

**INFRASTRUCTURAL FACILITIES OF ELEMENTARY SCHOOLS IN KAKDWIP
SUBDIVISION OF SOUTH TWENTY FOUR PARGANAS DISTRICT, WEST
BENGAL**

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ABSTRACT:

Education is very much related to globalization through its service giving quality. School environment in which the students learn is very crucial for sustaining the quality. Effective teaching learning is very much dependent on the suitable school infrastructure which is one of the core methodologies to globalize the education. Infrastructure is the underlying organizational structure needed by any school to remain functional and to run successfully. Different Researches have already established the fact that non-availability or poor infrastructure affects the quality of education. Ill-equipped classrooms, absence of toilet, lavatory exert negative impact on students as well as teachers. School absenteeism, drop out, poor achievement, poor performance in the examination all these are also related with the availability of sufficient infrastructure and other facilities within school. As elementary education is the gateway to lifelong learning process, strengthening its infrastructure is a pre-requisite to achieve Universalization of Elementary Education/Universalization of Primary Education. In this backdrop this paper attempts to expose the situation of infrastructural facilities of elementary schools in Kakdwip subdivision of South Twenty Four Parganas district, West Bengal. This study covers primary and upper primary schools of four C. D. Blocks namely, Kakdwip, Namkhana, Sagar and Pathar Pratima. DISE data and field observation are the key sources of information. Parameters have been selected from the EDI parameters proposed by National University of Planning and Administration with some necessary modifications. Availability of different facilities within the schools in the study area is inadequate. But it is also a striking feature that some schools represented better position in spite of being a part of the vulnerable area of Sundarban to climatic hazard.

KEY WORDS: School environment, school infrastructure, Universalization of Elementary Education, infrastructural facilities.

- 1. Introduction:** Education is very much related to globalization through its service giving quality. School environment in which the students learn is very crucial for sustaining the quality. Effective teaching learning is very much dependent on the suitable school infrastructure which is one of the methodologies to globalize the education. Infrastructure is the underlying organizational structure needed by any school to remain functional and to run successfully. Omotoso (1992) and Adeyemi (1998) stressed that educational facilities are the main contributors to students learning outcomes in the school system. These facilities include school buildings, classrooms, furniture, libraries, recreational equipment, apparatus and other instructional materials (cited in Adeyemi and Adu, 2010). Availability or non-availability of physical facilities affect the quality of education; provision of sufficient facilities in schools provides a challenging environment for students and effective teaching by the teachers; lack of adequate facilities such as textbooks, ill-equipped classrooms, laboratories, workshops and library are responsible for poor performance in examinations among the student's (Saeed and Wain, 2011). Different Researches have already established the fact that non-availability or poor infrastructure affects the quality of education. Ill-equipped classrooms, absence of toilet, lavatory exert negative impact on students as well as teachers. School absenteeism, drop out, poor achievement, poor performance in the examination all these are also related with the availability of sufficient infrastructure and other facilities within school. As elementary education is the gateway to lifelong learning process, strengthening its infrastructure is a pre-requisite to achieve Universalization of Elementary Education/Universalization of Primary Education.
- 2. Materials and Methods:** In this backdrop this paper attempts to expose the situation of infrastructural facilities of elementary schools in Kakdwip subdivision of South Twenty Four Parganas district, West Bengal. The Study Area is located within N 21°32' to N 22°0'20" of latitudes and E 87°58'59" to E 88°32'47" of longitudes. This study covers primary and upper primary schools of four C. D. Blocks namely, Kakdwip, Namkhana, Sagar and PatharPratima. DISE data and field observation are the key sources of information. The objective of this paper is to expose the situation of infrastructural facilities of elementary schools in Kakdwip subdivision of South Twenty Four Parganas district in West Bengal.

National University of Planning and Administration (NUEPA) have proposed some parameters for preparing Educational Development Index. Some parameters have been selected from these. Selected variables are as follows: pupil-classroom ratio, school with drinking water facilities, schools with common toilet as well as girls' toilet, boys' toilet, schools with facilities like blackboard, electricity, kitchen shed, book bank, play ground, boundary wall and ramp. At first the variables have been categorized into two divisions viz., positive and negative. After calculating the Z- Scores of each of these variables G. P wise, Composite Z- Scores have been calculated for positive variables for the year 2010. Suitable statistical methods and cartographic techniques have been applied for proper representation.

3. **Observations:** Availability of different facilities within the schools in the study area is inadequate. But it is also a striking feature that some schools represented better position in spite of being a part of the vulnerable area of Sundarban to climatic hazard. Though in a region like Sundarban sometimes it is felt that people are compelled to send their children to the nearest available school ignoring whatever may be the infrastructure as they have very limited choice specially in case of upper primary school. Eighteen schools have been visited in Sagar block within which twelve schools are primary and six schools are upper primary schools. Drinking water, electricity, kitchen shed, and book bank all these facilities are present in the school. But all of these schools do not have play ground and boundary wall. Even ManasadwipGangamoniSishuNiketan has no drinking water and separate toilet facility. But it has a common toilet. The percentage for schools having electric facility was only 5% in 2010 respectively. Thirteen schools have been visited in Kakdwip block. All of them have drinking water facility. Girls' toilet is also found within them. Many of them do not have play ground. BagherChakSishuShiksha Kendra, Berar ChakNiveditaSishuShiksha Kendra do not have ramp.

4. Discussion:

4.A. Situation of Institutional Arrangement and Infrastructural Facilities:

4. A.1. **Classroom:** It has been observed that (Table 1) average number of class room for primary level remains same (4) for 2007 and 2010. The upper primary schools have an average room of 12 and 10 for 2007 and 2010 respectively. In Kakdwip sub-division there was more (2109) class room at primary section than upper primary (1518). In case of primary though 68.56% of classroom was pucca in nature, 31.20% of classroom was partially pucca in nature. For upper primary 92.16% classroom was pucca and only 7.05% classroom was partially pucca. It has been found from table 2 that more than 50% of the class room was of good condition in Kakdwip sub-division for both primary and upper primary level. But 20% of the class rooms of primary level and 14% of the class rooms of upper primary level needed minor repair. On the other hand, the proportions for classroom which need major repair were 27% and 23% for primary and upper primary level respectively.

4. A.2. **Pupil-Class Room Ratio:** The indicator 'Average Student-Classroom ratio' (SCR) gives an idea as to how many students there are, on an average, in a classroom. Jalan and Panda (2010) consider this ratio as the only physical infrastructural characteristic of school that has some impact on learning levels. This pupil class room ratio (Table-3) is quite higher in the upper primary level than the primary level indicating the fact that congested class-room, lack of sufficient class-room space is hampering the teaching-learning process. In case of primary level pressure of student is highest on Kakdwip block and at upper primary level the pressure shifted to Sagar block. So, in Sagar block the classrooms area a little bit crowded. On the other hand the pressure is less in Namkahana block at both primary and upper primary level. Flow of students from adjoining district (Midnapore) to Sagar block for higher study may be one of the causes for this.

4. A.3. **Drinking Water Facilities:** Availability of drinking water in school is the most essential facility that every school must have. From Fig. 1, it is clear that drinking water facility was higher in primary schools than the upper primary schools for both 2007 and 2010. Out of 701 elementary schools within Kakdwip sub-division about 94% schools (primary 75% and upper primary 19%) had drinking water facility in 2007. But in 2010 this figure went down to almost 89%, within these primary schools occupied 69%, but upper primary schools occupied only 20%. At the elementary level PatharPratima (33.52%), Kakdwip (22.25%), Sagar (21.97%), and Namkhana (16.26%) blocks represents 1st, 2nd, 3rd and 4th position respectively in 2007. Same ranking was maintained in 2010 for the elementary level. PatharPratima (27.67%), Sagar (17.55%), Kakdwip (16.69%) and Namkhana (13.12%) occupied the 1st, 2nd, 3rd and 4th position in case of the primary schools. While the positions of PatharPratima (5.85%), Kakdwip (5.56%), Sagar (4.42%), and Namkhana (3.14 %) were 1st, 2nd, 3rd and 4th respectively for the upper primary schools. Dependency on tube well was found within 85% and 90% schools at primary and upper primary level respectively. Only 2% of schools had tap water facility for both primary and upper primary level in 2010. 8% primary and 4% upper primary schools had no drinking water facility in 2010.

4. A.4. **Toilet facility:** In Kakdwip sub-division, about 88.30% of the elementary schools had common toilet facility and only 41.94% of schools had girls' toilet in 2007 (table 4). The percentage was higher for primary schools (70%). A few upper primary schools had common toilet facilities (18%). But the provision is more

necessary for the upper primary level. About 58% of the elementary schools of Kakdwip sub-division did not have girls' toilet. The percentage was almost the same (57%) for primary schools but far less like only 1% for upper primary schools. Out of 42% elementary schools having this facility, primary schools occupied 24% and upper primary schools occupied 18%. In case of elementary school, 88.30% of the schools had common toilet. But in 2010, the proportion of school having common toilet had been decreased and proportion of school with girls' toilet had been increased. The same trend was found in primary, upper primary and total elementary. It is a good sign that to increase girls' enrolment and retention more girls' toilet was being constructed. Still 34% primary and 11% upper primary schools didn't have even common toilet. The proportion of schools without girls' toilet was 27% and 2% for primary and upper primary level respectively. Some of the schools though had latrines but it was without water and door. Students had to go to home for accessing toilet, parents hesitate to send their girl child to school and teachers also face great problem for this. Female teachers coming from long distance and also the teachers who reside in that village have to search for toilet in nearby houses in need which is very awkward to them. Especially for co-educational schools this create great problem for regular attendance. Except Swami Vivekananda in Kakdwip block, Ghoramara, Muriganga-I, Ramkarchar in Sagar block, DakshinRoypur in PatharPratima block all other GPs had some upper primary schools without common toilet. Suryanagar in Kakdwip block, DakshinGangadharpur, DakshinRoypur, Durbachati, HerambaGopalpur, LaxmiJanardanpur in PatharPratima block, Dhablat, DhasparaSumatinagar-I in Sagar block, Budhakhali, Frasersgunj, Haripur, Shibrampur of Namkhana block had some upper primary schools without girls' toilet.

4. A.5. Other facilities: In Kakdwip sub-division only 10% of the elementary schools had electric connection in 2007 within which primary school occupies 3% and upper primary school occupied 7% and in 2010 this percentage value rose to 12% only. Only 4% of the primary schools and 8% of the upper primary schools had electric connection in 2010. Book bank facility is a sector within infrastructural facilities where cent percent development has been occurred in Kakdwip sub-division. About 98% of the elementary schools were having this facility in 2007 and in 2010 it covered each and every school. 69% and 36% schools have Kitchen Shed at both primary and upper primary level respectively.

4.B. Status of Development at block level:

Selected variables for this study includes school student ratio, average student-classroom ratio, pupil-teacher ratio, school teacher ratio, classroom type, condition of classroom school with drinking water facilities, schools with common toilet as well as girls' toilet, boys' toilet, schools with facilities like blackboard, electricity, kitchen shed, book bank, play ground, boundary wall and ramp. Composite Z- Scores have been calculated for positive variables for the year 2010 at gram panchayat level (Table 5). Three classes have been prepared to reveal the levels of development at the Gram Panchayat level regarding infrastructure issue in elementary schools like high development (1.00 to 2.00), moderate development (0 to 1.00), low development (0 to -1.00) and very low development (-1.00 to -2.00) in case of positive variables.

Kakdwip Block: In Kakdwip block, Pratapadityanagar and Suryanagar G. P reflect highest and lowest development respectively in case of the positive indicators. Only Pratapadityanagar exhibits high level of development. Bapuji, Rabindra, Rishi Bankim Chandra, Srinagar and Swami Vivekananda fall within the zone of moderate level of development. Madhusudanpur, Netaji, Ramgopalpur, Sri Sri Ramakrishna and Suryanagar show low level of development. In case of the negative indicators, Suryanagar and Madhusudanpur G. P have been identified as most developed and least developed G.P. They fall within the zones of high development and very low development. Sri Sri Ramakrishna, Rishi Bankimchandra, Swami Vivekananda, Pratapadityanagar exhibit low level of development while Bapuji, Netaji, Rabindra, Ramgopalpur, Srinagar, fall within the moderate development zone (Map 1).

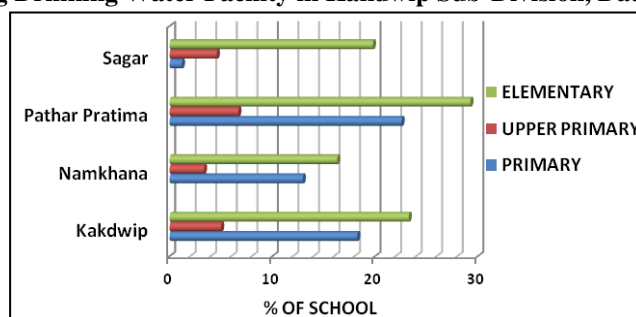
Sagar block: In Sagar block, Ramkarchar and Ghoramara G. P reflect highest and lowest development respectively in case of the positive indicators. They fall within the zones of high development and very low development. Dhablat, Gangasagar and Rudranagar represent moderate level of development. Rest of the gram panchayats falls under low development zone. In case of the negative indicators, Ghoramara, Muri Ganga I reflect high development and Gangasagar represent very low development. Ramkarchar and Rudranagar exhibit moderate level of development. Rest of the gram panchayats falls within the zone of low development (Map 2).

5. Conclusions: In this era of Globalization, it is desirable that every school will have the basic facilities. But in case of schools of Sundarban area especially for the vulnerable parts like Ghoramara Island, Mousini Island, G-Plot and some other islands of PatharPratima C.D. Block, it cannot be expected. Developing school infrastructure becomes a demotivating issue for the Government. Fund distribution should be made on accordance with the need of the schools and the authority should be very alert and efficient in collection and utilization of fund, grant etc. at right moment. Proper monitoring and supervision can be beneficial for effective utilization of fund. Along with that area specific strategies, greater flexibility in approach and sympathetic attitude are required to realize the local need and to improve the efficiency of this system.

6.References

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Fig 1: Schools Having Drinking Water Facility in Kakdwip Sub-Division, Data Source: DISE, 2010



7. Tables & Figures:

Table-1: Average Number of Class Room; Data Source: DISE, 2007 and 2010

CD Block	Number Of Class Rooms				Number Of Schools				Average Number Of Class Rooms			
	Primary		Upper primary		Primary		Upper Primary		Primary		Upper primary	
	2007	2010	2007	2010	2007	2010	2007	2010	2007	2010	2007	2010
Kakdwip	449	535	446	430	143	143	39	39	3	4	11	11
Namkhana	363	382	277	280	98	99	22	27	4	4	13	10
Pathar Pratima	709	725	477	484	204	204	41	48	3	4	12	10
Sagar	487	467	353	324	123	124	31	33	4	4	11	10
Sub-division Total	2008	2109	1553	1518	568	570	133	147	4	4	12	10

Table-2: Condition of Classroom in the Study Area; Source: DISE, 2010

CD Block	Primary				Upper primary			
	Good	Minor repair	Major repair	Total	Good	Minor repair	Major repair	Total
Kakdwip	356 (16.88%)	61 (2.89%)	118 (5.60%)	535 (25.37%)	312 (20.55%)	28 (1.84%)	90 (5.93%)	430 (28.33%)
Namkhana	196 (9.29%)	67 (3.18%)	119 (5.64%)	382 (18.11%)	176 (11.59%)	35 (2.31%)	69 (4.55%)	280 (18.45%)
PatharPratima	337 (15.98%)	126 (5.97%)	262 (12.42%)	725 (34.38%)	257 (16.93%)	108 (7.11%)	119 (7.84%)	484 (31.88%)
Sagar	225 (10.67%)	173 (8.20%)	69 (3.27%)	467 (22.14%)	209 (13.77%)	43 (2.83%)	72 (4.74%)	324 (21.34%)
Sub-division Total	1114 (52.82%)	427 (20.25%)	568 (26.93%)	2109 (100%)	954 (62.85%)	214 (14.10%)	350 (23.06%)	1518 (100%)

Name of CD Blocks	Primary	Upper primary
Kakdwip	38.68	53
Namkhana	29.43	52.61
Sagar	35.1	58.79
PatharPratima	34.04	57.91
Kakdwip Sub-division	34.62	55.72
S-24 Parganas District	40.76	75.31

Table-3: Average Pupil Class Room Ratio;Data Source: DISE, 2007 and 2010

Table 4: Toilet Facility in Kakdwip Sub-Division; Data Source: DISE, 2007and 2010

School Type	Common Toilet (2007)		Common Toilet(2010)		Girls' Toilet(2007)		Girls' Toilet(2010)	
	Yes	No	Yes	No	Yes	No	Yes	No
Primary	491 (70.04%)	77 (10.98%)	323 (45.05%)	247 (34.33%)	167 (23.82%)	401 (57.20%)	378 (52.72%)	192 (26.78%)
Upper Primary	128 (18.26%)	5 (0.71%)	68 (9.48%)	79 (11.02%)	127 (18.12%)	6 (0.86%)	131 (18.27%)	16 (2.23%)
Elementary	619 (88.30%)	82 (11.70%)	391 (54.53%)	326 (45.46%)	294 (41.00%)	407 (58.06%)	509 (70.99%)	208 (29.01%)

Table 5: Mean Composite Z- Scores of two Block; Data Source: Computed from DISE (2010) data

CD Blocks	Sl. No.	Gram Panchayat	2007		2010	
			Mean Composite Z-Score Of Negative Variables	Mean Composite Z-Score Of Positive Variables	Mean Composite Z-Score Of Negative Variables	Mean Composite Z-Score Of Positive Variables
K A K D W I	1	Bapuji	-0.23456	0.436866	-0.78458	0.654999
	2	Madhusudanpur	1.099375	-0.67118	1.0366	-0.26072
	3	Netaji	0.509375	-0.52468	-0.02489	-0.48879
	4	Pratapaditya Nagar	-0.82482	1.20128	0.42125	1.182048
	5	Rabindra	-0.87191	0.292643	-0.04471	0.095758
	6	Ramgopalpur	-1.27777	-0.41063	-0.00875	-0.86352

P	7	Rishi Bankimchandra	-0.68535	0.841176	0.300315	0.582653
	8	Sri Sri Ramakrishna	1.313105	-0.97387	0.425235	-0.63322
	9	Srinagar	-0.03794	-0.34384	-0.75033	0.056538
	10	Suryanagar	-0.57204	-0.51618	-1.46342	-0.89751
	11	Swami Vivekananda	1.582505	0.66842	0.893275	0.532111
S A G A R	1	Dhablat	0.07357	0.635609	0.67757	0.590563
	2	DhasparaSumatinagar I	1.483815	-0.00834	0.44527	-0.3194
	3	DhasparaSumatinagar -II	0.33823	-0.68324	0.87547	-0.53718
	4	Gangasagar	0.981015	0.717292	1.189535	0.597359
	5	Ghoramara	0.55287	-1.48258	-1.34869	-1.42662
	6	Muriganga -I	-1.08194	-0.74892	-1.45598	-0.48517
	7	Muriganga-II	-0.2462	-0.222	0.496595	0.199609
	8	Ramkar Char	-0.37817	1.207882	-0.51047	1.049734
	9	Rudranagar	-1.7232	0.584302	-0.36932	0.331766

Map-1& 2: Infrastructural Development of Elementary Schools in Kakkwip&Sagar Block (Based On Positive Variables, 2010); Data Source: Computed from DISE (2010) data

