

THE PREDICTIVE VALIDITY OF THE ETHIOPIAN
SCHOOL LEAVING CERTIFICATE EXAMINATION'S
ENGLISH AND THE INTEGRATIVE TESTS: COMPAR-
ATIVE STUDY*

Tibebe Alemayehu**

Abstract

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This research attempted to determine the predicative validity of the ESLCE's English test of 1987/88 by comparing it to the predictive ability of two locally designed integrative language proficiency tests.

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These tests were administered to samples of ESLCE candidates in 6 secondary schools in Addis Ababa. The candidates who joined the University were followed up. Taking their first year cumulative GPAs as criterion scores, the predictive validity of the ESLCE's English test was compared to that of the integrative tests.

The ESLCE showed a correlation of 0.13 while the combined integrative tests had a correlation of about 0.33. It was, thus, concluded that the 1987/88 ESLCE's English test had a low predictive power hardly reliable to be used as an Entrance Exam and these were followed by some recommendations.

INTRODUCTION

Today one of the educational predicaments that is extremely baffling a college instructor is the students' inability to express themselves in simple English sentences, or even worst, their failure to understand what their instructor explains to them in simple and plain English.

The problem becomes even more frustrating when one looks into it in terms of the yearly increasing Ethiopian School Leaving Certificate Examination (ESLCE) GPA requirements for admission into the tertiary level of learning. We have now reached a stage where a minimum GPA of 2.8 is required for admission into the diploma granting programmes, and a minimum GPA of 3.2 for degree programmes for

non-quota students,* as compared to a GPA of 2.0 about a decade and a half ago. The bewilderment here is that the tertiary level is requiring higher and higher ESLCE GPA's every year, to warrant it to select candidates with the best chance of success from an overwhelmingly large pool of applicants leaving their secondary schools. Every year, on average, about 3% of this large number of candidates are admitted to the colleges on this basis and yet, a significant number of them become subject to probation and dismissal, especially during their first two semesters.** The problem could be attributed to various factors that involve the teaching learning process. Two such factors that could undoubtedly be included are the question regarding the present educational standard in the country's elementary and secondary schools, and the question involving the effectiveness of the ESLCE. The former by itself involves a complex of factors and thus requires an equally complex and comprehensive study (probably at national level). The latter is relatively easier. And if a good number of the very small secondary

*The 1987/88 and 1988/89 incoming student were selected on this basis, according to the Higher Education - Main Department.

**According to the Freshman Programme, before the Introduction of the supplemental, dismissal rates of two figures (as high as 22% in 1980/81 academic year) were recorded.

school leavers we select for higher learning using this examination prove to be incompetent, one cannot avoid being doubtful about the effectiveness of the examination.

The purpose of this study is therefore to determine the predictive validity of the ESLCE's English test by comparing it with the predictive validity of the integrative tests (locally designed proficiency tests). By virtue of being the medium of instruction in the junior and above grades, of all the subjects, English no doubt qualifies as a subject which probably has the strongest bearing in determining the student's academic success. So does the ESLCE's English test actually have predictive power? In order to answer this question this paper has used the following techniques:

1. It used two integrative tests, namely the close technique and the dictation test prepared by the researcher. These are very well reputed language proficiency tests, currently in use in many universities as the best devices for testing the learner's global language proficiency.
2. They were administered to a sample of 1987/88 secondary school leavers, about one month before these subjects sat for the ESLCE.
3. The subjects who joined the University achieving a good pass in the ESLCE were considered. They were followed up for one year in their respective faculties to obtain

data for each person on his academic performance. This was done by taking his ESLCE English score, and his cumulative grade point average (CGPA) as a criterion score.

4. Using the product moment correlation, the correlation coefficients of,
 - a) the candidates' scores on the integrative tests Vs the GPA, and
 - b) the candidates' scores on ELSCE English test Vs the CGPA were obtained, and compared to determine the better predictor. This was done to examine the effectiveness of the ESLCE's English test as a reliable instrument for college admission.

This study is important in that, by revealing the extent of the predictive power of the ESLCE, it could further help the testing authorities of the Addis Ababa University resolve the issue of whether the University can anymore afford to set aside the question of introducing a separate and more reliable entrance examination for college admission.

The difference in the interpretation of grades between the ESLCE and the faculties could, though to a lesser extent, affect the magnitude of the correlation. This is probably an admitable limitation of the study.

REVIEW OF THE RELATED LITERATURE

Apart from the hearsay that is highly critical about the effectiveness of the ESLCE as a college

admission test, there are some notable scholarly works available to this day which are even more critical. For instance, Kehoe (1964) indicates that the ESLCE is an inappropriate means of evaluation, which could harm the national university and the country. In his MA Thesis of 1982, Tesfaye Gashaw also states that the ESLCE can neither serve as a criterion for admission to the University, nor be a measure for predicting students' language performance at the University level. Jarvis (1969) also airs his sharp remarks on the ESLCE. He points out that the ESLCE is beset by the weakness that it must serve a dual purpose. as a secondary school achievement test and as a university entrance examination, a purpose which it cannot accomplish.

Taking the 1963 ESLCE candidates as his subject, Tracy (1965) determined the predictive power of the test, by examining the overlap between the ESLCE scores of Amharic, English and Mathematics with the first year GPA of the subjects. Tracy found a correlation coefficient of 0.36, which according to him showed a moderate degree hardly enough to warrant a reliable predictive power. He further points out that a good subject examination should probably have a correlation coefficient of at least 0.50 when correlated with grades in the same subject in college, depending on how similar the college subject matter is to the secondary school subject matter.

In his doctoral dissertation Lakew Waldetekle (1972) assesses the effectiveness of Amharic and English as predictors of college success. He uses Amharic Verbal Aptitude Test (AVAT) and English Verbal Aptitude Test (EVAT) for the purpose and found out

that EVAT was slightly better predictor of a score on English language course than the AVAT.

Mittman (1972) who conducted a similar study also indicates that verbal skills in English are valid predictors of academic success at HSIU* and suggests that measures in this area should be under constant review. He further points out that since instruction and textual materials are in English, this subject should have to be given emphasis in the admission policy and that the University should have its own battery of examinations with better reliability and validity that can be enhanced through experience.

Melaku Asfaw (1974) attempts to examine whether a high GPA in Amharic, English, and Mathematics (these were the three required subjects then) means success for a student in the university under normal conditions, taking about 308 dismissed freshmen students in the 1973/74 academic year. He uses their first semester scores as criterion measure.

Still important scholarly work carried out on this same subject is one by Langmuir and Bowers (1967). The researchers used the Special Scholastic Aptitude Test (SSAT), Verbal and Mathematics for predicting first year GPA of 395 freshmen students admitted into 5 faculties of HSIU in the fall of 1965.

* Haile Selassie I University (former name of Addis Ababa University).

Tibebe A. The Predictive Validity of ESLCE

They found out that both the SSAT verbal and SSAT mathematics are generally useful predictors of academic success.

Finally, probably the most comprehensive study ever carried out with regard to the predictive validity of the ESLCE was that conducted by King (1966). King took a sample of 528 incoming freshmen in 10 faculties of HSIU admitted on the basis of the 1967 ESLCE results. He found out that total ESLCE GPA showed a moderate relation of about 0.47. He says that the 1967 ESLCE total GPA predicated fairly well to University freshman performance and was therefore a better set of examination than the 0.36 reported by Tracy in 1963.

With regard to the use of the integrative tests several sources commend them as the best instruments to assess the efficiency of the various integrated language skills of the students. For instance, according to Newman (1978), the cloze procedure is useful to test the learner's reading comprehension, his ability to discriminate between details and main ideas, arriving at a conclusion, and his ability to predict outcomes from the given contextual clues. It also eliminates guessing which is one of the inherent shortcomings of the discrete-point-tests. Oller (1979), probably the most prominent expert in the integrative testing techniques, states, that dictation involves the student in an active and complex process of analysis by synthesis of the various integrated language skills like those of the ability to spell, the discrimination of sounds and words, skills in interpreting what is heard to make sense out of it, knowledge of the structure of the language, and skill in writing and punctuation.

Heaton (1979) also mentions the skills involved in a dictation task as listening comprehension, the auditory memory span, spelling, the recognition of sound segments, and the familiarity with the grammatical and the lexical patterning of the structure of language. Gue and Holdaway (1973) state that the cloze tests are some of the tests used extensively, to screen out students in English speaking universities because of the wide ranging power of these tests to elicit the student's integrated language skills. (For more information see Tibebe Alemayehu 1987).

The integrative tests are not without limitations, however. Prominent among the shortcomings is the problem of finding passages of general interest, with the appropriate grade levels for the purpose. This is because, the determination of grade levels may require the use of formulas that involve calculations. And this in turn requires a lot of trial and error, something usually boring for one.

Procedure

3.1 The subjects: About 508 students of the 1987/88 prospective secondary school leavers from 4 high schools in Addis Ababa were the subjects of the study. The schools were:

- | | |
|---------------|------------------|
| a. St. Joseph | c. Sanford, and |
| b. Nazreth | d. Tikur Anbessa |

Since the study starts with subjects in secondary schools and follows them up through to first year of college, it focussed on schools thought to have good facilities and prepared

candidates that usually succeeded in passing the ESLCE and join the college. Thus, the sample schools were deliberately selected on the basis of their commendable reputation in passing a relatively large number of candidates to college. They were limited to four because of financial and other technical factors.

3.2 Selection and Preparation of the Integrative

Tests: Four passages, that deal with subject matter of general interest were selected. The passages were free of technical jargon and localized expressions. Their grade level was earlier determined using the Fog Index*. One native and two Ethiopian English teachers of the University were also asked to rate them, in view of their experience. Two passages favoured and considered more fit for grade 12 students by these teachers were selected. One of these passages with exactly 306 words was used for the cloze passage. Every 5th word was deleted and a total of 50 deletions were made. The first and last sentences were left intact deliberately, however. The other passage, with about 210 words was used for the dictation test.

*This is a readability formula which considers word length and sentence length to determine the difficulty level of passage.

The reliability of these two tests was determined next, using the Kuder and Richardson's Formula (KR-21)*. Then they were validated against the well known standard test of the Michigan Test of English Language Proficiency Form B. Both the cloze and the dictation tests correlated at 0.97 with the MTELP. This is a high correlation which suggests that these integrative tests are almost as equally valid as the MTELP. With regard to their reliability, the KR-21 reliability formula has indicated that the cloze test had a reliability coefficient of about 0.95 while the dictation test had 0.96. These figures also show a high degree of reliability of the tests as measures of language proficiency. They were therefore valid and reliable and measure almost the same thing as the MTELP.

- 3.3 Administration and Scoring of the Integrative Tests: All the 508 subjects were administered both the cloze and the dictation tests in two separate sessions, about one month before they sat for the ESLCE. They were given 60 minutes to finish the cloze test. A separate answer sheet was provided.

*This is a formula to estimate the reliability of tests with large number of items.

Each correctly restored item was awarded 2 points to make the test count of a hundred, using the exact-word-method. This method was adopted because as many testing experts like Heaton (1979) indicate, the two methods are highly correlated, and hence are equally reliable. In addition to this, the acceptable word method was avoided mainly because it is extremely difficult to exhaust all the acceptable answers for each deletion, and is therefore not easy to maintain consistency in scoring. The dictation test was given on tape. Answer sheets with proper instructions were also provided for them to write down what they heard. The number of mistakes per line in the two combined dictation tests were finally added together and the average of these constituted the student's scores of a hundred.

- 3.4 The Determination of the Predictive Validity of the Tests: This study considered the subjects who took both the integrative tests and the ESLCE, and then joined the degree granting units of the University in Addis ababa. In this manner, out of the 508 subjects a total of 171 students who joined 3 faculties were considered. Using the computer, the predictive validity coefficient was processed. With regard to the ESLCE English, it was impossible to find the raw scores, and therefore the letter grades of each student in English had to be converted to the grade points. According to both the ESLCE and the University, A=4 grade points,

B=3 grade points, C=2 grade points, D=1 grade point, and F=0 grade point.

Thus the total integrative test scores and the total ESLCE English scores of all the 171 subjects were correlated with the total CGPA of all the subjects together, to compare the predictive validity of the integrative tests with that of the ESLCE English, thereby, to see how far the ESLCE can be relied upon as an entrance examination for the University.

ANALYSIS AND RESULTS

The correlational validity in this study indicates the magnitude and direction of the relationship between the integrative tests and the first year cumulative grade-point-average (CGPA) which is the criterion score of the subjects on the one hand; and that between the ESLCE English examination and the CGPA of the subjects, on the other. The Coefficient of Correlation (r), ranges from -1 to $+1$. If $R=0$ the two tests are unrelated, and if $r=+1$ the relation is perfect. The negative correlation, however shows an inverse relationship.

To see whether or not the utility of the test scores varies among the faculties, the correlational computations were made in each faculty. The number (N) of subjects in each faculty was as follows: 51 were in the Social Science, 53 in the Natural Science, and 67 in the Faculty of Technology. The means (m) and the standard deviations (S.D.) for each test were

Tibebe A. The Predictive Validity of ESLCE

also computed likewise to observe the variations more clearly.

Table 1: Tabular Statistics for each integrative test and the CGPA of the subjects in the 3 faculties

| Faculty | N | Measure | Mean | S.D. | Liner r^{**} of the tests | | | Total r^{**} of C+D with total CGPA |
|---------|----|-----------|-------|-------|-----------------------------|------|------|---------------------------------------|
| | | | | | C | D | CGPA | |
| Soc.Sc. | 51 | Cloze | 50.25 | 19.08 | 1.00 | 0.87 | 0.27 | 0.26 |
| | | Dictation | 55.01 | 18.65 | 0.87 | 1.00 | 0.24 | |
| | | CGPA | 2.26 | 0.47 | 0.27 | 0.24 | 1.00 | |
| Nat.Sc. | 53 | Cloze | 45.15 | 17.78 | 1.001 | 0.77 | 0.34 | 0.31 |
| | | Dictation | 50.84 | 17.35 | 0.77 | 1.00 | 0.25 | |
| | | CGPA | 2.11 | 0.41 | 0.34 | 0.25 | 1.00 | |
| Tech. | 67 | Cloze | 52.96 | 17.52 | 1.00 | 0.72 | 0.25 | 0.32 |
| | | Dictation | 59.07 | 16.30 | 0.52 | 1.00 | 0.30 | |
| | | CGPA | 2.43 | 0.58 | 0.31 | 0.30 | 1.00 | |

*The relationship between the scores of cloze, dictation, and ESLCE English tests of the subjects in each Faculty, with their respective CGPA.

**The correlation between all subjects' total integrative raw scores, and total ESLCE English grade points, with all the subjects' total CGPA, separately.

Table 1 depicts the degree of relationship between each integrative test and the college CGPA. The high correlation ranging from 0.72 to 0.87, between the cloze and the dictation tests indicates the extent of similarity of these two tests in measuring integrated language skills of the learners. The variation between each integrative test and the CGPA is not as such significant.

Table 2: Tabular Statistics for the ESLCE and the CGPA of the subjects in the 3 faculties

| FACULTY | . N | MEASURE | . MEAN | . S.D. | Liner r | | Total r of ESLCE Eng. Vs total CGPA |
|---------|-----|------------|--------|--------|---------|------|--|
| | | | | | ESLCE | CGPA | |
| Soc.Sc. | 51 | ESLCE Eng. | 3.47 | 0.67 | 1.00 | 0.22 | 0.17 |
| | | CGPA | 2.26 | 0.47 | 0.22 | 1.00 | |
| Nat.Sc. | 53 | ESLCE Eng. | 3.19 | 0.65 | 1.00 | 0.32 | 0.24 |
| | | CGPA | 2.11 | 0.41 | 0.32 | 1.00 | |
| Tech. | 67 | ESLCE Eng. | 3.46 | 0.56 | 1.00 | 0.15 | 0.12 |
| | | CGPA | 2.43 | 0.58 | 0.15 | 1.00 | |

A close examination of Table 2 indicates the degree of overlap between the ESLCE English and the first year CGPA of the subjects.

The ESLCE English here seems to be a better predictor, in relative terms of course. The total

Tibebe A. The Predictive Validity of ESLCE

correlation of these two tests shows 0.12 for the technology group, 0.24 for the natural science group, and 0.17 for the social science group. The correlation for the natural science group is somewhat moderate, while that for the social science and technology groups are of low value. But in general the ESLCE English of the 1987/88 can be interpreted as having low predictive power.

Table 3: Comparison of the predictive power of the total integrative tests scores and the total ESLCE English of all the subjects

| Faculty | N | Measure | Correlations | | Total CGPA |
|---------|-----|------------------|--------------|-------------|------------|
| | | | Total C+D | Total ESLCE | |
| All | 171 | Total C+D | 1.00 | 0.281 | 0.33 |
| | | Total ESLCE Eng. | 0.28 | 0.13 | 0.13 |
| | | Total CGPA | 0.33 | 0.13 | 1.00 |

This table depicts the strength in the predictive power of the combined integrative scores and that of the total ESLCE English, for all the 171 subjects. The ESLCE English shows a low value correlation coefficient of only 0.13 with the college CGPA of the subjects, and the total combined integrative test scores show a moderate correlation coefficient of about 0.33 with the same total criterion score.

The F test computed to test the level of significance of all the three correlations indicates

that all the correlations are significant at the 0.005 level. This means that the probability for the correlations to depart significantly from being non-linear is less than 5 in a thousand similar cases.

Conclusion and Recommendations

CONCLUSION

The result shows that the ESLCE English tests with a low predictive ability of only 0.13, couldn't probably warrant reliability to be used as an instrument of college admission. The integrative tests correlated at 0.33 with the criterion score. This as has been stated above shows a moderate predictive power that could be used in some admission standards. Thus, other things being equal, when compared to the integrative tests, the ESLCE English test of the 1987/88 academic year was ineffective as a device of selection of students for admission into the tertiary level. This result confirms previous findings revealed by testing experts like Tracy (1965), and Mittman (1972).

RECOMMENDATIONS: The determination of the predictive validity of each subject matter every year could as indicated in the preceding chapters, help to refine the predictive ability of the ESLCE in general. Thus the testing authorities of the Addis Ababa University should have to reconsider this issue.

Since as has already been said, the ESLCE is basically a test of secondary school achievement, its consistent use as a college entrance examination

Tibebe A. The Predictive Validity of ESLCE

could do more harm than use to the educational activity of the country in general. The University should therefore look for other better alternative tests that could reliably indicate the learner's future academic performance.

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