



1. Project Data

Project ID P145741	Project Name Ghana Secondary Education Improvement	
Country Ghana	Practice Area(Lead) Education	
L/C/TF Number(s) IDA-54520,IDA-61220	Closing Date (Original) 30-Nov-2019	Total Project Cost (USD) 180,706,438.16
Bank Approval Date 20-May-2014	Closing Date (Actual) 30-Nov-2021	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	156,000,000.00	0.00
Revised Commitment	196,000,000.00	0.00
Actual	180,706,438.16	0.00

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2. Project Objectives and Components

a. Objectives

As stated in the July 30, 2014 Financing Agreement between the Republic of Ghana and the International Development Association (IDA, Schedule 1, p. 8), the proposed project development objective (PDO) was "to increase access to senior secondary education in underserved districts and improve quality in low-performing senior high schools (SHSs) within the Recipient's Territory." The design document presents the same statement (Project Appraisal Document, PAD, pp. vi, 7, and 21).



The PDO did not change throughout the project's life. However, PDO-level indicators and targets were revised as a part of the project's Additional Financing (AF), approved on June 27, 2017, which extended project activities to cover additional schools and students. These changes do not warrant a split rating methodology because: (i) while targets for two outcome indicators were indeed increased, actual achievements for these two indicators exceeded both the original and formally revised targets by the project's end; and (ii) another outcome target was not changed. Changes to intermediate results indicators were largely a reflection of the expansion of SHS coverage and enhancements to the quality package.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

27-Jun-2017

c. Will a split evaluation be undertaken?

No

d. Components

Component 1: Support to increase access with equity and quality in SHSs (original estimate of US\$140.1 million + US\$37.0 million in AF, amounting to a revised component estimate of US\$177.1 million; actual cost as reported in Annex 3 of ICR: US\$177.1 million). This component used a results-based financing (RBF) modality with disbursements up to a capped, absolute amount to be made against specific line items in the education sector annual budget, referred to as eligible expenditure programs (EEPs). Disbursements were to be conditioned on the achievement of specific results, measured by disbursement-linked indicators (DLIs).

Pillar 1 of this component (**increase access with equity**) (**original estimate of US\$125.1 million**) aimed to finance the construction of new secondary schools in underserved areas and rehabilitate and expand spaces in existing low-performing schools. This pillar also aimed to support scholarships for low-income students, particularly girls, increasing their access to secondary schools. The following DLIs were established under this pillar: (i) construction of new SHSs in underserved areas (DLIs 1 and 2); (ii) rehabilitation and expansion of 125 existing low-performing SHSs (DLI 3); and (iii) scholarships for students from low-income families, especially girls.

Pillar 2 of this component (**improve education quality in SHSs**) (**original estimate of US\$15.0 million**) aimed to support various interventions. The establishment of school performance partnerships (SPPs) was meant to foster mutual accountability between school management and their respective District Education Oversight Committees (DEOCs), backed by government commitment to provide resources to implement quality improvement initiatives. This pillar also supported the collection and publication of school data to inform SHS selection and facilitate Ministry of Education's (MoE) strategic planning and financing. The project also intended to support measures to improve math and science teaching and learning, including enhanced internet connectivity, the development of an education portal to improve student and teacher access to online resources, and teachers' enhanced ability to utilize information and communication



technology (ICT) in the classroom. DLIs established under this pillar included: (i) strengthening management and accountability through the publication of school performance reports (DLI 5); (ii) introducing SPPs in 125 SHSs to assess quality improvement and increase accountability (DLI 6); and (iii) improving learning outcomes in 125 SHSs through training for math and science teachers and ICT-based instruction (DLI 7).

Component 2: Management, research and monitoring and evaluation (M&E) (original estimate of \$15.9 million + \$3.0 million in AF, amounting to a revised component estimate of \$18.9 million; actual cost as reported in Annex 3 of ICR: \$18.9 million). This component aimed to build the capacity of MoE and Ghana Education Services (GES) to implement the government's SHS reforms, specifically in the areas of M&E, coordination, planning, communication, financial management, and safeguards. The component also included support for the implementation of a research agenda to inform SHS policy in the areas of financing, beneficiary targeting, education quality, teacher rationalization, and curriculum relevance. The component was designed to strengthen the analytical underpinnings of education policy, improve data collection to enable school mapping, and establish guidelines for school construction, renovations, and maintenance. In addition, the component included the financing of independent verification of project results, innovative pilot programs, the recruitment of technical experts, and the procurement of goods for specific activities.

Revisions to components

Approved on June 27, 2017, AF extended project activities under Component 1 to an additional 84 beneficiary schools, plus the 23 newly constructed schools under the parent project. The AF also allowed for the expansion of the quality improvement package, consisting of grants to SHS through SPPs, school leadership training, math and science teacher training, and the rollout of iBox and iCampus ICT interventions to an additional 107 beneficiary schools. The wording of DLI targets was slightly revised under the AF. The ICR (pp. 15-16) noted the strong rationale for AF financing of project scale-up, on three fronts. First, the project's high level of disbursement, successful achievement of the first three years of DLIs, and promising progress towards key outcome indicators were all seen as an opportunity to scale up the project's ambition. Second, the government's free secondary education policy, which took effect in project year 3, was expected to increase further the population's demand for secondary education, which could only be met with the provision of additional supply of quality secondary education. Third, the World Bank was one of only a very few donors supporting secondary education.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Cost. The project cost was originally estimated at US\$156.0 million. It was revised upward to US\$196 million to reflect the project's extended coverage of additional schools and its expanded package of quality improvement activities, decided at the time of AF (June 2017). While Annex 3 of the ICR presented a cost table showing US\$196.0 million total actual costs at project closing, the systems data presented in the ICR showed a total actual cost of US\$180.7 million. Given that the two credits provided 100 percent of project financing and were fully disbursed in terms of their SDR amounts (see Financing paragraph below), the difference between the total costs expressed in US dollars in various parts of the ICR is likely attributable to exchange rate fluctuations.

Financing and Borrower Contribution. The project was 100 percent financed by two IDA credits totaling 129.9 million SDRs: the original credit (IDA-54520) in the amount of 101.0 million SDRs (US\$156.0 million



equivalent); and Additional Financing (IDA-61220) in the amount of 28.9 million SDRs (US\$40.0 million equivalent). Both credits, in terms of their SDR amounts, were fully disbursed. No Borrower contribution was planned or provided.

Key Dates. The project was approved on May 20, 2014, became effective on October 3, 2014, and closed on November 30, 2021, two years after the original closing date of November 30, 2019. The mid-term review took place in mid-January 2018.

The project was restructured in August 2016 to consolidate the scheduled disbursement categories for annual disbursement-linked results (DLRs) into a single disbursement category to ensure that all EPP categories represented 100 percent of the project's financing of eligible expenditures.

Additional Financing in the amount of SDR 28.9 million (US\$40 million equivalent) was approved on June 27, 2017 (at which time 86 percent of the original credit had been disbursed) and became effective on April 9, 2018. The AF supported the extension of project activities to additional schools and the expansion of quality improvement activities, and prompted the scaling up of targets and a two-year extension of the project's closing date.

3. Relevance of Objectives

Rationale

The PDO was highly relevant to current country conditions. The dual focus of the PDO to increase access and improve the quality of education in SHSs is aligned with two core issues that were faced by the education sector at the time of preparation and, notwithstanding progress made under the project, remain critical today. At the design stage, three out of four 15-18-year-olds did not have access to SHS, and learning outcomes at the SHS level were also low. Poor access and low quality were concentrated in disadvantaged districts and schools, and this remains the case today. The PDO's specific focus on underserved districts and low-performing schools as a means of addressing inequities in access and in learning outcomes continues to be highly relevant to current country conditions.

The PDO was highly relevant to the current development priorities of the country. The government's Education Sector Plan (ESP) 2010-2020, still in effect at project closing, aimed to address the challenges of untrained SHS teachers, overcrowding of schools and poor infrastructure in the face of increasing enrollment, rising unit costs, and low enrollment in math and science programs. Its goals were to increase equitable access to high-quality secondary education in order to prepare young adults for higher education and the workforce. Among its strategies to improve equitable access were free public secondary education (since adopted by the government) and equal education opportunities for all eligible students. Strategies to improve quality included improving access to relevant, up-to-date teaching and learning materials; the establishment of libraries; increasing the relevance of curricula; participating in the West African Examination Council level examinations; and the development and delivery of in-service teacher training. The project supported research and studies to inform the new ESP, which has not yet been issued.

The PDO was also highly relevant to the Bank's Country Partnership Strategy at appraisal (CPS, FY2013-18) and Country Partnership Framework (CPF) FY2022-26 at closing. Under its second pillar on improving competitiveness and job creation, the FY2013-18 CPS contained an objective on improving



access and quality of education. The project was closely aligned with the FY2022-26 CPF Objective 2.1, "Improving access to quality education," under Focus Area 2, "Improving Inclusive Service Delivery." The objective focused on education access in underserved rural and urban areas, and on addressing structural and institutional constraints to improving the quality and relevance of post-basic education, which includes secondary education. This project was also highly responsive to the Bank's dual objective of reducing poverty and increasing shared prosperity. Its support of higher levels of education attainment, focused on underserved districts and disadvantaged students, constitutes a major contribution to human capital formation, given that the average rate of return on an additional year of schooling is 10.7 percent.

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

Increase access to senior secondary education in underserved districts in Ghana

Rationale

As laid out in the ICR's theory of change (ICR, pp. 7-8), the project's RBF design aimed to support and encourage the undertaking of two critical **activities**: (i) the establishment of new SHSs in underserved areas; and (ii) the expansion and rehabilitation of 125 existing, low-performing SHSs. It would do so through disbursements against achievements of: DLI 1: the proper targeting/selection of schools in underserved areas; DLI 2: an increase in new seats for SHS students in underserved districts (achieved through new construction); and DLI 3: an increase in the number of student seats utilized in existing low-performing schools (achieved through upgrading of selected schools). Together, these two activities were expected to culminate in an **output**: increased seats for SHS students in underserved localities and their utilization.

The RBF design also aimed to support and encourage an additional **activity**, the provision of scholarships/bursaries to SHS students belonging to low-income households, by disbursing against achievements of DLI 4: increased enrolment in SHS in targeted districts and schools (for students in low-income families, especially girls). The provision of these scholarships was expected to culminate in the **output** of increased enrollment in SHS for students from low-income families, especially girls, incentivized by DLI 4.

Together, these two **outputs** (increased student seats and increased enrollment of low-income, especially female, students) were expected to culminate in the achievement of Objective 1.

The theory of change was lacking in information that would shed light on how the 51,000+ new seats for SHS students, reported to be fully utilized, would be translated in terms of student-to-class and student-to-teacher ratios over time. Neither did it include the need to recruit additional teachers to accommodate new students, especially given the influx of new students, additional to those identified at appraisal, following the adoption of



the government's new policy of free secondary education three years into project implementation. Indeed, since this theory of change was prepared by the ICR and was retrospective in nature, the new government free education policy – and its implications -- might have been incorporated. Given the project's intention to improve – and track -- access, quality, and learning achievements for girls, the theory of change would have been enriched had it acknowledged other, non-financial constraints to girls' enrollment in SHSs (distance, security, gender-appropriate water and sanitation facilities, early marriage, etc.) and how these could be (or were being) addressed, in complement to the provision of scholarships to girls.

Outputs and intermediate results

- The project's focus on underserved districts was based on a targeting approach that applied criteria reflecting unmet need and demand for secondary education, as well as poverty data.
- Project support to new school construction culminated in the creation of 15,341 new (additional) SHS seats, and their utilization by SHS students in targeted areas, fully achieving the target of 15,000 seats (102 percent achievement).
- An additional 36,605 seats were created in low-performing beneficiary SHSs and utilized by students, through the project's support to rehabilitation and expansion works, exceeding the target of 30,000 seats (122 percent achievement).
- The task team informed IEG during their November 15, 2022 meeting that, while the full staffing of these new and expanded schools was not captured in the DLIs, it was a well-established, well-understood condition for achieving full school functionality and readiness, it was monitored closely by the Bank and government, and the RBF design leveraged attention to this imperative.
- Ninety-two percent of respondents to the beneficiary survey stated that facility upgrades helped increase enrollment and reduce overcrowding (Beneficiary Assessment Report, 2021).
- A total of 20,122 scholarships/bursaries were distributed to low-income students in participating districts and schools, doubling the initial target of 10,000 and fully achieving the target of 20,000 set at the time of AF (101 percent achievement). Sixty percent of these scholarships were awarded to female students. The task team, during a November 15, 2022 meeting with IEG, specified that prior to the government's free secondary education policy (introduced in project year 3), scholarships in the amount of US\$500 covered everything that was on students' bills (parent-teacher association dues, textbooks that were not free, uniforms, house dresses for boarders, and other expenses). Tuition was financed separately. After the new government policy took effect, the project provided bursaries directly to targeted students to cover private costs associated with school (bicycles, mobile phones, an example of a girl buying crutches – all expenditures at the students' discretion). During its November 15, 2022 meeting with IEG, the task team specified that selection criteria were applied to applicants at the school level (scholarship committee, including school counselor and principal), which sent their proposed list of candidates to the district level, which in turn conducted interviews and made final decisions. Feedback during field visits and through beneficiary assessments indicates that they reached the right beneficiaries.
- A project report comparing the socioeconomic characteristics of successful and unsuccessful project applicants for scholarships from 2014 to 2018 found that recipients (making up 80 percent of applicants) reflected the application of targeting criteria: they were more likely to be female, orphans, disabled, low-income, and/or reside in single-parent households, compared with non-recipients (making up 20 percent of applicants). The ICR cited evidence from a recent study in Ghana (but not associated with the project) that scholarships for SHS students increased educational attainment and



learning outcomes. The experimental study found that scholarship recipients were 27 percentage points more likely than non-recipients to obtain secondary education, they received an average of 1.25 more years of secondary education than non-recipients, and they scored 0.16 standard deviations higher in math and reading comprehension five years into the study (Duflo et al., 2021). Moreover, 94 percent of beneficiaries surveyed at the project's end found that scholarships were beneficial and transparently identified deserving students to attend school, purchase learning materials, and stay in school (2021 Beneficiary Assessment Report).

Outcomes

- From a baseline of 39 percent in 2014, transition rates from junior high school (JHS)3 to SHS1 in targeted districts rose to 82 percent in 2020, far exceeding the original and AF targets of 47 and 49 percent, respectively, as well as the unofficially revised target (post-AF) of 66 percent, established during the July 2018 implementation support mission. Moreover, this gain of 43 percentage points is more than double that achieved nationally during the same timeframe (from 68 percent to 88 percent, or a gain of 20 percentage points), an indication of improved equity in access. The baseline and original target for this indicator were updated in June 2015, when the final selection of districts was made. This was envisaged at the design stage and is why the baseline and target differ from the provisional baseline and target included in the PAD (ICR, p. 19).
- Completion rates in target schools (pupils belonging to a school cohort who reached SHS3 as a share of pupils in that same cohort originally enrolled in SHS1) increased from a baseline of 81.7 percent to 89.0 percent, exceeding both the original and revised targets of, respectively, 85.7 and 86.7 percent.
- Completion rates for females in these schools increased from a baseline of 81.2 to 89.0 percent, exceeding the original and revised targets of 85.1 and 86.1 percent, respectively, and fully closing the gender gap in performance on this indicator.
- Endline data for SHS education attainment (defined as the proportion of 19-21 year-olds completing SHS education) was pending, awaiting the release of Population Census data from 2021, which had not yet been made available by the Ghana Statistical Service. In the interim, the ICR reported that, based on Ghana Living Standards Measurement Surveys 2013 and 2017, SHS education attainment within the two poorest quintiles in the targeted underserved districts rose from 6.92 percent in 2013 to 13.52 percent in 2017. The end-of-project (2021) target set for this indicator was 15 percent. Net improvement in education attainment achieved in these underserved districts during 2013-17 (a gain of 6.6 percentage points) exceeded the end-of-project target of a 5-percentage-point increase and was close to that achieved in better-off, better-performing non-project districts (from 7.70 to 14.48 percent, or a gain of 6.78 percentage points). Gender-disaggregated data from this same source revealed:
 - For males: education attainment increased from a baseline of 11.1 percent in 2013 to an achievement of 18.9 percent in 2017, a gain of 7.8 percentage points, exceeding the target of a five-percentage-point gain; and
 - For females: education attainment increased from a baseline of 6.10 percent to an achievement of 11.7 percent in 2017, a gain of 5.7 percentage points, exceeding the target of a five-percentage-point gain.

The ICR noted (p. 19) that end-of-project achievement for this indicator will be updated and reported to IEG once the 2021 Population Census becomes available. During IEG's November 15, 2022 meeting with the



task team, it was revealed that the team is currently working on calculating the SHS educational attainment levels using recently released Population Census 2021 data, and expect to complete this work by the end of November.

Rating

Substantial

OBJECTIVE 2

Objective

Improve quality in low-performing senior high schools in Ghana

Rationale

The project's RBF design supported and encouraged the undertaking of two **activities**: the production and publication of annual school performance reports (by disbursing against DLI 5: annual publication of school performance report); and the establishment of school performance partnerships between beneficiary schools and their respective DEOCs (by disbursing against DLI 6: school performance partnerships established in 125 beneficiary schools). Together, these activities were expected to culminate in an **output**: greater school accountability.

Additional **activities** to improve learning outcomes in 125 beneficiary schools (delivery of a "quality package" of interventions, comprised of quality assessment, development and delivery of training modules for math, science, and ICT-based instruction, and expected increases on West African Senior School Certificate Examination [WASSCE] average scores in project SHSs) were to be supported and encouraged (by disbursing against DLI 7: improved learning outcomes in 125 selected SHSs – quality package). These activities were expected to culminate in an **output**: increased numbers of teachers trained in math, science, and ICT. Together, the outputs (greater school accountability and increased numbers of trained teachers in math, science, and ICT) were expected to culminate in the achievement of Objective 2: improved quality in low-performing senior high schools in Ghana, as measured by improved learning outcomes.

The theory of change was based on expectations that development and delivery of teacher training modules for math, science, and ICT-based instruction will lead to increases on WASSCE average scores. It was silent, however, on other critical quality factors, such as classroom size, student-to-teacher ratios, teacher attendance rates, and the need to recruit additional teachers and learning materials to accommodate the increment of students generated by this project and to ensure more equitable distribution of these resources.

The theory of change did not capture activities and outputs under Component 2 (especially M&E; research on targeting, education quality, teacher rationalization, and curriculum relevance; and guidelines for school mapping and works -- all for improved SHS policy) and their potential contributions to the PDO (access and quality).

Outputs and intermediate results



- A total of 1,718 teachers participated in training to upgrade or acquire new skills in mathematics, far exceeding the original target of 360 and the revised target of 730 teachers, set under the AF. Before training, only 2 percent of teachers scored 60 percent or higher on the math pre-test. After the training, 86 percent of teachers reached or exceeded the 60 percent score (Project Report on Science and Math Training, 2020).
- A total of 2,185 teachers participated in training to upgrade or acquire new skills in science, far exceeding the original target of 500 and the revised AF target of 1,470. Before training, only 6 percent of teachers scored 60 percent or higher on the science pre-test. After the training, 93 percent of teachers reached or exceeded the 60 percent score (Project Report on Science and Math Training, 2020).
- The teacher training design (focused on math, science, and ICT) was grounded in information from surveys of teachers (of what elements of the curriculum they found hardest to teach) and students (on what elements of the curriculum they found hardest to learn), which overlapped significantly. Training was undertaken twice a year and focused on these very challenges (Task Team meeting with IEG, November 15, 2022).
- Teacher feedback gave good indication of training relevance and quality. One hundred percent of trainees agreed or strongly agreed that what they learned from the training can be applied at the school level and was relevant to their work; and 99 percent of trainees expressed that the training gave them sufficient practice and feedback (Project Report on Science and Math Training, 2020). Ninety-three percent of beneficiaries surveyed in 2021 found that math and science teacher training and interventions were beneficial in improving pedagogy, addressing difficult topics, and utilizing teaching and training materials.
- Under the Math and Science for Sub-Saharan Africa (MS4SSA) Initiative, the project financed the rollout of education technology to facilitate the teaching of math and science in 25 selected SHSs, providing each with a smart board/smart classroom, 40 laptops, 50 clickers, scripted lessons, structured lessons, a sequenced curriculum, and robotics equipment. The MS4SSA also trained 25 ICT teachers in coding and robotics, and 100 math and science teachers received training in utilizing smart classrooms. Beneficiaries rated the MS4SSA intervention as very relevant, as all respondents indicated that their use of learning materials and student participation in the classroom increased.
- iBox provided students with digital content on math, science, and IT without the need for internet access, making this content accessible to all students using school computer labs. This content contained videos featuring lessons from excellent teachers covering over 100 topics, and also included notes, practicums, and quizzes for each topic. The establishment of iCampus expanded access to this content through remote connections (Task Team meeting with IEG, November 15, 2022).
- Improvements in physical facilities also contributed to quality of teaching and learning, especially the inclusion of well-equipped, state-of-the-art libraries, science labs, classrooms, and additional learning equipment and materials, which attracted many student applicants to previously disadvantaged schools (Task Team meeting with IEG, November 15, 2022).
- A total of 229 SPPs were established with beneficiary SHSs, exceeding the original target of 125 and substantially achieving the revised target of 231 SPPs (99 percent achieved). Ninety-three percent of school heads and 70 percent of teachers surveyed at the end of the project found SPPs to be useful in providing support for students, procuring teaching and learning materials, and procuring laboratory materials.
- In total, 231 SHS ICT packages were implemented in beneficiary schools, exceeding the original target of 125 and fully achieving the revised target of 232 packages.



- A functioning monitoring system was established to track data and publish information annually on all SHSs in Ghana, fully achieving the target.
- Seven research and sector analysis tasks were conducted to inform the preparation of a new Secondary Education Strategy, exceeding the original target of five and fully achieving the revised target of seven tasks. Topics covered were: (i) an assessment of the impact of ICT packages and different rollout strategies on student performance; (ii) a report on student attendance; (iii) an analysis of teacher absenteeism; (iv) the MS4SSA initiative; (v) a study of student perceptions of science and mathematics; (vi) beneficiary assessment survey baseline data; and (vii) an assessment of practices in math and science classrooms.
- Various project activities supported capacity development of school officials and MoE staff, which contributed to the strengthening of the education system and its ability to improve access and quality. The project provided leadership and management training in all project schools and trained various school officials and MoE staff on M&E, procurement, and financial management.
- Reliance on existing government structures for project management and implementation, procurement, financial management, and M&E also helped strengthen and sustain institutional capacity.

Outcomes

- From a baseline of 10.7 percent (established, as intended in the PAD, in the June 2015 Implementation Status and Results Report based on the final selection of schools), the share of students within the beneficiary schools under the original project obtaining 6 credits and above in the WASSCE, administered by the West African Examinations Council, rose to 27.8 percent, far exceeding the original target of 15.0 percent and the unofficially revised target (established during the July 2018 implementation support mission) of 16.8 percent.
- Data on girls' performance on WASSCE in schools supported under the original project also show a high increase in performance. From a baseline of 9.50 percent, the share of girls at schools supported under the original project who obtained 6 credits and above reached 27.5 percent, almost completely closing the gender gap, and far exceeding the target of 16 percent.
- The target set for the additional schools supported under the AF was also surpassed, with the share of all students attending these schools obtaining 6 credits and above in WASSCE achievement tests rising from a baseline of 21.9 percent in 2017 to 31.1 at the end of the project, exceeding the target of 25.9.
- Data on girls' performance on WASSCE in schools supported under the AF also show a substantial increase in performance. From a baseline of 19.3 percent, the share of girls at schools supported under the AF who obtained 6 credits and above reached 30.2 percent. Not only did this surpass the target of 23.4 percent, it also slightly exceeded the achievement for all students attending AF-supported schools (31.0), indicating the elimination of the gender gap.
- The share of students in all project schools (original and AF) obtaining 6 credits and above in WASSCE increased by 17.5 percentage points (from 11.7 percent in 2014 to 29.2 percent in 2020), slightly surpassing the gain among better-off, better performing non- project schools (16.7 percentage points: from 18 percent in 2014 to 34.7 percent in 2020). This indicates that improvements in equity were achieved under the project.



- The project reached 737,334 beneficiaries, exceeding its target of 711,000, of which 47.3 percent were female, slightly exceeding the target of 44.1 percent. However, the 160,628 beneficiaries reached under the AF fell short of the target of 250,000 (64 percent achieved), and the share of these beneficiaries who are female (46.9 percent) fell slightly short of the 50 percent target. This was due largely to the one-year gap created by the COVID epidemic in 2020. It is important to note, however, that the total beneficiaries reported in the results framework do not include the 1.2 million registered users of the iCampus. Inclusion of these registered users among beneficiaries reached would result in the surpassing of targets.
- Representing a subset of all beneficiaries, a total of 722,273 students benefited from direct interventions to enhance learning, exceeding the target of 707,000. Of these student beneficiaries, 351,429 (or 49 percent) were female, exceeding the target of 341,000 female students.

Rating
High

OVERALL EFFICACY

Rationale

Attribution. The ICR's assessment of project attribution noted that the introduction of government's free SHS policy two years into project implementation was an important external factor that likely contributed to increasing SHS enrollment, along with supply-side (increased number of SHS seats created and utilized) and demand-side (scholarships/bursaries to cover materials and other costs for low-income students) project interventions. Much of the rest of the ICR's assessment of attribution (pp. 22-25) discussed some of the linkages between various parts of the results chain and was factored into the above tallies of outputs, intermediate outcomes, and outcomes in this ICR Review, including: the targeting of scholarships/bursaries and their likely effect on enrollment and learning among low-income students; the quality and contribution of math and science teacher training and learning materials and their effect on quality of teaching and learning; a comparison of outcomes among project schools and (better-off) non-project schools, showing equal improvements in outcome indicators for two targets; and much higher improvements in project schools than non-project schools in the JHS3 to SHS1 transition rates. The Task Team, during its November 15, 2022 meeting with IEG, shed further light on attribution. The World Bank and African Development Bank are the only two partners providing substantial support to Ghana's secondary education subsector. The significantly improved access and learning outcomes among disadvantaged students, attending school in the most deprived districts, are highly attributable to this project's tenacious focus on equitable access and quality, and their impact in terms of learning outcomes,

Even though so many PDO targets were surpassed, the ICR made a convincing case that the targets set were sufficiently ambitious. This is grounded in the facts that: (1) pre-project trends were regressing (in the case of WASSCE scores) or showing mixed performance (in the case of JHS to SHS transition rates); (2) the project focused on socio-economically disadvantaged districts whose performance was lower than that of better-off schools and national averages; and (3) targets were raised at the time of the AF, increasing the project's ambition in response to improving trends under the project.



With substantial achievement of Objective 1 and high achievement of Objective 2, overall project efficacy is rated Substantial.

Counterfactual. Without this project, there would likely have been no gains in access in Ghana's most deprived areas, no gains in the quality of education in these same areas, and no substantial gains (if any) in learning in these same areas and among the most deprived students, as measured by WASSCE achievement tests. There would also likely be no, or very little, iBox and iCampus capacity in the country. As such, in the absence of the project, this capacity would not have been scaled up with the support of other partners and projects, to cover all SHS in Ghana and to accommodate additional digital teaching and learning content, which now includes additional subjects and disciplines (Task Team/IEG meeting of November 15, 2022).

Overall Efficacy Rating

Substantial

5. Efficiency

Economic Efficiency. No cost-benefit analysis was conducted at the time of project appraisal. An ex-post economic analysis was undertaken as part of ICR preparation, which explored base-case, low-case, and high-case scenarios. The findings of this analysis were that the net present value of project benefits ranges from US\$1,801 million to US\$2,453 million across the three scenarios, with internal rate of return (IRR) estimates ranging from 21 to 23 percent, indicating that project benefits vastly exceeded project costs. Annex 4 of the ICR provided underlying assumptions and other details.

Based on the theory of change, **economic benefits** were categorized into three types: quantity benefits (i.e., benefits arising from higher SHS completion rates and the consequent increase in lifetime wages), quality benefits (i.e., benefits due to higher productivity of former students), and efficiency benefits (i.e., cost savings stemming from decreased repetition and dropout rates). **Economic costs** included public investments in education (i.e., project costs and non-salary and capital expenditures), private costs (i.e., household education spending), and opportunity costs (i.e., foregone wages for JHS and SHS students). Based on the economic analysis and the high IRRs estimated for the project, the economic efficiency of the project is rated as substantial.

Implementation Efficiency. Procurement activities did not cause any significant delays, which would have negatively affected implementation. Construction was cost-efficient, with actual per-unit costs significantly lower than project design estimates. Per-unit cost of facility upgrades was US\$0.12 million versus an initial estimate of US\$0.32 million, and the per-unit cost of school construction was US\$3.2 million, compared to an estimate of US\$4.3 million. However, civil works could have been implemented more efficiently. Site-specific building layouts, structural designs, and schedules of quantities were not prepared adequately. Moreover, these elements were changed significantly at many sites. The consequences of these shortcomings were increased scope of work and contract values, and difficulties in designing a monitorable implementation plan and in coping with the pace of changes. Under the DLI design, government procurement procedures were not reviewed by the Bank. This caused the issue of many selected contractors lacking the capacity to handle large projects, and culminated in longer completion time (42 months on average) than the average contracting period (15



months). Albeit with some delays, all project DLRs were met by the time of project completion and all intermediate outcome targets were substantially met or exceeded, with project funds 100 percent disbursed.

The mainstreaming of project management and M&E within MoE also contributed to implementation efficiency, and, in addition, promoted the scaling up of activities beyond beneficiary schools and the sustainability of project investments and initiatives. Rather than relying on a project management unit, project activities were managed and overseen by MoE, and decision-makers were fully involved in their implementation. This approach helped strengthen MoE’s capacity to implement and monitor projects in the education sector. Activities initiated under the project were extended beyond beneficiary schools. SPPs were scaled up to cover all SHSs in the country, computer labs were provided to all SHSs, and the development of the iCampus intervention provided access to learning content to all students in the country. The evidence-based process for district and school/site selection for upgrading existing schools and for new school construction helped ensure the selection of schools with potential for high impact and serves as an example for MoE to apply to future investments.

COVID-19 adversely impacted project activities, especially school closures and resulting learning issues, delays in completing construction activities due to lockdowns in the country, and slowing down of economic activity, which negatively impacted beneficiary households, contributing to dropouts, pregnancy, and early marriage in some cases. Nevertheless, the task and project teams adjusted to remote work, including the conduct of virtual mission and technical meetings and continued monitoring of environmental and social safeguards, following COVID-19 protocols. A few additional shortcomings in implementation efficiency included: teacher turnover in project schools, which may have undermined the benefits of teacher training; insufficient coordination between school leadership and teachers in the development of SPPs (beneficiary survey); and limited availability of teaching and learning materials, which impacted teachers’ ability to use tools and equipment in math and science instruction.

In relation to evidence of economic and implementation efficiency, the shortcomings in implementation efficiency are considered to be moderate. Overall efficiency is rated Substantial.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	23.00	0 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome



The **relevance** of the PDO is rated **high**, as the project was responsive to country conditions and issues faced by the education sector today, and was tightly aligned with the government's current sector priorities, as well as with the Bank's current CPF 2022-2026 and education-specific objectives. **Efficacy** is rated **substantial**, with Objective 1 (increased access to secondary education in underserved districts) substantially achieved and Objective 2 (improved quality in low-performing senior high schools) highly achieved. Project **efficiency** is rated **substantial**. The results of an ex-post cost-benefit analysis point to healthy net present values and high internal rates of return, across three scenarios, and to strong implementation efficiency, with moderate shortcomings.

These ratings produce an Outcome rating of Satisfactory, indicative of minor shortcomings in the project's preparation, implementation, and achievement.

a. Outcome Rating
Satisfactory

7. Risk to Development Outcome

Sustainability of Sector Reforms. Prospects are encouraging that sector reforms initiated and supported under the project will be sustained post project, thus ensuring a continuing flow of development outcomes. MoE has decided to carry forward school leadership and management trainings. Digital versions of the trainings will be uploaded on YouTube, and the National Teaching Council (NTC) is set to train trainers on school leadership. This leadership training will be mandatory for heads of schools and will confer Continuous Professional Development credit points, which will be verified by the NTC when school heads apply for license renewal. Completion of leadership training will also inform decisions about head teacher placement and promotions. SPPs have been scaled up to all public SHSs, and all school-level budgeting will follow the SPP process. Payment through June 2026 of the fee for the SPP server and the fees associated with its Grievance Redress Mechanism will allow the SPP portal to remain operational for the school mapping exercise. The design of the project itself also bodes well for sustaining reforms. The management and implementation of project activities through existing structures within MoE has supported the retention and full use of human resource capacity and the ownership of reforms and innovations.

Financial Sustainability. The government has taken a number of steps to safeguard the financial sustainability of project-supported reforms and initiatives. It has demonstrated strong commitment to the secondary education sector through increased financing of SHSs over the past decade. The secondary education subsector now receives a higher allocation of funds than any other subsector. While a slowdown in economic growth could reduce public spending on education, the government has identified some steps to safeguard spending on SHS. At the time of launching the free secondary school policy and program, the government introduced a double-track system to allow for multiple cohorts of students to study in SHSs, utilizing existing infrastructure and teaching resources. This system, expected to be eliminated by 2024, is viewed as a temporary measure. Through the Ghana Education Trust Fund, the government is selling bonds to finance the building of schools and has also introduced a special tax for school infrastructure, reflecting its commitment to safeguarding spending on secondary education.

Impact of COVID on Sustainability. The fiscal constraints imposed by the COVID-19 pandemic create a risk that not all project activities might be sustained. At risk, for example, might be the provision of scholarships/bursaries to students and math and science teacher training. The COVID-19 pandemic also had



a negative impact on the education sector that was non-financial in nature: students dropping out of school. A resurgence of COVID-19 could therefore have a detrimental impact on enrollment and learning outcomes. Given the low levels of remote learning among public school students in Ghana during COVID-induced school closures, learning loss during further closures remains a real concern, although the project did accelerate the establishment of remote learning capacity.

8. Assessment of Bank Performance

a. Quality-at-Entry

The Bank's preparation of this project culminated in a design with many strong features. It was strategic in its relevance and approach, as evidenced in its strong alignment with Ghana's development priorities for secondary education, and with the Bank's CPF (both the one in place at appraisal and the new one in effect at closing (see Section 3 for details). Its data-driven approach for targeting districts and schools most in need was systematic and evidence-based. Its application of well-chosen and transparent selection criteria (linked to a DLI) minimized the risks of political interference and was the subject of an extensive debate in Parliament during the project approval process. The debate culminated in Parliamentary consensus on the importance of the needs- and evidence-based approach to targeting, which took into account poverty, gender, and other social development factors. The project placed due emphasis on equity, ensuring that improvements in access would benefit areas and students most in need; and it struck a healthy equilibrium between the access and quality goals by phasing construction and rehabilitation works and ensuring that each new or rehabilitated school would adhere to conditions that would make it fully operational and ready to receive students. Environmental and social aspects (including safeguards) and fiduciary aspects of the project were prepared in line with Bank policies and requirements.

As the first RBF operation in Ghana's education sector, using a DLI modality, the project was innovative in its design. It supported a results focus (under Component 1), while ensuring adequate management, monitoring, and oversight to support DLR and DLI achievement, whose targets were critical to PDO achievement. DLIs focused on processes, outputs, and outcomes. Well-defined verification protocols ensured that activities were implemented and intended results achieved. The project's utilization of existing structures within MoE for implementation, monitoring, and evaluation supported their utilization and further development of the sector's institutional capacity, and also improved prospects for ownership and sustainability. Continuous engagement with the government and its development partners during preparation further ensured ownership and coherence of efforts, a practice that was carried through to implementation. Assessment of risks as substantial and mitigation measures were appropriate, focusing on the new RBF approach, which depended on timely and adequate budgetary expenditures and intensive monitoring and reporting to verify DLI achievements. Preparation involved the sensitization of counterparts about the RBF instrument and reporting requirements and the planning of workshops and training sessions for the early implementation period.

Design shortcomings centered on missing links in the theory of change/results framework (e.g., recruitment/financing of incremental teachers to accommodate the new students accessing newly created seats in school) and the absence of critical, complementary indicators for tracking progress toward the quality objective (classroom size, student-to-teacher ratios, teacher attendance, among others).



Quality-at-Entry Rating

Satisfactory

b. Quality of supervision

Bank supervision of this project was continuous, holistic, and proactive. The Bank conducted a total of 18 implementation support missions during the project's seven-year life. The Task Team Leader (TTL) during project design had been involved in Bank-financed projects for eight years prior; another core member had nine years of experience working in Ghana; and the co-TTL was based in the country office and remained TTL until project completion. This ensured that there was minimal disruption caused by Bank staff turnover. Bank support of an active education program in Ghana (several Global Partnership for Education projects and Skills and Technology Development) supported and nurtured continual dialogue, strong relationships, and a high level of trust. This helped ensure synergies in the Bank's engagement at the primary and secondary education levels and allowed for leveraging economies of scale by combining supervision missions and raising high-level issues with counterparts. This also reduced costs and administrative burden on the government by having one interface for several projects. The Bank's proactivity was evidenced in its holding of technical meetings with key counterparts, undertaking of site visits, ensuring of a quick response to the government's request for additional financing, and provision of support and advice to MoE beyond the scope of the project. During times of restricted travel due to COVID-19, the Bank and government organized remote supervision of civil works activities using cameras to monitor and document new construction progress.

Rooted in the RBF design of the project and regular reporting against DLIs and intermediate outcome indicators, the Bank's missions and dialogue were focused on development impact with a continued emphasis on rendering newly constructed and renovated schools fully operational and ready to receive students. The Bank was candid in its reporting and assessment of project performance. Among concerns it raised during supervisions were low utilization of iBox, a lack of communication and awareness around school mapping reforms, and delays in civil works activities. Minor shortcomings included not formalizing the increased targets set during the July 2018 implementation support mission and not exploring important measures of quality (classroom size and student-to-teacher ratios, among others). Supervision of fiduciary and safeguard aspects, including the mitigation of any issues, was undertaken regularly and well.

One of the project's major successes was that it introduced reforms that were scaled up nationally. First, it offered scholarships to students to attend SHS, and in September 2017, three years into implementation, MoE introduced the free SHS policy. While this policy was not totally driven by the project, the first three years of implementation did offer MoE a glimpse of the effects of reducing the costs of schooling for low-income SHS students. Second, the project-supported establishment of computer labs in selected SHSs was scaled up to cover all SHSs in Ghana thanks to MoE's success in securing financing through another Bank project (E-transform) and the Belgian government. Third, convinced of the value of SPPs developed for all project-supported schools, the GES encouraged all SHSs in the country to develop SPPs and leveraged funding from other sources to this end. Finally, the project introduced ICT in project schools in the form of the iBox, but this was only accessible to students and teachers in close proximity to the school. MoE thus used project financing to expedite the development of iCampus, facilitating remote



access to teaching and learning material. This improved the equity of access to these materials and prepared the education system for the COVID-induced school closures it would later face.

Quality of Supervision Rating

Highly Satisfactory

Overall Bank Performance Rating

Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The PDO was clearly stated. The theory of change provided in the ICR was retrospective in nature, drawn from the PAD's project description, since the PAD itself did not present one (it was not required at the time of project preparation). The theory of change largely captured the key elements of the project's results chain supporting each of the two objectives (see Section 4), but it also had some shortcomings. *With regard to the access objective*, the emphasis on girls' access was reflected in the project's provision to low-income students, especially girls, of bursaries to lift financial barriers to their access, but the theory of change did not capture the effect of the government's free secondary education policy, introduced prior to the AF, and how this may have affected the nature and impact of these bursaries. The theory of change also did not capture any of the non-financial barriers to girls' access to education, which were known at project design (early marriages, pregnancies, among others) (see Gender discussion in Section 10). *With regard to the quality objective*, the theory of change linked only two outputs/intermediate outcomes (greater school accountability and increased numbers of teachers trained) as contributors to education quality in low-performing schools. It did not capture how the 51,000 additional and utilized student seats, achieved under the access objective, would ensure quality of education for these new students, e.g., through the recruitment of additional teachers and the provision of textbooks and other learning materials.

The indicators chosen to measure project performance and outcome were comprised of PDO-level indicators, intermediate results indicators, and two corporate indicators (number of beneficiaries and beneficiary satisfaction surveys). PDO-level indicators were well suited to measure access and quality and tracked girls' outcomes as well as overall outcomes. They were complemented by a set of DLIs and DLRs (itemized in Section 4), which were coherent with project objectives and indicators, and incited a results focus at the school level. These indicators were specific, measurable, achievable, and time-bound. Baselines and targets were established at appraisal, and then, as anticipated, adjusted during the first full year of implementation, to reflect the baselines of the schools ultimately selected through the targeting process. While SHS completion rate was presented as an intermediate results indicator under Objective 2 (quality), it may have been more appropriately considered as an outcome indicator of Objective 1 (access).

Consistent with shortcomings in the theory of change, these measures did not allow a full assessment of attribution. Additional indicators would have shed light on the extent to which the project's intermediate outcomes contributed to quality. Especially given the baseline situation of significant and growing demand/need for secondary education in project areas, and the government's new free education policy



introduced two years into the project (which incited additional demand), the following indicators would have helped track and measure the project's effect on quality: student-to-classroom ratios; teacher recruitment; student-to-teacher ratios; provision of textbooks and learning materials; declines in out-of-school youth.

The PAD identified data sources, frequency of reporting, and responsible authorities for each indicator (except completion rates). M&E design leveraged existing data sources and systems (Education Management Information System [EMIS], WASSCE, Population Census data, and household survey data) and involved relevant MoE departments/activities (the MoE's Planning, Budgeting, Monitoring and Evaluation Department (PBME); its Statistics Research, Information Management and Planning Department; the EMIS; and the National Education Sector Annual Review). The GES was responsible for monitoring specific project activities.

b. M&E Implementation

Strengths. Indicators in the results framework were regularly reported and updated, earning satisfactory or moderately satisfactory ratings during project implementation. District-level activities benefited from the training of officers and the development of a performance and monitoring report template to standardize collection and reporting. Central-level M&E was well staffed, with a seasoned M&E specialist and adequate data collection and analysis capacity. MoE's PBME Department worked closely with other institutions to collect necessary data. This project's reliance on existing systems was an important factor in the retention of M&E functions post-project, as evidenced by the use of the same M&E structure by the Ghana Accountability for Learning Outcomes project. Remote monitoring of civil works through the use of 360-degree cameras was an innovation that proved useful in monitoring civil works implementation when fieldwork was not possible due to COVID.

Challenges. Reporting on one PDO indicator (SHS educational attainment for the poorest two wealth quintiles) at project closing was not possible, because it depended on data from the Population Census, planned for 2020, but conducted a year later due to COVID. As a consequence, the Ghana Statistical Service was still analyzing data at the time of ICR preparation and was thus unable to make data available to the project. The ICR reported interim data based on existing data sources (Ghana Living Standards Measurement Survey, rounds 6 and 7) and promised to report to IEG on achievements based on Population Census data, when available. On November 15, 2022 the task team informed IEG that this data is now available, and they are aiming to update and report results on this indicator by the end of the month. In July 2018, a year after AF approval, as a result of an implementation support mission, the Bank and the government agreed to raise targets on a few indicators in light of strong achievements observed. While from that point on further progress was assessed against these increased targets, they were never formalized. Only one of these targets was for a PDO indicator (transition rates from JHS3 to SHS1 in targeted districts. Since all targets (original, revised under AF, and informally-set post-AF target) were exceeded, outcome ratings (and ratings methodology) were not affected. There was also a minor error in the formally revised/AF intermediate target of total beneficiary schools having a SPP in place and receiving ICT packages. The target was set at 232 schools but should have been 231 schools.

Data Reliability. The various data sources for reporting against the results framework are reliable and widely used by stakeholders in Ghana. Data sources for all PDO indicators come from census-based (rather than sample-based) surveys, avoiding any sampling errors. The EMIS provided the data source for calculating JHS to SHS transition rates. The final data on SHS education attainment for the poorest



two wealth quintiles will rely on Population Census data. WASSCE data, used to assess learning outcomes, are assessed to be highly reliable and valid (Bandeale and Adewale, 2013).

The school mapping exercise was designed to improve accountability by making key information on schools publicly available. By the project's end, all schools in Ghana were mapped and their profiles uploaded to the Ghana Schools information webpage. However, 63 percent of students surveyed (Beneficiary Assessment) reported no knowledge of the school mapping exercise, indicating room for improvement in the use of the school mapping portal.

c. M&E Utilization

M&E data were regularly used to verify DLI achievement. M&E findings were shared with heads of schools and their teams during annual school leadership trainings. M&E results also informed course correction during implementation. During monitoring visits to schools in 2015-16, the project team noted that electricity supply for the iBox was coming from the national grid, with frequent power outages impeding reliable access. Their recommendation of solar panel use was operationalized. The seven research papers supported under the project (itemized in Section 4) informed project activities, including baseline reports on math and science achievement and assessment practices, influencing the design of teacher training.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The project was classified as Category B (having potentially adverse environmental impacts on human or environmental important areas), triggering two World Bank policies: OP 4.01 Environmental Assessment; and OP 4.12 Involuntary Resettlement. As required under these policies, the project prepared an Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework. Forty-one farmers were identified as being affected by the land acquisition process, well below the 200 people cut-off, which would have warranted the preparation of a resettlement action plan. All 41 farmers received compensation and resettlement assistance in accordance with the Abbreviated Resettlement Action Plan, approved by the Bank and disclosed in-country in February 2015. Beyond resettlement, there was extensive effort to ensure that the livelihoods of affected individuals were fully restored.

In compliance with the ESMF, the project prepared an Environmental and Social Management Plan to guide environmental and social safeguards risks and impact mitigation with regard to the school rehabilitation and construction activities. All participating schools received training on environmental and social safeguards issues to ensure proper documentation and monitoring of school rehabilitation and construction of facilities. The Bank's Environment and Social Safeguards team was also actively involved in monitoring and site meetings, which allowed them to educate contractors on salient environment and social safeguards issues related to civil works. Tender documents for civil works were required to include environmental and social health and safety plans. The project also developed a comprehensive grievance redress mechanism



(GRM), which included three toll-free numbers for different telecom providers, with SMS being yet another vehicle for lodging complaints. All head teachers received training on the GRM, and the project management team devised a three-tiered GRM consisting of committees at the community, district, and national levels.

There were areas, however, where environment and social safeguards performance could have been improved. Some schools, for example, did not have proper waste facilities, which resulted in construction and school waste being burned in the open. Occasional delays in funds release impacted regular safeguards monitoring efforts. Nevertheless, there were no major environment and social safeguards issues encountered during project implementation, which was largely consistent with the moderately satisfactory safeguards ratings in the Bank's internal implementation reporting.

b. Fiduciary Compliance

Fiduciary Arrangements. Based on the Bank's assessment of financial management capacities and systems undertaken during project preparation, the project design relied on existing country systems for financial management activities. The Budget Directorate within the Ministry of Finance was responsible for budgeting and release of funds, and the Controller and Accountant General's Department ensured that funds were transferred in a timely manner and adequately accounted for. The Financial Controller of the GES was the main focal person responsible for validating Component 2 expenditures, under which disbursement of funds followed the standard investment project financing approach, whereby funds were advanced to the GES's designated account based on six-monthly expenditure forecasts. The Ghana Audit Service verified EEP spending under Component 1, whose funding was disbursed on the basis of DLR achievements.

Financial Management (FM). FM performance was rated as satisfactory throughout the project period, but at closing the FM rating was "moderate." The ICR did not explain why the rating at closing was lower than that throughout the project's lifetime, nor did it describe shortcomings. According to the ICR (pp. 35-36), the project complied fully with OP/BP 10.02 on Financial Management and with the FM-related covenants in the Financing Agreement. Interim Financial Reports documenting expenditures were prepared by the Financial Controller and approved by the Chief Director every six months. Components 1 and 2 experienced only marginal deviations between the planned budget and actual expenditures. As documented in the 2021 project fiduciary review, the project's FM systems were assessed to be adequate and provided management and stakeholders with the requisite information to mitigate financial risks. Key findings from the review highlighted that strong project governance under the leadership of the Steering Committee helped ensure that audit issues were addressed in a timely manner. The high technical level of staff in the head office (fiduciary staff, as well as engineers) ensured that FM activities were carried out as envisaged. All documentation of project expenditures and financial reporting requirements were sufficient and shared in a timely manner. The audited financial statements for the last three years of the project received unqualified opinion ratings from the Ghana Audit Service, providing assurances that the funds were being used appropriately.

Procurement. All procurement activities under the project were implemented in accordance with World Bank Procurement Guidelines and Procurement Regulations. For both Components 1 and 2, all planned procurement activities under goods, works, consultancy services, and non-consultancy services were executed to completion except for outstanding civil works and consultancy under Component 1, which



were coming to a close soon after project completion. The last post-procurement review in February 2021 rated procurement risk as moderate, while the last Procurement Risk Assessment and Management System review conducted in January 2022 rated procurement performance as satisfactory. These ratings are consistent with the overall procurement performance over the life of the project. Procurement activities were mainstreamed and handled by qualified procurement officers. The Bank's procurement team provided regular capacity building training through procurement clinics and other Bank procurement workshops.

c. Unintended impacts (Positive or Negative)

Gender. Over and above the expected outcomes for females intended by the project and reported in the efficacy section (share of beneficiaries who are female; their completion rates and test scores compared with their male counterparts; their share of scholarships awarded), the ICR reported (p. 27) that gender-sensitive teaching practices were observed in project schools, with 71 percent of teachers observed in the classroom exhibiting gender-sensitive teaching practices, and 76 percent of teachers observed to be treating boys and girls equally in the classroom (Dataplas, 2017). The ICR (p. 27) also noted that female project beneficiaries faced some challenges. It noted the high rates of early pregnancy in Ghana and the lack of support provided by the education system for students who wish to return to school post-pregnancy. High dropout rates for female students were reported anecdotally, especially during COVID-19, and these were mainly attributed to pregnancies and early marriages (Gender and GBV Report, 2021). Another major challenge was the limited number of female math and science teachers at the secondary school level. Only eight percent of math and science teachers in project schools were female, indicating that the education system must do more to recruit and train female math and science teachers. While the particular studies cited above were undertaken during implementation, data on these challenges could have been compiled during project preparation and these issues factored into the project's theory of change (see Section 4's discussion of theory of change).

d. Other

The project had an unintended positive impact in that it contributed to the mitigation of disruption in education due to the COVID-19 pandemic. Project financing of iCampus and iBox resources helped provide additional learning resources during the pandemic and increased the MoE's preparedness to cope with future school closures. The MoE leveraged information, education, and communication activities under the project to expedite the development of the iCampus portal, launched in May 2020, allowing students and teachers to access educational resources online. Within a year of its launch, 1.2 million students were registered on the portal, which hosted 138,000 active users (Borrower's Project Completion Report, 2021). This enabled students to continue to access education content remotely while schools were closed due to COVID-19. Procurement of a mobile van for MoE's Center for Distance Learning and Open Schooling is being used to support the iCampus and iBox initiatives by providing repairs, maintenance, and beneficiary training. A support center, established under the project, provides support to SHS in utilizing iCampus and iBox packages, with additional centers to be established in various regions.

11. Ratings



Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	
Bank Performance	Satisfactory	Satisfactory	
Quality of M&E	Substantial	Substantial	
Quality of ICR	---	Substantial	

12. Lessons

The following lessons are a subset of lessons presented in the ICR, slightly reworded by IEG to be more succinct:

- **The RBF approach supports a results focus, and can also incentivize Borrowers to adopt efficient implementation practices and offer flexibility to respond to new challenges.** RBF kept discussions with government counterparts focused on results rather than inputs. Process-related DLRs helped improve implementation of civil works activities, including adherence to needs-based district and school selection processes and to pre-construction requirements. RBF design allowed flexibility to leverage financing for a more robust rollout of iCampus to provide a distance learning option for SHS students during COVID.
- **Given the government’s commitment to steering more students into science, technology, engineering, and mathematics (STEM) fields, the hiring of more and higher quality math and science teachers, especially females, and their equitable distribution and effective use are key.** Project studies on math and science teaching and learning point to the need to: reassess the syllabi for these subjects; strengthen teaching and learning at the basic level to improve student preparedness entering SHS; carry out more group and practical work learning activities in the classroom; and develop and implement a national policy on teaching at the SHS level, with follow-up teacher training for ongoing improvement.
- **More attention to consultation, capacity building, and communication in the design and implementation of initiatives is likely to enhance actors' and stakeholders' understanding and uptake.** The beneficiary survey revealed that many teachers reported that they were not part of the SPP planning process and pointed to the need to be more inclusive in the development process, including the presentation of SPPs to teachers for their input before finalization. The 2021 fiduciary review identified specific areas for capacity development, including bookkeeping training for head teachers and the conduct of monthly inspection reviews of school records. Most beneficiary survey respondents were unaware of the school digest or the school mapping portal, and similarly, the uptake of the iBox could have been improved through greater communication.
- **Scholarships and bursaries for secondary education can serve as a useful policy tool to improve social outcomes, particularly for girls and women.** Recent experimental evidence from Ghana on the impact of secondary school scholarships on education, health, and employment outcomes make a strong case for continuing to use this tool to support



vulnerable students and reveals that scholarships do incentivize girls with the ability to succeed academically to choose to go to SHS.

IEG's review offers an additional lesson:

- **Gaps in a project's theory of change expand the risks of missed opportunities to incorporate critical assumptions, interventions, outputs, and intermediate outcomes and indicators that enhance prospects for the success and sustainability of investments.** Critical gaps in this project's theory of change for improving education access and quality were the absence of any contribution from teacher recruitment to accommodate the significant increment in new student places (and the financing source); trends on classroom size and student-to-teacher ratios; and non-financial obstacles to girls access to secondary education (see Section 4).

13. Assessment Recommended?

No

14. Comments on Quality of ICR

Quality of Evidence. The evidence collected under this project and used in the ICR came from credible sources (see Section 9) and was properly referenced. Annex 1 was systematic in presenting data on all of the intermediate outcome and outcome indicators. There were some minor discrepancies between data presented in the ICR's efficacy discussion in the main text and that presented in Annex 1, and within the main text. In these cases, this ICR Review relied on Annex 1 data.

Quality of Analysis was strong overall. The gaps in the theory of change, mentioned in this ICR Review, were grounded in the original components, as presented in the PAD's main text. The detailed project description in the PAD's Annex 2 (p. 31) made vague mention of the need to rationalize/reallocate teachers for their more effective use; MoE's zero tolerance of teacher absenteeism; and ways and means of generating savings within the sector to finance additional teachers. These elements should have been reflected in the theory of change. Also, there was no analysis of the free education policy (adopted three years into the project) and how it affected scholarships and bursaries and what they covered. Some information on efficacy was presented in different sections of the ICR. For example, gender-disaggregated data were presented under "Other Outcomes and Impacts" (p. 27), rather than in the Efficacy section (pp. 17-24). The assessment of project attribution would have been enriched with information on what additional activities the government and/or other partners (if any) were supporting in the project area. This was clarified during IEG's November 15, 2022 meeting with the Task Team (see Section 4).

Quality of Lessons. The lessons were based on evidence and analysis included in the ICR and were relevant to other countries embarking on improvements in secondary education quality and access.

Results Orientation. The ICR had a strong results orientation.



Internal Consistency/Adherence to Guidelines. With the exception of above-mentioned, slight discrepancies of data between the main text and Annex 1, and the presentation of gender outcomes on project outcome indicators under “Other Outcomes and Impacts” rather than under “Efficacy,” the ICR was internally consistent and adhered to guidelines.

a. Quality of ICR Rating
Substantial