

Comparing the paper-based and computer-based CaMLA EPT

The CaMLA English Placement Test (EPT) is designed to quickly and reliably place English Language learners into homogeneous ability levels. While the exam has traditionally been paper-based (pb), a computer-delivered version has been recently developed. The computer-based (cb) CaMLA EPT contains exactly the same items as the (pb) CaMLA EPT, in exactly the same order. This report summarizes the results of a study to compare test takers' results on the (pb) and (cb) CaMLA EPT. The purpose of this study was to demonstrate that the two different delivery methods provide test takers with statistically equivalent results.

Participants

The study was conducted at five U.S. universities and colleges who had volunteered to participate. Each participating institution received a voucher to purchase refreshments. Test takers completed both the (pb) and (cb) versions of the exam within a few days of each other. In order to minimize the effect of test order and exam familiarity, the (pb) and (cb) versions of the exam used two parallel test forms (D and E), and the order in which the test takers took the exams was randomized.

A total of 81 test takers completed both a (pb) and a (cb) CaMLA EPT. 49.38% were female and 50.62% were male. Table 1 shows that all of the test takers were over the age of 17 and the majority were in their twenties (67.90%). While the test takers represented 17 different first-language backgrounds, the sample primarily consisted of test takers whose first language was Arabic, Spanish, and Telugu. Overall, the sample was representative of the CaMLA EPT's very broad target population.

Table 1: Distribution (in %) of Test Takers by Age

Age	Reliability
17–19	11.11
20–22	24.69
23–25	25.93
26–29	17.28
30–39	12.35
>40	6.17
Missing	2.47

Results

Table 2 shows the descriptive statistics for both exams. The test takers performed very similarly on both exams. The mean scores for the (cb) and (pb) versions differed by less than a quarter (0.23) of a score point and the standard deviations were near identical.

Table 2: CaMLA EPT Descriptive Statistics

Delivery Method	Mean	Standard Deviation	Score Range
Computer-Based	51.14	13.85	12–78
Paper-Based	51.37	13.99	18–75

The (cb) and (pb) exam scores were also very strongly correlated ($r = 0.902$), which suggests that the exams measure and rank test takers' English language proficiency very similarly.

Linear regression was used to further explore the relationship between the (cb) and (pb) CaMLA EPT exam scores. This analysis revealed that the regression line (intercept = 5.25819, slope = 0.89308) was very close to the identity line (intercept = 0, slope = 1). Additionally, the model had a high coefficient of determination ($r^2 = 0.814$), which means that most of the variation (81.4%) in a test taker's (cb) score can be explained by their (pb) test score. Figure 1 presents a scatter plot of the (pb) scores against the (cb) scores. The regression and identity lines are also included to visually demonstrate the similarities between the test scores. The graph shows that there is a positive linear relationship between the scores. Also, the clustering of the points near the identity line suggests that the (pb) and (cb) versions of the CaMLA EPT provide test takers with comparable scores.

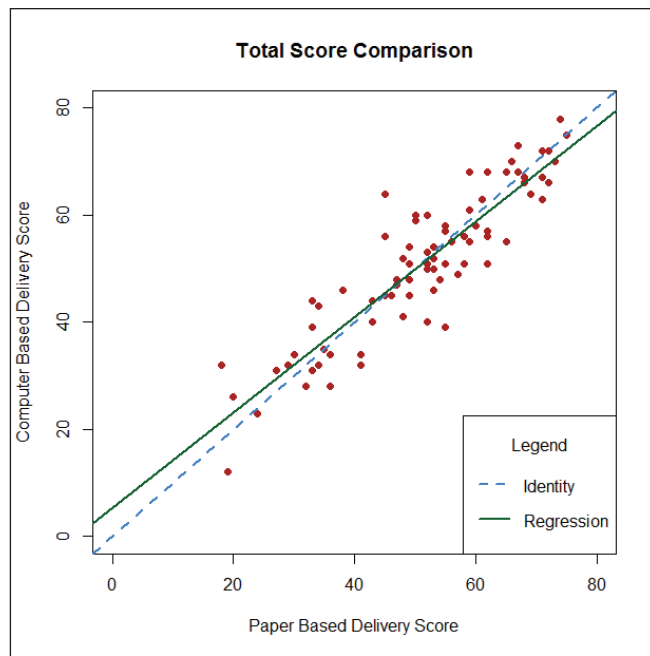


Figure 1: CaMLA EPT Computer-Based Delivery Scores vs. Paper-Based Delivery Scores

Summary

Overall, the analyses provide sufficient evidence to conclude that the (pb) and (cb) CaMLA EPT provide test takers with equivalent results. The (cb) CaMLA EPT also has the potential to offer institutions more flexibility in testing and faster turnaround of results.

Besides the ease of administration, what is great about the [computer-based CaMLA] EPT is that the results are revealed as soon as the students finish (doing away with the time-consuming scanning of answer sheets).

The report provides an overview of students' strengths and weaknesses and is valuable for all concerned: manager, instructors, and students.

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