Chapter 5

Infrastructure and in-school facilities

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This Chapter focuses on availability of infrastructure and in-school facilities as per the norms laid down in the Right to Education Act, 2009 and Samagra Shiksha Scheme. The highlights of audit findings are as follows:

- Out of 9,285 schools in the sampled districts, 3 to 72 *per cent* schools had various infrastructural deficiencies in terms of all-weather buildings, classrooms, laboratories, libraries, ICT facilities, toilets, drinking water, *etc*.
- In 23 *per cent* test-checked schools, single classroom was used for multiple classes. In 43 *per cent* test-checked schools, the students of Primary to Secondary classes were made to sit on the floor. In 19 *per cent* test-checked schools, the existing toilets were incomplete or were in unhygienic conditions, due to their non-maintenance.
- In 11 *per cent* test-checked schools, imparting Secondary level (IX-X) education, the existing laboratories lacked requisite equipment and other facilities.
- In 14 *per cent* test-checked schools, the available ICT facilities had not been used, due to the absence of skilled manpower/ instructor.
- 46 *per cent* test-checked schools had adverse Student Classroom Ratio (SCR) during 2022-23, where the SCR ranged between 42:1 and 129:1.

The RTE Act, 2009 and Samagra Shiksha Implementation Framework (SSIF) suggest infrastructure norms and standards that should be adhered to by the State in fulfilling the basic infrastructure needs necessary for children at different levels of school education. Paragraph 3.2 of National Education Policy (NEP) recommended providing effective and sufficient infrastructure, so that all students have access to safe and engaging school education at all levels, from Pre-primary to Grade XII. The suggested norms and standards under the RTE Act, 2009 and SSIF are given in ***Table 5.1***.

Table 5.1: Suggested norms and standards of school infrastructure

Provisions	Level of school education	Suggested infrastructure norms and standards
RTE Act (Schedule)	Classes I-VIII (Elementary)	All-weather building consisting of at least one classroom for every teacher, an office-cum-store-cum-head teacher's room.
		Separate toilets for boys and girls, safe drinking water facilities, a kitchen, library, playground, barrier free access, boundary wall/ fencing.

Provisions	Level of school education	Suggested infrastructure norms and standards
		Minimum of two teachers for Primary classes (Classes I to V) and one teacher per class for Upper Primary classes (Classes VI to VIII). Thus, there shall be at least two classrooms for Primary classes and three classrooms for Upper Primary classes.
Paragraph 1.1.1 of RMSA guidelines for school infrastructure	Classes IX & X (Secondary)	Four classrooms for two sections and two classrooms for single-section Secondary school, headmaster room, office room.
Paragraph 4.4.5 of SSIF	Classes IX & X, Classes XI & XII (Secondary & Higher Secondary)	Integrated laboratory (Classes IX & X); Science laboratory (Classes XI & XII); Art/ Craft room (Classes IX to XII).
Paragraph 12.3 of SSIF	Class VI to XII (Upper Primary to Higher Secondary)	ICT facilities including Smart classrooms.
Paragraph 4.5 and 5.4 of SSIF	(Classes I to XII) all levels of school	Library, separate toilets for boys and girls, toilet for CwSN, safe drinking water, electrification, ramps with hand railing, furniture, playground, boundary wall/ fencing among others.

5.1 Availability of infrastructure and facilities

Audit noticed that the State did not ensure availability of required infrastructure and in-school facilities in the Government and Government-aided schools as of March 2023. Though the infrastructure and in-school facilities had improved in some aspects, such as the availability of all-weather buildings, libraries, laboratories, boundary walls, Information and Communication Technology (ICT) facilities and electrification of schools in 2022-23 over 2018-19, there were still a large number of schools which did not have the basic required infrastructure and facilities, as indicated in ***Table 5.2***.

Table 5.2: Infrastructure facilities in the schools of the State

Sl. No.	Infrastructure/ facilities	2018-19	2022-23	
		Total No. of Schools in the State : 61,022	**Total No. of Schools in the State : 54,478**	**Total No. of Schools in the sampled districts: 9,285**
		No. of schools without the facilities (Percentage)	**No. of schools without the facilities (Percentage)**	**No. of schools without the facilities (Percentage)**
1.	All weather buildings	10,987 (18)	1,608 (3)	297 (3)
2.	Headmaster's room	12 (0.02)	17,782 (33)	2,950 (32)
3.	Boys' toilet	2,902 (5)	4,102 (8)	662 (7)
4.	Separate Girls' toilet	1,235 (2)	1,915 (4)	269 (3)
5.	CwSN toilet for Boys	19,552 (32)	22,520 (41)	3,962(43)
6.	CwSN toilet for Girls	19,121 (31)	25,806 (47)	4,349 (47)

Sl. No.	Infrastructure/ facilities	2018-19	2022-23	
		Total No. of Schools in the State : 61,022	**Total No. of Schools in the State : 54,478**	**Total No. of Schools in the sampled districts: 9,285**
		No. of schools without the facilities (Percentage)	**No. of schools without the facilities (Percentage)**	**No. of schools without the facilities (Percentage)**
7.	Drinking water facilities	0	63 (0.12)	1 (0)
8.	Ramp	16,991 (28)	5,422 (10)	792(9)
9.	Handrail	19,806 (32)	15,877 (29)	2,741(30)
10.	Playground	41,825 (69)	14,882 (27)	3,754 (40)
11.	ICT facilities	23,984 (out of 28,232 schools) (85)	18,837 (out of 27,134 schools) (69)	3,189 (out of 4,434 schools) (72)
12.	Computer Room	18,508 (out of 28,232 schools) (66)	18,319 (out of 27,134 schools) (68)	3,177 (out of 4434 schools) (72)
13.	Furniture/ fixture	NA	27,759 (51)	5,782 (62)
14.	Art/ Craft room	8,768(out of 9,710 schools) (90)	4,285 (out of 9930 schools) (43)	502 (out of 1,449 schools) (35)
15.	Integrated laboratory	7,157 (out of 8,762 schools) (82)	2,506 (out of 8,938 schools) (28)	344 (out of 1,320 schools) (26)
16.	Kitchen shed	NA	4,207 (out of 51,196 schools) (8)	630 (out of 8,778 schools) (7)
17.	Boundary wall	27,427 (45)	18,289 (34)	2,953 (32)
18.	Electrification	41,427 (68)	4,756 (9)	1,454 (16)
19.	Smart classroom	NA	19,726 (out of 27134 schools) (73)	3,129 (out of 4,434 schools) (71)
20.	Library room	58,068 (95)	19,607 (36)	2,983(32)

(Source: Analysis of information furnished by OSEPA)

***{N.B:** As per SSIF, (i) ICT facilities are essential in schools imparting education to students of Upper Primary, Secondary and Higher Secondary Classes (Classes VI to XII);(ii) Integrated laboratory is essential in schools imparting education to students of Secondary Classes (Classes IX and X);(iii) Art/ Craft room is essential in schools imparting education to students of Secondary and Higher Secondary Classes (Classes IX to XII)}*

In the 95 sampled Government/ Government-aided schools in six sampled districts, Audit noticed the following deficiencies in infrastructure and in-school facilities, as indicated in ***Table 5.3***.

Table 5.3: Infrastructure and schooling facilities in the sampled schools

School category	Class of education imparted by the sampled school	No. of schools covered	Schools without the infrastructure and other functional schooling facilities
Elementary	Primary to Upper Primary (Elementary)	32	• 44 *per cent* (42 out of 95) schools lacked playground • 69 *per cent* (66 out of 95) schools lacked CWSN toilet facilities • Two *per cent* (two out of 95) schools were not electrified • 25 *per cent* (24 out of 95) schools did not have complete boundary wall/ green fencing • Three *per cent* (3 out of 95) school lacked drinking water facilities • 59 *per cent* (56 out of 95) schools imparting upper Primary to Higher Secondary classes lacked ICT facility
Secondary	Primary to Secondary	24	
	Upper-Primary to Secondary	15	
	Secondary only	01	
Higher Secondary	Primary to Higher Secondary	02	
	Upper Primary to Higher Secondary	04	

School category	Class of education imparted by the sampled school	No. of schools covered	Schools without the infrastructure and other functional schooling facilities
	Higher Secondary only	17	• Eight *per cent* (8 out of 95) schools lacked separate toilets for girls • 10 *per cent* (8 out of 77) schools imparting Primary/ Upper Primary classes did not have kitchen • 41 *per cent* (39 out of 95) schools did not have ramp and railing facilities • 81 *per cent* (51 out of 63) Secondary and Higher Secondary school lacked art/ craft/ curricular room • 22 *per cent* (11 out of 51) Secondary and Higher Secondary school lacked integrated/ science laboratory
	Total	**95**	

(Source: Analysis of information furnished by sampled schools)

(N.B: Out of 96 sampled schools, one school was not functioning since 2019-20)

Thus, the State had not ensured availability of basic infrastructure and in-school facilities to create interest among the students towards education and provide them access to quality education. Lack of proper assessment of infrastructure needs of schools, delay in completion of infrastructure works were some of the reasons for deficient infrastructure as discussed in ***Paragraph 5.6***.

In reply, the Department stated (October 2024) that the infrastructure facilities had improved in terms of all-weather buildings, libraries, laboratories, boundary walls, ICT facilities and Electrification. The reply is not acceptable, as Audit had noticed severe infrastructural deficiencies in most of the test-checked schools.

5.2 Adverse Student-Classroom Ratio

Under the RTE Act, 2009, the Pupil Teacher Ratio (PTR) in a Primary School (PS) shall not exceed 40:1. Paragraph 4.6 of the RMSA framework stipulates maintaining Student Classroom Ratio (SCR) at 40:1 in Secondary schools. Under the SSIF, the SCR is one of the key performance indicators for assessment of the sufficiency of infrastructure facilities. SSIF defines a classroom with more than 40 students (Primary to Senior Secondary stages) as an overcrowded classroom.

The SCR in Primary, Upper-Primary, Secondary and Higher Secondary classes during the period 2018-19 and 2022-23 in respect of Government and Government aided schools of the State and the sampled districts, is summarised in ***Table 5.4.***

Table 5.4: Adverse SCR in the schools of the State and Sampled districts

Year	No. of schools offering Primary, Upper Primary, Secondary and Higher Secondary classes[19]				No. of schools offering Primary, Upper Primary, Secondary and Higher Secondary classes having adverse SCR (Percentage in brackets)			
	Primary[20]	Upper Primary	Secondary	Higher Secondary	Primary	Upper Primary	Secondary	Higher Secondary
State								
2018-19	50,504	24,131	8,583	956	2,635 (5)	3,878 (16)	5,061 (59)	799 (84)
2022-23	45,323	23,115	8,810	1,191	5,443 (12)	5,603 (24)	3,725 (42)	681 (57)
Sampled Districts								
2022-23	8,132	3,833	1,300	166	1,198 (15)	1,091 (28)	607 (47)	107 (64)

(Source: Analysis of data furnished by OSEPA)

Audit noticed that the SCR for schools offering Primary and Upper Primary classes declined in 2022-23 over 2018-19, whereas the SCR improved in the schools offered Secondary and Higher Secondary classes in the State. The rise in adverse SCR and decline in enrolment of children from Primary to Upper Primary levels of education in the State during 2022-23 over 2018-19, indicated the inability of the State to improve classroom needs of the students over the years.

Among the sampled districts, Nabarangpur had the highest proportion of schools, offering Primary and Upper Primary classes, with adverse SCR followed by Koraput. In case of Secondary and Higher Secondary classes, Bhadrak and Nabarangpur districts had the highest proportion of schools with adverse SCR.

In the sampled schools, Audit verified SCR in 95 sampled schools and noticed that overall 44 (46 *per cent*) schools had adverse SCR during 2022-23. The range of SCR in those schools was between 42:1 and 129:1 respectively. The adverse SCR was highest in Secondary schools (24) followed by Higher Secondary schools (16) and Upper Primary schools (four) respectively, as detailed in ***Appendix 5.1.***

Thus, the State was unable to provide sufficient classrooms to the students. In view of the adverse SCR, students were deprived of the basic infrastructure needs, compelling the students to sit in overcrowded classrooms.

The Department replied (October 2024) that the SCR status of Elementary and Secondary Schools had improved. The reply is not convincing as out of 95 test-checked schools, the SCR was higher than the norm in 44 schools, as of March 2023.

[19] Excluding schools without any enrolment of children

[20] Schools offering primary classes (*i.e.* I-V, I-VIII, I-X and I-XII)

5.3 Deficient infrastructure and school facilities in the sampled schools

During JPI conducted with headmasters of schools during June to December 2023, Audit noticed the following deficiencies in infrastructure and school facilities in the sampled Government and Government-aided schools:

- ***Single classroom used for multiple classes*:** In 18 (23 *per cent*) out of 78 test-checked schools offering Primary, Upper Primary and Secondary education, a single classroom was used for multiple classes. In two test-checked schools Hataguda Upgraded High school, Mukhibidai Upgraded High school of Koraput district, the veranda of the building was used for classroom purposes, as shown in ***Pictures 5.1 and 5.2***. The details are given in ***Appendix 5.2.***

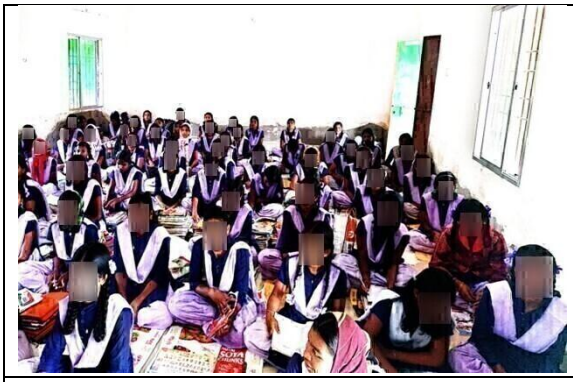
	
Picture 5.1; dated 26.06.2023	***Picture 5.2; dated 04.07.2023***
Classes I to IV students sitting jointly in the veranda of Hataguda Upgraded High school under Semiliguda block of Koraput district	***Class VIII students sitting in the veranda of Mukhibidai Upgraded High school under Semiliguda block of Koraput district***

Audit observed that the reasons due to which single classroom was used for multiple classes, were as follows:

- Lack of adequate classrooms for students (12 schools)
- Lack of adequate classrooms as well as teachers (four schools) and
- Lack of adequate teachers (two schools)

Different classes and ages of students required different sets of attention and levels of education, but by using a single classroom for imparting education to students of different levels, the students were deprived of the quality of attention which they deserved.

- ***Overcrowded classrooms:*** In 15 (17 *per cent*) of the 95 sampled schools, 32 classrooms were overcrowded, where 53 to 160 students were seated in a single classroom. Audit noticed that in 11 such overcrowded classrooms, 53 to 121 students of Primary and Upper Primary classes were seated. Similarly, in another 17 overcrowded classrooms, 71 to 130 students of Secondary classes were seated, whereas in other four overcrowded classrooms, students ranging from 119 to 160 of Higher Secondary classes had been seated, as shown in ***Pictures 5.3*** and ***5.4***.

	
Picture 5.3; dated 23.09.2023	***Picture 5.4, dated 23.09.2023***
Around 90 students of Cl-IX sitting in single classroom in Govt SSD Girls HS, Karchamal, Nabarangpur	***Around 110 students of Cl-X sitting in one classroom in Govt SSD Girls HS Karchamal, Nabarangpur***

Audit observed that lack of adequate classrooms resulted in overcrowding of students affecting access to quality education. As such, a pleasant environment for proper school education was lacking.

- ***Damaged/ unsuitable classrooms:*** In 14 (15 *per cent*) out of 95 sampled Government/ Government aided schools, damaged walls, ceilings and roofs were noticed in classrooms (***Picture 5.5***). The schools, block and district-level authorities, thus, failed to ensure a safe learning environment for the students. Details are in ***Appendix 5.3.***

Picture 5.5; dated 25.07.2023
Class VIII students sitting under broken Asbestos Roof in Krupasindu Govt. High School, Bhadrak

- ***Classrooms used as multi-purpose rooms***: In eight schools, the classrooms were used as classroom-cum-store room for keeping Mid-day Meal (MDM) stuff and other materials due to the absence of sufficient space/ storeroom (Details are in ***Appendix 5.4***) (***Picture 5.6***), whereas, in five schools, the classrooms were being used as kitchens for preparing Mid-day Meals, due to the absence of dedicated and proper kitchen/ shed.

Picture 5.6; dated 04.07.2023
Classroom being used as classroom cum storeroom in Mukhibidai Upgraded High school, Koraput

- ***Absence of head teacher room-cum-office room*:** In five schools, the classrooms and the veranda were used as Headmaster's room-cum-office room, due to absence of a dedicated room.
- ***Under-utilised classrooms:*** In two sampled schools (Govt. Upper Primary School, Khageswar and Dhaniojha, Bhadrak district) despite

availability of additional classrooms, the same were not put to use for the benefit of the students and remained vacant. Audit found that due to (i) non-construction of the parapet of the roof and (ii) earmarking of the classroom as Headmaster's room, the classrooms were not being used.

- ***Non-functional toilets:*** In 18 (19 *per cent*) schools imparting different classes of education[21], out of 95 sampled schools, the existing toilets were incomplete or were in unhygienic conditions, due to their non-maintenance. In two such schools, the existing toilets were not put to use due to the absence of water/ electricity connections. In one school (Chandrapada Upgraded High school of Koraput), instead of making arrangements for functional use of the existing toilets, additional toilets were under construction.

- ***Absence of seating furniture:*** In 41 (43 *per cent*) out of 95 sampled schools, the students of Primary to Upper Primary classes (Class I to Class VIII - 40 schools) and Primary to Secondary classes (Class I to Class X - one school) were made to sit on the floor, due to the absence of furniture for students.

- ***Absence of functional integrated/ science laboratory room:*** In five (11 *per cent*) out of 46 sampled schools imparting education to students of Secondary classes (IX to X), the existing laboratories lacked requisite instruments/ connections/ facilities. Hence, the same were not being put to effective use for the benefit of students. Similarly, in one (nine *per cent*) out of 11 sampled schools imparting science education to students of Higher Secondary classes (Classes XI to XII), the laboratories (four) were not being used by the students due to non-availability of requisite furniture and facilities and absence of demonstrators ***(Pictures 5.7*** and ***5.8***). Details are given in ***Appendix 5.5***.

Picture 5.7; dated 03.08.2023
Botany lab without requisite set up & demonstration facilities in SSD Higher Secondary School, Sunabeda

Picture 5.8; dated 03.08.2023
Physics lab without requisite set up & demonstration facilities in SSD Higher Secondary School, Sunabeda

- ***Non-functional CwSN toilets*****:** In three sampled schools, the existing CwSN toilets were not suitable for use due to lack of ramp, railings, wide passages and unhygienic conditions.

[21] Primary and Upper Primary class: nine; Primary to Secondary class: seven; Upper Primary to Secondary class: one and Higher Secondary class: one)

- ***Overcrowded hostels:*** Audit noticed overcrowded hostels in two[22] sampled residential schools. In one[23] out of the two schools, the hostel had 16 rooms and in each room, 12 residents were designated to stay. However, during JPI conducted by Audit, it was found that against the residential capacity of 192, a much larger number of residents were being accommodated in the hostel. Another[24] school was providing residential schooling to 40 children of Classes I to V. However, it was noticed that the existing 40-seated hostel building was in a dilapidated condition and all 40 boarders were being accommodated in a six bedded small room adjacent to the hostel, without adequate capacity to accommodate all the children.

- ***Unsafe ramp and railing***: In two schools (Pendapada Project Upper Primary School, Hataguda Upgraded High school, Koraput), Audit noticed unsafe ramps and ramps with broken iron angles, which were not fit for use both by CwSN as well as for normal students and could cause serious accidental injury as shown in ***Pictures 5.9*** and ***5.10.***

Picture 5.9; dated: 12.08.2023
Ramp with broken angle in Pendapada Primary and Upper Primary School

Picture 5.10; dated: 13.07.2023
Unsafe ramp/ entrance to Classes VI and VIII at Hataguda Upgraded High school

- ***Non-functional drinking water facilities:*** In one sampled school (Pandriguda Project Upper Primary School), the existing tube well was non-functional and students were getting water from outside the school area.

Thus, the State failed to provide basic infrastructure and academic needs of the students in the schools, which resulted in denial of quality education to the students.

The Department stated (October 2024) that steps had been taken for providing additional classrooms, repair and maintenance works, provision of toilets/CwSN toilets, ramp & railing, drinking water facilities, procurement of chemicals and apparatus, *etc*.

[22] SSD Girls; High School, Baligaon and Chandrapada Upgraded High school, Koraput
[23] SSD Girls High School, Baligaon, Koraput
[24] Chandrapada Upgraded High school, Koraput

Recommendation 5.1

Infrastructure facilities in schools, being an essential requirement for effective teaching-learning, should be properly assessed and construction constraints resolved effectively for completion of infrastructure works in time.

5.4 Variations between the UDISE+ data and the physical status of school infrastructure

The UDISE+ data is used by the State for infrastructure planning. The State Advisory Council constituted for implementation of the RTE had suggested (November 2016) sample-checking by the State Project Director, OSEPA to ensure the authenticity and reliability of UDISE+ data being uploaded by the schools. Audit noticed huge disparities between the status of infrastructure as shown in the UDISE+ data (2022-23) and the physical status of infrastructure, observed during JPI, as shown in ***Table 5.5***, in 83 (87 *per cent*) out of 95 sampled schools.

Table 5.5: Variations between the UDISE+ data and the physical status of infrastructure in sampled schools

Sl. No.	Status of infrastructure in sampled school as per UDISE+ Report	Status noticed during JPI and as per information furnished by schools
1.	Six sampled schools have separate toilet for girls.	The same schools had no separate toilet facility for girls.
2.	CwSN toilet facility is available in 32 schools.	CwSN toilet facility was not available in the same 32 sampled schools.
3.	Two sampled schools have drinking water facility.	Functional drinking water facilities were not available in those schools.
4.	Electricity connection is available in one school.	Electricity connection was not available in the same school.
5.	24 schools have playgrounds.	Playground was not available in the same 24 sampled schools.
6.	Ramp with handrail facility available in 16 schools	Ramp with handrail facility was not available in the same 16 schools.
7.	Kitchen shed available in four schools.	Kitchen shed was not available in the same schools.
8.	13 schools have Smart classrooms.	Smart classrooms were not available in the same schools.
9.	Internet facility available in 39 schools.	Internet facility was not available in the same 39 schools.
10.	Computer lab available in nine schools.	Computer lab was not available in those nine schools.
11.	ICT facility available in 14 schools.	ICT facility was not available in those 14 schools.

(Source: Information furnished by OSEPA, sampled schools and Joint Physical Verification)

The above table clearly indicates that the data shown in the UDISE+ portal, being uploaded by the schools, was different from the actual status of infrastructure facilities in the test-checked schools. Thus, the real position of infrastructure and in-school facilities was not uploaded in the UDISE+ portal.

Accuracy of data should be ensured by the Department, because inaccurate data leads to improper infrastructure planning.

The HM of sampled schools (Bhadrak and Sambalpur districts) while accepting the fact stated that the data was uploaded erroneously due to absence of handholding and training for proper use and feeding of information into the UDISE+ portal.

While accepting the fact, the Department stated (October 2024) that capacity building of Headmaster/principal had been done for proper data updation in UDISE+ portal.

5.5 Information and Communication Technology facilities in schools

Paragraph 24.1 of the National Education Policy, 2020, emphasises the importance of technology and recommends optimisation and expansion of digital platforms and Information and Communication Technology (ICT) based educational initiatives in providing quality education for all. The three cardinal principles of access, equity and quality could be served well by harnessing the potential of ICT. Paragraph 12.3 of SSIF supports the establishment of ICT laboratories, software and smart classrooms in Upper Primary to Higher Secondary schools.

As per Paragraphs 1 and 3.1.1 of GoI guidelines on 'ICT in Schools scheme' (February 2011), dependable power supply, internet connectivity, exclusive ICT teacher, training for all teachers and computer lab/ room are the prerequisites for effective use of ICT.

Audit noticed that in the AWP&B (2018-23) of Samagra Shiksha (SS), the State had set a target of establishing ICT infrastructure in 2,317 Upper Primary schools and smart classrooms in 6,065 and 909 Upper Primary and Secondary schools. respectively. However, due to delayed finalisation of procurement formalities by the OSEPA, the facilities had not been established in any of the targeted schools, as of March 2023, as shown in ***Table 5.6***.

Table 5.6: Target and achievement in establishment of ICT facilities

Particulars of ICT facilities planned to establish	Class of education		Year of approval	Particulars of ICT facilities established, as on March 2023
	Upper Primary	Secondary		
Establishment ICT infrastructure	1,300	0	2018-19	0
	715	0	2019-20	
	302	0	2021-22	
Sub-total	**2,317**	**0**	**2018-22**	**0**
Establishment of smart classroom	3,946	384	2021-22	0
	2,119	525	2022-23	
Sub-total	**6,065**	**909**	**2021-23**	**0**
Total	**8,382**	**909**	**2018-23**	**0**

(Source: Information furnished by OSEPA)

Besides this, Audit noticed that the SME Department, Government of Odisha approved the proposal of the Director of Higher Secondary Education (DHSE), Odisha and decided (October 2017) to instal 135 Smart Classrooms and laboratories in Higher Secondary schools for modernisation of quality education. As per the decision, there would be a Committee under the Chairmanship of Principal Secretary, SME Department to decide the modalities for procurement of requirement of Smart Classroom and the DHSE would monitor the progress of installation of Smart Classroom. Accordingly, the Department sanctioned funds for 44 schools, out of 135 identified schools

(2018-23) for setting up Smart Classrooms and IT facilitation laboratories, including civil infrastructure, at an estimated cost of ₹ 34.15 lakh per school up to 2020-21 and thereafter ₹ 12.08 lakh per school during 2022-23.The DHSE, released the funds to the Principals of 13 Government and 31 non-Government aided schools for the establishment of these facilities during 2018-23. However, 17 schools (39 *per cent*) could establish the Smart Classrooms and the remaining 27 surrendered the entire allotted funds to the DHSE. The DHSE cited that lack of infrastructure, insufficient manpower and difficulties faced by the schools in handling GeM portal were the reasons for the non-establishment of the Smart Classrooms by the schools.

Further, during 2021-22, the SME Department made budget provision of ₹ 2.05 crore for modernisation of quality education in 30 Higher Secondary schools but the Government failed to finalise the guidelines due to which the entire budget provision lapsed during the year.

Audit observed that the DHSE failed to ascertain availability of space/ room, ICT trained teachers, manpower through feasibility study before taking up the proposals. Hence, it was the failure of the Department in establishing facilities required for computer-based qualitative learning for students.

As such, 18,837 (out of 27,134 schools) of the State-run and Government-aided Upper Primary, Secondary and Higher Secondary schools were running without ICT facilities, as of March 2023. Audit also noticed the following deficiencies in the sampled schools regarding utilisation of ICT facilities:

- **Non-utilisation of ICT facilities:** In 13 (14 *per cent*) out of 95 sampled schools, the available ICT facilities in the schools had not been used due to the absence of skilled manpower/ instructor (list of schools detailed in ***Appendix 5.6***). Additional ICT lab was under construction in one (SSD Girl's High School, Baligaon) despite non-utilisation of existing ICT facilities. Besides, ICT labs with computers were not utilised by the students due to want of skilled teachers and not used for educational purpose as shown in ***Picture 5.11*** and ***Picture 5.12***.

	
Picture 5.11; dated 28.08.2023	***Picture 5.12; dated 03.08.2023***
ICT lab equipped with 40 computers, all remaining unutilised due to want of skilled teacher at OAV, Chandrapada	***ICT lab at SSD Higher Secondary School, Sunabeda not used for educational purposes***

- **Non-use of smart/ digital board:** In one sampled school (Upgraded High school, Chandrapada, Koraput), despite establishment (April 2023) of a smart classroom and ICT lab, the same were not made functional, due to lack of electricity connection.

Thus, the lack of ICT facilities and absence of skilled teachers in schools has deprived the students of benefitting from learning associated with digital technology.

In reply, the Department stated (October 2024) that Smart classrooms in Upper Primary and Secondary schools had already been completed and tendering process for establishment of ICT infrastructure was going on.

Recommendation 5.2

The ICT needs of schools in terms of infrastructure and human resources should be ensured to enhance the students' learning outcomes and enable them to gain from benefits of digital technology.

5.6 Status of construction of infrastructure

Audit noticed that 17,583 infrastructure works related to Elementary schools (Primary and Upper Primary) and 2,696 works related to Secondary and Higher Secondary schools had been approved in the AWP&B of the State for 2018-23. However, 11,272 works (64 *per cent*) relating to Elementary schools and 2,512 (93 *per cent*) relating to Secondary and Higher Secondary schools remained incomplete/ had not-started, as of March 2023. Of the total 13,784 incomplete works, 2,058 (15 *per cent*) infrastructure works pertained to the years 2018-22, of which 637 (2018-19: 61, 2019-20: 269, 2020-21:194, 2021-22:113) *i.e.* 31 *per cent* works, did not even commence, as detailed in ***Appendix 5.7***.

OSEPA and the DPCs stated that land dispute, non-availability of land, school management level disputes, change in implementing agency and difficulties in access due to road problems were the reasons for non-commencement of the works.

In five sampled districts, Audit noticed that 2,171 out of 3,424 infrastructure works, targeted during 2018-23, remained incomplete/ not started, as of March 2023. The DPCs attributed non-availability of land, delayed tendering process and commencement of work by the executing agencies, as reasons for non-completion of works, as shown in ***Table 5.7.***

Table 5.7: Target and achievement of infrastructure works in the sampled districts during 2018-23

(Figures represent number of works)

District	Target (2018-23)	Works completed	Works Under progress	Works Not started	Total incomplete works	Reasons for non-completion
Bhadrak	519	200	18	301	319	Delay in commencement of work by executing agencies.
Koraput	1,730	277	133	1320	1,453	Delay in tendering process and delayed release of funds.
Nuapada	386	197	31	158	189	Non-availability of land
Sambalpur	402	385	17	0	17	Delay in tendering process.

District	Target (2018-23)	Works completed	Works Under progress	Works Not started	Total incomplete works	Reasons for non-completion
Sonepur	387	194	62	131	193	--
Total	**3,424**	**1,253**	**261**	**1,910**	**2,171**	

(Source: Information furnished by DPCs)

Audit observed that the State had not taken time-bound action to ensure construction of new schools, additional classrooms, and upgradation of existing schools to provide required educational facilities to students in time. Delayed completion of infrastructure work forced the children of multiple classes to sit in overcrowded classrooms, and in damaged classrooms, as discussed in ***Paragraph 5.3***.

The Department stated (October 2024) that out of 11,272 incomplete works of Elementary schools, 5,598 works had been completed and 217 works had also started. Further, out of 2,512 incomplete works of Secondary schools, 678 works had been completed and 51 works had also started.

5.6.1 Unfruitful expenditure on partially constructed school infrastructure

Audit noticed that in one sampled district (Koraput), 17 infrastructure works related to construction of additional classrooms, toilets, new buildings, *etc*., at an estimated cost of ₹ 92.04 lakh (approved by the PAB from 2005-06 to 2017-18), remained incomplete, even after release/ incurring expenditure of ₹ 58.97 lakh. In case of 15 works, the District Project Coordinator issued work orders/ executed agreements (April 2005 to February 2017) with the School Management Committee/ HM/ Technical Consultant for the execution of works under the technical supervision of the Sr. Technical Consultant, who was required to meet with TC and SMC to review the progress and resolve the difficulties. In respect of all these works, the completion schedule of the works was six months from the date of issue of the work order/ execution of the agreement. However, for one[25] work, the DPC executed an agreement (November 2020) and issued work order (December 2020) to the contractor, with a completion schedule of six months from the date of work order. However, the contractor did not execute the work even after the lapse of the agreement period. Based on the reasons cited by the contractor and the report of the technical consultant, the Collector approved the (February 2023) cancellation of the tender and shifted the project to another site. Audit observed that due to inadequate technical supervision and monitoring on the part of technical personnel and the DPC, the works remained incomplete for more than 5 to 17 years of the scheduled date of completion.

[25] Construction of dilapidated school building at Mangalpur Primary School of Narayanpatna block with contract value of ₹10.21 lakh

Case Study

The Renu Project Upper Primary School (Semiliguda Block under Koraput district) imparts education to Class I to VII. The DPC, Koraput sanctioned (2011-12) ₹ 4.22 lakh and released ₹ 4.09 lakh in favour of the headmaster of the school for the construction of additional classrooms (December 2013). The work was scheduled to be completed by June 2014. In the JPI (July 2023), Audit noticed that the entire amount of ₹ 4.09 lakh had been utilised. However, the work was lying incomplete even after a lapse of more than nine years of the scheduled date of completion. The DPC Koraput, while accepting the fact, stated that ₹ 4.40 lakh had been recovered from the concerned Headmaster of the school and action was being taken for completion of the project departmentally.

Picture 5.13; dated 10.07.2023
Incomplete Classroom inside the premises of Renu Project Upper Primary School

The Department stated (October 2024) that steps had been taken for completion of the work by following due procedure.

Recommendation 5.3

Progress of infrastructure projects should be monitored effectively to ensure timely completion of projects and delivery of benefit to the students.