**Data Collection**

The data for this study was gathered from a sample of students who took both the Manchester Exam and other established English as a Foreign Language (EFL) assessments, such as TOEFL and IELTS. This diverse group of participants varied in age, gender, and native language, providing a comprehensive dataset for analysis.

**Sample Description**

A total of 180 students participated in the study. The participants were classified based on the test type (Manchester Exam and CEFR) and various demographic variables, including gender (male and female), age (categorized into 18-24, 25-34, 35-44, and 45-54), and native language (Chinese, Arabic, French, and Spanish).

**Variables**

The independent variables in the study included the type of test taken (Manchester Exam or CEFR), gender, age, and native language. The dependent variables were the scores in different sections of the exams: Grammar, Comprehension, Reading, Writing, Listening, Speaking, and the Total Score.

**Descriptive Statistics**

The study began with calculating the mean, standard deviation, and distribution of scores for each section of the exams. This step helped in understanding the general performance trends among the participants.

**ANOVA (Analysis of Variance)**

 To determine if there were statistically significant differences in the scores between the Manchester Exam and CEFR groups, ANOVA tests were conducted. The null hypothesis (H0) assumed no significant differences in the scores between the groups, while the alternative hypothesis (H1) posited significant differences. A significance level (α) of 0.05 was used to test these hypotheses. The formula used for ANOVA was

$$F= \frac{MSbetween}{MSwithin}$$

**Cross-Tabulation**

 Cross-tabulation analyses were performed to examine how test-takers were distributed across different demographic groups (gender, age, native language) for both the Manchester Exam and CEFR. This analysis provided insights into demographic trends and patterns.

**Regression Analysis**

 Regression analysis was used to explore the relationship between the total score and individual section scores (Grammar, Comprehension, Reading, Writing, Listening, Speaking). The regression equation was:

$$Y=β0+β1X1+β2X2+β3X3+β4X4+ϵY $$

**Factor Analysis**

 Factor analysis was conducted to identify the underlying relationships between the scores in different sections of the exams. This analysis helped in understanding how different sections contribute to the overall assessment of English proficiency.

**Chi-Square Test**

 Chi-square tests were employed to determine if there were significant associations between categorical variables such as test type and gender. This test helped in identifying whether the distribution of test types was independent of gender.