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Continuous and Placement Assessment Results as a Predictor of Student Achievement in Primary Schools

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Abstract

The purpose of this study was to explore the performance of out-of-school children in speed school and accelerated learning programs as a basis for success in primary schools. This research field has received very little attention. The continuous assessment and placement test results of students at risk were not used much in the literature, which this study aims to fill. The total number of students involved in the study was 624. The study used the continuous assessment average scores and placement test scores as predictor variables. The results show that the relationship between placement test and 1st-semester score in grade four was significant, r (196) = .501, p < .001. For the Accelerated Learning Program, the placement test and 1st-semester score in grade three were significant, r (111) = .413, p<.001. As a tool to forecast primary school students' future achievement, the teacher-made continuous assessment appears to be less useful than placement tests for children who come through speed school. Students from speed school backgrounds performed better than students from formal schools; students from accelerated learning program backgrounds performed almost similarly to students from formal schools except in environmental science. The study indicated that in grade four of formal primary school, continuous assessment was found to be poorly linked with student knowledge and skills. However, the results show that both comparisons found placement examinations to be a reliable indicator of children's achievement in primary schools. It can be concluded that students who joined grades three and four of formal school through speed school and an accelerated learning program are capable of achieving minimum learning competence in the subsequent educational outcomes in elementary grades.

Keywords: accelerated learning program, continuous assessment, placement test, speed school

Abstrak

Tujuan penelitian ini adalah untuk mengetahui prestasi anak putus sekolah pada program sekolah akselerasi dan pembelajaran akselerasi sebagai dasar keberhasilan di sekolah dasar. Penelitian ini hanya mendapat sedikit perhatian. Hasil penilaian berkelanjutan dan tes penempatan siswa berisiko tidak banyak digunakan dalam literatur, yang ingin diisi oleh penelitian ini. Jumlah siswa yang terlibat dalam penelitian ini adalah 624. Penelitian ini menggunakan skor rata-rata penilaian berkelanjutan dan skor tes penempatan sebagai variabel prediktor. Hasilnya menunjukkan bahwa hubungan antara tes penempatan dan nilai semester 1 di kelas empat adalah signifikan, r (196) = .501, p < .001. Untuk Program Percepatan Pembelajaran, tes penempatan dan nilai semester 1 di kelas tiga adalah signifikan, r (111) = .413, p<.001. Sebagai model untuk memperkirakan prestasi masa depan siswa sekolah dasar, penilaian berkelanjutan yang dilakukan guru tampaknya kurang berguna dibandingkan tes penempatan untuk anak-anak yang lulus sekolah akselerasi. Siswa yang berlatar belakang sekolah akselerasi mempunyai prestasi lebih baik dibandingkan siswa yang berasal dari sekolah formal; Siswa yang

berlatar belakang program pembelajaran akselerasi memiliki prestasi yang hampir sama dengan siswa dari sekolah formal, kecuali pada mata pelajaran ilmu lingkungan. Studi ini menunjukkan bahwa di kelas empat sekolah dasar formal, penilaian berkelanjutan ditemukan memiliki hubungan yang buruk dengan pengetahuan dan keterampilan siswa. Namun, hasil penelitian menunjukkan bahwa kedua perbandingan tersebut menemukan bahwa ujian penempatan merupakan indikator yang dapat diandalkan mengenai prestasi anak-anak di sekolah dasar. Dapat disimpulkan bahwa siswa yang mengikuti sekolah formal kelas tiga dan empat melalui sekolah cepat dan program pembelajaran akselerasi mampu mencapai kompetensi belajar minimal pada hasil pendidikan selanjutnya di kelas dasar.

***Kata kunci**: program pembelajaran akselerasi, penilaian berkelanjutan, tes penempatan, sekolah akselerasi*

Introduction

Out-of-school children (OOSC) are school-age children who are supposed to be in schools but are not in schools due to parental and governmental failures to provide accessible, quality education for them. Out-of-school children are non-attendance at school (Niyi et al., 2022). Girls, in particular, advanced through the levels and, on average, improved their numeracy and literacy skills (Randall et al., 2020). In the Ethiopian context, out-of-school children are those children aged 9–14 who do not attend any school or drop out of school before completing the curriculum. Through an accelerated learning program and speed school, they are given a second chance to go to school. At schools, the students are engaged in collaborative, hands-on activities, peer-to-peer discourse, and positive teacher-student relationships were identified as social processes that facilitated students' propensity to engage in learning opportunities (Bae & Lai, 2020). The students have the opportunity to attend a three-year curriculum (grades one to three) using a condensed curriculum for ten months, or 1440 hours for speed school and 1100 hours for the accelerated learning program (ALP). The student's performance is assessed based on different types of continuous assessment and placement tests before joining the formal school at grades four or three that allow students to acquire minimum learning competency in a short period of time.

It is an undeniable fact that teachers often evaluate student performance based on students' test scores. Students' test scores are often cumulative of scores from different assessments of contents that they go through during a particular time frame (Ing et al., 2015). Continuous assessment provides information that can be used to evaluate students for a variety of purposes, including whether they are succeeding or failing by age-grade standards, whether they merit advancement or special treatment, and, ultimately, in many systems, whether they are allowed access to the next grade, judgment of ability, advancement, placement, and so on (Elmore, 2019); Each score adds to the previous one (Omonigho, 2019). Continuous assessment remains the umbrella of Educational and Counseling Psychology. It may be best appreciated if we understand it from the viewpoint of psychology as a way of logical thinking (Khan et al., 2011). It measures students' mastery of the foundational knowledge in terms of competency in reading, numeracy, problem-solving skills, and techniques for working in collaborative groups (Global, 2010; Omonigho, 2019). A test to measure different dimensions of cognitive abilities or capacity for study has been considered a more reliable measure of future educational success than measures of achievement (Geiser & Santelices, 2007). However, primary schools usually involve continuous assessment that evaluates students' progress through a different assessment form prescribed in the subjects. Continuous assessment is viewed as a learning performance related to a course that is separated from examinations and accompanied by regular feedback. Continuous assessment scores can correctly predict students' achievement (Atondo et al., 2019). Evidence of children's and young people's progress and achievements will come from day-to-day learning and through the things they may write, say, make, or do. Assessment enables teachers and students to draw inferences from the information obtained and act accordingly (Anyor & Abah, 2014). Through appropriate assessment, teachers can classify and grade their students, give feedback, and structure their teaching accordingly (Tosuncuoglu, 2018).

The quality of assessment in predicting the future success of students remains an area of interest. According to Hall (2015) whether or not past performance can predict future performance for learners has been a highly debated issue (Hall, 2015). The study was in agreement with an earlier study by Hattie (2012), as cited in (Greive, 2012), which found that prior achievement was a significant contributor to future performance. The predictive validity of a test is defined as the correlation of its scores with an outcome criterion. However, in many test situations, this correlation is not directly calculable (Zimmermann et al., 2017).

Student assessments or examinations are used to measure the level of candidates' achievement at all levels. It assesses every aspect of the learners' activities (Omonigho, 2019). Examinations are also used for the selection of students for next-level programs (Yusuf, 2010). In the practice of assessment, research has identified that, in recent decades, girls have received successively higher grades than boys. Several studies have found significant gender differences in school achievement, favoring girls over boys (Ullah, 2019). In science subjects, at the fourth-grade level, performance for females was slightly higher than for males across the participants, although the situation varied from country to country (Martin & Mullis, 2013). Female students have much higher levels of interest in reading than male students, with the converse being true in relation to mathematics. Boys earn higher grades in math and science (Cornwell & Parys, 2010). In a study conducted in Ethiopia, the performance of grade four students in mathematics can generally be regarded as less than satisfactory (Gutu et al., 2014). Moreover, Dea and others in math and science found that there is a lower variation among girls than boys and higher average grades for girls (O'Dea et al., 2018). Teachers need to consider the expectations that they have of students of both sexes and adopt strategies to raise their levels of self-confidence and motivation in those areas where they are weak. In particular, female students who do not have confidence in their mathematical abilities are likely to be constrained in their future choice of career, making it important to aim to build this aspect of their confidence (Perform, 2009).

In general, measuring predictive validity requires assessing how accurately learners' achievements may be predicted. The correlation between a predictor variable and a criterion variable is a common statistical measure of predictive validity. The closer the relationship between the predictor and the criterion, the higher this correlation is. High predictive validity in selection decisions indicates that a person (or group of people) was probably chosen appropriately.

The Study Context

In Ethiopia, since 1994, access to primary education, or basic education, has been compulsory and free of charge for all citizens. However, there are several children who are out of school for different reasons. There are over 4.5 million (19.9%) children of primary school age (7–14 years old) out of school in Ethiopia. Among those, over 2.6 million (23.2%) are female, and over 1.9 million (16.7%) are male. School exclusion is a significant problem for primary-school-aged children of both sexes despite the increase in GER seen in recent years. The situation is worse for female children(ATEM Consultancy Service, 2012). In this regard, the government, in collaboration with NGOs such as GGE (Geneva Global Ethiopia), has designed a speed school program for children out of school since 2011. To this end, a curriculum of grades one to three was condensed into three phases that are equivalent to grades one to three in formal school. The children enrolled at the speed school are in the age range of 9–14. The program was run and completed in ten months, or 1440 hours. A similar program called the Accelerated Learning Program (ALP) was adapted from Speed School. This program covers the grade one and two curriculum of primary school and is condensed into two phases. The program is covered in ten months, or 1100 hours, by the out-of-school students enrolled at the government primary schools. In both programs, the learning process is activity-based learning. Assessment is predominantly based on practical, continuous, formative, and summative methods. Summative tests of learning progress are conducted at the end of phases 1, 2, and 3, and finally, students sit for a placement test to pass to the next grade 4, 3, or 2 of formal school. The purpose of conducting the different assessments is to enable children to achieve the minimum learning competence (reading, writing, and math skills) before joining grade four or three of formal school.

In 2014 and 2021, Speed School enrolled 65,440 out-of-school children, with 55,046 completing the program and 55030 moving on to grade four (Muskin et al., 2021). From 2012 to 2022, Speed School enrolled 36611 children. On the other hand, the ALP, a new program introduced into the education system, has enrolled 11076 students (M = 5924, F = 5152) (MoE, 2022). In general, in the two programs, a total of 47687 children have enrolled and will attend school in 2022. To investigate the success story of the speed school program (Pryor et al., 2018), they conducted research on pupils transitioning from speed school to formal school and reported that the speed school students performed better. For example, the study found that, for math, only 22.4% of Speed School students are in the low achievers category compared to 42% and 42.9% of Government School and Link School students, respectively.

However, the researchers did not use continuous assessment and placement test results as instruments to predict the future success of children at primary schools. The first study was only based on the results of speed school students, whereas the current study included ALP and formal school students in grades three and four. The study involves a large number of students, both from speed schools and ALPs, compared to students in formal schools. Thus, to fill the gaps, the present study investigates the extent to which classroom continuous assessment tests and placement tests predict students' success in formal school achievement based on core subjects (mother tongue, mathematics, environmental science, and English language).

In this study, the following research question will be answered:

- How effectively can teacher-made continuous assessment and placement test results predict the results of core subjects in formal school grades?
- What is the gap in performance between male and female students in each core subject?
- Is there a statistically significant mean difference between students' scores at speed school, an accelerated learning program, and their formal school background?

Methods

Participants

In this study, participants were selected from three sources. The first source was students who attended speed school under the Geneva Global Ethiopia Project and passed to grade four formal schools, and the second source was students who attended the ALP run by the government and passed to grade three formal schools. The third source was students from a formal school in grades three and four. In selecting students' samples, we have used the sample size determination formula employed by Yemane (1967), n= N/ 1+ N(e2). Where "n" is the sample, "N" is the total population, and "e" is the sampling error (level of precision=5%). Accordingly, students from speed school backgrounds were 1105. Using the formula n=1105/1+1105(.05)2 =294 students who attended the speed school program were traced to collect their 1st-semester results in grade four.

However, because of missing data or scores from the list of identified students, 95 students' data were excluded from the study. The analysis was made based on 199 (male = 105, female = 94) students who are attending grade four-speed school, and in parallel, 199 (male = 93, female = 106) students attending the same grade four from formal school backgrounds were included for comparison. In addition, 251 students who attended the ALP under the government program passed to grade three, of which 154 were determined by the above formula. However, because of some missing scores during data clearing, the data was reduced to 113 students (male = 66, female = 47). In the same way, 113 students from grade three formal school backgrounds (male = 57, female = 56) were included. In general, 398 from grade four and 226 from grade three, for a grand total of 624 primary school students' scores, were analyzed on core subjects (mother tongue, mathematics, environmental science, and English).

Data Collection and Analysis

The researchers gathered the data from two sources: the student's record offices (Speed School Program and Accelerated Learning Program). The first analysis was made based on predictive validity using Pearson correlation, which involves continuous assessment, placement tests, and grade four for speed school. The second was based on the ALP continuous assessment, placement test, and grade three first semester results. In both cases, the analysis was made to determine the predictive power of continuous assessment and placement tests for students' success in formal school. Other analyses were made using the t-test and ANOVA for comparing the mean scores of continuous assessment, placement test, and first semester results in grades three and four. The data from classroom continuous assessment, placement test, and first-semester results were collected on four subjects (mother tongue, mathematics, environmental science, and English). In using the t-test and ANOVA, we checked the assumption using the normality of the data before the analysis was made. The students were selected randomly, and the data from the continuous assessment, placement tests, and first-semester results in grades three and four are normally distributed.

Results and Discussion

In this part of the research, we have presented the results based on the research question verified in the above section. The first part of the analysis described the relationship between the scores of the core subjects and the predictive power of continuous assessment and placement tests for students' success in formal school. The subsequent presentation was about gender differences in the core subjects, followed by comparisons of students' results from speed school, ALPs, and formal school backgrounds, focusing on the core subjects' mother tongue, mathematics, environmental science, and English.

Table 1. Descriptive Statistics of Students Score in Grade Four

Core Subjects	Students' Background	N	Mean	Range	Minimum Score in %	Maximum Score in%	Max.Fre	Frq<50%	Freq≥50%
Mother Tongue	Speed School	198	68.9848	68.00	32.00	100.00	8	26	172
	Formal school	198	64.1717	86.00	14.00	100.00	1	33	165
Mathematics	Speed School	198	66.1919	78.00	22.00	100.00	2	29	169
	Formal school	198	63.2626	88.00	12.00	100.00	2	20	178
Environmental Science	Speed School	198	68.8990	70.00	30.00	100.00	2	15	183
	Formal school	198	62.8889	75.00	22.00	97.00	0	30	168
English	Speed School	198	62.4444	78.00	22.00	100.00	1	27	171
	Formal school	198	66.0707	62.00	33.00	95.00	0	13	175

The descriptive statistics in the above **Table 1.** show that the mean score of students from speed school is higher in mother tongue, mathematics, environmental science, and English compared to students from formal school backgrounds. Surprisingly, the minimum score in mathematics was registered by students from formal schools (12%) compared to students from speed schools (22%). Students from speed schools registered low in English (22%) compared to students from formal schools (33%). On the other hand, in environmental science, the maximum score was 97 % for students from formal schools and 100% for students from speed schools. In general, students from speed school backgrounds have performed well in all the core subjects they have attended in grade four compared to students from formal schools.

Table 2. Correlation Matrix of Assessments

		Grade four 1st semester score				"r"
Variables	**Subjects**	**Mother tongue**	**Mathematics**	**Environmental science**	**English**	
Continuous Assessment	Mother Tongue	.175*	-.166*	.048	.300**	
	Mathematics	.210**	-.124	.063	.344**	
	Environmental Science	.190**	-.143*	.053	.346**	
	English	.245**	-.153*	.103	.420**	
"r"						.150*
Placement Test	Mother tongue	.400**	.081	.356**	.407**	
	Mathematics	.355**	.159*	.310**	.368**	
	Environmental science	.447**	.285**	.383**	.391**	
	English	.416**	.065	.333**	.513**	
"r"						.501**

**. Correlation is significant at the 0.01 level (2-tailed).

As can be observed in **Table 2.** above, continuous assessment of the core subject has a low relationship with grade 4, 1st-semester result, and the relationship is significant for mother tongue r(196) =.175* and English r(196) =.420** but non-significant for mathematics r(196) = -.124, poor and environmental science r(196) =.053, a very low but positive relationship. However, placement test results on each of the core subjects show a low to high relationship with grade 4, and the relationship was significant. The low relationship was observed for mathematics r(196) =.159*, medium for mother tongue r(196) =.400**, and for environmental science r(196) =.383**, and large significant for English (r(196) ==.175* and English r(196) =.420** but non-significant for mathematics r(196) = -.124, poor, and environmental science r(196) =.053, a very low but positive relationship. However, placement test results on each of the core subjects show a low to high relationship with grade 4, and the relationship was significant. The low relationship was observed for mathematics r(196) =.159*, medium for mother tongue r(196) =.400**, and for environmental science r(196) =.383**, and large significance for English r(196) =.513**, as recommended by Hemphill (2003) suggested a revision of Cohen, 1988, Cohen, 1992 guidelines: small < .20; medium = .20 to .30, and large effects > .30 used as Pearson r values.

In this analysis, the relationship reveals that the predictive validity of classroom teacher-made continuous assessment has less power in predicting students' success at formal school r(196) =.150*. However, the placement exam result, which was given at the end of the program, has the power to indicate students' success in grade 4, with a first-semester score of r(196) =.501**. The result shows that both continuous assessment and placement measured the likelihood that the students were motivated to stay in their education career, particularly to complete their primary education. However, the low relationship observed between mathematics and environmental science in both classrooms through continuous assessment and placement test results has indicated that students must work intensively to improve their performance in hard science areas in their academic careers.

In **Table 3.,** comparisons were made on grade four first semester scores by gender. The male students from formal school and female students from speed school backgrounds were computed. The result has shown that there is no significant difference between them in their mother tongue, mathematics, or English language. However, closer observation of the mean reveals that the mean score yielded by females is higher than the mean score of males. The analysis of environmental science has shown that males (mean = 63.21, SD = 15.14) and females (mean = 67.84, SD = 11.15), t(2,183) = 2.371, P =.020. The results reveal that there is statistical significance between male and female students.

In the comparisons made on mother tongue, mathematics, and environmental science, female students score higher than their male counterparts.

Table 3. Independent Sample t-test, Mean and St.D. by Gender

Core Subjects	Gender	N	Descriptive		t-test for Equality of Means		
			Mean	St. D.	*t*	*df*	Sig. (2-tailed)
Mother Tongue	Male	93	63.95	17.48	1.867	183	.064
	Female	94	68.46	15.37			
Mathematics	Male	93	65.12	14.55	1.371	183	.172
	Female	94	68.28	16.72			
Environmental Science	Male	93	63.21	15.14	2.371	183	.020
	Female	94	67.84	11.15			
English	Male	93	67.09	13.66	-1.903	183	.059
	Female	94	63.30	13.41			

*. The mean difference is significant at p-value < .05.

Table 4. Independent Sample t-test, Mean and St.D. Between SSS and FSS at Grade 4

Core Subjects	Students' Background	N	Descriptive		t-test for Equality of Means		
			Mean	St. Deviation	t	df	Sig. (2-tailed)
Mother Tongue	Speed School Students	198	68.985	16.577	3.274	394	.001**
	Formal School Students	198	64.172	16.310			
Mathematics	Speed School Students	198	66.192	16.962	1.831	394	.068
	Formal School Students	198	63.391	14.088			
Env. Science	Speed School Students	198	68.899	13.397	4.173	394	.000**
	Formal School Students	198	63.009	15.136			
English	Speed School Students	198	62.444	14.492	-2.241	394	.008**
	Formal School Students	198	65.451	12.767			

*. The mean difference is significant at p-value < 0.05.

**Speed School Students (SSS), Formal School Students (FSS)

Table 4. has indicated that there is a statistically significant mean difference between students who came from speed school and formal school on mother tongue (mean = 68.985, SD =16.577), and (mean = 64.172, SD = 16.310), t(2, 394) = 3.274, P =.001**, environmental science (mean = 68.899, SD = 13.397), and (mean = 63.009, SD = 15.136), t(2, 394) = 4.173, P =.000**, and on English for students from speed school (mean = 62.444, SD = 14.492) and students from formal school (mean = 65.451, SD = 12.767), t(2, 394) = -2.241, P =.008**. The analysis reveals that students from speed school backgrounds have better performance in their mother tongue, mathematics, and environmental

sciences. However, in English subjects, students from formal school backgrounds performed better than those from speed school.

Table 5. ALP Pearson Correlation Matrix

		Grade three 1st semester score				"r"
Variables	**Subjects**	**Mother tongue**	**Mathematics**	**Environmental science**	**English**	
Continuous Assessment	Mother Tongue	.219*	.263**	.203*	.290**	
	Mathematics	.225*	.307**	.226*	.239*	
	Environmental Science	.227*	.315**	.249**	.276**	
	English	.287**	.326**	.268**	.304**	
"r"						.344**
Placement Test	Mother tongue	.365**	.334**	.349**	.282**	
	Mathematics	.373**	.208*	.257**	.308**	
	Environmental science	.321**	.313**	.368**	.283**	
	English	.346**	.255**	.322**	.311**	
"r"						.413**

**. Correlation is significant at the 0.01 level (2-tailed).

N=113

The correlation matrices undertaken by the ALP operating at primary school. As can be observed in **Table 5.** above, continuous assessment of the core subject has a low relationship with grade 3, 1st-semester result, and the relationship is significant for mother tongue r(111) =.219*, low, mathematics r(111) =.307**, medium, environmental science r(111) =.249**, low, and English r(111) =.304**, medium, and the relationship is significant. However, placement assessment test results on each of the core subjects show a low to moderate relationship with grade 3, and the relationship is significant. The low relationship was observed for mother tongue r(111) =.365**, mathematics r(111) =.208*, medium for environmental science r(111) =.368**, and medium significant for English r(111)= .311** as recommended by Hemphill (2003) suggested a revision of Cohen, 1988, Cohen, 1992 guidelines: small < .20; medium = .20 to .30, and large effects > .30 used as Pearson r values.

According to the findings of the study, the predictive validity of classroom teacher-made continuous assessment has less power in predicting students' success in formal school. However, the placement exam result that was given at the end of the program has the power to indicate students' success in grade 3, first semester of 2023. The result indicates that both continuous assessment and placement measured the likelihood that the students attending grade 3 at a formal school were motivated to stay in their education career, particularly to complete their primary education.

Table 6. Independent Sample t-test , Mean and St.D. Between ALP and FSS at Grade 3

Subjects	Background	N	Descriptive		t-test for Equality of Means		
			Mean	St. D.	t	df	Sig. (2-tailed)
Mother Tongue	ALP Students	113	60.496	16.181	-1.673	236	.096
	Formal School Students	113	63.608	12.421			
Mathematics	ALP Students	113	67.974	14.1581	.996	236	.320
	Formal School Students	113	66.232	12.8051			
Environmental. Science	ALP Students	113	68.504	14.315	-2.889	236	.004**
	Formal School Students	113	73.560	12.684			
English	ALP Students	113	63.301	13.328	-1.633	236	.104
	Formal School Students	113	76.352	83.998			

*. The mean difference is significant at p-value < .05

The above **Table 6.** has indicated that there is a statistically significant mean difference between students who came from speed school and formal school on mother tongue (mean = 68.985, SD =16.577), and (mean = 64.172, SD = 16.310), t(2, 394) = 3.274, P =.001**, environmental science (mean = 68.899, SD = 13.397), and (mean = 63.009, SD = 15.136), t(2, 394) = 4.173, P =.000**, and on English for students from speed school (mean = 62.444), SD = 14.492) and students from formal school (mean = 65.451, SD = 12.767), t(2, 394) = -2.241, P =.008** . The analysis reveals that students from speed school backgrounds have better performance in their mother tongue, mathematics, and environmental sciences. However, in English subjects, students from formal school backgrounds performed better than those from speed school.

In the analysis conducted in **Table 7.**, there is a statistically significant mean difference between students from speed school, an ALP, and a formal school background, except in the mother tongue. Students on their mathematics performance in grade three's first-semester speed school program (mean = 57.855, SD = 14.300), N = 76; ALP (mean = 67.974, SD = 14.158), N = 113; formal school (mean = 66.867, SD = 12.947), N = 113; F (2,301) = 13.93, P =.000). The students from speed school were supposed to enter grade four, but they were placed in grade three instead since they had a lower placement exam score than the students who entered grade four. However, we do not know which of the groups are different from each other. In the comparison, we conducted a post hoc test on the significance variables to compare each condition. Post hoc comparisons using the Tukey HSD test indicated the mean score of the ALP (mean = 67.974, SD = 14.158), N = 113, has shown statistically significant differences from the Speed School Program (mean = 57.855, SD = 14.310), N = 76. However, ALP (mean = 67.974, SD = 14.158), N = 113, did not show a statistically significant difference from formal school (mean = 66.504, SD = 12.805), N = 113.

Table 7. ANOVA for Students from Speed School, ALP, and Formal Schools Background in Grade Three

Subjects		Descriptive			ANOVA				
		N	Mean	St. D.		Sum of Squares	df	Mean Square	F	Sig.
Mother Tongue	SSP	76	59.276	13.410	Between Groups	991.295	2	495.648	2.430	.090
	ALP	113	60.496	16.181	Within Groups	60988.082	299	203.974		
	Formal S.	113	63.619	12.739	Total	61979.377	301			
Mathematics	SSP	76	57.855	14.309	Between Groups	5272.610	2	2636.305	13.93	.000
	ALP	113	67.974	14.158	Within Groups	56583.337	299	189.242		
	Formal S.	113	66.867	12.947	Total	61855.947	301			
Environmental Science	SSP	76	63.171	11.493	Between Groups	4848.941	2	2424.470	14.017	.000
	ALP	113	68.504	14.315	Within Groups	51717.006	299	172.967		
	Formal S.	113	73.451	12.976	Total	56565.947	301			
English	SSP	76	57.171	15.711	Between Groups	3819.392	2	1909.696	10.379	.000
	ALP	113	63.301	13.328	Within Groups	55012.316	299	183.988		
	Formal S.	113	66.301	12.176	Total	58831.709	301			

*. The mean difference is significant at the .05 level.

** ALP- Accelerated Learning Program, Formal School Students (FSS)

There is a statistically significant mean difference between students from speed school, ALPs, and formal school backgrounds on environmental science performance in the first semester of grade three. Speed school programs (mean = 63.171, SD = 11.493), N = 76; ALPs (mean = 68.504, SD = 14.315), N = 113; and formal schools (mean = 73.451, SD = 12.976), N = 113, F(2,301) = 14.017, P =.000) were statistically different from one another. Post hoc comparisons using the Tukey HSD test indicated the mean score of the ALP (mean = 68.504, SD = 14.315), N = 113, was statistically different from that of the formal school (mean = 73.451, SD = 12.976), N = 113. ALP (mean = 68.504, SD = 14.315), N = 113, was also statistically different from the Speed School Program (mean = 63.171, SD = 11.493), N = 76. On the Environmental Science subject, students from a formal school background performed better than students from speed school and an ALP.

The third comparison was made on English language performance. It was found that there is a statistically significant mean difference between students from speed school, ALPs, and formal school backgrounds on English subject performance in grade three's first semester. Speed school program (mean = 57.171, SD = 15.711), N = 76; ALP (mean = 63.301, SD = 13.328), N = 113; formal school

(mean = 66.301, SD = 12.176), N = 113; F(2,301) = 10.379, P =.000) were different from one another. Post hoc comparisons using the Tukey HSD test indicated the mean score of speed school students (mean = 57.171, SD = 15.711) was statistically different from the ALP (mean = 63.301, SD = 13.328), N = 113, and from the formal school (mean = 66.301, SD = 12.176), N = 113.

Discussion

This study framework was guided by the teacher-made classroom continuous assessments and placement tests prepared at the regional-level evaluation center. According to Ghaicha (2005), continuous assessments have an advantage over centralized assessments or placement tests in that the results are immediately available to the teacher (and, presumably, the learners) and can influence the course of instruction for both. While these assessments can play an important role in promotion to the next grade, they are rarely used for high-stakes decisions such as admission to the next level of the education system. Such a type of assessment can have great potential for accelerating learning for all learners (Ghaicha, 2005).

In this study, we have established the predictive validity of continuous assessment tests and placement tests that can predict future students' performance in primary school academic achievement. The two assessments were correlated with the first semester results of students from a speed school, an ALP, and a formal school. The study indicated that there is no significant difference in terms of gender except for environmental subjects. The comparisons made between the speed school accelerated learning program and formal school analysis indicated that students from speed school performed better than students from formal schools, and the difference is significant for mother tongue, environmental science, and English; students from accelerated learning program performed better on environmental science, and the difference is significant.

As can be observed from the result above, for students from speed school backgrounds, the correlation between continuous assessment and first-semester scores in grade four was found to be positive and significant. In addition, the placement test was found to be medium in predicting the future success of students in grade 4 of formal school. The other prediction was made based on the scores of students from ALPs. The results reveal that classroom continuous assessment tests were a low predictor of students' success at grade three of formal school, and placement tests were found to be medium.

This means that there is a positive correlation between classroom continuous assessment tests, placement tests, and first semester scores in grade four of formal school, suggesting that students who score low or high at classroom continuous assessment are also likely to score low or high at first semester results, and vice versa. Continuous assessment tests compared to placement test results in speed school and accelerated learning programs were found to be less predictive of students' success in grades three and four of formal school. The finding doesn't support the claim of Omirin et al. (2008) that there is a prediction of examination scores related to their Continuous Assessment scores. In this study, both speed school and an accelerated learning program students scored higher in the classroom continued assessment than in the placement test. The disparity between continuous assessment and placement tests in predicting the success of the students in the next grade levels (grade four or three) can be associated with the marks inflation assigned to students on each activity during classroom instruction, the quality of questions to assess the performances of each student, and the lack of knowledge of facilitators to use different assessment tools critically.

The analysis of specific subject performances has shown that there is no statistically significant difference between children's results in their mother tongue, mathematics, or English language. However, closer observation of the mean reveals that the mean score yielded by females is higher than the mean score of males, and the difference was found to be significant in environmental science. This result was consistent with other studies on science subjects at the fourth grade; performance for females was slightly higher than for males across the participants, although the situation varied from country to country (Mullis et al., 2004; Martin & Mullis, 2013). In contrast, only a few studies, for example Frye and Hemmer (2012) examine gender differences in achievement prior to the eighth grade. As the level

of education increases, the ratio of female to male participants in math and related sciences declines (Nosek et al., 2002). Females outperform males in language-based subjects and verbal tests e.g., (Deary et al., 2007; Tsaousis & Alghamdi, 2022), and males outperform their female counterparts in STEM-related subjects (e.g., math, engineering, etc.) and spatial tests (Strand et al., 2006). We showed that girls performed similarly to or better than boys in science in two of every three countries (Stoet & Geary, 2018). However, in the current study, females performed less than their male counterparts in the English language and better than males from formal school backgrounds in mother tongue, mathematics, and environmental science subjects. In more than half the countries, the difference in average achievement in science between females and males was negligible at the fourth grade. Males had higher average science achievement than females in 8 countries (Martin & Mullis, 2013).

In general, in all the comparisons made except, in the case of mathematics, students from formal school backgrounds performed better than those who were from speed schools placed in grade three or an ALP. Teachers need to consider the expectations that they have of students of both sexes and adopt strategies to raise their levels of self-confidence and motivation in those areas where they are weak. In particular, female students who do not have confidence in their mathematical abilities are likely to be constrained in their future choice of career, making it important to aim to build this aspect of their confidence (Perform, 2009). In this study, girls have successfully gotten better grades in the core areas than boys. It seems to imply that gender variations in academic performance have a propensity to close the accomplishment gap between boys and girls in challenging subjects like mathematics.

Conclusion

This study confirmed that both continuous assessment and placement test scores were found to have a positive relationship with the first semester scores of the students in grades 4 and 3. However, speed school placement test scores were found to be a high predictor of students' success in their successive grades. In both cases, the placement examination score should continue to be used as a selection and placement tool rather than classroom continuous assessment for the enrolment of learners into formal primary school grades four and three. In the comparisons made between male and female students' scores, the females from speed school performed better than their male counterparts from formal school backgrounds. The speed school and ALP have benefited girls by keeping them at school and allowing them to compete with their male counterparts.

The enrollment of children out of school in the programs of speed school and accelerated learning has made a significant contribution to the improvement of net enrollment and primary school literacy. The analysis of the scores of the students from speed school backgrounds compared to those from formal school has shown that the students from speed school performed better on the three subjects than students from formal school, except in the case of the English language.

The comparisons made on the new ALP adapted from speed school run under the government have shown that the students' from the ALP background performed less compared to the grade three formal students backgrounds in all subjects. In this regard, close supervision of the delivery of the condensed curriculum, methodology employed in the classroom by teachers, assessment, and support have to be made to help students stay and complete at least their primary school program with good motivation and better scoring in the next grades. To get reliable research results, more studies will be conducted by taking into account other factors, such as student language proficiency, social skills, life skills, learning difficulties, and parent-child relationships as a predictor of academic accomplishment for particularly out of school children.

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