

Dr. Aggrey Boys High School – Case Study

Dr Aggrey Boys High School is located in Taita Taveta County on the South Eastern part of Kenya. This county is considered to be marginalized in the education categorization by the Ministry of Education. The school was founded in 1951.

Attracting and retaining students

When the ADSI project started in 2016, it had a population of 671 boys who have now increased to 856 students - a 28% increment. Although there is a government policy for 100% transition from primary education to secondary education, Dr. Aggrey High School has become a *school of choice for parents* due to the use of modern methods of teaching with ICT through the **African Digital Initiative**.



Figure 1: Signage at the entrance of the School

Increased student enrolment in STEM subjects

The uptake of STEM subjects by students over the project period has seen notable gains. Although Biology and Chemistry subjects are compulsory, the physics subject is optional and has had an increased number of students taking it each year as shown in Figure 2 below.

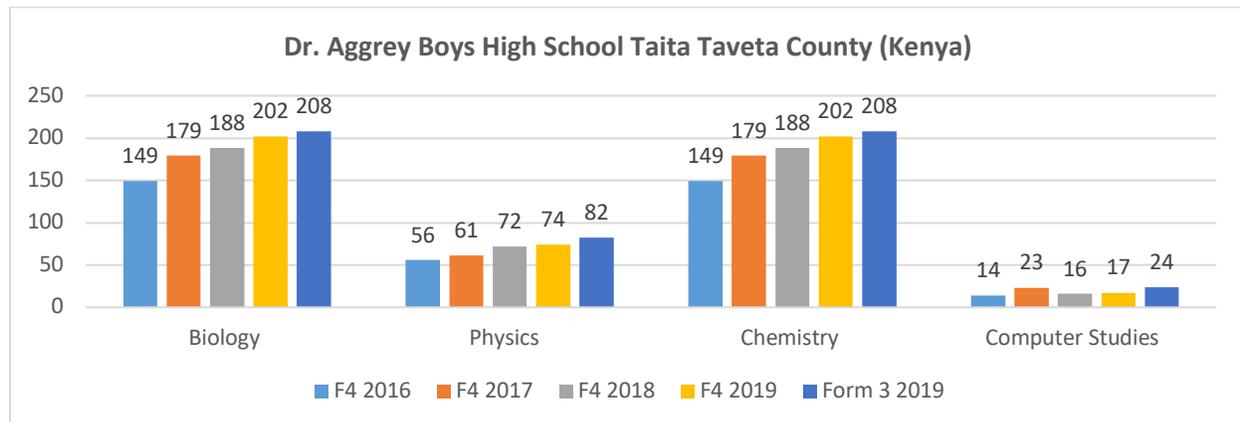


Figure 2: Uptake of Science subjects 2016 – 2019

The uptake of physics increases the options for learners’ career paths at the tertiary level of education. The enrollment increased by 46% in the physics subject and by 40% in Chemistry and Biology between 2016 and 2019.

Computer studies also gained popularity among students choosing this subject during the project period. This shows increased confidence and appreciation of ICT as a discipline for future employment.

Impact of ADSI on National Examination Results

The average mean score of the school at national examinations has improved from 6.14 in 2016 to 6.74 in 2018 out of a maximum of 12 points. Over the 3 year period, the results in each of the STEM subjects, except for Physics which marginally declined, saw improvements in overall academic performance on national examinations - particularly in English, Chemistry and Mathematics. This can be seen in the table below.

National Examination Mean Scores of the STEM subjects on a scale of 1-12						
	English	Maths	Biology	Physics	Chemistry	Computer Studies
2016	4.88	5.5	4.49	6.12	4.04	9.27
2018	7.13	6.74	4.54	5.56	5.66	9.29
Average Gain	2.25	1.24	0.05	-0.56	1.62	0.02

Table 1: Comparison of National Examination mean scores (2016-2018)

Developing ICT infrastructure

The presence of ADSI has resulted in a noticeable increase in support for the school and its teachers in the integration of ICT to enrich student learning with the Parent-Teacher Association, the teacher union and the wider community by their placing a strong focus and commitment to enhance the ICT school ICT infrastructure.

Teacher Professional Development

A key focus of ADSI is on the professional development of teachers in becoming competent in the use of technology to deliver their teaching and learning as well as to become pedagogically creative in the 21st century skills. Of the 34 teachers in Dr Aggrey Boys School, 23% of whom are female, all have participated in the three-year ADSI professional development and successfully reached the level of Knowledge Creation¹. This requires teachers to publish their assignments and lesson plans on the ADSI platform to demonstrate their mastery of these skills. The best lesson plans are shared globally as a pedagogic resource with all teachers teaching these subjects.

¹ Based on a customized version of the UNESCO ICT Teacher Competency Framework

Additionally teachers are mentored via classroom observation involving the local county education officers.

Charting Progress of Dr Aggrey Boys School in ADSI

The Dr. Aggrey Boys School has achieved e-Confidence status on **Digital School of Distinction** (DSD) Roadmap as results of notable improvements in the 5 domains as shown in Figure 2 below. It has achieved standards prescribed in “Leadership and Planning”, “Teacher Professional Development” and “ICT use in the curriculum” domains. It has scored less in the “ICT school culture” domain alongside “ICT infrastructure and resources” indicating it still needs to reach out for community buy-in and mobilization of resources around ICT integration. This could be explained by the fact the ICT culture narrative is new to the community and the school and it’s a poor community.

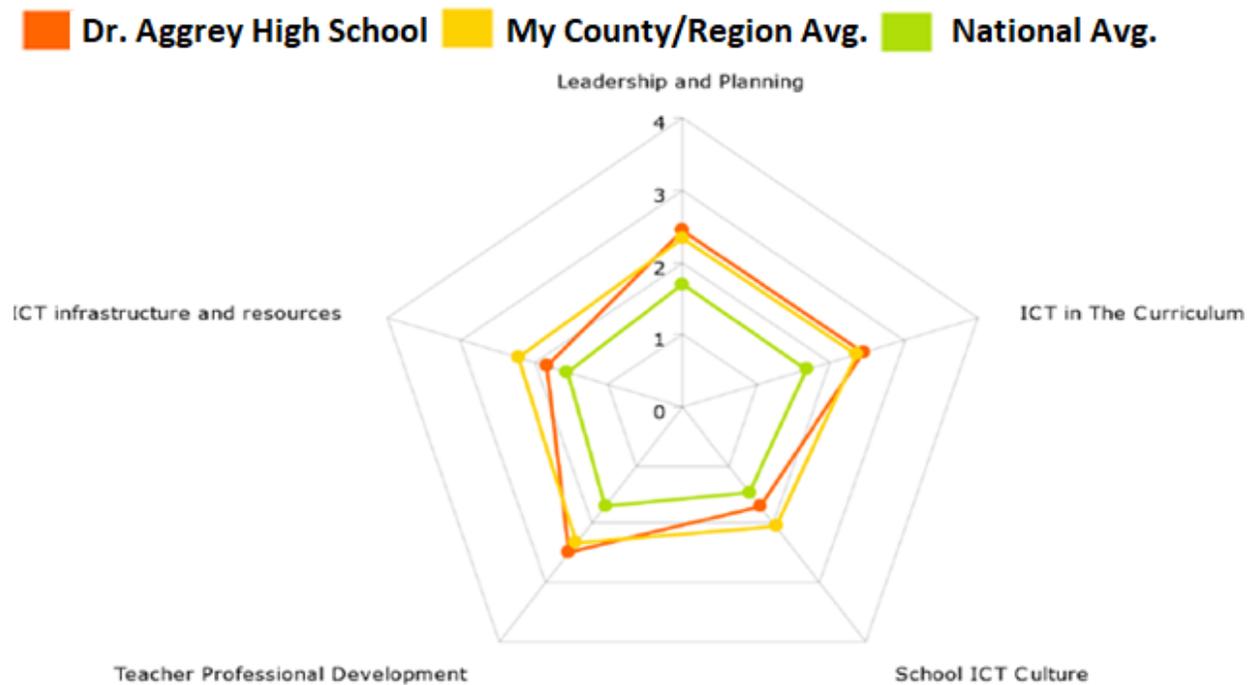


Figure 3 e-Confidence Progress summary

Dr. Aggrey is one of the many schools that has shown a steady improvement among participating ADSI schools and, has registered positive outcomes during the project period. It is recognized by County officials that it is a school that is very effective in serving the learners in this region.. These are students who would otherwise never have had an opportunity to experiment with technology and be exposed to new methods of learning that use ICTs with an integration of 21st Century skills, relevant and current content which provides an opportunity of deeper engagement and a desire for life-long learning.