.96 | 3.60   | 0.00 | 9.20  | 9.20  | 0.15 |
| Factor                | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Senegal</i>        |      |      |        |      |       |       |      |
| Grammar               | 5.01 | 2.25 | 5.20   | 0.00 | 10.00 | 10.00 | 0.14 |

|                              |      |      |      |      |       |       |      |
|------------------------------|------|------|------|------|-------|-------|------|
| <b>Reading Comprehension</b> | 5.25 | 2.19 | 5.00 | 0.00 | 10.00 | 10.00 | 0.13 |
| <b>Vocabulary</b>            | 5.01 | 2.50 | 5.20 | 0.00 | 10.00 | 10.00 | 0.15 |

| <b>Factor</b>                | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
|------------------------------|-------------|-----------|---------------|------------|------------|--------------|-----------|
| <b><i>Spain</i></b>          |             |           |               |            |            |              |           |
| <b>Grammar</b>               | 3.85        | 2.16      | 3.60          | 0.00       | 9.20       | 9.20         | 0.25      |
| <b>Reading Comprehension</b> | 4.07        | 2.41      | 4.00          | 0.00       | 9.00       | 9.00         | 0.28      |
| <b>Vocabulary</b>            | 3.30        | 2.61      | 2.80          | 0.00       | 9.20       | 9.20         | 0.31      |

| <b>Factor</b>                    | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
|----------------------------------|-------------|-----------|---------------|------------|------------|--------------|-----------|
| <b><i>State of Palestine</i></b> |             |           |               |            |            |              |           |
| <b>Grammar</b>                   | 5.93        | 2.20      | 6.20          | 0.00       | 10.00      | 10.00        | 0.07      |
| <b>Reading Comprehension</b>     | 6.03        | 2.08      | 6.00          | 0.00       | 10.00      | 10.00        | 0.07      |
| <b>Vocabulary</b>                | 5.68        | 2.68      | 6.40          | 0.00       | 10.00      | 10.00        | 0.09      |

| <b>Factor</b>                | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
|------------------------------|-------------|-----------|---------------|------------|------------|--------------|-----------|
| <b><i>Tunisia</i></b>        |             |           |               |            |            |              |           |
| <b>Grammar</b>               | 4.75        | 2.01      | 4.40          | 0.00       | 9.60       | 9.60         | 0.17      |
| <b>Reading Comprehension</b> | 5.08        | 2.26      | 5.00          | 0.00       | 9.00       | 9.00         | 0.19      |
| <b>Vocabulary</b>            | 4.70        | 2.07      | 4.80          | 0.00       | 9.60       | 9.60         | 0.17      |

| <b>Factor</b>                | <b>Mean</b> | <b>SD</b> | <b>Median</b> | <b>Min</b> | <b>Max</b> | <b>Range</b> | <b>SE</b> |
|------------------------------|-------------|-----------|---------------|------------|------------|--------------|-----------|
| <b><i>Turkey</i></b>         |             |           |               |            |            |              |           |
| <b>Grammar</b>               | 4.77        | 1.81      | 4.80          | 0.00       | 10.00      | 10.00        | 0.08      |
| <b>Reading Comprehension</b> | 5.27        | 1.98      | 5.00          | 0.00       | 10.00      | 10.00        | 0.09      |
| <b>Vocabulary</b>            | 4.57        | 2.34      | 4.80          | 0.00       | 9.60       | 9.60         | 0.10      |

| Factor                      | Mean | SD   | Median | Min  | Max   | Range | SE   |
|-----------------------------|------|------|--------|------|-------|-------|------|
| <i>United Arab Emirates</i> |      |      |        |      |       |       |      |
| Grammar                     | 5.14 | 2.50 | 5.20   | 0.00 | 9.60  | 9.60  | 0.26 |
| Reading Comprehension       | 4.66 | 2.26 | 4.00   | 0.00 | 10.00 | 10.00 | 0.23 |
| Vocabulary                  | 5.33 | 2.52 | 5.60   | 0.00 | 9.20  | 9.20  | 0.26 |
| Factor                      | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>United Kingdom</i>       |      |      |        |      |       |       |      |
| Grammar                     | 6.21 | 2.04 | 6.40   | 0.00 | 10.00 | 10.00 | 0.09 |
| Reading Comprehension       | 5.75 | 2.14 | 6.00   | 0.00 | 10.00 | 10.00 | 0.10 |
| Vocabulary                  | 6.52 | 2.39 | 7.20   | 0.00 | 10.00 | 10.00 | 0.11 |
| Factor                      | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>USA</i>                  |      |      |        |      |       |       |      |
| Grammar                     | 8.10 | 1.49 | 8.40   | 2.80 | 10.00 | 7.20  | 0.16 |
| Reading Comprehension       | 6.98 | 1.77 | 7.00   | 2.00 | 10.00 | 8.00  | 0.19 |
| Vocabulary                  | 8.60 | 1.61 | 8.80   | 0.00 | 10.00 | 10.00 | 0.17 |
| Factor                      | Mean | SD   | Median | Min  | Max   | Range | SE   |
| <i>Others</i>               |      |      |        |      |       |       |      |
| Grammar                     | 5.54 | 2.50 | 5.60   | 0.00 | 10.00 | 10.00 | 0.09 |
| Reading Comprehension       | 5.56 | 2.43 | 6.00   | 0.00 | 10.00 | 10.00 | 0.08 |
| Vocabulary                  | 5.39 | 2.97 | 6.00   | 0.00 | 10.00 | 10.00 | 0.10 |

## 2.3. Reliability and Validity

### Reliability

Reliability refers to the extent to which an assessment is free from error and the degree to which items on a scale are measuring the same construct. For a measure to be reliable, the same results

must be consistently generated over time. Reliability is important for an assessment as it enables us to have confidence that scores on a test are really typical of an individual's behaviour, aptitude or attitude. A primary concern when developing and using tests, is the extent to which random measurement errors influence test performance. If a test is unreliable, it is impossible for it to be valid as accuracy of results (validity) depends on the consistency with which the same results are produced. High reliability of an assessment helps to guard against biases that may be caused by errors in human judgment during the recruitment and selection process.

Internal reliability values vary from 0 to 1, with higher values being more desirable. As a rule of thumb, a reliability of 0.70 or higher is recommended (Nunnally, 1978), with values greater than 0.9 (excellent); 0.7 to 0.9 (good); 0.6 to 0.7 (acceptable); 0.5 to 0.6 (poor) and values less than 0.5 (unacceptable).

Cronbach's Alpha for the **BUSINESS ENGLISH TEST** was computed on the sample (n = 29,598), and can be seen in Table 8. All the factors show a reliability of above .6. The **BUSINESS ENGLISH TEST** also has an overall reliability of .94, indicating that the scale has excellent internal consistency and is highly reliable.

*Table 8. Reliability Coefficient for all Factors.*

| Factor                | Coefficient |
|-----------------------|-------------|
| Grammar               | 0.86        |
| Reading Comprehension | 0.67        |
| Vocabulary            | 0.90        |

### *Validity*

Validity refers to the extent to which an assessment measures what it claims to measure, and that this is well-founded and accurately corresponds to actual behaviour. In psychometrics, validity relates to the degree to which practical evidence and scientific theory support the interpretation of test scores. Whilst the reliability of an assessment relates to the degree to which results are consistent over time, validity tells us the degree to which results of an assessment are accurate and enable us to confidently make predictions about a target outcome. Therefore, a test can be reliable but not valid (one can consistently get the wrong answer) but it cannot be valid without being reliable, as confidence in the accuracy of results depends on the consistency with which we obtain the same results. Established validity protects practitioners from faulty, costly, unethical and legally risky decisions.

The factors in the **BUSINESS ENGLISH TEST** measure English language proficiency, however, they all measure different factors of the language. In other words, if someone scores highly on one factor, it does not mean that they will score highly on all factors.

The correlation coefficient is a numerical way to quantify the relationship between the variables, and ranges between -1 and 1. The closer the value to 1, the stronger the relationship. The correlation coefficient does not imply causality; it merely signifies the association between variables. Traditionally, factor correlations are measured using Pearson (1895) correlation.

Table 9. Inter-factor Correlations.

|                       | Grammar | Reading Comprehension |
|-----------------------|---------|-----------------------|
| Reading Comprehension | 0.64    |                       |
| Vocabulary            | 0.76    | 0.58                  |

### Confirmatory Factor Analysis

To investigate the theoretical constructs or factors that may be represented by a set of items as well as the quality of individual items, a confirmatory factor analysis (CFA) is usually performed. CFA is used to determine how well the model fits the data, and therefore evaluating the goodness of fit indices is crucial. Several statistical tests are used to determine how well the model fits the data in CFA and SEM. The closer fit indices meet statistical requirements, the better the model. The Chi Square ( $X^2$ ) statistic is considered the primary index of goodness-of-fit. However, due to problems associated with reliance on the  $X^2$  (sensitivity to sample sizes and inappropriateness when distributional assumptions are violated), measures of relative fit are strongly recommended. The  $X^2$  is a measure of absolute fit, and provides a fundamental indication of how well the proposed theory fits the data and does not rely on comparison with a baseline model (Jöreskog & Sörbom, 1993).

For the validation of the **BUSINESS ENGLISH TEST**, the Root Mean Square Error of Approximation (RMSEA, Steiger & Lind, 1980), the Bentler Comparative Fit Index (CFI), and the Tucker-Lewis Index (TLI) were chosen as additional measures of fit, as they are the least likely to be affected by sample size (Fan, Thompson & Wang, 1999). Furthermore, using a variety of indices is necessary as different indices reflect different aspects of model fit (Hooper, Coughlan & Mullen, 2008). Like the  $X^2$ , the RMSEA is a measure of absolute fit that assesses the amount of error associated with a proposed model. The lower the RMSEA, the more robust the model; indices of .05 or below are considered to be a good fit (Hu & Bentler, 1999). This is because RMSEA is related to the residuals in the model and assesses the degree to which the proposed model is inaccurate. Both the CFI and TLI are incremental or relative fit indices that assess overall improvement of a proposed model compared with an independence model where observed variables are uncorrelated (Hooper et al., 2008; Holtzman & Vezzu, 2011). While higher values of the CFI and TLI (.9 and above) indicate an excellent fit, it should be noted that a CFI or TLI of .90 or higher may not necessarily correspond to a RMSEA of .05 or less (Hu & Bentler, 1999).

Table 10. The Goodness of Fit Indices and Model Results.

| N      | X2        | Df   | X2/df  | P | RMSEA | P<=.05 | CFI  | TLI  |
|--------|-----------|------|--------|---|-------|--------|------|------|
| 29,598 | 55157.093 | 1710 | 32.256 | 0 | .032  | 1      | .946 | .944 |

The results displayed in Table 10, show an RMSEA of .032 and CFI of .946, indicating that the **BUSINESS ENGLISH TEST** has a very good model fit and that the factors exist in the defined structure.

## 2.4. BUSINESS ENGLISH TEST and Equal Opportunities

Organisations are increasingly under pressure to ensure that the tools used to inform employee recruitment, selection, development, promotion and performance measurement decisions are fair, objective and accurate. This pressure stems from a progressively knowledgeable applicant pool, a more sophisticated labour force and stringent local and international employment legislation and testing standards. Equal opportunities therefore represent a critical consideration for any modern day work assessment, and an assessment is only considered to be truly valid when it is appropriate for use with different groups. The **BUSINESS ENGLISH TEST** is a fair and accurate measure of proficiency in the English language, and HR practitioners and psychologists can be confident of its application.

### *Measurement Equivalence*

Measurement equivalence (ME) refers to the consistency of measurement across some specified group demarcation such as nationality, ethnicity and gender. The focus of ME is to ensure that individuals from different groups with the same standing on an attribute have the same set of observations on an assessment (Drasgow, 1987; McLeary & Cruise, 2012). ME helps to determine the extent to which respondents are interpreting items similarly, and identified differences across groups reflect actual differences in the trait being measured (Drasgow, 1987). One approach to assessing measurement equivalence is differential item functioning analysis.

### *Differential Item Functioning (DIF)*

An item functions differently, or displays DIF, if respondents from different groups have different probabilities of endorsing the item, despite having the same level of the attribute or trait. When a different probability of endorsing an item remains constant across different levels of the attribute or trait, the DIF is said to be uniform. Here, the item of interest consistently gives one group an advantage across all levels of the attribute or trait. Conversely, when a different probability of endorsing an item varies along the level of the attribute or trait, the DIF is characterised as non-uniform (Clauser & Mazor, 1998; Hanson, 1998). Rather than a consistent advantage being given to the reference group across the ability continuum, an advantage to one group over another exists at different levels of the trait. For instance, an item may give the reference group an advantage at the higher end of the continuum, while a disadvantage at the lower end.

### *DIF Analysis: Gender*

DIF analysis was performed across gender to ensure that there was not a bias towards either males or females, and therefore that the **BUSINESS ENGLISH TEST** is a fair test for both genders. For this analysis, the norm sample was divided according to gender; 14,598 females and 14,702 males. Due to the large sample size ( $n = 29,598$ ) - the test for significance being extremely sensitive, the analysis flagged 40 of the 60 for DIF, based on gender. However, none showed an effect size ( $R^2$ ) greater than 0. Therefore, it can be considered that the **BUSINESS ENGLISH TEST** does not contain any item that functions differently across genders.

### *DIF Analysis: English vs. French*

DIF analysis was performed across a sample that took the **BUSINESS ENGLISH TEST** with instructions in English and a sample that took the assessment with instructions in French to ensure that there was not a bias towards either language, and therefore that the **BUSINESS ENGLISH TEST** is a fair test for both samples. For this analysis, the norm sample was divided according to the language of the instructions; 7,286 for English and 22,312 for French.

Table 11. Coefficients for Significant DIF and Effect Size for DIF Items.

| Factor    | Coefficient | R <sup>2</sup> | Effect size |
|-----------|-------------|----------------|-------------|
| Grammar 1 | 479.761     | 0.016          | Negligible  |

Due to the large sample size ( $n = 29,598$ ) - the test for significance being extremely sensitive, the analysis flagged 58 of the 60 for DIF, based on the language of the instruction. However, only 1 item showed an effect size ( $R^2$ ) greater than 0 as can be seen in Table 11. According to Zumbo and Thomas' (1997) classification of effect size, any  $R^2$  under .13 is considered negligible. Therefore, it can be considered that the **BUSINESS ENGLISH TEST** does not contain any item that functions differently across language.

### T-tests and ANOVAS

Although several items were flagged with DIF, their impact on the overall assessment is negligible, meaning that the assessment does not bias towards gender or language. Therefore, any significant difference can be attributed to real differences between the groups, rather than biases of the assessment. To further explore the differences found between the groups, an independent sample t-test was performed between the groups; t-tests and ANOVAS were performed between gender, age group and study level (see Tables 12 to 14).

#### Gender

In order to check for differences in scores between genders, an independent samples t-test was conducted to compare all the **BUSINESS ENGLISH TEST** factors between females ( $n = 14,598$ ) and males ( $n = 14,702$ ) (see Table 12).

Table 12. T-tests For Factors by Gender.

| Factor                | Female | Male | T.   | df    | P    |
|-----------------------|--------|------|------|-------|------|
| Grammar               | 4.77   | 4.65 | 4.67 | 29298 | 0.00 |
| Reading Comprehension | 5.22   | 5.16 | 2.54 | 29298 | 0.01 |
| Vocabulary            | 4.81   | 4.78 | 1.00 | 29298 | 0.32 |

The t-tests found significant differences between males and females on the factors *Grammar* and *Reading Comprehension*, with females scoring slightly higher than males.

#### Age Group

In order to check for differences in scores between age group, an ANOVA was conducted to compare all the **BUSINESS ENGLISH TEST** factors between five age groups: 18-25 ( $n = 10,276$ ), 26-33 ( $n = 8,883$ ), 34-41 ( $n = 5,114$ ), 42-49 ( $n = 2,852$ ) and 50+ ( $n = 1,419$ ) (see Table 13).

Table 13. ANOVA by Age Group.

| Factor                | 18-25 | 26-33 | 34-41 | 42-49 | 50+  | F       | df   | p-value |
|-----------------------|-------|-------|-------|-------|------|---------|------|---------|
| Grammar               | 4.20  | 4.96  | 5.03  | 5.02  | 5.07 | 210.789 | 4.00 | 0.00    |
| Reading Comprehension | 4.75  | 5.36  | 5.52  | 5.54  | 5.50 | 153.637 | 4.00 | 0.00    |
| Vocabulary            | 4.48  | 5.05  | 4.94  | 4.86  | 4.86 | 63.099  | 4.00 | 0.00    |

The ANOVA found that there were significant differences for all the factors. Post-hoc analysis was conducted using pair-wise t-tests (Bonferroni correction) in order to see where these differences occurred.

For *Grammar*, those in the age category 18-25 ( $M = 4.20$ ) scored significantly lower than those in the age groups 26-33 ( $M = 4.96$ ,  $p = 0$ ), 34-41 ( $M = 5.03$ ,  $p = 0$ ), 42-49 ( $M = 5.02$ ,  $p = 0$ ) and 50+ ( $M = 5.07$ ,  $p = 0$ ).

For *Reading Comprehension*, those in the age category 18-25 ( $M = 4.75$ ) scored significantly lower than those in the age groups 26-33 ( $M = 5.36$ ,  $p = 0$ ), 34-41 ( $M = 5.52$ ,  $p = 0$ ), 42-49 ( $M = 5.54$ ,  $p = 0$ ) and 50+ ( $M = 5.50$ ,  $p = 0$ ). Those aged 26-33 ( $M = 5.36$ ) scored significantly lower than 34-41-year-olds ( $M = 5.52$ ,  $p = 0.001$ ) and 42-49-year-olds ( $M = 5.54$ ,  $p = 0.006$ ).

For *Vocabulary*, those in the age category 18-25 ( $M = 4.48$ ) scored significantly lower than those in the age groups 26-33 ( $M = 5.05$ ,  $p = 0$ ), 34-41 ( $M = 4.94$ ,  $p = 0$ ), 42-49 ( $M = 4.86$ ,  $p = 0$ ) and 50+ ( $M = 4.86$ ,  $p = 0$ ). Those aged 26-33 ( $M = 5.05$ ) scored significantly higher than 42-49-year-olds ( $M = 4.86$ ,  $p = 0.006$ ).

### Study Level

In order to check for differences in scores between study level, an ANOVA was conducted to compare all the **BUSINESS ENGLISH TEST** factors between six study levels: Level 1 - Master's Degree, PhD, Engineering or Business School, MBA ( $n = 9,012$ ); Level 2 - Bachelor's Degree, First-year Master's ( $n = 7,453$ ); Level 3 - 2 years of Vocational or University Study ( $n = 6,647$ ); Level 4 - High School diploma ( $n = 3,413$ ); Level 5 - Trades Training, No High School Diploma ( $n = 996$ ); and Level 6 - Students ( $n = 1,598$ ) (see Table 13).

Table 14. ANOVA by Study Level.

| Factor                | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | F       | df | p-value |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|----|---------|
| Grammar               | 5.38    | 4.85    | 4.08    | 4.30    | 4.78    | 4.22    | 316.026 | 5  | 0.00    |
| Reading Comprehension | 5.96    | 5.18    | 4.71    | 4.57    | 5.10    | 4.54    | 343.656 | 5  | 0.00    |

|                   |      |      |      |      |      |      |         |   |      |
|-------------------|------|------|------|------|------|------|---------|---|------|
| <b>Vocabulary</b> | 5.43 | 4.99 | 4.27 | 4.29 | 4.56 | 4.35 | 214.003 | 5 | 0.00 |
|-------------------|------|------|------|------|------|------|---------|---|------|

The ANOVA found that there were significant differences for all the factors. Post-hoc analysis was conducted using pair-wise t-tests (Bonferroni correction) in order to see where these differences occurred.

For *Grammar*, those in Level 1 (M = 5.38) scored significantly higher than those in Levels 2 (M = 4.85, p = 0), 3 (M = 4.08, p = 0), 4 (M = 4.30, p = 0), 5 (M = 4.78, p = 0) and 6 (M = 4.42, p = 0). Those in Level 2 (M = 4.85) scored significantly higher than those in Levels 3 (M = 4.08, p = 0), 4 (M = 4.30, p = 0) and 6 (M = 4.42, p = 0). Those in Levels 4 (M = 4.30, p = 0) & 5 (M = 4.78, p = 0) scored significantly higher than those in Level 3 (M = 4.08), while those in Level 5 (M = 4.78) scored significantly higher than those in Level 4 (M = 4.30, p = 0) and Level 6 (M = 4.22, p = 0).

For *Reading Comprehension*, those in Level 1 (M = 5.96) scored significantly higher than those in Levels 2 (M = 5.18, p = 0), 3 (M = 4.71, p = 0), 4 (M = 4.57, p = 0), 5 (M = 5.10, p = 0) and 6 (M = 4.54, p = 0). Those in Level 2 (M = 5.18) scored significantly higher than those in Levels 3 (M = 4.71, p = 0), 4 (M = 4.57, p = 0) and 6 (M = 4.54, p = 0). Those in Level 3 (M = 4.71) scored significantly higher than those in Level 4 (M = 4.57, p = 0.039) but scored significantly lower than those in Level 5 (M = 5.10, p = 0). Those in Level 5 (M = 5.10) scored significantly higher than those in Level 4 (M = 4.57, p = 0) and Level 6 (M = 4.54, p = 0).

For *Vocabulary*, those in Level 1 (M = 5.43) scored significantly higher than those in Levels 2 (M = 4.99, p = 0), 3 (M = 4.27, p = 0), 4 (M = 4.29, p = 0), 5 (M = 4.56, p = 0) and 6 (M = 4.35, p = 0). Those in Level 2 (M = 4.99) scored significantly higher than those in Levels 3 (M = 4.27, p = 0), 4 (M = 4.29, p = 0), 5 (M = 4.56, p = 0) and 6 (M = 4.35, p = 0). Those in Level 5 (M = 4.56) scored significantly higher than those in Level 3 (M = 4.27, p = 0.01).



### 3. Additional Information and Considerations

The **BUSINESS ENGLISH TEST** was developed primarily to guide Human Resource decisions for recruitment but its usage is manifold for organisational settings. It is important that the appropriate norms, scores and interpretations are used in order to aid selection, career development, coaching, and performance management. Accurate interpretation of psychometric tests helps both administrators and candidates to: a) put the assessment into context; b) effectively compare candidates across target capabilities; c) accurately identify areas for development; d) maximise fit between job requirements and candidate potentials; and e) promote the organisation as a fair and objective place to work. The current chapter gives guidelines for Human Resource practitioners to understand and successfully interpret candidate scores of the **BUSINESS ENGLISH TEST** for different organisational objectives.

Report generation software for the **BUSINESS ENGLISH TEST** provides graphs and personalised comments for all the 3 factors that relate to the candidate's score. The report should only be interpreted by professionals who have completed *Central Test's* accredited training course and are familiar with this manual. Training in and knowledge of the assessment process are vital as scores should be interpreted in light of information regarding reliability, validity, standard error of measurement, and any accommodations to the assessment or assessment session that were made. Scores should also be presented within the context of the assessment and in a clear, meaningful and appropriate way for the target audience. It is also important to note that all the assessments by Central Test have been developed for Human Resource purposes only. Therefore, no clinical conclusions can be drawn from the results – not even from extreme scores.

Recruitment and selection is an important organisational function which can be very time-consuming and expensive. Furthermore, bad recruitment decisions have additional effects on organisational productivity, capability and sustainability. Therefore, it is recommended that prior to administering the **BUSINESS ENGLISH TEST**, recruiters have a detailed job description and person specification based on a job analysis.

Furthermore, the **BUSINESS ENGLISH TEST** can be used in line with performance evaluations, which are a key component of employee development and success. Performance reviews should be fair and balanced assessments of an employee's achievements and capabilities, and should give the opportunity to discuss expectations and accomplishments.

Whilst the **BUSINESS ENGLISH TEST** is effective in identifying areas for development, it should not be used to directly track an employee's performance progress. We therefore recommend the use of objective performance assessments or other evaluations in conjunction with the **BUSINESS ENGLISH TEST**.

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