

THE RELATIONSHIPS BETWEEN ESLCE SCORES AND STUDENTS' ACADEMIC ACHIEVEMENTS AT THE BAHIR DAR TEACHERS COLLEGE

Merhatibeb Bezabih¹

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INTRODUCTION

The Ethiopian School Leaving Certificate Examination (ESLCE) is administered throughout Ethiopia every academic year to students completing high school education. The examination has formally two purposes (MOE, 1972, Policy Making body, AAU, 1965). Primarily, it is an achievement test for high school graduation. Additionally, Langmuir's (1969) averment "...the certificate enjoys enormous prestige ... because employers use it as a screen to reduce the number of job applicants" is still valid.

To date, several studies have been conducted in varying depth and points of emphasis to examine how well the ESLCE does forecast the performance of students in higher institutes of learning. Stated in other words the educational concern of these studies was to examine whether or not ESLCE is an efficient screening instrument for granting students admission to universities and colleges.

In the literature, the conclusions reached and the recommendations given by different researchers do not seem consistent. There are scholars who claim that ESLCE serves its purpose as predictor of students' performance in higher studies. The most prominent work in this direction is that of Asmerom *et*

al. (1989). Part of their conclusion reads: "...individuals with good performance in the former (ESLCE overall GPA) tend to do the same in the latter (first year first semester GPA)."

On the other hand, there are others who argue that the ESLCE is not a reliable predictor. According to Madsen (1967), "...it (ESLCE) needs considerable refinement in order to achieve adequate reliability and efficiency." Adane (1983) contends: "It (ESLCE) should not be regarded or used as an infallible measurement of ability and possible success in future academic career of individuals or groups." Melaku (1975) has investigated the relationships between ESLCE and freshman grades of failing students at three faculties of Addis Ababa University, and the findings led him to a pessimistic conclusion: "Neither the ESLCE average scores nor the scores in Amharic, English or Mathematics were indicative enough of university performances." Tesfaye (1982) in his study "The Measurement of English Language Proficiency of High School Graduates", regarding ESLCE English examination, concludes that it neither serves as a criterion for admission to university nor as a measure for predicting students' language performance at the university level. And he recommends that the ESLCE be restricted to its role as an achievement test and a separate test, College Entrance Examination, be set for university admission. Still another study which demonstrated the weakness of the

ESLCE as predictor of students' success in college is the one by one by Semira (1991). She writes, "...success or failure in the ESLCE is not a necessarily true indicator of success or failure at college".

While ESLCE is used for admission by all higher institutes regardless of the discipline (education, agriculture, medicine etc.) and the level of the program offered (degree or diploma), most of the studies so far have focused mainly on students admitted to Addis Ababa University. Another common feature the bulk of these studies share is that they give little attention to diploma-pursuing students. Moreover, as observed by notable scholars (Semira,1991, Asmerom *et al.*, 1989) no responsible institution or authority has been set up in response to the comments and recommendations of research findings regarding the ESLCE. Hence, evaluating the validity and utility of the ESLCE as a college admission test continues to be timely.

PURPOSE

The Bahir Dar Teachers College (BDTC) admits regular students into its diploma program as determined by the Higher Education Main Department of the Ministry of Education,

formerly Commission for Higher Education (Office of the Registrar, AAU, 1992, UNESCO, 1986). The admission is normally based on the ESLCE performance of the applicants. However, to the best of this writer's knowledge, no attempt has been made to find out if the ESLCE is really serving its intended objective of predicting the academic success of students admitted to the college.

Therefore, at BDTC as elsewhere, the subject is worth examining. This study was particularly committed to the investigation of: (1) The relationships among the overall GPA acquired in ESLCE, the overall freshman first semester GPA and the cumulative GPA at graduation or dismissal; (2) The inter-relationships among the grades in English and Mathematics (both in ESLCE and first year first semester) and the relations they have with the three overall GPAs mentioned in (1) above.

METHOD AND PROCEDURE

The target population of this paper were all regular diploma students who either graduated or discontinued their education for academic reasons from BDTC in the Academic years 1987/88 to 1991/92. They numbered a total of 1128.

Following Asmerom *et al.* (1989) the total population was categorized into three groups. Those students who had successfully completed the program and earned their diploma constituted two of the groups identified as above average and average. Above average students are those who secured a cumulative GPA of 2.75 or better at graduation while average refers to students who graduated with a cumulative GPA of 2.00-2.74. Students who could not maintain the minimum required GPA and consequently flunked out of the college comprised the third group -- the dismissals.

Each member of the study group was listed stratified by both group and year. Systematic random sampling was then utilized to select a total of 320 student samples comprising 41 dismissals, 193 average and 86 above average students (see Table 1).

Table 1: Total Population and sample size distribution stratified by year and group.

year	total number	sample size	graduated			
			average students CGPA=2.00-2.74		above average students CGPA=2.75-4.00	
E.C.	number	size	total number	sample size	total number	sample size
1980	36	11	134	38	33	9
1981	33	9	140	40	66	20
1982	29	8	118	33	51	14
1983	12	3	175	50	97	27
1984	35	10	112	32	57	16
Total	145	41	679	193	304	86

For every sample selected seven variables were considered and their values were collected from the students' files at the Assistant Registrar's Office of the BDTC. Three of the variables were the results achieved in ESLCE: ESLCE English grade (EEG), ESLCE Mathematics grade (EMG) and ESLCE overall grade point average (EGPA). The other four variables were the records of the students' college performance. These are first year first semester grades in English (FFEG) and Mathematics (FFMG), first year first semester overall GPA (FFGPA) and cumulative grade point average at the time of graduation or dismissal (CGPA). Letter grades were converted into their standard scale numerical equivalents. Thus A=4, B=3, C=2, D=1 and F=0.

The variables were examined for significant interrelationships and variations across the three groups of the samples. Pearson product moment correlation coefficients among the variables were computed first for the full sample and separately for the dismissed, average and above average students. Mean score values and standard deviations were also calculated for each variable in the various sample groups. Significance of the observed correlation coefficients and mean score differences were determined at p 0.05 level. In the statistical analysis each sample group was treated as large sample (Garrett, 1966).

RESULTS AND DISCUSSION

The relationship of the overall college cumulative GPA (CGPA) to the other variables

Table 2 reports that 14 of 21 cross perspective correlation coefficients were significant in the full sample. It also presents that 8, 7 and 13 rs were significant for the dismissed, average and above average students, respectively each out of 21. In all cases, correlations coefficients found significant were invariably positive.

Table 2: Correlation matrix among the seven variables; above diagonal for the full sample and sample below diagonal for the three separate groups

	EEG	EMG	EGPA	FFEG	FFMG	FFGPA	CGPA
EEG		0.09	0.47*	0.16*	0.08	0.14*	0.10
dismissals							
average							
above average			0.36*	0.00	0.07	0.02	-0.01
EMG							
dismissal	0.17						
average	0.03						
above average	0.02						
EGPA				0.16*	0.14*	0.23*	0.21*
dismissals	0.51*	0.48*					
average	0.38*	0.33*					
above average	0.46*	0.22*					
FFEG					0.57*	0.76*	0.67*
dismissals	-0.08	0.01	-0.08				
average	0.18	-0.05	0.10				
above average	0.34*	0.09	0.12				
FFMG						0.82*	0.75*
dismissals	-0.04	0.01	-0.09	0.32*			
average	-0.01	0.11	0.01	0.08			
above average	0.13	0.22*	0.06	0.31*			
FFGPA							0.91*
dismissal	-0.13	0.09	-0.06	0.49*	0.67*		
average	0.21*	-0.12	0.12	0.54*	0.51*		
above average	0.29*	0.16	0.23*	0.60*	0.51*		
CGPA							
dismissals	-0.12	0.02	-0.10	0.32*	0.37*	0.61*	
average	0.10	-0.12	0.01	0.29*	0.19	0.58*	
above average	0.14	0.05	0.22*	0.33*	0.37*	0.55*	

* Significant at 5% level ($p \leq 0.05$).

In analysing the results, CGPA was first taken as the main criterion variable so as to identify which of the variables under study predict (in magnitude and direction) the academic success or failure of students. In the full sample, CGPA was correlated positively and significantly to four of the variables. It showed a very strong correlation to FFGPA ($r=0.91$), marked relation with FFEG ($r=0.67$) and FFMG ($r=0.75$) and weak association to EGPA ($r=0.21$). However, the correlation of CGPA to EEG and EMG were not significant. This indicates that among the three ESLCE variables considered, EEG and EMG have no relation to the students' college success. Again the relation of EGPA to CGPA is so weak that no reliable conclusion can be drawn about its predictive power. In line with this, Tassew *et al.* (1990) have reached the same conclusion after assessing the degree of correlations between EGPA and CGPA of University students. One may also infer that first year first semester achievement are markedly associated to the students' academic destiny in the college thereby indicating their selective nature.

Further examination was sought to see if the picture was also true for the three groups considered separately; The results suggest that the validity of the three ESLCE variables in predicting CGPA is not far from what is shown by the full sample. For all the three groups, the main criterion variable failed to retain any significant correlation with EEG, EMG and

EGPA, the only exception being the weak relation expressed between CGPA and EGPA ($r=0.21$) for above average students. Grades scored in the college on the other hand, unlike ESLCE scores, as in the full sample, have offered significant relation with CGPA in the separate sample groups. The coefficients of correlation varied from as low as 0.32 with FFEG for dismissals to as high as 0.61 with FFGPA for above average students. An exception to this was the insignificant correlation between CGPA and FFMG for average students.

The overall ESLCe grade point average, EGPA, is the basis for the selection and admission of students into the diploma program of the BDTC. Pertinent to this, the Senate Legislation of Addis Ababa University (1987), upon which the academic regulations of BDTC are based, unequivocally states that applicants with EGPA of 1.4 or better and 2.0 or better may be considered for admission into diploma, and degree programs, respectively. Nevertheless, Table 3 shows that the mean EGPA scores of the sampled students were so high that they would otherwise have qualified them for admission i to degree programs. This is tempting in that it may lead one to expect all students with such high EGPA would successfully complete the diploma program. But empirical evidences shows this is not actually the case.

Table 3: Mean and standard deviation (sd) for the seven variables in the various groups.

	Total sample		Dismissals		average		above average	
	mean	sd	mean	sd	mean	sd	mean	sd
EEG	2.23	0.6340	2.17	0.7219	2.17	0.5487	2.34	0.6037
EMG	1.65	0.6788	1.69	0.7442	1.58	0.6508	1.68	0.6306
EGPA	2.61	0.3272	2.54	0.3846	2.59	0.3216	2.71	0.2322
FFEG	1.98	1.0098	1.14	0.7214	2.10	0.8185	2.70	0.7937
FFMG	2.02	1.1816	0.89	0.7732	2.21	0.7911	2.97	0.8655
FFGPA	2.18	0.8159	1.30	0.3713	2.21	0.3939	3.03	0.4641
CGPA			1.44	0.3174	2.30	0.2255	3.11	0.2605

True, the mean EGPA score for above average students was significantly higher than the mean EGPA score of average or dismissed students. However, dismissals and average students did not show any significant mean EGPA difference. Naturally, in token of the drawbacks of its prognostic power, EGPA identifies the two groups together.

Regarding EGPA as predictive index of achievement at BDTC the mean score values also indicate that students categorized above average in the college are those admitted with EGPA of

nearly 2.8 or better. Again students who had lower EGPA during admission are at academic peril, because their failure is equally likely as their success. Mittman (1972) forwarded parallel suggestion that the 2.0 EGPA student was a or academic risk in the then Haile Selassie I University. It seems that this fact has been recognized and it is probably one of the reasons for the steady rise of EGPA scores required for college admission. The documentary provisions 1.4 and 2.0 are nowhere near the EGPA scores demanded nowadays.

Moreover, the contribution of ESLCE grades in the two compulsory subjects, English and Mathematics, in forecasting college academic achievement was examined on account of mean differences. In this regard, a close observation of Table 3 shows that neither average nor above average students possessed mean EEG and EMG values that are significantly different from those owned by the dismissals. The implication is therefore, that both EEG and EMG tend to put dismissals and successful students in the lump. Such a result is unhelped for, and there is no evidence against an argument that EEG and EMG do not have the effect of serving the purpose for which they have been intended as predictors.

In contrast, the mean score differences among the three sample groups in all first year first semester variables were salient and statistically significant. Over and above this, the magnitudes

of mean scores for the three variables in the three sample groups were increasing in the anticipated direction. Accordingly, above average students exhibited the higher mean scores, and mean scores manifested by dismissals were found to be significantly lower than those possessed by successful students.

First year first semester overall GPA and its relations to the other variables

First year first semester academic achievement not only determines the current performance, but also ministers as an incentive to the future academic accomplishment of a student during his remaining college life. Besides, in almost all the literature available, ESLCE grades as predictors of university or college performance are validated against freshman grade point averages. Here, the need to evaluate the degree of dependence of FFGPA upon the three ESLCE variable and its interrelation to FFEG and FFMG is therefore evident.

Table 2 reveals that for the whole sample, among the five independent variables, FFGPA exhibited the highest marked relationship with FFMG ($r=0.82$). Following closely in correlational magnitude was its relationship with FFEG ($r=0.76$). Across the three sample groups, results of the correlational magnitude was its relationship with FFEG

($r=0.76$). Across the three sample groups, results of the correlational analysis also indicate that FFGPA was moderately and significantly related to both FFEG and FFMG with coefficients ranging from 0.49 to 0.67. It may follow then, that the three freshman first semester variables are interrelated in a way that high FFEG and FFMG scores are guarantee to high FFGPA.

Faint but significant relationships were noted between FFGPA and EEG. The coefficients of correlation were 0.14, 0.21 and 0.29, respectively for the full sample, average and above average students. For the cases considered therefore, the results conceivably signify that EEG only feebly presages freshman performance of college successful student.s Further deficiency of the ESLCE scores as predictors of freshman performance is also discernible when one learns that FFGPA is in no way related to EMG neither in the full sample nor in any of the three separate groups, and to EEG for the failures. This view regarding the predictive ability of EEG is shared by Madsen (1967), who describes the ESLCE English examination as "not truly diagnostic." Likewise, Melaku (1975) found very poor correlation between EEG and FFGPA for university failures ($r=0.06$). Contrary to these findings, others (King, 1969; King & King, 1972) reported a significant correlation between EEG and FFGPA ($r=0.42$) and remarked that EEG

score would serve in predicting students' university performance.

Also noted was that the relationship between FFGPA and EGPA for the full sample and above average students, albeit low magnitude, remained positive and significant. In both groups $r=0.23$. The two variables were un-correlated for dismissals and average students. This the results suggest the power of EGPA is weak (a combination of grades in five subjects including EEG and EMG) in foretelling about FFGPA. Again the magnitudes of the correlation coefficients give reason to believe that EGPA cannot be at all events reposed upon as an inerrable screening instrument for the selection and placement of students to higher institutes. Rival hypotheses indicating that the relation between EGPA and FFGPA is marginal were also forwarded by both Tracy (1965) and Melaku (1975). Against the grain of these findings, Asmerom *et al.* (1989) published significant correlations between EGPA and FFGPA for six different faculties of Addis Ababa University ($r=0.26 - 0.77$).

The data generated in this paper depict that of the three ESLCE variables, EGPA and EEG are in spite of all their weaknesses, first and second respectively in predicting FFGPA. Similar findings were reported (King, 1969; King & King, 1972) claiming that EGPA has the highest correlation

with FFGPA and is hence a better predictor of FFGPA than EEG which is better than EMG.

From the data presented in Table 3, it is possible to gather that for dismissals the mean EGPA score was higher than the mean FFGPA score which was lower than the mean CGPA score. From the variability point of view, the standard deviations in the same group make it apparent that EGPA scores were widely scattered from the mean relative to FFGPA and CGPA Scores.

Between the two successful groups of students, average students followed the trend shown by the dismissals in relation to magnitudes of mean scores in EGPA, FFGPA and CGPA. In this group CGPA scores were closely clustered around the mean and FFGPA had the highest variability.

With respect to above average students, mean score was least for EGPA and highest for CGPA. FFGPA has a mean score value in between the two. Another component of the results extracted for the same group is that EGPA and CGPA scores were grouped in close proximity to the means relative to the high dispersion of scores in FFGPA.

On the whole, above average students are apt to have better performance in the college than their own performance in

ESLCE. Just the other way, though average students are able to complete their studies successfully, they are, nevertheless, inclined to demonstrate low performance in the college than in ESLCE. In both groups mean CGPA scores were higher than mean FFGPA scores. And so, successful students seem to improve their academic status after their freshman first semester. Among the three variables (EGPA, FFGPA and CGPA), members of these groups had also the highest variability in their freshman scores. In agreement with these results, Adane (1983) found that EGPA values have low variability than FFGPA values. He has also reported that mean EGPA scores are less than mean FFGPA scores, similar to the results discussed above for average students.

The interrelationships of Fresh man English and Mathematics and their relations to the ESLCE scores

Further inspection of Table 2 delineates the relationships of the ESLCE variables to FFEG and FFMG. In this respect, significant correlations were found between EEG and FFEG for the full sample and for above average students with respective coefficients of 0.16 and 0.34. Above average students were unique in providing the only substantial linkage between the two mathematics grades, EMG and FFMG

($r=0.28$). To be a good predictor a subject test in ESLCE is proposed (Tracy, 1965) to have a correlation coefficient of at least 0.25 when correlated with grades in the same subject in college. Higher values (0.6 or 0.7) were also suggested (Madsen, 1969). Viewed from this stand point, the current data disclose that the degree of relationships owned (including even those which appear to be sizable) between grades of the same subjects (English and Mathematics) in ESLCE and in the college are not satisfactory. Thus on the whole, results from this analysis tend to impart that the performance of students in freshman English and Mathematics is not necessarily in the order of their achievement in ESLCE in the same subjects.

Examination of the mean score differences between EEG and FFEG and between EMG and FFMG whose values are presented in Table 3 also yielded results of similar effect to the findings suggested by the correlation coefficients. Supporting evidences were documented (Asmerom *et al.*, 1989) in connection to the relation between EMG and FFMG for students of Technology and Natural Science and the relation between EEG and FFEG for students of the college of social science. Of all tests in the ESLCE, the most studied is the English examination with regard to its relation to FFEG. Correlation coefficients between EEG and FFEG reported in one of these studies (Tracy, 1965) the coefficients varied from

a low of -0.09 to a high of 0.07. Both of these earlier findings are also clearly in agreement with the present results.

In spite of low magnitudes, it is only in the full sample that the relationships of EGPA to FFEG ($r=0.16$) and FFMG ($r=0.14$) happened to be significant. It is also noteworthy that none of the separate groups or the whole sample displayed significant correlations between EEG and FFMG and between EMG and FFEG. Hence, the proclivity of the results connotes that EG has nothing to say about FFMG in the same way as EMG does not tell any thing about FFEG.

Another aspect of the correlational analysis uncovers modest and significant relationship between achievements in freshman English and Mathematics. The correlation coefficients between FFEG and FFMG were 0.57 in the full sample, 0.31 for above average students and 0.32 for dismissals. This perhaps indicates that grades achieved in English and Mathematics in the college are consistent in the sense that ability in one subject usually goes with comparable ability in the other.

The Interrelationships among the ESLCE scores

An additional issue of concern was the interdependence among the three ESLCE scores. The correlation matrix (Table 2)

offers data which show that the associations of EGPA to both EEG and EMG were not strong in the full sample as well as for the separate sample groups. They could only be characterized as weak or at best as moderate (0.22-0.51). Without distinction to the different sample groups, the same table also illustrates that EEG and EMG were devoid of any significant correlation.

It is possible then to presume that EEG and EMG scores would moderately and positively predict the magnitude of EGPA. It is also possible to deduce that achievements in the two ESLCE subject tests, EEG and EMG, are not equable and that the level of competence in one does not indicate the level of competence in the other.

CONCLUSION

This study has attempted to explore the relationships between ESLCE scores and college academic achievements of the regular diploma students at BDTC.

The findings discussed in the preceding section reflect that next to the entire sample, the highest number of significant interrelationships among the variables considered was observed for above average students. The observed significant relationships

of EGPA to FFGPA a CGPA, though positive, were weak in the entire sample and in the three separate groups. It is only in a few cases that EEG gave significant relations to FFEG and FFGPA. EMG is deprived of relations to virtually all college achievements considered. It has also the least number of significant interrelations among the variables considered. EEG and EMG were not found to be comparable.

Grades scored in the college on the other hand were generally consistent, the highest relationship being between FFGPA and CGPA. It is then possible to conclude that once the students have secured admission, their ESLCE achievement tend to have no appreciable role in determining their college performance. Instead, other factors including FFEG, FFMG and FFGPA become more important and relevant of the students' success or failure in the college.

Consequently, it appears that, ESLCE as a whole lacks adequate validity to warrant its utility as the sole instrument of selection and admission of students to higher education.

The relationships of college achievements and ESLCE scores may be the outcome of a blend of several factors. Assuming all other factors were constant, the ESLCE as suggested by the present findings may not be classified as other than a poor examination as far as its predictive validity is concerned. The

result of the study seems to corroborate Duggan's (1969): observation that "Poor tests... badly researched, if at all, and used with indiscretion provide a vulnerable and visible target for valid criticism of the whole system."

This being the picture of ESLCE in accomplishing its predictive task, it would seem only natural that it needs considerable improvement or replacement better procedures for the purpose of selection and placement of students to colleges and universities. In the opinion of the present author, if ESLCE is to continue to serve as a predictive test it should be at least supplemented with aptitude and psychological tests which are believed to measure the real ability and interest of students. Entrance examinations prepared by each college may also be thought of as additional selection and screening mechanisms. Admittedly, attaining this end requires inputs of various kinds of resources. Nevertheless, the beginning to lay the foundation has to be strived for.

Of course, the results discussed in this paper are limited to the predictive validity of ESLCE and the study focused on students admitted to BDTC. Thus there is certainly a need to extend this work to other higher institutes of learning and additional research is also necessary to examine factors which influence ESLCE as an achievement and predictive test; indeed doing so can provide much richer and comprehensive conclusion.

REFERENCES

- Adane Taye (1983). "The ESLCE result compared to the academic achievement of first year at Asmara University", Ethiopian Journal of African Studies, 3(1), 27.
- Addis Ababa University (1987). "Senate Legislation of Addis Ababa University", p. 91 and p. 95.
- Asmerom Kidane, Lakew Wolde Tekel, Makonnen Yimer and Yusuf Omer Abdi (1989). "Students Drop-out in Institutions of Higher Learning in Ethiopia, Magnitude, Causes and Cures", The Ethiopian Journal of Education, 10(2), 9.
- Duggan, J.M. (1969). "A Critical appraisal of One National Testing Program", Developments in Educational Testing, (K. Ingenkamp, editor), The Proceedings of an International Conference held under the aegis of the Padagogisches Zentrum, Berlin, University of London Press Ltd., Vol. 2, p. 214.
- Garrett, H.E. (1966). *Statistics in Psychology and Education*", Sixth Edition, Ninth Indian Reprint (1979), Vakils, Feffer and Simons Ltd., Bombay, p. 186.
- King, M. (1969). "The Ethiopian School Leaving Certificate Examination and Freshman Performance at Haile Selassie I University", HSIU, Testing Center.
- King, M. and King, J. (1972). "Some Correlates of University Performance in Developing Countries: The Case of Ethiopia", The Ethiopian Journal of Education, 5(2), 20.

- Langmuir, C.R. (1969). "Testing at the Interface Between Modern and Ancient Cultures: Verbal and Non-verbal Tests in Ethiopia", Developments in Educational Testing, (K. Ingenkamp, editor), The Proceedings of an International Conference held under the aegis of the Padagogisches Zentrum, Berlin, University of London Press Ltd., vol. 2, p. 288.
- Madsen H.S. (1967). "English Language Testing in Ethiopia, The ESLCe Examination", The Ethiopian Journal of Education, 1(1), 46.
- Madsen, H.S. (1969). "A Statistical analysis of the 1968 ESLCE English Language Examination", The Ethiopian Journal of Education, 3(1), 2.
- Melaku Asfaw (1975). "The Relationship Between the ESLCE GPA's of Required Subjects and First Semester Freshman GPA's of dismissed students" The Ethiopian Journal of Education, 7(2), 48.
- Ministry of Education (1972). Guidelines for National Examinations (Grades 6, 8, and 12).
- Mittman, A. (1972). "A Multivariate Prediction Study for Haile Selassie I University", HSIU, University Testing Center (mimeo. 12) Mimeographed.
- Office of the Registrar, Addis Ababa University (1992). "Students Handbook", p.5.
- Policy making body (1965). A meeting held at the University President's Office, Addis Ababa University, Addis Ababa.