



Are children in South and Central Somalia accessing education, and are they learning? Baseline information

Charles Wafula^a, Godfrey Mulongo^{b,*}

^a Kenyatta University, P.O Box: 43844-00100, Nairobi, Kenya

^b Value Plus Consultants, Box 28950 00100, Nairobi, Kenya

ARTICLE INFO

Keywords:

Access
Literacy
Learning
Numeracy
Performance

ABSTRACT

This study investigates the status of *access* to formal education in post-conflict South and Central Somalia and the resultant *learning outcomes*. For *access*, the indicators of enrollment and school attendance are considered. Other related indicators such as pupils-to-classroom ratio, desks-to-children ratio, access to electricity, and toilet-to-pupils ratio are also investigated. For *learning outcomes*, teacher-to-student ratio, learners' performance in national standardized examinations, and learning competency in reading and numeracy are analyzed to determine whether the children are learning or not. The survey covered five states, namely Banadir, Galmudug, Hir-Shabelle, South West and Jubbaland. Mixed methods in data collection were used, involving field-level engagements through a survey questionnaire, the administration of competency tests, focus group discussions and key informant interviews. Ultimately, 549 respondents participated in the study including 365 learners who sat literacy and numeracy assessments. The findings reveal that not all school-aged children in South and Central Somalia are accessing school. Even when they do, they are seldom learning. This paper offers suggestions on how to enhance access and learning.

1. Introduction

War and armed conflict have many casualties, one of which is education (Manucheher, 2011). Warring parties usually disrupt the status quo, which, in all instances globally, is underscored in part by a stable education system that serves the citizens of a given country (Omoeva, Moussa, & Hatch, 2018). Education systems and service providers like schools and teachers are often affected by the chaos while the parties struggle to gain a nuanced form of control over the society (Hönig, 2018). Education is a natural target in conflict, because there is always a push to weaponize information, in this case, knowledge, and education is seen as a conduit through which this knowledge is passed to the general population (Justino, 2010). Re-routing children from school works well for the protagonists because it increases the number of children and youths whom they can recruit into the file and rank of soldiers (Hönig, 2018).

The Somali conflict that led to the collapse of the government in 1991 greatly affected the capacity of the Ministry of Education, Culture and Higher Education (MOECHE) to manage and provide basic education. During the conflict, most schools closed, educational facilities were looted or destroyed, and many educators and students fled the country. In general terms, the public education system collapsed, and was largely

replaced by a privately-run, fragmented schooling system that utilized foreign curricula and foreign languages as its medium of instruction (Federal Government of Somalia, 2018). However, since the inception of the Federal Government of Somalia on September 10, 2012, significant steps have been taken to improve the education sector in Somalia (Abdullahi & Hussein, 2015). In addition to the re-establishment of educational authorities both at the federal and state levels, the capacities of the duty bearers have been enhanced on various fronts; a number of new schools have been built and existing ones rehabilitated (Hassan & Wekesa, 2017). Various auxiliary services that support education such as water and school feeding programs have been delivered to schools by different development partners; investments have been made in training teachers to reduce the high number of untrained teachers in classrooms; new Technical and Vocational Education and Training (TVET) centers have been constructed and both new and old centers equipped; teaching and learning materials have been supplied to schools (UNICEF, 2018).

Despite these efforts, Somalia still has a long way to go in addressing the country's educational needs. The Federal Government of Somalia is still adrift in terms of achieving sustainable development goals (SDGs) in education, particularly those aiming to improve access to education and children's learning outcomes (United Nations, 2018). These challenges

* Corresponding author.

E-mail addresses: wafula.charles@gmail.com (C. Wafula), mulongoe@gmail.com (G. Mulongo).

<https://doi.org/10.1016/j.ssaho.2019.100011>

Received 4 July 2019; Received in revised form 19 December 2019; Accepted 20 December 2019

Available online 28 January 2020

2590-2911/© 2020 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

require urgent and sustained attention. The key challenges and gaps, *inter alia*, that need to be addressed include large populations of nomadic families (over 25% of the population) and internally displaced families (approximately 9% of the population) that are poor and therefore face additional barriers to education, the poor enrollment of girls, and high dropout and repetition rates. Other challenges include capacity limitations at MOECHE; poor learning competencies for literacy and numeracy; stark educational inequities; breaches of data integrity related to the over-reporting of student numbers; and lack of a nationwide and reliable set of learning assessments (Ministry of Education, 2018). This paper attempts to fill the gap related to data, with specific focus on the South and Central Somalia (SCS) region.

The role of quality data in effective decision-making in education cannot be over-emphasized (Devine, Srinivasan, & Zaman, 2004). It is for this reason that organizations in social and community development invest in baseline surveys as foundational assessment tools for the reliable measurement of progress (Cohen, 2006). Unfortunately, to the best of our knowledge, there is no national level data on learning outcomes. This position is corroborated by government itself which notes that “information on student learning outcomes is very limited or unreliable” and further makes an accurate guesstimate that “it is highly likely that learning outcomes are low” (Federal Government of Somalia, 2018, p. 17).

In 2018, the Strengthening Education and Training in Somalia (SETS) project conducted a baseline survey to fill the data/information gap in South and Central Somalia. This paper is extracted from the larger baseline survey report. These data could be of wider utility beyond the confines of SETS. The current paper focuses only on the status of *access* and *learning outcomes*. *Access* as used in this paper is limited to enrollment and school attendance. Other school quality related indicators such as pupils-to-classroom ratio, desks-to-pupils ratio, toilets-to-pupils ratio, teachers-to-students ratio, good governance and access to electricity and water are also considered. *Learning outcomes* in this paper refers to learners’ *performance in national standardized examinations* and *learning competency* in reading and numeracy. *Learning competency* (sometimes referred to as *literacy* in this paper) therefore stands for pupils’ achievement in reading and numeracy. Learning outcomes therefore refers to skills that a learner acquires after exposure to a literacy-enhancing educational environment/experience (Mulongo, 2017, p. 13).

2. Research statement

Achieving sustainable development outcomes in a post-conflict country such as Somalia requires development players to make informed decisions, particularly in resource allocation (Rondinelli & Montgomery, 2015). Unfortunately, a critical challenge that faces education, like many other sectors in post-conflict communities, is the lack of reliable data to inform planning, monitoring and evaluation (Earnest & Dickie, 2012). For instance, documenting and monitoring *access* and *learning*-related indicators are important, and central to improving standards in education. With regard to *access*, studies indicate that learners who remain in school and are engaged are less likely to fall behind academically, they achieve more in school (Department for Education, 2019), are more likely to get employment, and have improved social skills (Government of New Zealand, 2010). Meanwhile, monitoring learning outcomes helps teachers and students to know the progress they are making in school (Mahajan & Singh, 2017).

Therefore, because of their importance, obtaining the baseline status of the two criteria is a necessity for effective educational planning. This reason motivates investments in education management information systems (EMIS) as tools to capture and track progress in these key areas. A baseline survey provides the initial foundation to which subsequent progress can be compared. The data presented in this paper potentially fill this gap as far as *access* and *learning* indicators in South and Central Somalia are concerned.

The following, therefore, are the key research questions: *What is the current status of, and what are the patterns of enrollment and school*

attendance? What is the status of school infrastructure (such as classrooms, desks, access to electricity and toilets)? *and what is the current status of learning outcomes in South and Central Somalia?*

3. Methods

In terms of geographic scope, the survey covered five states, namely Banadir, Galmudug, Hir-Shabelle, South West and Jubbaland. These are the five target states for the SETS project. A total of 22 schools were sampled in these regions (see section 3.4. for details on sampling). Data were collected in September 2018. The approach in data collection for the current research was predominantly primary. The primary data collection involved field-level engagements through a survey questionnaire, the administration of competency tests, focus group discussions (FGDs) and key informant interviews. The survey questionnaire was administered to a) primary and secondary school head-teachers and b) primary and secondary school teachers. Focus group discussions were conducted with learners in both regular primary schools and non-formal education centers (NFEs). Similarly, key informant interviews were conducted with head teachers from regular primary schools and NFEs.

The competency test that featured Early Grade Mathematics Assessment (EGMA) and Early Grade Reading Assessment (EGRA) was administered to grades 5 and 6, although the assessments that were administered were for grade 4 competency levels. EGRA assessments were two-fold – Somali Literacy and English Literacy.

The EGRA and EGMA are widely-used assessment tools internationally, and their validity and reliability has been found to be internally consistent (Gochyyev, Mizunoya, & Cardoso, 2019). The EGRA and EGMA tools adopted for this study were sourced from Relief International, an international non-governmental organization that has implemented extensive education programs in Somalia. In the process of developing these tools, Relief International pre-tested and standardized all the test items in all the subjects, against the backdrop of comparative learning outcomes in Somalia, sourced from other project-level findings.

3.1. Somali literacy

The EGRA Somali Literacy test had eight tasks: Words; Reading and Comprehension level 1; Reading and Comprehension level 2; Oral Passage Reading; Reading and Comprehension level 3, Filling-in Blank Spaces; Writing Sentences in Negative Form; and Writing Sentences in the Future Tense. Appendix 1 gives further details on the scoring for EGRA – Somali Literacy.

3.2. English literacy

The EGRA English Literacy test had nine tasks: Letters; Words; Reading and Comprehension level 1; Oral Passage Reading; Reading and Comprehension level 2; Reading and Comprehension level 3; Filling-in Blank Spaces; Writing Sentences in Negative Form; and Writing Sentences in the Future Tense. Likewise, the scoring for EGRA English Literacy is as tabulated. Appendix 2 gives further details on this.

3.3. Mathematics/numeracy

The EGMA tests had 11 tasks: Missing Numbers; Addition level 1; Subtraction level 1; Addition level 2; Subtraction level 2; Word Problems – Addition and Subtraction; Multiplication level 1; Multiplication level 2; Division level 1; Division level 2; and Word Problems – Multiplication and Division. Appendix 3 shows how the scoring of the EGMA tasks was done.

3.4. Sampling

The study utilized cluster sampling and purposive sampling. In deciding the sample size of participating schools, a confidence level of

95% was preferred. To arrive at the specific schools to participate, first, the schools were clustered in states, and in each state, simple random sampling was used. However, due to the limited number of both primary and secondary schools in some states, the study covered the entire population. Additionally, in some states, the researchers purposively selected schools that had a good mix of internally displaced children.

An outline of the sampling for the learning institutions, based on the states as clusters, is shown below in Table 1.

3.4.1. Sampling learners for the administration of the competency tests

Cochran's (1977) formula was used for determining a representative sample size for large populations, to arrive at the number of learners who participated in the EGRA and EGMA assessments.

Bearing in mind that the SETS log-frame figure of the number of primary school children supported by the project in the target areas is 40,000 pupils, and using Cochran's formula thus:

$$n_o = \frac{z^2 pq}{e^2}$$

where:

n_o is the sample size

z is the selected critical value of desired confidence level

p is the estimated proportion of an attribute that is present in the population

$q = 1 - p$

e is the desired level of precision

This is how the sample was worked out:

$$n_o = \frac{1.96^2 * 0.5 * 0.5}{0.05^2}$$

$$n_o = \frac{1.96^2 * 0.5 * 0.5}{0.05^2}$$

$$n_o = 384.16 = 384$$

however, the sample being a finite one, the evaluation employed Cochran's recommended correction for a finite population using the formula thus:

$$n = \frac{n_o}{1 + \frac{n_o - 1}{N}}$$

here n_o is Cochran's sample size, N is the population, and n is the new, adjusted sample size.

$$n = \frac{384}{1 + \frac{384 - 1}{40,000}}$$

$$n = 380$$

Thereafter, this sample of 380 learners was distributed evenly among the 22 sampled schools. Thus, in each school, 18 learners were purposively

selected from Grades 5 and 6, following the outline tabulated below. This was based on last term's (February to May 2018) examination results. The sampling is shown below in Table 2. For competency tests, the target was 378 pupils for primary schools and 34 for the Beder Model (secondary) School. Ultimately, only 347 pupils sat the english literacy test; 336 sat the numeracy test and 323 pupils sat the somali literacy test.

All the Form 2 students at the Beder Model (secondary) School participated in the competency test assessments because of their low numbers (34 students).

A total of 28 enumerators were trained and deployed to help with data collection. Specifically, Baanadir and Hir-Shabelle each had 6 enumerators, Baidoa 4, Galmudug 6, and Kismaayo 6.

Ultimately, the evaluation involved 549 respondents in different categories as shown in Table 3.

3.5. Data analysis

Quantitative data (questionnaire and learning assessments) were analyzed using both Statistical Package for Social Sciences (SPSS) and MS Excel, to generate the relevant inferential and descriptive statistics. Open-ended questions in questionnaires were recorded and analyzed using basic thematic sorting and frequencies.

For learning assessments, the aggregate numeracy and literacy scores for all the tasks for each child were computed. These scores were determined by summing all the correct answers for a learner then dividing by the total possible marks in the test and multiplied by 100.

The results of the learning tests comprised the average score per task and an aggregate score for each test. They also presented the proportion of learners attempting a task, as well as those that attempted and passed a task that had a Stop Rule (one for Somali Literacy and two for English Literacy).

3.6. Ethical considerations

For confidentiality, appropriate measures were taken to prevent the respondents' data from being published or otherwise released in a form that would allow the identity of any subject to be disclosed or inferred. Anonymity was paramount in order to prevent unwitting breaches of confidentiality. For example, pupil's names were not inferred during data analysis. This study relies on data collected by the SETS project. The EGRA/EGMA tools were obtained from Relief International. Permission to use these materials was granted by SETS and appropriate acknowledgement is made.

Table 2
Sampling of pupils for learning assessments.

Grade	Performance Levels	Boys	Girls
Grade 5	Top performers	2	2
	Average performers	2	2
	Poor performers	2	2
Grade 6	Top performers	1	1
	Average performers	1	1
	Poor performers	1	1
Sub total		9	9
Total		18	

Table 1
Sampling of learning institutions.

Clusters (institutional Categories)	Sample								
	Population	Regions					Total	C.L	C.I
		Banadir	Galmudug	Hir-Shabelle	South West	Jubbaland			
Basic Education – Existing	18	4	3	1	1	1	10	0.95	±15.1
Secondary Education – Existing	2	1				1	2	0.95	±15.1
Additional Public Schools	25		2	3	3	3	11	0.95	±15.1
Total	45						22	0.95	±15.1

Table 3
Outline of survey respondents.

Respondent Category	Sex		Total
	Female	Male	
EGRA and EGMA	173	192	365
NFE Heads	0	6	6
NFE Learners	17	4	21
FGD, NFEs	1	8	9
FGD, Primary School Pupils	63	56	119
Survey Questionnaire, Primary School Heads	1	19	20
NFE Heads	0	6	6
Interview, Primary School Head	0	3	3
TOTAL	255	294	549

3.7. Limitations of the survey

The survey process was constrained, to varying degrees, by the following factors:

- The data collection had to be carried out in phases since it commenced when the schools were on the holiday break.
- Data collection from secondary schools was limited to the only existing institution – Beder Model School – in Kismaayu.
- The highest number of pupils who did the English Literacy competency assessment tests was 347, against a target of 380.

4. Findings

This section is organized as follows: the first sections (4.1–4.3) present findings on the indicators of access, while the remaining sections (4.4–4.6) highlight those related to learning outcomes.

4.1. General enrollment in primary and secondary schools (formal education)

The general enrollment in schools was captured for both formal and

non-formal education using the questionnaires for primary and secondary school headteachers and NFE heads. In addition, the enrollment of learners with disabilities and those in the reintegration program in formal education was surveyed.

In the primary schools, the enrollment for the sampled primary schools was 8282 learners (3719 girls). [Table 4](#) presents these data.

4.1.1. Enrollment in non-formal education centers

The previous and current enrollments for the NFE centers are shown in [Table 5](#). The data showed that five out of six centers recorded an increase in enrollment. Moreover, there were dynamics in the gender dimension: three centers recorded a drop in the number of females enrolled and two centers had experienced a drop in male enrollment. Previously, Docol A and NFE Centre had no male learners but currently each has 14.

4.1.2. Enrollment of learners with disabilities in primary and secondary schools

The evaluation computed the proportion of learners with disabilities to the entire enrollment population. The disability categories considered included those who were physically disabled, had a hearing impairment, were visually impaired or vocally impaired. The findings are illustrated in [Table 6](#).

4.1.3. Learners in the reintegration program in primary and secondary schools

The proportion of learners in the reintegration program compared to the entire enrollment was computed. These learners constituted the following categories: Internally Displaced Persons (IDPs), pastoralists and refugee returnees. The findings are as elucidated in [Table 7](#).

4.2. Attendance

For assessing attendance, the survey focused on perceptions about attendance and a headcount in both primary schools and NFE centers, and on awareness concerning school dropout and awareness of out-of-

Table 4
Enrollment in sampled schools.
The enrollment for Beder Secondary School was 42 (17 girls).

Grade	Sex	Jubbaland 4	Banadir 4	South West 3	Hir-Shabelle 3	Galmudug 5	Total 19
Class 1	Boys	214	238	138	130	161	881
	Girls	210	204	88	140	189	831
	Total	424	442	226	270	350	1712
Class 2	Boys	171	94	153	107	150	675
	Girls	121	89	117	107	171	605
	Total	292	183	270	214	321	1280
Class 3	Boys	118	132	143	93	188	674
	Girls	106	113	91	84	146	540
	Total	224	245	234	177	334	1214
Class 4	Boys	109	70	95	87	188	549
	Girls	86	53	62	83	157	441
	Total	195	123	157	170	345	990
Class 5	Boys	114	69	130	58	187	558
	Girls	74	45	80	59	115	373
	Total	188	114	210	117	302	931
Class 6	Boys	110	59	113	55	147	484
	Girls	89	38	71	58	119	375
	Total	199	97	184	113	266	859
Class 7	Boys	58	40	126	57	134	415
	Girls	68	41	74	53	82	318
	Total	126	81	200	110	216	733
Class 8	Boys	108	37	83	49	50	327
	Girls	64	27	47	57	41	236
	Total	172	64	130	106	91	563
Total	Boys	1002	739	981	636	1205	4563
	Girls	818	610	630	641	1020	3719
	Total	1820	1349	1611	1277	2225	8282

Table 5

Previous and current enrollment and percentage increase.

	Previous Enrollment (Pre-2018)			Current Enrollment (2018)			Increase in Enrollment		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Docol A NFE Centre	0	47	47	14	39	53	100%	–17%	13%
Docol B NFE Centre	0	47	47	14	39	53	100%	–17%	13%
Bandiradley A NFE	24	21	45	28	20	48	17%	–5%	7%
Bandiradley B NFE	35	41	76	40	51	91	14%	24%	20%
Galinsor A NFE	27	33	60	17	43	60	–37%	30%	0%
Galinsor B NFE	44	53	97	32	68	100	–27%	28%	3%

Table 6

Enrollment of learners with special needs.

Type of disability	Sex	Banadir	Jubbaland	South West	Hir-Shabelle	Galmudug	Total
Physically Disabled	Boys	0.14%	1.40%	0%	0.63%	0.66%	0.59%
	Girls	0.00%	1.22%	0%	0%	0.49%	0.40%
	Total	0.07%	1.32%	0%	0.31%	0.58%	0.51%
Hearing Impairment	Boys	0.14%	0.60%	0.20%	0%	0.17%	0.24%
	Girls	0.00%	0.49%	0.48%	0%	0.49%	0.32%
	Total	0.07%	0.55%	0.31%	0%	0.31%	0.28%
Visually Impaired	Boys	0.14%	1.00%	0%	0%	0.25%	0.31%
	Girls	0.00%	0.98%	0%	0%	0.20%	0.27%
	Total	0.07%	0.99%	0%	0%	0.22%	0.29%
Vocally Impaired	Boys	0.00%	0.50%	0%	0%	0.00%	0.11%
	Girls	0.00%	0.24%	0%	0%	0.10%	0.08%
	Total	0.00%	0.38%	0%	0%	0.04%	0.10%

Table 7

Enrollment of learners in the reintegration program.

Reintegration program		Banadir	Jubbaland	South West	Hir-Shabelle	Galmudug	Total
IDPs	Boys	36%	23%	37%	0%	0%	19%
	Girls	30%	22%	42%	0%	0%	17%
	Total	33%	23%	39%	0%	0%	18%
Pastoralists	Boys	0%	12%	0%	0%	6%	4%
	Girls	0%	2%	0%	0%	4%	1%
	Total	0%	2%	0%	0%	4%	1%
Refugee Returnees	Boys	2%	25%	5%	0%	0%	7%
	Girls	3%	28%	4%	0%	0%	7%
	Total	2%	26%	5%	0%	0%	7%

The IDPs constituted 18% (boys 19% and girls 17%) of the enrolled learners and South West State recorded the highest proportion – 39% (boys, 37% and girls, 42%). Hir-Shabelle and Galmudug reported none in this category. Pastoralists accounted for 2.5% (boys 4% and girls 1%) while refugee returnees constituted 7% (boys 7% and girls 7%). The majority of the refugee returnees were in Jubbaland – 26% (boys 25% and girls 28%).

Out of the 42 learners at Beder Secondary School, 12% (boys 10% and girls 14%) were in the reintegration program.

school children in primary schools only.

Learners' attendance was computed by taking a headcount of the learners present on the day of the visit divided by the current enrollment (based on the school records). The overall attendance for primary schools stood at 84% (boys 87% and girls 81%). Jubbaland had the highest attendance – 108% (boys 110% and girls 105%) – implying that there were more learners in class than those captured in the enrollment roster. Banadir had the least at 61% (boys 70% and girls 5%). The attendance for girls in Banadir was markedly low. Further details are shown in [Table 8](#).

4.2.1. Attendance by headcount at NFE centers

The researchers computed the attendance of the learners by taking a headcount on the day of the visit and comparing the number with the enrollment records. The average attendance for all the NFE centers was 76% (male 92% and female 63%). Bandiradley B NFE had the highest attendance rate at 88% (male 80% and female 94%). In Docol A and B NFE Centers, there were more male learners in class than in the enrollment roster, a pointer to school records that are not well updated. [Table 9](#) illustrates details of the headcount.

4.2.2. Awareness of out-of-school children

The evaluation analyzed the issue of out-of-school children (OOSC) for primary schools.¹ Learners acknowledged during the FGDs that were conducted that they were aware of cases of OOSC that were personally known to them. There was a higher incidence of OOSC on the part of girls (94.7%) compared to boys (89.5%). [Table 10](#) illustrates this.

In the learners' FGDs, the following reasons were given for the high incidents of OOSC:

For girls, these included the following: failure by parents to understand and appreciate the importance of education for girls; a negative attitude towards education and the warped belief that it is needless to attend school when you will soon be married off; financial constraints in meeting school fees and purchasing other essentials; the engagement of girls in domestic chores; child labor to supplement family income;

¹ To compute OOSC, we asked headteachers to estimate the number of OOSC based on the current number of children in the school. Secondly, we also did some incidental assessments, based on anecdotal estimations at the FGDs that we conducted. These included learners' and parents' FGDs.

Table 8

School attendance, disaggregated by gender, grade and state.

Grade – sex of learner		Banadir	Jubbaland	South West	Hir-Shabelle	Galmudug	Total
Grade 1	Boys	66%	39%	97%	52%	74%	64%
	Girls	25%	40%	90%	36%	83%	51%
	Total	47%	39%	94%	43%	79%	57%
Grade 2	Boys	64%	83%	88%	61%	81%	77%
	Girls	53%	107%	99%	41%	89%	81%
	Total	58%	93%	93%	51%	86%	79%
Grade 3	Boys	53%	131%	101%	67%	95%	90%
	Girls	47%	105%	99%	51%	97%	81%
	Total	50%	118%	100%	59%	96%	86%
Grade 4	Boys	89%	150%	98%	67%	90%	99%
	Girls	58%	163%	82%	59%	100%	97%
	Total	76%	156%	92%	63%	94%	98%
Grade 5	Boys	71%	110%	90%	84%	89%	91%
	Girls	78%	153%	91%	69%	103%	102%
	Total	74%	127%	90%	77%	94%	95%
Grade 6	Boys	85%	115%	93%	75%	82%	92%
	Girls	74%	92%	87%	76%	82%	83%
	Total	80%	105%	91%	75%	82%	88%
Grade 7	Boys	98%	245%	94%	93%	87%	113%
	Girls	85%	166%	88%	74%	79%	100%
	Total	91%	202%	92%	84%	84%	107%
Grade 8	Boys	86%	153%	90%	88%	28%	101%
	Girls	111%	141%	91%	68%	32%	91%
	Total	97%	148%	91%	77%	30%	97%
Totals	Boys	70%	110%	94%	69%	83%	87%
	Girls	51%	105%	92%	54%	89%	81%
	Total	61%	108%	93%	62%	86%	84%

The attendance for secondary schools was 56%. Boys had a higher attendance (65%) than girls (43%).

Table 9

Attendance by headcount – NFE centers.

NFE Centre	Headcount			Attendance by headcount		
	Male	Female	Total	Male	Female	Total
Docol A NFE Centre	19	16	35	136%	41%	66%
Docol B NFE Centre	19	16	35	136%	41%	66%
Bandiradley A NFE	25	15	40	89%	75%	83%
Bandiradley B NFE	32	48	80	80%	94%	88%
Galinsor A NFE	17	30	47	100%	70%	78%
Galinsor B NFE	21	39	70	66%	57%	70%
Totals	133	164	307	92%	63%	76%

Table 10

Awareness of out-of-school children.

	Girls		Boys	
	No. of Schools	%	No. of Schools	%
Banadir	3	75%	3	75%
Jubbaland	4	100%	4	100%
South West	3	100%	3	100%
Hir-Shabelle	3	100%	2	66.7%
Galmudug	5	100%	5	100%
Total	18	94.7%	17	89.5%

cultural beliefs and norms hindering girls' education e.g. that girls are incapable of managing their own affairs, and that girls are not equal to boys thus are not given equal opportunity to access education; early marriages.

These reasons corroborate the findings by UNICEF (2017, p. 20) regarding the reasons why girls don't attend school. The report notes that 'the low availability of sanitation facilities for girls, lack of female teachers, safety concerns and social norms that favor the education of boys inhibit parents from enrolling their daughters in school.'

For boys, the reasons for being out of school included the following: engagement in child labor; playing football in the neighborhood; poverty; low interest in going to school because they believe that they will not get quality education; lack of awareness about the importance of

education on the part of parents; inability to cope with the learning process and academic demands; sickness; some parents favoring girls over boys, hence a reluctance to take their boys to school; a belief on the part of some boys that attending school is against religion, thus they opt for Quranic school; drug abuse; challenges of (re)integration, especially for those who are refugees, returnees or IDPs; and socio-economic and cultural practices such as pastoralism.

The parents' FGDs also corroborated the reasons for OOSC, as shared by the learners through their FGDs. In addition, parents in Banadir state averred that some physically disabled learners do not attend school due to long distances and lack of transport services. Other reasons came from parents from South West State who cited lack of water, inadequate classrooms and lack of female teachers in the schools within their locus.

4.2.3. Pupil-to-teacher ratio

The pupil-to-teacher ratio (PTR) and the pupil-to-trained teacher ratio for primary and secondary schools were computed. In primary schools, there was an overall ratio of 1 teacher to 32 learners and 1 trained teacher to 101 pupils. A comparison between the ratios in Table 11 reveals that all the states in South and Central Somalia have a shortage of trained teachers. South West State had the highest number of trained teachers (1:253) and Banadir the lowest (1:38). For the secondary school, the PTR was at 1:11.

In the NFE centers there were two tutors per NFE centre on average and only Galinsor B had one trained teacher (male). All the other 12 tutors were untrained. This is illustrated in Table 12.

Table 11

Teacher-to-pupil ratio.

Level	State	Teacher – Pupil Ratio	Trained Teacher – Pupil Ratio
Primary	Jubbaland	35	72
	Banadir	19	38
	South West	34	253
	Hir-Shabelle	27	65
	Galmudug	43	72
	Total	32	101
Secondary	Jubbaland	6	11

Table 12
Teaching staff.

NFE Centre	Total No. of Teachers			Trained Teachers			Untrained Teachers		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Docol A NFE Centre	1	1	2	0	0	0	1	1	2
Docol B NFE Centre	1	2	3	0	0	0	1	2	3
Bandiradley A NFE	1	1	2	0	0	0	1	1	2
Bandiradley B NFE	1	1	2	0	0	0	1	1	2
Galinsor A NFE	2	0	2	0	0	0	2	0	2
Galinsor B NFE	2	0	2	1	0	1	1	0	1
Total	8	5	13	1	0	1	7	5	12
Average	1	1	2	0	0	0	1	1	2

4.3. Learning infrastructure

The learning infrastructure investigated comprised the sections of the school, classrooms in relation to pupils' numbers, furniture, connection to power, and school playgrounds and fences.

4.3.1. Pupil-classroom ratio

The findings showed that the pupil-classroom ratio (PCR) in South and Central Somalia region was 62. Hir-shabelle had the highest class size (92). Table 13 illustrates this situation.

More insights into the state of school classrooms were gained during the FGDs. For instance, in their respective FGDs, the majority of the pupils requested the construction of more classrooms and renovation of the existing ones. Gaalkayo Primary School pupils complained that their classrooms were small and needed to be expanded. Those in Docol Primary School indicated that some of their classrooms did not have roofs as these were carried away by heavy winds. Macmur Primary School pupils indicated that the temporary classes in their school ought to be renovated and upgraded to permanent status.

Regarding NFE centers, the survey revealed that there were, on average, two classes for literacy and two classes for numeracy in each NFE centre, which the NFE heads deemed to be adequate.

4.3.2. Classroom furniture

Data on classroom furniture were obtained from headteachers of both primary and secondary schools. Based on the MOECHE's recommended desk-to-pupil ratio of 1:3, in the sampled schools in South and Central Somalia, 4 primary schools had adequate furniture for learners while 15 had inadequate furniture. The inadequacy was also manifest in the secondary school. In Jubbaland and Hir-Shabelle, classroom furniture for pupils was inadequate. Only one out of four schools in Banadir, one out of three in South West State and two out of five in Galmudug had adequate furniture. Fig. 1 below illustrates this.

4.3.3. Connection to electric power

A total of 52.6% of the primary schools did not have electricity or any form/source of lighting. Notably, all the schools in Hir-Shabelle had no power connection, followed by Banadir (75%) and SouthWest State (66.7%). In Jubbaland, on the other hand, 75% of the sampled schools – both primary and the secondary school had power connectivity that was reliable. One school in Jubbaland and one in Galmudug had unreliable electricity.

Table 13
Pupils-classroom ratio for permanent classrooms.

School level	State	N	Mean
Primary	Jubbaland	4	52
	Banadir	4	36
	South West	3	75
	Hir-Shabelle	3	92
	Galmudug	3	64
	Total	17	62
Secondary	Jubbaland	1	11

Of the six NFE centers reached by this evaluation, only one had electricity.

4.3.4. Pupil-latrine ratio

On average, the South and Central Somalia region has 91 boys and 70 girls per toilet/latrine in primary schools. Banadir had 60 learners per latrine for boys, which is appropriate, but fell short of the standard in latrines for girls. The low enrollment at Beder Secondary School gave them a favorable toilet-pupil ratio (Table 14).

4.4. Curriculum and language of instruction in schools

School curriculum refers to a particular set of courses and activities that a school uses to foster education and meet the needs of learners (Doll, 1996). A curriculum helps teachers to deliver an effective and quality education because it sets standards, goals and learning outcomes that enable teachers to judge whether or not students are able to move onto the next level (Armstrong, 1989). The study established that schools were using three different curricula, namely, the UNICEF, the Somali Government and the Kenyan, as indicated in Table 16. Eleven schools were using the Somali Government curriculum, two schools were using the Kenyan curriculum and one school was using the UNICEF curriculum.

For the language of instruction, the results show that eight (8) out of the 19 sampled primary schools used English language exclusively, another eight (8) used Somali exclusively, three (3) used both English and Somali and one (1) used a mix of English, Somali and Arabic. In terms of the regions, all sampled schools in Galmudug used English, while all in Hir-Shabelle used Somali. In Jubbaland, three (3) out of the five (5) sampled schools used both English and Somali. The use of mixed English, Somali and Arabic was only found in the South West State.

In the secondary school, both English and Somali were used while in the NFE centers Somali was the only language of instruction.

4.5. End of primary/secondary examination and performance

Usually, a national exit examination is a standardized evaluation system of primary and secondary education for transition to the next level of education or to career training. Bishop (1999) argues that there is a positive correlation between external exit examinations and internal efficiency in an educational system. Further, he notes that the prospect of an external exit examination has a bearing on how teachers teach and how pupils study.

The evaluation established that for South and Central Somalia, learners either sat for the Federal Government of Somalia (FGS) examination or for an internal examination, as illustrated in Table 17 below.

The performance of the learners in the end-of-primary examination was computed based on the examination they took, and the mean scores are summarized in Table 18. Only three subjects were tracked, namely, Somali language, English language and mathematics.

In the 2018 primary examination results, the average mean score for Somali was high in schools that used internal examinations (88.3%) while those for English (72.1%) and mathematics (75.5%) were high for schools that used the FGS end-of-primary examination.

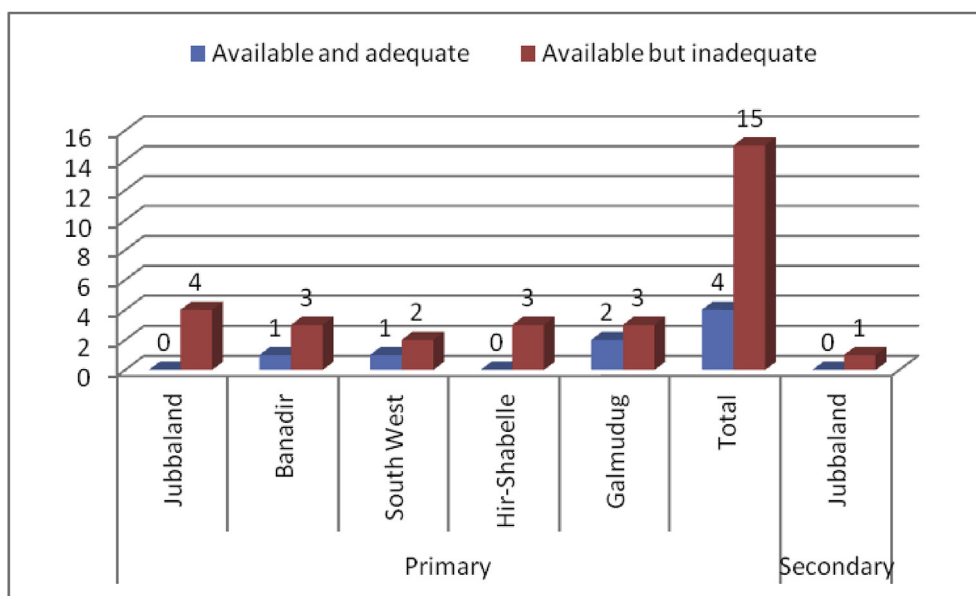


Fig. 1. Furniture for pupils.

Table 14

Latrine-to-pupil ratio.

Level	State	Boys - latrine ratio	Girls - latrine ratio
Primary	Jubbaland	77	64
	Banadir	60	59
	South West	102	87
	Hir-Shabelle	147	
	Galmudug	92	72
	Total	91	70
Secondary	Jubbaland	3	2

The ratio of student-latrine in the NFE centers revealed ideal ratios in all centers except at Galinsor B (Table 15). This was largely driven by the low levels of enrollment in these centers.

Table 15

Student-to-latrine ratio.

NFE Centre	Students Latrines	
	Male	Female
Docol A NFE Centre	14	39
Docol B NFE Centre	14	39
Bandiradley A NFE	14	20
Bandiradley B NFE	40	51
Galinsor A NFE	17	43
Galinsor B NFE	No latrines for 68	No latrine for 100

In terms of gender analysis, when learners took the FGS examination, boys achieved higher mean scores in Somali and English languages than girls, but in mathematics, girls recorded a higher mean score than boys. When learners took internal examinations, boys had a higher mean score than girls in Somali language, a slightly higher mean score in English but the same score in mathematics. Further details are provided in Table 18.

Table 16

School curricula.

Curriculum	Jubbaland	Banadir	South West	Hir-Shabelle	Galmudug	Total
Curriculum by UNICEF	0	1	0	0	0	1
Somali Govt Curriculum	3	3	2	2	1	11
Kenyan Curriculum	0	0	0	0	2	2
Somali & Kenyan Curriculum	1	0	0	0	0	1
Totals	4	4	2	2	3	15

4.6. Pupils learning assessment results

4.6.1. Scores for Somali literacy

The first part of this analysis is presented based on the learners that attempted each task by state, region, grade and gender. In primary schools, tasks one to six were attempted by over 90% of the learners; only 13% of learners attempted tasks seven and eight. In the secondary school, 100% of pupils attempted tasks 1, 2, 3, 5 and 6, and 94% attempted task 4.78% of learners attempted task 7, and 67% attempted task 8. These findings are further illustrated in Table 19.

In the entire South and Central Somalia region, the aggregate score for Somali Literacy was 26.3% for primary school pupils and 30.9% for those in secondary school. In the primary schools category, Banadir (30.7%) had the highest aggregate score (30.7%), followed by Galmudug (29.5%), Hir-shabelle (27.0%), Jubbaland (22.2%) and South West State (21.3%). Fig. 2 below gives a graphical comparison of how states performed against each other.

In terms of performance by grade and gender, Grade 5 had an aggregate score of 25.7% (boys 26.1% and girls 25.2%), while Grade 6 had an aggregate score of 27.3% (boys 26.6% and girls 28.3%). The secondary school students had an aggregate score of 31.1% (boys 32.5% and girls 28.4%). Focusing on gender, girls had a slightly higher aggregate score (26.4%) than boys (26.3%) in primary school. However, in secondary school, boys had a higher aggregate score (32.3%) than girls (28.2%) as shown in Fig. 3.

Appendix 4 gives an overall picture of the performance in Somali Literacy, covering the findings discussed in the preceding sections.

4.6.1.1. Implications of the timed tasks and the stop rule. Task 1 (Words) and task 4 (Oral Passage Reading) were timed, which partly explains the reason for low average scores in these tests compared to the others. Task 6, on the other hand, had a stop rule; the learner could only proceed to

Table 17

Type of end of primary/secondary examination.

Type of examination	Jubbaland	Banadir	South West	Hir-Shabelle	Galmudug	Total
No response	0	2	0	1	0	3
Federal Government of Somalia End of Primary Exam	3	1	2	1	2	9
No Grade 8 Classes yet	1	1	1	1	2	6
Internal Examination	0	0	0	0	1	1

Table 18

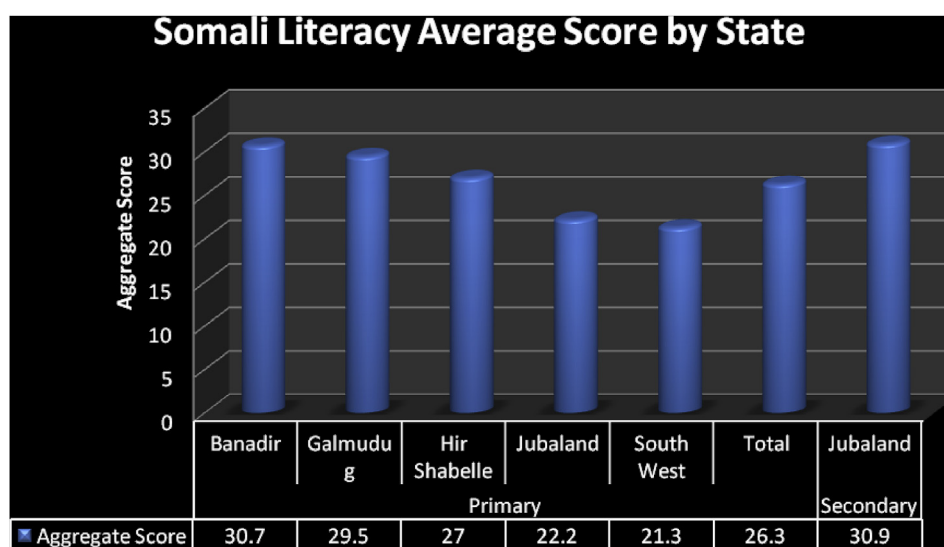
End-of-primary school performance based on exit examinations.

Examination in 2018	No. of Schools	Candidates	Somali Mean Score	English Mean Score	Mathematics Mean Score
Federal Government of Somali End of Primary Exam	Boys	6	273	79.0	71.7
	Girls	7	127	76.1	68.9
	School	7	400	78.6	72.1
Internal Examination	Boys	1	14	89.2	63.2
	Girls	1	16	87.3	65.3
	School	1	30	88.3	64.3

Table 19

Learners that attempted each task in Somali Literacy – primary and secondary.

Level	Grade	Sex	N	Words	Reading and Comprehension 1	Reading and Comprehension 2	Oral Passage Reading	Reading and Comprehension 3	Filling in Blank Spaces	Writing Sentences in Negative Form	Writing Sentences in Future Tense
Primary	Class 5	Boy	106	100%	100%	100%	97%	98%	94%	14%	14%
		Girl	86	99%	98%	98%	93%	98%	95%	12%	9%
		Total	192	99%	99%	99%	95%	98%	95%	13%	12%
	Class 6	Boy	77	100%	100%	100%	100%	100%	95%	8%	9%
		Girl	55	100%	100%	100%	98%	98%	95%	22%	20%
		Total	132	100%	100%	100%	99%	99%	95%	14%	14%
	Total	Boy	183	100%	100%	100%	98%	99%	95%	11%	12%
		Girl	141	99%	99%	99%	95%	98%	95%	16%	13%
		Total	324	100%	99%	99%	97%	98%	95%	13%	13%
Secondary	Form 2	Boy	12	100%	100%	100%	92%	100%	100%	92%	83%
		Girl	6	100%	100%	100%	100%	100%	100%	50%	33%
		Total	18	100%	100%	100%	94%	100%	100%	78%	67%

**Fig. 2.** Somali Literacy average score by state.

the other tasks if he/she got all questions in this task correct. This also explains the low average scores in the succeeding tasks (7 and 8).

An analysis of the stop rule at task 6 revealed that only a few learners out of those who attempted the task passed and proceeded to tasks 7 and 8. In the primary schools, only 16.6% of the 307 learners who attempted

task 6 passed, while in the secondary school, 77.8% of the 18 learners who attempted the task passed. [Table 20](#) further illustrates this finding.

[Appendix 5](#) gives an overall picture of the learners who attempted and passed Task 6 that had a stop rule.

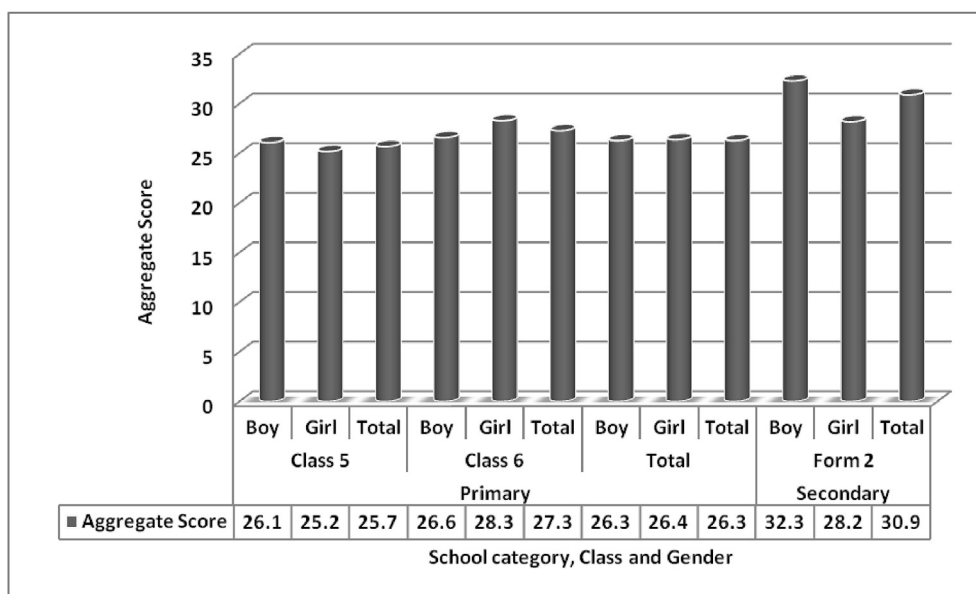


Fig. 3. Somali Literacy scores for primary and secondary by class and gender.

4.6.2. Scores for English literacy

The first part of this analysis is presented based on the learners who attempted each task by state, region, grade and gender. In the primary schools, the total of those attempting task 1 starts at a high of 99% and dips to 2% by the time the assessment reaches task 9, which is the last one. In the secondary school, participation is steadier, starting off at 100% for task 1 and levelling out to 78% at task 9. Further findings are shown below in Table 21.

Appendix 6 gives a more detailed breakdown of how learners attempted the different assessment tasks in each state.

4.6.2.1. Performance summary. In the entire South and Central Somalia region, the aggregate scores for English Literacy were 45.0% for pupils in primary and 82.1% for those in secondary school. Breaking this down by state, in the primary schools, Hir-Shabelle had the highest aggregate score (62.6%), followed by Jubbaland (49.9%), Galmudug (43.2%), Banadir (40.3%) and South West State with the lowest at 29.4% (Fig. 4).

4.6.2.2. English literacy by grade and gender performance. Grade 5 had an aggregate score of 43.4% (boys 45.3% and girls 41.4%), while Grade 6 had an aggregate score of 47.3% (boys 45.7% and girls 49.2%). The aggregate score for secondary school students was 82.1% (boys 84.2% and girls 78.0%). Focusing on gender, boys had a slightly higher aggregate score of 45.5% and 84.2% for primary and secondary schools respectively, compared to girls (44.4% and 78.0%) as shown in Fig. 5.

A further analysis of the findings, comparing gender and grade performance in each state is contained in Appendix 7.

4.6.2.3. Implications of the stop rule. In the English Literacy test, tasks 3 and 7 had a stop rule. In the sampled primary schools, only 35% of the

learners who attempted task 3 managed to pass and progress to other tasks. In terms of gender, slightly more boys (36%) than girls (34%) passed task 3. Looking at grade differentiation, there were more Grade 6 learners (41%) passing task 3 than those in grade 5 (31%).

All learners in secondary school successfully passed task 3. Further details are illustrated in Table 22.

Only 7% (boys 6% and girls 7%) of the learners in primary school who attempted task 7 passed. In secondary school, 78% of those who attempted it passed. This is illustrated below in Table 23.

4.6.3. Scores for the numeracy test

In the entire South and Central Somalia regions, the aggregate score for Numeracy was 64.5% for pupils in primary school and 87% for those in secondary school. In both primary and secondary schools, boys achieved higher scores than girls. In Grade 5 boys scored 65.4% while girls scored 62.1%. In Grade 6, boys achieved 66.6% and girls 64.3% while in secondary school, the boys scored 90.9% while the girls scored 79.3%. The difference in scores across gender is more pronounced in secondary than in primary (Fig. 6).

4.6.3.1. Comparison of performance between states. In primary schools, Hir-Shabelle had the highest aggregate score (73.8%), followed by Jubbaland (71.0%), Galmudug (67.7%), Banadir (54.8%) and South West State with the lowest score at 52.9% as shown in Fig. 7.

4.6.3.2. Implications of timed tasks. Task 2 (Addition Level 1) and task 3 (Subtraction Level 1) were timed. The researchers analyzed the average amount of time in seconds that remained of the total amount of time permitted for answering each task (60 s). Learners in primary school had 5 s remaining for both tasks while those in secondary were much faster, and had 6 and 9 s remaining on the timer for task 2 and task 3 respectively. The analysis is shown in Table 24.

5. Discussion and recommendations

The Post-conflict Education Management Information System (EMIS) for the Federal Government of Somalia is still evolving. The Ministry of Education, Culture and Higher Education's (MOECHE's) Education Statistics Yearbook 2017 indicated that 250,350 pupils (115,082 girls) were enrolled in 848 primary schools in the country, of which 829 (97.8%) were formal primary schools with integrated Quranic schools (IQSS) and

Table 20

Somali Literacy – learners who passed Task 6.

Level	Sex	Learners who passed Task 6	Total learners who attempted Task 6	Percent
Primary	Boy	24	173	13.9
	Girl	27	134	20.1
	Total	51	307	16.6
Secondary	Boy	11	12	91.7
	Girl	3	6	50.0
	Total	14	18	77.8

Table 21

Learners who attempted each task in English Literacy – primary and secondary.

			N	Letters	Words	Reading and comprehension 1	Oral passage reading	Reading and comprehension 2	Reading and comprehension 3	Filling in blank Spaces	Writing sentences in negative form	Writing sentences in future tense
Primary	Class 5	Boy	106	99%	83%	100%	32%	33%	33%	33%	2%	2%
		Girl	102	99%	81%	100%	29%	29%	29%	28%	3%	3%
		Total	208	99%	82%	100%	31%	31%	31%	31%	2%	2%
	Class 6	Boy	74	99%	85%	99%	39%	39%	39%	39%	3%	3%
		Girl	65	100%	86%	98%	42%	42%	42%	42%	3%	2%
		Total	139	99%	86%	99%	40%	40%	40%	40%	3%	2%
	Total	Boy	180	99%	84%	99%	35%	36%	36%	36%	2%	2%
		Girl	167	99%	83%	99%	34%	34%	34%	34%	3%	2%
		Total	347	99%	84%	99%	35%	35%	35%	35%	3%	2%
Secondary	Form 2	Boy	12	100%	100%	100%	100%	100%	100%	100%	83%	83%
		Girl	6	100%	100%	100%	100%	100%	100%	100%	67%	67%
		Total	18	100%	100%	100%	100%	100%	100%	100%	78%	78%

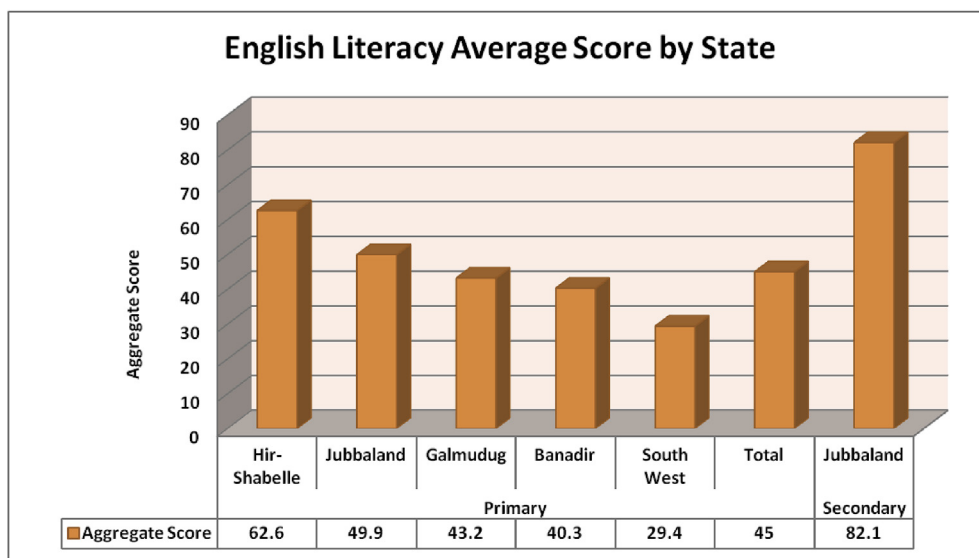


Fig. 4. English Literacy score by state.

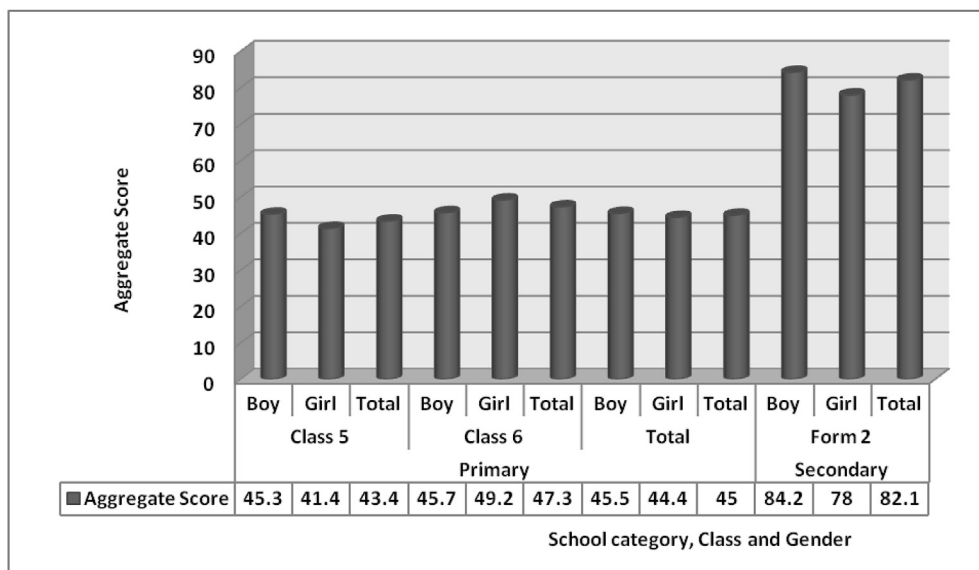


Fig. 5. English Literacy scores for primary and secondary by grade and gender.

Table 22

Performance in task 3 by primary school pupils.

Grade	Sex	Learners that passed task 3	Total learners that attempted task 3	Percent
Grade 5	Boy	35	106	33%
	Girl	30	102	29%
	Total	65	208	31%
Grade 6	Boy	29	73	40%
	Girl	27	64	42%
	Total	56	137	41%
Total	Boy	64	179	36%
	Girl	57	166	34%
	Total	121	345	35%

Table 23

Performance in task 7.

Level	Grade	Learners who passed task 7	Total learners who attempted task 7	Percent
Primary	Class 5	4	64	6%
	Class 6	4	56	7%
	Total	8	120	7%
Secondary	Form 2	14	18	78%

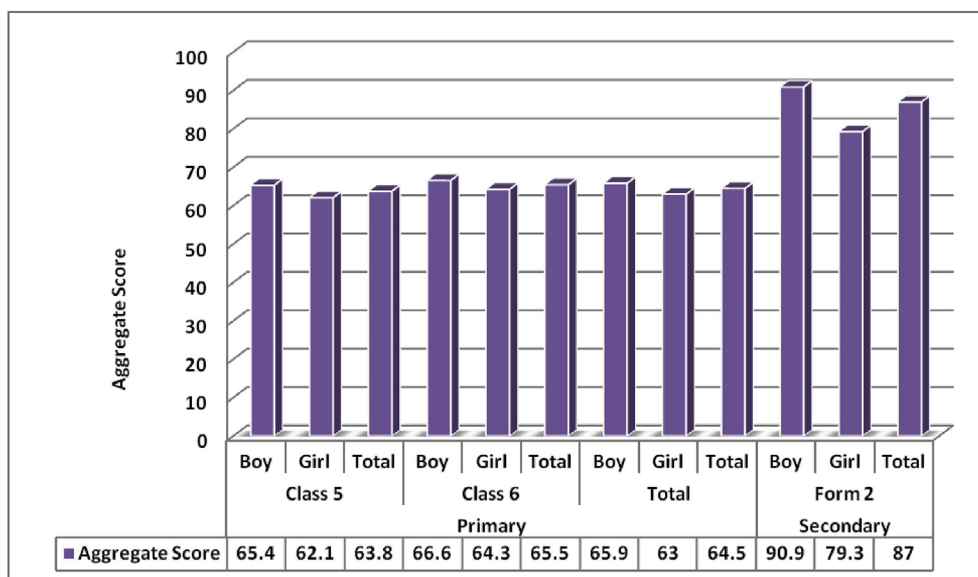
19 (2.8%) were Alternative Basic Education (ABE) centers. The enrollment in 428 formal secondary schools stood at 85,582 (36,842 girls). However, access to school is still low in post-conflict Somalia. The Gross Enrollment Rate (GER) and Net Enrollment Rate (NER) stand at 21% and 17% respectively in primary schools. In secondary schools, the GER is 18.1% and the NER 7.4%. Moreover, for the five regions covered in this study, the data showed that in addition to low enrollment, the overall attendance at primary schools was still low, at 84% (boys at 87% and girls at 81%), while attendance at secondary schools was 56%. Attendance for boys was higher than for girls (65% and 43%, respectively). These data reveal that access to school is still a challenge for most school-aged children. Additionally, there are stark gender disparities in accessing formal education in Somalia, particularly at the secondary level, with girls the most affected.

To improve access and bridge the gender inequalities, a number of interventions should be considered.

Enrollment by pastoralists accounted for 2.5% of the total enrollment, while for refugee returnees it was only 7%. The low numbers of enrolled learners categorized as pastoralists emphasizes the need to develop a framework that delivers education to them beyond the traditional school set up. [UNICEF \(2016\)](#) noted that pastoralist communities made up a quarter of the Somali population; adapting approaches to ensure that all children living in these settings have access to basic education is critical.

The need for sustained awareness and enrollment drives cannot be gainsaid. The focus group discussions on attendance revealed that failure on the part of parents to ensure that their children attended school regularly was to blame for the high absenteeism. Other reasons that account for poor attendance include poverty and an unsupportive school environment for learners with disabilities. The research participants indicated that financial constraints affected parents' ability to pay fees and to buy uniforms and other school materials for their children. This is consistent with many studies and surveys conducted previously in Somalia, that flagged up the knock-on effects of poverty on many facets of life. The [World Bank \(2016\)](#) indicated that around 51% of the population lived in extreme poverty. The situation is even worse in the IDP camps where 70% of the inhabitants are estimated to live in poverty, followed by the Mogadishu area with 58%. Pupils noted during the FGDs that there was no water for washing hands in their latrines and that some of the latrines were full, hence, essentially, out of use. This is a pointer to the need to broaden interventions to focus on renovating some of the existing toilets/latrines and to provide related services like hand-washing facilities.

It is clear from the related indicators that the learning environment and the quality and quantity of facilities and equipment are still poor. The study has established that the pupil-classroom ratio in primary schools averages 22 learners more than the recommended 40 learners per class. Some regions such as Hir-shabelle had a class size of 92, more than double the standard class size. Large classes are obstacles to effective teaching and learning and result in poor educational outcomes; they are not conducive for giving pupils individual attention; they hinder the provision of adequate learning materials; and they have been blamed for general student indiscipline. The study further revealed that only 20% of the schools had adequate furniture for learners to use in the classrooms, and more than 50% of the primary schools did not have a source of power. The pupil-latrine/toilet ratio for the region was one toilet/latrine for 91 boys and one for 70 girls; this is far higher than the required ratio of 1:60 and 1:30 for boys and girls respectively ([Spheres Standards, 2011](#)).

**Fig. 6.** Numeracy Scores for primary and secondary by class and gender.

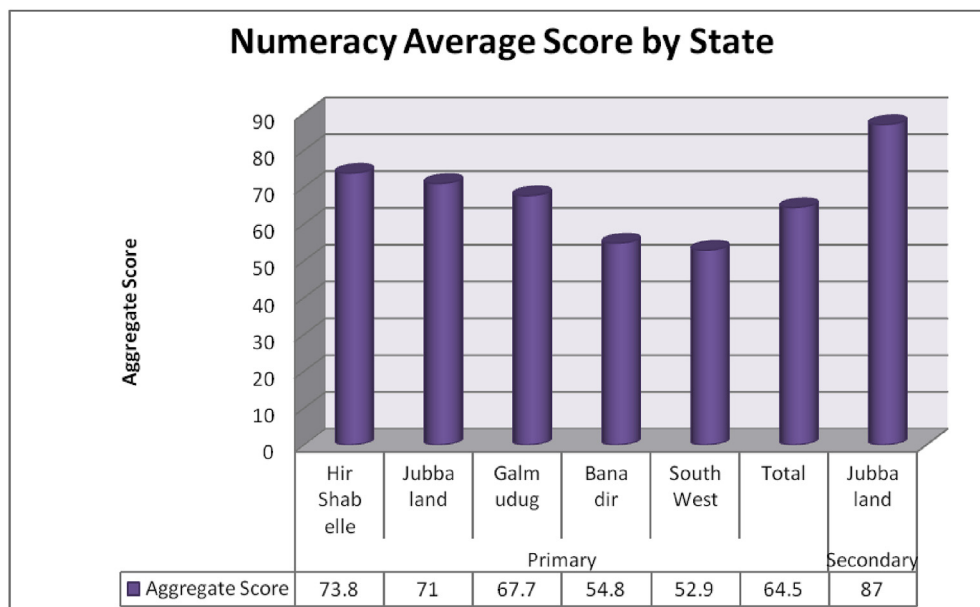


Fig. 7. Performance in Numeracy Assessment by state.

Table 24

Average time remaining on timer and total number of sums attempted.

Level	Grade	Sex	N	Task 2: Addition 1		Task 3: Subtraction 1	
				Time Remaining	Sums attempted	Time Remaining	Sums attempted
Primary	Class 5	Boy	101	5	10	5	10
		Girl	98	5	10	5	10
		Total	199	5	10	5	10
	Class 6	Boy	73	4	10	5	10
		Girl	64	5	9	4	10
		Total	137	4	10	4	10
	Total	Boy	174	5	10	5	10
		Girl	162	5	10	4	10
		Total	336	5	10	5	10
Secondary	Form 2	Boy	12	6	10	9	10
		Girl	6	6	10	9	10
		Total	18	6	10	9	10

The teacher-pupil ratio and the trained teacher-pupil ratio for primary and secondary schools reveal that all the states in South and Central Somalia have a huge deficiency of trained teachers, with states such as the South West posting a ratio of 1:253, compared with global trends, where the average PTR is about 1:24 (UNESCO, 2017). The need for more trained teachers in the Federal State of Somalia is therefore overwhelming.

The findings further indicated that schools in South and Central Somalia were using three different curricula, namely those of UNICEF, the Somali Government and Kenya. There is a need for education stakeholders to work with MOECHE to establish a standardized curriculum across the SCS.

Learners in SCS sit either for the FGS examination or for an internal examination. Hopefully, education stakeholders in the country will work towards supporting MOECHE in instituting nationwide exit examinations at the end of both the primary and the secondary schooling cycles. Moreover, there is a need to conduct a survey of learning outcomes at the national level. This will move the measure from project-based data that in most cases cannot be applied generally, to more reliable, national-level data which can be used by other development partners. This position is corroborated in the MOECHE (2018, p. 17) report, which notes that 'information on student learning outcomes is very limited or unreliable' and further makes an accurate guestimate that 'it is highly likely that

learning outcomes are low'.

Nonetheless, the current study, although narrow in scope, has demonstrated that not all school-aged children in SCS are accessing school. School attendance is very low, and as demonstrated by the learning assessment, learners are seldom learning. The study has revealed that although the aggregate score for numeracy was 64.5% in primary schools, literacy skills are still low for both Somali language and English language in the whole of South and Central Somalia (the aggregate score was 26.3% and 45% for Somali and English Literacy respectively for pupils in primary school).

Investing in staffing and teacher training are critical pathways to improving the classroom experience for learners at all levels. The quality of learning will always be tied to the availability and competence of teachers. Supplementary interventions such in-service teacher training would play an important role in strengthening the degree of competence among teachers.

Moreover, adequate staffing and financing of the Quality Assurance and Standards units within both the federal- and state-level ministries would play a pivotal role in enhancing accountability on the part of schools to deliver on their mandate. Furthermore, it is essential that Quality Assurance and Standards Officers (QASOs) are supported in travelling around to carry out their work.

Credit author statement

We declare that this manuscript has not been published previously and is not under simultaneous review elsewhere.

Acknowledgements

The Strengthening Education and Training in Somalia (SETS) project

commissioned the authors to design and conduct the baseline survey from which this paper is extracted. The authors would also like to thank SETS for granting permission to make these findings public. The EGRA and EGMA tools adopted for this study were obtained from Relief International. We are grateful to Relief International for allowing SETS to adopt these instruments.

Appendices.

Table A1
Outline of Somali Literacy assessment

EGRA – SOMALI LITERACY			
Task	Tasks	Number of Items	Scoring
1	Words	There were 60 words to be read in 1 min.	Any correct word was awarded one mark giving a maximum of 60 marks (equal weighting). To get a score for each pupil, the correct words read per minute were converted to 100 points
2	Reading and comprehension Level 1	There was a short story to be read and 4 questions to be answered	Upon completing reading the story, the pupil responded to 4 questions. Score for each child was converted into 100 points.
3	Reading and comprehension Level 2	There was a short story to be read and 4 questions to be answered	Upon completing reading the story, the pupil responded to 4 questions. Score for each child was converted into 100 points.
4	Oral Passage Reading	The story had 489 words to be read in a minute.	The correct words read in the oral passage per minute were noted. The score for correct words read per minute for each pupil was converted into 100 points.
5	Reading and comprehension Level 3	The comprehension questions were four (4) based on the story in level 4.	For comprehension questions, there were four (4) questions with equal weighting. Score for each pupil was converted into 100 points.
6	Filling-in Blank Spaces	There were 3 questions	The filling-in blank spaces in sentences had 3 sentences. Each sentence was a score totaling to 3. Score for each pupil was converted into 100 points.
7	Writing Sentences in Negative Form	There were 2 questions	NB: This level was early stop rule - if the pupil failed any question, they stopped. Writing Sentences in Negative Form had 3 sentences. Each sentence was a score totaling to 3. Score for each pupil was converted into 100 points.
8	Writing Sentences in the Future Tense	There were 2 questions	Writing Sentences in future tense had 3 sentences. Each sentence was a score totaling to 3. Score for each pupil was converted into 100 points.

Table A2
Outline of Numeracy Assessment

EGMA - Numeracy Test			
Task	Tasks	Number of Items	Scoring
1	Missing Number	There were 10 items where the pupil was to fill the missing numbers	The score for every pupil calculated by taking the correct scores/10 and then converted into 100 points.
2	Addition Level 1	There were 10 items where the pupil was to provide the answers in a minute	The score of the pupil calculated by taking the correct scores per minute/10 and then converted into 100 points.
3	Subtraction Level 1	There were 10 items where the pupil was to provide the answers in a minute	The score of the pupil calculated by taking the correct scores per minute/10 and then converted into 100 points.
4	Addition Level 2	There were 5 items	The score for every pupil calculated by taking the correct scores/5 and then converted into 100 points.
5	Subtraction Level 2	There were 5 items	The score for every pupil calculated by taking the correct scores/5 and then converted into 100 points.
6	Word Problems-Addition and Subtraction	There were 4 items	The score for every pupil calculated by taking the correct scores/4 and then converted into 100 points.
7	Multiplication Level 1	There were 5 items	The score for every pupil calculated by taking the correct scores/5 and then converted into 100 points.
8	Multiplication Level 2	There were 5 items	The score for every pupil calculated by taking the correct scores/5 and then converted into 100 points.
9	Division Level 1	There were 5 items	The score for every pupil calculated by taking the correct scores/5 and then converted into 100 points.
10	Division Level 2	There were 5 items	The score for every pupil calculated by taking the correct scores/5 and then converted into 100 points.
11	Word Problems-Multiplication and Division	There were 2 items	The score for every pupil calculated by taking the correct scores/2 and then converted into 100 points.

Table A3
Outline of English Literacy Assessment

EGRA – ENGLISH LITERACY			
Task	Tasks	Number of Items	Scoring
1	Letters	There were 100 letters to be identified	Any correctly identified letter was awarded one mark giving a maximum of 100 marks (equal weighting).
2	Words	There were 50 words to be read in 1 min.	Any correct word was awarded one mark giving a maximum of 50 marks (equal weighting). To get a score for each pupil, the correct words read per minute were converted to 100 points
3	Reading comprehension Level 1	There was a short story to be read and 4 questions to be answered	Upon completing reading the story, the pupil responded to 4 questions. Score for each child was converted into 100 points.
4	Oral Passage Reading	The story had 174 words to be read in a minute.	NB: This level was early stop rule level 1- if the pupil failed any question, they stopped. The correct words read in the oral passage per minute were noted. The score for correct words read per minute for each pupil was converted into 100 points.
5	Reading comprehension Level 2	The comprehension questions were four (4) based on the story in level 4.	For comprehension questions, there were four (4) questions with equal weighting. Score for each pupil was converted into 100 points.
6	Reading comprehension Level 3	The comprehension questions were four (4)	For comprehension questions, there were four (4) questions with equal weighting. Score for each pupil was converted into 100 points.
7	Filling-in Blank Spaces	There were 4 questions	The filling-in blank spaces in sentences had 4 sentences. Each sentence was a score totaling to 4. Score for each pupil was converted into 100 points.
8	Writing Sentences in Negative Form	There were 2 questions	NB: This level was early stop rule level 2- if the pupil failed any question, they stopped. Writing Sentences in Negative Form had 2 sentences. Each sentence was a score totaling to 2. Score for each pupil was converted into 100 points.
9	Writing Sentences in the Future Tense	There were 2 questions	Writing Sentences in future tense had 2 sentences. Each sentence was a score totaling to 2. Score for each pupil was converted into 100 points.

Table A4
Somali Literacy Scores for Primary and Secondary Schools by State, Class and Gender

			N	Words	Reading and Comprehension 1	Reading and Comprehension 2	Oral Passage Reading	Reading and Comprehension 3	Filling in Blank Spaces	Writing Sentences in Negative Form	Writing Sentences in Future Tense	Aggregate Score
Banadir	Class 5	Boy	19	73.9	89.5	39.5	21.3	55.3	29.8	5.3	0.0	27.4
		Girl	14	80.1	96.4	50.0	24.1	41.1	33.3	7.1	7.1	30.8
		Total	33	76.5	92.4	43.9	22.5	49.2	31.3	6.1	3.0	28.8
	Class 6	Boy	12	82.5	95.8	52.1	25.6	50.0	27.8	0.0	2.8	32.2
		Girl	11	77.1	79.5	52.3	29.1	70.5	30.3	6.1	0.0	34.4
		Total	23	79.9	88.0	52.2	27.3	59.8	29.0	2.9	1.4	33.3
	Total	Boy	31	77.2	91.9	44.4	23.0	53.2	29.0	3.2	1.1	29.3
		Girl	25	78.8	89.0	51.0	26.3	54.0	32.0	6.7	4.0	32.4
		Total	56	77.9	90.6	47.3	24.4	53.6	30.4	4.8	2.4	30.7
South West	Class 5	Boy	17	58.7	72.1	47.1	14.1	61.8	13.7	0.0	0.0	19.4
		Girl	13	54.7	80.8	38.5	14.9	61.5	20.5	0.0	0.0	19.8
		Total	30	57.0	75.8	43.3	14.4	61.7	16.7	0.0	0.0	19.6
	Class 6	Boy	14	62.0	87.5	57.1	23.6	66.1	21.4	0.0	0.0	28.1
		Girl	8	50.8	59.4	46.9	11.2	62.5	16.7	0.0	0.0	16.1
		Total	22	58.0	77.3	53.4	19.1	64.8	19.7	0.0	0.0	23.8
	Total	Boy	31	60.2	79.0	51.6	18.4	63.7	17.2	0.0	0.0	23.4
		Girl	21	53.3	72.6	41.7	13.5	61.9	19.0	0.0	0.0	18.4
		Total	52	57.4	76.4	47.6	16.4	63.0	17.9	0.0	0.0	21.3
Jubbaland	Class 5	Boy	18	82.4	100.0	72.2	15.3	65.3	38.9	14.8	16.7	23.6
		Girl	19	80.5	93.4	80.3	14.2	51.3	33.3	5.3	8.8	22.5
		Total	37	81.4	96.6	76.4	14.8	58.1	36.0	9.9	12.6	23.0
	Class 6	Boy	20	76.0	92.5	65.0	13.4	52.5	33.3	5.0	5.0	21.2
		Girl	15	77.1	96.7	63.3	13.4	51.7	37.8	17.8	24.4	21.5
		Total	35	76.5	94.3	64.3	13.4	52.1	35.2	10.5	13.3	21.3
	Total	Boy	38	79.0	96.1	68.4	14.3	58.6	36.0	9.6	10.5	22.3
		Girl	34	79.0	94.9	72.8	13.9	51.5	35.3	10.8	15.7	22.0
		Total	72	79.0	95.5	70.5	14.1	55.2	35.6	10.2	13.0	22.2
Galmudug	Class 5	Boy	25	79.3	87.0	68.0	24.0	48.0	46.7	12.0	2.7	30.7
		Girl	30	79.0	79.2	60.0	18.3	46.7	57.8	13.3	8.9	25.8
		Total	55	79.1	82.7	63.6	20.9	47.3	52.7	12.7	6.1	28.0
	Class 6	Boy	19	80.0	82.9	64.5	19.6	32.9	59.6	8.8	1.8	27.1
		Girl	15	89.2	93.3	75.0	30.3	23.3	82.2	24.4	13.3	37.8
		Total	34	84.1	87.5	69.1	24.3	28.7	69.6	15.7	6.9	31.8
	Total	Boy	44	79.6	85.2	66.5	22.1	41.5	52.3	10.6	2.3	29.2
		Girl	45	82.4	83.9	65.0	22.3	38.9	65.9	17.0	10.4	29.8
		Total	89	81.0	84.6	65.7	22.2	40.2	59.2	13.9	6.4	29.5
Hir					Shabelle	Class 5	Boy	27	86.9	99.1	76.9	18.0
	19.4	24.7	7.4	3.7	26.6							
	Girl	9		88.7	100.0							0.0
	Total	36		87.4	99.3	79.2	18.4	18.1	22.2	5.6	2.8	27.0
		Boy	12	86.7	95.8	77.1	19.3	33.3	22.2	2.8	0.0	27.5

(continued on next column)

Table A4 (continued)

		N	Words	Reading and Comprehension 1	Reading and Comprehension 2	Oral Passage Reading	Reading and Comprehension 3	Filling in Blank Spaces	Writing Sentences in Negative Form	Writing Sentences in Future Tense	Aggregate Score
Girl Total	Class	Girl	6	87.2	83.3	62.5	18.3	4.2	33.3	0.0	26.7
	6	Total	18	86.9	91.7	72.2	18.9	23.6	25.9	1.9	27.2
	Total	Boy	39	86.8	98.1	76.9	18.4	23.7	23.9	6.0	26.9
		15		88.1	93.3	76.7	19.0	10.0	22.2	0.0	27.5
		54		87.2	96.8	76.9	18.6	19.9	23.5	4.3	27.0
	Class	Boy	106	77.5	90.3	62.5	18.9	47.2	31.4	8.2	26.1
	5	Girl	85	76.8	87.6	62.4	17.9	45.6	38.0	7.1	25.2
		Total	191	77.2	89.1	62.4	18.5	46.5	34.4	7.7	25.7
	Class	Boy	77	77.1	90.3	63.3	19.6	46.8	35.1	3.9	26.6
	6	Girl	55	77.7	85.5	61.8	21.4	44.1	44.8	12.7	28.3
		Total	132	77.4	88.3	62.7	20.4	45.6	39.1	7.6	27.3
	Total	Boy	183	77.3	90.3	62.8	19.2	47.0	33.0	6.4	26.3
		Girl	140	77.2	86.8	62.1	19.3	45.0	40.7	9.3	26.4
		Total	323	77.3	88.8	62.5	19.2	46.1	36.3	7.6	26.3

Table A5

Performance in Task 6 of Somali Literacy by Grade and State

			Learners that passed task 6	Total learners that attempted task 6	Percent
Banadir	Grade 5	Boy	1	18	5.6
		Girl	1	14	7.1
		Total	2	32	6.3
	Grade 6	Boy	0	11	0
		Girl	1	9	11.1
		Total	1	20	5.0
South West	Grade 5	Boy	0	16	0
		Girl	1	13	7.7
		Total	1	29	3.4
	Grade 6	Boy	0	14	0
		Girl	0	8	0
		Total	0	22	0.0
Jubbaland	Grade 5	Boy	4	18	22.2
		Girl	2	19	10.5
		Total	6	37	16.2
	Grade 6	Boy	3	20	15
		Girl	4	14	28.6
		Total	7	34	20.6
Galmudug	Grade 5	Boy	4	21	19
		Girl	8	27	29.6
		Total	12	48	25.0
	Grade 6	Boy	4	16	25
		Girl	7	15	46.7
		Total	11	31	35.5
Hir Shabelle	Grade 5	Boy	6	27	22.2
		Girl	1	9	11.1
		Total	7	36	19.4
	Grade 6	Boy	2	12	16.7
		Girl	2	6	33.3
		Total	4	18	22.2
Total	Grade 5	Boy	15	100	15
		Girl	13	82	15.9
		Total	28	182	15.4
	Grade 6	Boy	9	73	12.3
		Girl	14	52	26.9
		Total	23	125	18.4

Table A6
Breakdown of Learners Attempting Different Tasks in English Literacy

			N	Letters	Words	Reading and Comprehension 1	Oral Passage Reading	Reading and Comprehension 2	Reading and Comprehension 3	Filling in Blank Spaces	Writing Sentences in Negative Form	Writing Sentences in Future Tense
Banadir	Class 5	Boy	19	95%	100%	100%	37%	37%	37%	37%	0%	0%
		Girl	15	93%	93%	100%	20%	20%	20%	13%	0%	0%
		Total	34	94%	97%	100%	29%	29%	29%	26%	0%	0%
	Class 6	Boy	13	92%	92%	100%	23%	23%	23%	23%	0%	0%
		Girl	13	100%	100%	100%	38%	38%	38%	38%	0%	0%
		Total	26	96%	96%	100%	31%	31%	31%	31%	0%	0%
	Total	Boy	32	94%	97%	100%	31%	31%	31%	31%	0%	0%
		Girl	28	96%	96%	100%	29%	29%	29%	25%	0%	0%
		Total	60	95%	97%	100%	30%	30%	30%	28%	0%	0%
South West	Class 5	Boy	19	100%	100%	100%	5%	5%	5%	5%	0%	0%
		Girl	15	100%	100%	100%	0%	0%	0%	0%	0%	0%
		Total	34	100%	100%	100%	3%	3%	3%	3%	0%	0%
	Class 6	Boy	12	100%	92%	92%	25%	25%	25%	25%	0%	0%
		Girl	8	100%	100%	100%	0%	0%	0%	0%	0%	0%
		Total	20	100%	95%	95%	15%	15%	15%	15%	0%	0%
	Total	Boy	31	100%	97%	97%	13%	13%	13%	13%	0%	0%
		Girl	23	100%	100%	100%	0%	0%	0%	0%	0%	0%
		Total	54	100%	98%	98%	7%	7%	7%	7%	0%	0%
Jubbaland	Class 5	Boy	19	100%	100%	100%	16%	21%	21%	21%	5%	5%
		Girl	17	100%	100%	100%	35%	35%	35%	35%	0%	0%
		Total	36	100%	100%	100%	25%	28%	28%	28%	3%	3%
	Class 6	Boy	19	100%	100%	100%	47%	47%	47%	47%	0%	0%
		Girl	17	100%	100%	94%	47%	47%	47%	47%	6%	0%
		Total	36	100%	100%	97%	47%	47%	47%	47%	3%	0%
	Total	Boy	38	100%	100%	100%	32%	34%	34%	34%	3%	3%
		Girl	34	100%	100%	97%	41%	41%	41%	41%	3%	0%
		Total	72	100%	100%	99%	36%	38%	38%	38%	3%	1%
Galmudug	Class 5	Boy	31	100%	100%	100%	23%	23%	23%	23%	0%	0%
		Girl	37	100%	100%	100%	16%	16%	16%	16%	0%	0%
		Total	68	100%	100%	100%	19%	19%	19%	19%	0%	0%
	Class 6	Boy	21	100%	100%	100%	29%	29%	29%	29%	0%	0%
		Girl	18	100%	100%	100%	28%	28%	28%	28%	0%	0%
		Total	39	100%	100%	100%	28%	28%	28%	28%	0%	0%
	Total	Boy	52	100%	100%	100%	25%	25%	25%	25%	0%	0%
		Girl	55	100%	100%	100%	20%	20%	20%	20%	0%	0%
		Total	107	100%	100%	100%	22%	22%	22%	22%	0%	0%
Hir	89% Girl 17%	Shabelle					Class 5	Boy	18	100%	0%	100%
		89%	89%	89%	89%	6%		6%				
		Girl	18	100%	0%	100%		83%	83%	83%	83%	17%
	Total	36	100%	0%	100%	86%	86%	86%	86%	86%	11%	11%
		Class	Boy	9	100%	0%	100%	89%	89%	89%	22%	22%
		Girl	9	100%	0%	100%	100%	100%	100%	100%	11%	11%
	Total	18	100%	0%	100%	94%	94%	94%	94%	94%	17%	17%
		Boy	27	100%	0%	100%	89%	89%	89%	89%	11%	11%
		27	100%	0%	100%	89%	89%	89%	89%	89%	15%	15%
Girl Total Total	54	100%	0%	100%	89%	89%	89%	89%	89%	89%	13%	13%
		Class	Boy	106	99%	83%	100%	32%	33%	33%	2%	2%
		Girl	102	99%	81%	100%	29%	29%	29%	28%	3%	3%
	Total	208	99%	82%	100%	31%	31%	31%	31%	31%	2%	2%
		Class	Boy	74	99%	85%	99%	39%	39%	39%	3%	3%
		Girl	65	100%	86%	98%	42%	42%	42%	42%	3%	2%
	Total	139	99%	86%	99%	40%	40%	40%	40%	40%	3%	2%
		Boy	180	99%	84%	99%	35%	36%	36%	36%	2%	2%
		Girl	167	99%	83%	99%	34%	34%	34%	34%	3%	2%
	Total		347	99%	84%	99%	35%	35%	35%	35%	3%	2%

Table A7

English Literacy Performance by Grade and Gender in each State

			N	Letters	Words	Reading and Comprehension 1	Oral Passage Reading	Reading and Comprehension 2	Reading and Comprehension 3	Filling in Blank Spaces	Writing Sentences in Negative Form	Writing Sentences in Future Tense	Aggregate Score
Banadir	Class 5	Boy	19	76.3	70.2	51.3	19.7	18.4	6.6	6.6	0.0	0.0	43.3
		Girl	15	78.0	55.3	35.0	7.1	15.0	6.7	1.7	0.0	0.0	35.0
		Total	34	77.1	63.6	44.1	14.2	16.9	6.6	4.4	0.0	0.0	39.7
	Class 6	Boy	13	69.1	68.2	46.2	12.9	11.5	11.5	3.8	0.0	0.0	37.3
		Girl	13	80.2	66.5	59.6	21.4	19.2	25.0	13.5	0.0	0.0	45.1
		Total	26	74.7	67.3	52.9	17.1	15.4	18.3	8.7	0.0	0.0	41.2
	Total	Boy	32	73.4	69.4	49.2	16.9	15.6	8.6	5.5	0.0	0.0	40.9
		Girl	28	79.0	60.5	46.4	13.7	17.0	15.2	7.1	0.0	0.0	39.7
		Total	60	76.0	65.2	47.9	15.4	16.3	11.7	6.3	0.0	0.0	40.3
South West	Class 5	Boy	19	71.0	66.0	27.6	2.6	0.0	2.6	0.0	0.0	0.0	31.9
		Girl	15	58.4	51.1	15.0	0.0	0.0	0.0	0.0	0.0	0.0	24.6
		Total	34	65.4	59.4	22.1	1.5	0.0	1.5	0.0	0.0	0.0	28.7
	Class 6	Boy	12	54.3	67.2	41.7	12.6	6.3	6.3	4.2	0.0	0.0	32.6
		Girl	8	60.8	66.3	25.0	0.0	0.0	0.0	0.0	0.0	0.0	27.6
		Total	20	56.9	66.8	35.0	7.6	3.8	3.8	2.5	0.0	0.0	30.6
	Total	Boy	31	64.5	66.5	33.1	6.5	2.4	4.0	1.6	0.0	0.0	32.2
		Girl	23	59.2	56.3	18.5	0.0	0.0	0.0	0.0	0.0	0.0	25.6
		Total	54	62.3	62.1	26.9	3.7	1.4	2.3	0.9	0.0	0.0	29.4
Jubbaland	Class 5	Boy	19	96.7	87.9	53.9	14.0	9.2	17.1	6.6	2.6	5.3	49.0
		Girl	17	93.9	79.1	54.4	15.4	23.5	27.9	7.4	0.0	0.0	47.9
		Total	36	95.4	83.7	54.2	14.7	16.0	22.2	6.9	1.4	2.8	48.5
	Class 6	Boy	19	97.4	83.8	77.6	17.5	19.7	13.2	9.2	0.0	0.0	50.7
		Girl	17	97.8	95.1	67.6	15.9	25.0	35.3	14.7	2.9	0.0	51.9
		Total	36	97.6	89.1	72.9	16.7	22.2	23.6	11.8	1.4	0.0	51.3
	Total	Boy	38	97.0	85.8	65.8	15.7	14.5	15.1	7.9	1.3	2.6	49.9
		Girl	34	95.9	87.1	61.0	15.6	24.3	31.6	11.0	1.5	0.0	49.9
		Total	72	96.5	86.4	63.5	15.7	19.1	22.9	9.4	1.4	1.4	49.9
Galmudug	Class 5	Boy	31	88.6	70.5	61.3	12.0	11.3	15.3	4.8	0.0	0.0	43.1
		Girl	37	82.7	64.1	60.8	8.1	11.5	12.2	2.7	0.0	0.0	38.5
		Total	68	85.4	67.0	61.0	9.8	11.4	13.6	3.7	0.0	0.0	40.6
	Class 6	Boy	21	84.4	79.6	66.7	17.2	19.0	16.7	4.8	0.0	0.0	46.0
		Girl	18	94.4	77.8	72.2	18.9	20.8	18.1	11.1	0.0	0.0	49.7
		Total	39	89.0	78.8	69.2	17.9	19.9	17.3	7.7	0.0	0.0	47.7
	Total	Boy	52	86.9	74.2	63.5	14.1	14.4	15.9	4.8	0.0	0.0	44.3
		Girl	55	86.6	68.6	64.5	11.6	14.5	14.1	5.5	0.0	0.0	42.2
		Total	107	86.7	71.3	64.0	12.8	14.5	15.0	5.1	0.0	0.0	43.2
Hir Shabelle	Class 5	Boy	18	92.9	84.3	97.2	38.3	72.2	33.3	30.6	0.0	0.0	61.4
		Girl	18	93.4	87.3	95.8	35.3	68.1	44.4	30.6	5.6	0.0	60.5
		Total	36	93.2	85.8	96.5	36.8	70.1	38.9	30.6	2.8	0.0	61.0
	Class 6	Boy	9	94.1	88.7	97.2	41.0	75.0	44.4	38.9	0.0	0.0	64.0
		Girl	9	94.1	85.8	100.0	48.5	88.9	66.7	36.1	11.1	0.0	67.8
		Total	18	94.1	87.2	98.6	44.7	81.9	55.6	37.5	5.6	0.0	65.9
	Total	Boy	27	93.3	85.8	97.2	39.2	73.1	37.0	33.3	0.0	0.0	62.2
		Girl	27	93.7	86.8	97.2	39.7	75.0	51.9	32.4	7.4	0.0	63.0
		Total	54	93.5	86.3	97.2	39.5	74.1	44.4	32.9	3.7	0.0	62.6
Total	Class 5	Boy	106	85.4	75.1	58.3	16.5	20.5	14.9	9.0	0.5	0.9	45.3
		Girl	102	82.2	67.5	55.4	12.8	22.3	17.9	7.8	1.0	0.0	41.4
		Total	208	83.9	71.4	56.9	14.7	21.4	16.3	8.4	0.7	0.5	43.4
	Class 6	Boy	74	81.3	77.8	65.5	18.6	22.6	16.6	9.8	0.0	0.0	45.7
		Girl	65	88.3	79.7	66.5	20.4	28.5	28.5	14.6	2.3	0.0	49.2
		Total	139	84.6	78.7	66.0	19.4	25.4	22.1	12.1	1.1	0.0	47.3
	Total	Boy	180	83.7	76.2	61.3	17.4	21.4	15.6	9.3	0.3	0.6	45.5
		Girl	167	84.6	72.3	59.7	15.7	24.7	22.0	10.5	1.5	0.0	44.4
		Total	347	84.1	74.3	60.5	16.6	23.0	18.7	9.9	0.9	0.3	45.0

References

- Abdullahi, S. H., & Hussein, A. (2015). *Educational challenges in post-transitional Somali*. Mogadishu: Heritage Institute for Policy Studies.
- Armstrong, D. (1989). *Developing and documenting the curriculum*. Boston: Allyn and Bacon.
- Bishop, J. H. (1999). Are national exit examinations important for educational efficiency? *Swedish Economic Policy Review*, 6, 349–398.
- Cochran, W., G. (1977). In *Sampling Techniques* (3rd). New York: John Wiley & Sons.
- December 1st Cohen, C. (2006). Measuring progress in stabilization and reconstruction. Retrieved from <https://www.usip.org/publications/2006/03/measuring-progress-stabilization-and-reconstruction>.
- Department for Education. (2019). School attendance: Guidance for maintained schools, academies, independent schools and local authorities. United Kingdom: Online document. Retrieved December 2nd, 2019, from <https://assets.publishing.service.gov.uk/government/uploads/system/>.
- Devine, P. W., Srinivasan, C. A., & Zaman, M. S. (2004). Importance of data in decision-making. In M. Anandarajan, A. Anandarajan, & C. A. Srinivasan (Eds.), *Business intelligence techniques*. Berlin, Heidelberg: Springer.
- Doll, R. (1996). *Curriculum improvement: Decision making and process* (9th ed.). Boston: Allyn and Bacon.
- Earnest, J., & Dickie, C. (2012). Post-conflict reconstruction—a case study in Kosovo: The complexity of planning and implementing infrastructure projects. In *Paper presented at PMI® research and education conference*. Limerick, Munster, Ireland: Newtown Square, PA: Project Management Institute.
- Federal Government of Somalia. (2018). *Education sector program improvement grant 2018-2020 program document*. Mogadishu: Federal Ministry of Education, Culture & Higher Education.
- Gochyyev, P., Mizunoya, P., & Cardoso, M. (2019). *Validity and reliability of the MICS foundational learning module. Data and analytics section, division of data, research and policy*. New York: UNICEF.
- Government of New Zealand. (2010). Improving Attendance: Case management of truancy and the prosecution process. Online document. Retrieved December 2nd, 2019, from <https://education.govt.nz/.../ImprovingAttendance2010.pdf>.
- Hassan, A. H., & Wekesa, M. (2017). Factors influencing education quality in Mogadishu in Somalia. *The Strategic Journal of Business & Change Management*, 4(3), 127–146.
- Hönig, T. (2018). *The effect of conflict on education: Evidence from Sierra Leone*. London: London School of Economics & Political Science. Retrieved from <https://mpr.ub.uni-muenchen.de/85064/>.
- Justino, P. (2010). *How does violent conflict impact on individual educational outcomes? The evidence so far*. Brighton, UK: Institute of Development Studies at the University of Sussex.
- Mahajan, M., & Singh, M. K. (2017). Importance and benefits of learning outcomes. *Journal Of Humanities And Social Science*, 22(3), 65–67. Retrieved December 04, 2019, from https://www.researchgate.net/publication/315637432_Importance_and_Benefits_of_Learning_Outcomes.
- Manuchehr, T. (2011). Education right of children during war and armed conflicts. *Procedia Social and Behavioral Sciences*, 15, 302–305. <https://doi.org/10.1016/j.sbspro.2011.03.090>.
- Ministry of Education, C. a (2018). *Education sector program improvement grant document (2018-2020)*. Mogadishu: Ministry of Education, Culture and Higher Education.
- Mulongo, G. (2017). Cross-national learning assessments: Relationship to educational policy, curriculum and capacity development in Kenya, Tanzania and South Africa. Johannesburg: Unpublished Ph.D thesis. Retrieved December 05, 2019, from <http://wiredspace.wits.ac.za/bitstream/handle/10539/23793/Godfrey%20942006.%20Final%20Thesis%20May.%2010.%202017.pdf?sequence=2&isAllowed=y>.
- Omoeva, C., Moussa, W., & Hatch, R. (2018). *The effects of armed conflict on educational attainment and inequality*. Washington D.C.: Education Policy and Data Center. FHI 360.
- Rondinelli, D. A., & Montgomery, J. D. (2015). Regime change and nation building: Can donors restore governance in post-conflict states? *Public Administration and Development*, 25(1), 15–23.
- Spheres Standards. (2011). *WASH Assessment in schools 2017* (Spheres).
- UNESCO. (2017). *Student teacher ratio, primary school*. UNESCO. https://www.theglobaleconomy.com/rankings/Student_teacher_ratio_primary_school/. (Accessed 20 May 2019).
- UNICEF - Somalia. (2018). Education strategy note 2018-2020. UNICEF Somalia. Retrieved May 14, 2019 <http://files.unicef.org/transparency/documents/Somalia%204.%20Education.pdf>.
- UNICEF. (2016). *Situation analysis of children in Somalia*. UNICEF.
- UNICEF. (2017). Somalia: Annual report. UNICEF. Retrieved May 15, 2019 https://www.unicef.org/somalia/SOM_resources_annualreport2017.pdf.
- United Nations. (2018). *The sustainable goals report - 2018*. New York: United Nations.
- World Bank. (2016). *Somali high frequency survey*. The World Bank Group. <http://microdata.worldbank.org/index.php/catalog/2738>. (Accessed 18 November 2018).