RESEARCH PAPER

CAN REGULATORY FRAMEWORKS GUARANTEE INCLUSIVE BASIC EDUCATION? INSIGHTS FROM THE PHYSICAL ENVIRONMENT IN TWO TYPES OF BASIC SCHOOLS IN CAPE COAST, GHANA

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ABSTRACT
The passage of the needed regulatory frameworks in Ghana raised hopes that the physical environment in educational institutions would be improved to meet the spatial needs of pupils with impairments. A spatial audit was conducted to evaluate the physical conditions in seven officially designated inclusive basic schools and seven mainstream basic schools where such pupils were enrolled in the Cape Coast Municipality of Ghana. The audit assessed the levels of compliance with the recommended universal design principles. Furthermore, questionnaires were administered to all the 41 pupils with restricted mobility enrolled in both school settings to explore their experiences with respect to physical access and space utilization. In-depth interviews were carried out with other purposively selected stakeholders including headteachers and teachers to further explore the emerging issues. Contrary to expectations the results revealed many dangerous obstructions, unsuitable toilet facilities and overcrowded and poorly surfaced classrooms. These conditions obstructed the movements of the respondents and constrained their rights to education. The conclusion is that there is the need for collaboration among the stakeholders in the Municipality to go beyond the regulations to ensure the retrofitting of the school environments, the improvement of basic school facilities like toilets and classrooms to enhance physical access and learning outcomes of the pupils.

Keywords: *Basic schools, physical environment, access, pupils with impairments, Ghana*

INTRODUCTION
Free compulsory basic education is globally recognized as a basic human right (United Nations, 1948). This basic right has been subsequently enshrined in many national constitutions across the world including the 1992 Ghana Constitution. Basic education is considered as the foundation for harnessing a person's full mental and physical potential for upwards socio-economic mobility, increased productivity and invariably a potential for poverty reduction (Palmer, 2011; Trani *et al*, 2011; UNESCO, 2005). With that this perspective in mind, many nations have responded positively to the Convention of the Rights of Persons with Disabilities (2006); the United Nations Convention

Against Discrimination in Education (1960) and the United Nations Convention on the Rights of the Child (1989) by providing constitutional guarantees and enacting specific legislations to provide educational opportunities for children experiencing substantial long-term impairments (Bines and Lei, 2011). This can be seen in many situations including the Anti-Discrimination and Accessibility Act of Norway, No. 42 of 2008, the Malaysian Persons with Disability Act 685 (2008), the US Education for All Handicapped Children Act (1975; the Australian Disability Standards for Education, 2005 and the Kenyan Basic Education Act No 14, Revised (2018). More recently, the UNDP Sustainable Development Goals have urged nations to build physically accessible and non-discriminatory educational facilities and to reduce inequality by promoting socio-economic and spatial inclusion.

While the United Nations and national legislations have significantly contributed to increased school enrolments of children with impairments, many are still refused admissions into schools (UNDESA, 2018), while those who attend school occasionally miss classes and experience higher dropout rates (El-Saadani and Metwally, 2019; Bines and Lei, 2011). A common outcome is that, just about half of all such children actually complete primary school (UNESCO, 2009) as they are unable to cope due to financial constraints, inappropriate transportation and communication infrastructure (Trani *et al*, 2011), unprofessional attitudes exhibited by staff and students and unsafe school environments (Xaba, 2006), endemic superstitions about disability (Palmer, 2011) and debilitating site, topographic features, unfriendly structural designs and spatial layouts both in the built environment and in schools (Mukhopadhyay and Moswela, 2020; Donohue and Bornman, 2014; Danso *et al*., 2012). These multiple barriers often disincentivize many from enrolling in school, while many who enroll do not make significance progress (Donohue and Bornmann, 2014). The situation is critical in rural areas where about 65 per cent of disabled persons never attend school (UNDESA, 2018). Despite the fact that inclusive education was introduced years ago as the *".... most effective means of combating dis-*

criminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all..."(UNESCO, 1994: 10), many disabled children are still educated in special schools rather than in inclusive school environments (Klang *et al*, 2020).

These outcomes reflect the slow pace of implementation of various national legislations aimed at creating enabling environment and mainstreaming impaired pupils into educational systems. As a result, El-Saadani and Metwally (2019) have concluded that disability (rather than poverty, gender and spatial location) is key to their chances of being enrolled and completing school which serves as the foundation for socio-economic mobility. Hence access and enjoyment of their right to education can rest on micro-scale physical design dimensions. Removing these barriers and embracing inclusiveness in educational environments which responds to diversity of needs contributes to improved adult livelihoods and reduced societal inequalities (UNDP, undated).

This research focused on micro-scale physical dimensions in basic schools that promote inclusiveness with profound effects on pupils' ability to cope and improve on their learning outcomes (Suleman and Hussain, 2014; Tanner, 2008). A barrier-free and safe physical environment is a first key visible indicator of socio-spatial and pedagogical inclusion, allowing the educational system to provide equal educational opportunities to all pupils irrespective of disabilities (Ackah-Jnr and Danso, 2019). The complex interactions between bodily and sensory impairments and environmental conditions have been sufficiently explored (Naami, 2019; Masala and Petretto, 2008; UNDESA, 2006; Clarke and George, 2005). This study brings together these insights to explore the effect of spatial and structural obstacles in basic schools using universal standard designs.

Disability, vulnerability and inclusive education
Despite the contribution of congenital factors, disabilities largely emanate from poor nutrition, inadequate access to medical care (Palmer, 2011), ageing, accidents, political instabilities, wars and poor living and working

conditions (WHO, 2011; Wazakili *et al,* 2011; Lang and Upah, 2008). In spite of this fact, disability in many countries in the global south is variously perceived as "an act of God" (Retief and Letšosa, 2018), as an omen, a misfortune, a curse or retribution from deities (Adetoro, 2014; Ghana Statistical Service, 2013) or even as a disease (Idol, 2006). The disabled are perceived as less productive despite evidence suggesting otherwise (Hindle *et al*., 2010). As a result, many are socially and spatially excluded and confined to niche occupations (Wazakili *et al*., 2011) and so have limited access to socio-economic opportunities (Dhungana, 2006; Fulton and Sabornie, 1994). Unfortunately, family systems that traditionally supported the disabled are rapidly changing due to individualization associated with migration and urbanization and the increasing preference for single-family housing (Agyeman *et al.*, 2018; Owusu-Ansah and O'Connor, 2010). These perceptions and outcomes call for the need to strengthen their education and training as a pathway to full social inclusion and reduced vulnerabilities.

A child's dependency on adults and their peer groups potentially exposes them to higher degrees of risks of assaults, bullying, emotional abuse and neglect, as well as falls and injuries, with significant long-term behavioral, physical and mental health impacts (Ramirez *et al*., 2004; Finkelhor and Dziuba-Leatherman, 1994). Unfortunately, children have limited mental and physical capacities to resist, adapt to threatening environments and cope or recover from these abuses (Masten, 2018; Finkelhor and Dziuba-Leatherman, 1994). Disabled children who now constitute a significant proportion of the world's disabled population (Peek and Stough, 2010), are doubly exposed to these harms and psychosocial stress particularly in the school environment. Improved physical environment attenuates these risks and reinforces their capacities to make substantial progress (Durstine, *et. al*, 2000). Late interventions may be more expensive and potentially fail to achieve the desired outcomes.

Inclusive education has been touted as providing the initial setting for greater appreciation and understanding of disability and addressing social exclusion (UNESCO, 2009). It promotes diversity, acceptance, belongingness and collaborative relationships and aims at delivering quality education best suited to individual competencies, skills and attributes (Reeves *et al*., 2020). Inclusive settings facilitate socio-spatial interactions thereby serving as the foundation for building cohesive, harmonious, inclusive and peaceful societies (Grau and García-Raga, 2017). Under this system, disabled children are provided with individualized curricular, assessment procedures and logistical and communication and visual devices that fit their unique characters, abilities and interests in "regular" schools. They are able to compete with their non-disabled counterparts on equal basis and both groups automatically adjust their communication skills and interactions without being prompted (Guralnick and Paul- Brown, 1977; Guralnick, 1990). As a result, disabled children are more likely to develop positive self-images, peer acceptance, and increased social interactions while inducing change in perceptions and attitudes among the non-disabled (Reeves *et al*., 2020; Odom and Bailey, 2001). However, inclusion is only effective during their formative years as younger children are more likely to be receptive of that idea than their older counterparts (Siperstein *et al*., 2007). One of the most important early interventions is inclusive education at the basic level.

Despite the ongoing debates about the benefits of inclusion in community schools versus those provided by special schools (Allan and Brown, 2001; Weinstein, 1979), many governments have adopted policies of inclusion. The success of those policies depends upon a wide array of influences, but one particular concern involves the provision of a barrier free and safe physical environment. As Ackah-Jnr and Danso (2019) have noted, a universally accessible school environment can facilitate access, maneuverability and space utilization in an independent and safe manner and should therefore be seen as the foundation for socio-spatial and pedagogical inclusion. That view is endorsed by UN (1975), the UNDESA (undated), and the UN (2006). Initial research in this area has involved analyses of the ambi-

ence in buildings including lighting, ventilation, temperature and noise levels (Weinstein 1979), and safety concerns (Xaba, 2006; Malone and Tranter and, 2003), along with the spatial perspectives of pupils and staff (Ackah -Jnr and Danso 2019). However, the actual physical accessibility and settings in basic schools have remained largely under explored. This research extends that insight by carrying out micro-level analysis on regularly used spaces in inclusive and mainstream primary schools in the Cape Coast Municipality, a historic Ghanaian educational hub. The research acknowledges that inclusion goes beyond the mere integration of persons with impairments in mainstream schools. It uses structured audit to assess the influences of a number of local scale spatial perspectives on physical and maneuverability to determine compliance with universal access design and government policy which aim at full inclusion in basic schools.

The study context
In Ghana, free compulsory basic education for all can be traced back to 1961 when the Education Act 87 (1961) was passed to provide tuition-free basic education to every child who attained six-years. Similarly, the 1992 Constitution of Ghana (Article 16, Section 1) mandates the provision of universal free compulsory basic education. More specifically, the Persons with Disability Act 715, (2006) (subsequently referred to in this paper as "the Disability Act") urges the government to provide free education for children with disabilities. Article 17 of that act further urges the government to identify, fund and equip selected educational facilities in each of the then 10 regions for the benefit of disabled children. Furthermore, the Ghana Education Act, 778 (2008) mandates Municipalities to address the spatial needs of all groups, particularly children with long-term impairments.

Under pressure from the Ghana Society for the Physically Disabled and the Ghana Society for the Blind, the inclusive school concept was piloted in three regions in Ghana in 2009 (Agbenyega, 2007), before the launch of both Ghana Inclusive Education Policy and the Standards and Guidelines for the Practice of Inclusive Education in Ghana in 2015. The

expectation was that, school environments would be retrofitted to comply with universal design principles for full inclusion as mandated by the policy and guidelines. Therefore, the key research question in this research is this: *Fifteen years after the passage of the Act, and five years following the launch of government policy and the standards for accessibility, what physical changes have occurred to promote socio-spatial inclusion of pupils with restricted mobility?* This question is addressed by applying an evaluation technique to the conditions in 14 schools in the Cape Coast Municipality, Ghana, along with questionnaire survey and interviews with participants.

As a key educational hub, Cape Coast provides a good location to investigate the issues surrounding the implementation of inclusivity in its basic schools. Table 1 shows that the schools used in the research span the full history of the settlement of Cape Coast which began as a colonial city, with one dated from 1755 while the newest school was constructed in 1984. However, some of the mainstream schools were only reclassified as inclusive schools in 2003 prior to the passage of the Disability Act. The table shows that, several years after the promulgation of the inclusive education policy, the standard guidelines and the Disability Act, the schools have not been rehabilitated and retrofitted to accommodate the spatial needs of the mobility impaired.

METHODS
This paper focuses on pupils experiencing significant long-term physical and sensory impairments whose mobility patterns, access and maneuverability are affected in one way or the other by physical obstacles. Hence the research evaluated the physical conditions of the regularly used spaces including the approach routes, the schoolyards, classrooms and toilet facilities both in the officially designated inclusive schools and in the mainstream schools where pupils with restricted mobility were enrolled. It also explored concerns raised by the pupils themselves as well as the perspectives of head teachers and teachers in the selected schools.

After ethical clearance was granted, a list of

Table 1: Ages and conditions of buildings in inclusive and non-inclusive schools in survey

	Inclusive schools	Year Established	Rehabilitation of old blocks	Additional blocks constructed
1	Pedu 'A'	1953	No	No
2	Pedu 'B'	1960	No	No
3	Philip Quacoe Boys -	1755	No	No
4	Ghana National Basic	1984	No	No
5	Christ Church Anglican	1947	No	No
6	Aboom Methodist	1975	No	No
7	A.M.E. Zion	1903	No	No
	Non-inclusive schools			
1	St Lawrence Catholic Basic	1939	No	Yes
2	St Anthony's Anglican Basic	2002	No	No
3	Ayifua St. Mary's Basic	1969	No	No
4	Kakumdo Basic	1966	No	Yes
5	Antem Basic	1958	No	No
6	Efutu M/A Basic	1949	No	No
7	E.J.P Brown Basic	1960	No	No

Source: Field Survey, 2017

seven officially designated "inclusive schools" and seven non-inclusive schools (where pupils with restricted mobility were enrolled) were obtained from the offices of the Ministry of Education in Cape Coast. The evaluation technique involved assessing compliance with universal design principles as mandated by the Persons with Disability Act (2006) and the Standards and Guidelines for Practice in Inclusive Schools in Ghana (hereafter, referred to as "Ghana Standards". All schools were accommodated in single story buildings; therefore, the audits were limited to only horizontal circulation. With the aid of notebooks and tape measure, the physical conditions were observed, measured, documented and results presented in tabular form. Based on information gleaned from these audits, questionnaires were developed and administered to all 41 pupils (30 pupils with restricted mobility enrolled in the seven inclusive schools as well as 11 enrolled in non-inclusive schools). The questions were centered on the spatial and structural obstacles encountered in the frequently used spaces. The survey responses were coded, analyzed and the results presented in tables. Finally, in-depth interviews were carried out with five purposively selected pupils with restricted mobility, five teaching staff, as well as all the 14 head teachers to further explore the issues emerging from the field audits and the survey. These interviews were recorded, transcribed and analyzed in themes and presented as narratives.

RESULTS
Before reporting the findings, it is important to establish the background information of the primary respondents. The spatial issues of the research will be felt to a greater or lesser extent depending upon the nature of disability of the respondents. For example, the experiences of the blind who mostly use navigational devices may significantly differ from those with vision impairments who see objects within a few feet

away. Therefore, the respondents were aggregated into impairment types in order to understand their response to the design of their school environment (see Table 2). Pupils with multiple co-morbidities are generally educated in special schools or in children's homes (Avoke, 2001) and so were not found in any of the schools studied. However, it is entirely possible that undiagnosed co-morbidities still existed among the respondents but were not part of the data provided for the research.

According to the Ghana Statistical Service (2014), persons with impairments accounted for less than one percent of the total student population the Cape Coast Municipality, with the proportion of females slightly higher than males, and blindness being the most predomi-

ant. Consistent with that information, the blind constituted the largest proportion of the respondents, followed by the physically impaired (see Table 2).

The respondents were predominantly males despite the fact that females out-numbered males in the general population (Ghana Statistical Studies (2014). Research suggests that the likelihood of a disabled child going to school largely depends on their gender, geographic location, socio-economic backgrounds and cultural values (see El-Saadani and Metwally, 2019; Naami *et al.,* 2012; Dhungana, 2006). It is therefore possible that many disabled girls were not enrolled in schools for one reason or the location, socio-economic backgrounds and cultural values (see El-Saadani and Metwally,

Table 2: Disability by age and sex in inclusive and non-inclusive schools

		Physical	Vision	Attention deficiency	Hearing	Autism	Blind	Speech	Total
Inclusive schools									
Ages	Sex								
6-8	Male			1	1				2
	Female								
9-11	Male		1						1
	Female				2				2
12-14	Male	1	1			1	1		4
	Female						2		2
14+	Male	2					10		12
	Female	1					6		7
	Total	*4*	*2*	*1*	*3*	*1*	*19*		*30*
Non-inclusive schools									
6-8	Male								
	Female				1				1
9-11	Male		1	1					2
	Female				1			1	2
12-14	Male	1	1			2			4
	Female	1							1
14+	Male	1							1
	Female								
	Total	*3*	*2*	*1*	*2*	*2*	*0*	*1*	*11*
	Grand Total	**7** **(17.1)**	**4** **(9.8)**	**2** **(4.9)**	**5** **(12.2)**	**3** **(7.3)**	**19** **(46.3)**	**1** **(2.4)**	**41** **(100)**

Source: Fieldwork, April 2017

2019; Naami *et al.,* 2012; Dhungana, 2006). It is therefore possible that many disabled girls were not enrolled in schools for one reason or the other. Afterall, Dhungana (2006) reported that disabled females in Nepal were largely denied access to education and essential services due to patriarchal tendencies. This outcome has wider implications for disability policy and social inclusion as studies suggest that disabled females are more likely to be unemployed and poorer and therefore encounter more problems than their male counterparts (see Dhungana, 2006; Fulton and Sabornie, 1994).

The pupils experiencing blindness were previously enrolled in the Blind Unit of the School for the Deaf but were later transferred to Ghana National Basic School. However, the rest were fairly distributed across the 14 basic schools as they did not require specialized teachers and specific logistical support to pursue their educational carriers (see Table 3).

Assessment of the physical environment
This section presents and analyzes the results of the assessment of the levels of compliance with universal access and utilization standards as mandated by the Disability Act and under the Ghana standards. the emphasis was on regularly-used spaces including approach routes, school yards, classrooms, verandas and toilet facilities.

Approach routes and entrances
The assessment of approach routes involved the

Table 3: Enrolment and impairment types in inclusive and non-inclusive

		Physical	Vision	Attention deficiency	Hearing	Autism	Blind	Speech	Total
					Inclusive schools				
1	Pedu 'A'				1				1(3.3
2	Pedu 'B'		1	1					2 (6.7
3	Philip Q. Boys	2							2 (6.7)
4	Aboom Meth.	1			1				2 (6.7)
5	Christ Church Ang.		1			1			2 (6.7)
6	A.M.E Zion	1			1				2 (6.7)
7	Ghana National						19		19 (63)
	Total	4 (13.3)	2 (6.7)	1 (3.3)	3 (10)	1 (3.3)	19 (63.3)	0	30 (100)
					Non-Inclusive				
1	E.J.P Brown			1		1			2 (18.2)
2	Efutu Basic				1				1 (9.1)
3	Antem Basic		1			1			2 (18.2)
4	St. Lawrence Cath.	1							1 (9.1)
5	Ayifua St. Mary's							1	1 (9.1)
6	St. Anthony's Ang.	1			1				2 (18.2)
7	Kakumdo Basic	1	1						2 (18.2)
	Total	**3 (27.3)**	**2 (18.2)**	**1 (9.1)**	**2 (18.2)**	**2 (18.2)**	**0**	**1 (9.1)**	**11 (100)**

slope, width, surfacing and presence or absence of physical obstructions. The Ghana Standards (p. 7) recommends a longitudinal walk gradient of 3 to 5 percent and indicates that:

All entrance paths/sidewalks and/or walkways shall be smooth, devoid of non-slip materials and shall have a firm level surface suitable for walking and wheeling. It is important to note that irregular surfaces like cobble stones, coarsely exposed aggregate concrete, bricks etc. often cause bumpy rides.

As indicated in Table 4, the approach routes of the schools were generally unpaved; therefore the recommended safety measures such as speed ramps and zebra crossings and traffic lights could not be installed. The site inspections revealed that the edges of the approach routes had been taken over by temporary structures of all kinds, some used for retail activity, as well as for wood, furniture, machinery and broken-down vehicles. The approach route to the Ghana National Basic School in particular, where all the blind pupils were enrolled, was steep (more than the recommended 5 percent gradient) and were littered with full of boulders. These obstructions impeded mobility and heightened safety concerns among the pupils, particularly users of crutches, wheelchairs and other mobility devices. This finding demonstrates a mismatch between intensions of social inclusion in the inclusive policy and the actual physical outcomes in the schools.

Audits of the school yards
Enhanced landscapes not only foster appreciation of natural environment and learning outcomes (Ali *et al*., 2015), but also provide opportunities for enjoyment and peaceful co-existence through socio-spatial interaction (Grau and García-Raga, 2017). Typically, the impaired have limited access to leisure and games and greater exposures to falls resulting in injuries (Ramirez *et al*., 2004). Therefore, well-designed exterior spaces in schools not only improve physical fitness but also provide opportunities for socio-spatial interactions for collaboration, sharing, mutual learning (Yantzi, 2010). In lieu of these concerns,

Table 4: Approach route of inclusive and non-inclusive schools

	Inclusive schools	Slope	Width (meters)	Surfacing	Obstruction
	Inclusive schools				
1	Pedu 'A'	Level	15	Grass and sand	No
2	Pedu 'B'	Level	15	Grass and sand	No
3	Philip Quacoe Boys	Level	8	Sandy	No
4	Ghana National Basic Sch	Steep	5	Gravel and clay	Yes
5	Christ Church Anglican	Level	15	Grass and sand	No
6	Aboom Methodist	Steep	5	Gravel and sand	No
7	A.M.E. Zion	Level	10	Sandy	Yes
	Non-inclusive schools				
1	St Lawrence Catholic Basic	Level	5	Sand	Yes
2	St Anthony's Anglican Basic	Gentle	10	Gravel and sand	No
3	Ayifua St. Mary's Basic	Level	5	Grass and sand	Yes
4	Kakumdo Basic	Level	5	Sand	No
5	Antem Basic	Level	10	Sand	No
6	Efutu Basic	Level	15	Grass and sand	No
7	E.J.P Brown Basic	Steep	5	Gravel and sand	No

Field Survey, 2017

the Ghana Standards (section 5) states:

> *"...every school compound shall be well maintained, and free from any obstacles such as poorly aligned hedges, tree trunks, and open gutters. Where there are boulders or pieces of rocks the area shall be secured with safety fence. There shall be walkways and pavements to all schools".*

Similarly, the UNDP's Sustainable Development Goal 11 (Target 7) urges nations *"to provide universal access to safe, inclusive and accessible, green and public spaces"*. Hence the analysis of the school yards focused on green spaces, pavements linking school blocks, playing grounds and safety measures.

The study revealed that, with the exception of two inclusive schools (Ghana National and Aboom Methodist) and another mainstream school (E.J.P Brown), there were no interconnected walking pavements between buildings, hence creating difficulties in terms of movements and maneuverability for the mobility impaired. In most cases, the existing green spaces were limited to school football and netball fields which were either sandwiched between classroom blocks or located further out on the periphery. Site inspections showed that tactile mats which are used to indicate ends and beginnings of walkways and furniture for resting and leisure were absent in all schools. More significantly, the yards of Ghana National (where the blind students were found and the Aboom Methodist (also a designated inclusive school) were both characterized by rocky and hilly surfaces. Similarly, building materials consisting of sand, gravels, wood and iron rods for ongoing construction works were stored in the yards of St Lawrence Basic School without cautionary signs and protective mechanisms. In addition, parts of the school yards in Ayifua St. Mary's Anglican had been taken over by carpenters for the display of their furniture. These unpaved yards, lack of interconnected walking pavements, limited landscaping and obstructive yards limited the opportunities for leisure and so many impaired pupils were mostly confined to their classrooms during breaks to avoid falls and injuries.

Audits of classrooms

Classroom settings have potential influences on movements, maneuverability and learning outcomes (Soukup *et al.*, 2007). It was therefore expected that classrooms were appropriately designed to minimize glare and to facilitate universal access, and that adjustable furniture would be made available and arranged in a non-threatening manner to accommodate the spatial needs of the impaired. Though the Ghana Standards were silent on adjustable furniture, it recommended a well-arranged and appropriately positioned classroom furniture to ensure safety of pupils. It also recommended that at least one classroom doorway should be universally accessible.

The research found that the orientations of some school blocks allowed sunlight to directly intrude into classrooms thereby exacerbating vision difficulties. Classroom doors were unidirectional and swung outwards only and were mostly left ajar during school hours hence distracting the attention of pupils. The absence of ramps and adjustable furniture, broken down furniture stored on verandas, overcrowded classrooms (with over 50 pupils in many cases), slippery concrete floors and poorly arranged furniture, all combined to impede movements and maneuverability especially for pupils utilizing assistive devices.

Audits of toilet facilities

According to the Ghana Standards, *"the preferred toilet arrangement is a separate unisex facility that incorporates a water closet bowl, hand-washing basin, grab rails and an emergency push button. At least one of the toilet facilities must have universal access with doors which open outwards, and the cubicle shall have sufficient dimensions (minimum of least 1.7m x 1.8m) to facilitate maneuverability".*

Contrary to that requirement, Table 6 shows that only one inclusive school and one non-inclusive school had purpose-built water closet toilets (which were actually funded by non-government organizations and not by Cape Coast Municipality). However, irregular water flows limited the use of these facilities. Besides, doors were unidirectional (opened inwards), and latches could only be opened with

Table 6: Toilet facilities in inclusive and non-inclusive schools

	Inclusive Schools	Type of Toilet	Distance from Classroom	Dimensions of Cubicles	Presence of Hand washing facility
	Inclusive schools				
1	Pedu 'A'	Pit latrine	100m	N/A*	NO
2	Pedu 'B'	Pit latrine	80m	N/A	NO
3	Philip Quacoe Boys	Pit latrine	40m	N/A	NO
4	Ghana National Basic	Pit latrine	30m	N/A	NO
5	Christ Church Anglican	Pit latrine	40m	N/A	NO
6	Aboom Methodist	WC	30m	1.2m x 1.2	YES
7	A.M.E. Zion	Pit latrine	40m	N/A	NO
	Non-inclusive Schools				
1	St Lawrence Catholic Basic	Pit latrine	80m	N/A	NO
2	St Anthony's Anglican Basic	Pit latrine	50m	N/A	NO
3	Ayifua St. Mary's Basic	Pit latrine	40m	N/A	NO
4	Kakumdo Basic	WC	20m	1.2m x 1.2	YES
5	Antem Basic	Pit latrine	30m	N/A	NO
6	Efutu Basic	Pit latrine	70m	N/A	NO
7	E.J.P Brown Basic	Pit latrine	40m	N/A	NO

*Source: Fieldwork, April, 2015 (*Pit latrines have long wooden roles without cubicles)*

both hands in standing position. Grab rails and panic alarm buttons were conspicuously absent in these water closet facilities. The rest of the schools were all provided with pit latrines that were essentially trenches lined with slabs and located further away from classrooms. The likelihood of slipping and falling into the toilet holes discouraged the vision impaired pupils and those using assisted mobility devices from using the latrines.

In sum, the audits showed that the approach routes, schoolyards, classrooms and toilet facilities were all physically obstructive and inappropriate and therefore posed difficulties in terms of movements and maneuverability with implications on learning outcomes. This shows that the so-called inclusive schools existed only in name. The subsequent section explores the concerns expressed by the pupils and school officials with respect to the regularly used spaces.

Concerns expressed on the utilization of facilities

The respondents regularly expressed concerns about the utilization of school yards, toilet facilities, and classrooms. These concerns were initially captured using questions requiring dichotomous answers (Yes/No) as shown in Table 7, followed by subsequent interviews.

Table 7 shows that majority of the respondents were bothered by the physical conditions in the schools. With respect to slopes, a vision impaired pupil pointed out, *"...climbing and descending the steep slope alone without help is difficult and dangerous".* Another pupil who claimed to have once sustained injuries from falls narrated their ordeal by saying that:

> *"One time I stepped on a polythene bag, slipped and fell all the way to the base. It was painful and scary not knowing where I was going to land. Since then I have been using*

Table 7: Concerns expressed by the pupils in inclusive and non-inclusive schools

	Responses	Inclusive schools	Non-inclusive schools
Steep slope of approach routes	Yes	18 (60)	8 (73)
	No	12 (40)	3 (27)
Poor surfacing	Yes	21 (70)	9 (82)
	No	9 (30)	2 (18)
Presence of physical obstacles	Yes	20 (67)	8 (73)
	No	10 (33)	3 (27)
Absence of interconnected Pavements	Yes	22 (73)	10 (91)
	No	8 (27)	1 (9)

Source: Field Survey, 2017 (Note: Percentages in parenthesis)

Table 8: Concerns expressed about the toilet facilities in the schools

	Responses	Inclusive schools	Non-inclusive schools
Suitability	Yes	26(87%)	2 (18%)
	No	4(13)	9 (82)
Privacy	Yes	26(87)	4(36)
	No	4(13)	7(64)
Distance	Yes	25(83)	2(18)
	No	5(17)	9 (82)
Adequate cubicle space	Yes	26(87)	2(18)
	No	4(13)	9(82)
Guard rails	Yes	23 (77)	10 (91)
	No	7 (23)	1(9)

Field Survey, 2017

another route even though it's far from the school".

Another expressed concerns about the physical obstructions in the schoolyards as follows:

"First, it was not a problem going around during break time but because they brought the sand and stones here, moving around has become difficult so I just stay in the class-room for my peace of mind".

But for the dangers of slips and falls over boulders and debris, many pupils would have preferred not to seek human support. As they regularly indicted, such assistance made them feel more "handicapped".

However, Table 7 also show that significant proportion of the respondents were not particularly bothered by these conditions. Perhaps their responses reflected their initial low expectations of conditions in these schools.

Utilization of toilet facilities

Table 8 shows that the pupils were generally frustrated with the physical conditions of the toilets. They commented on the "hot and smelly toilets", unsuitable facilities, the lack of privacy, the long distance from the classroom blocks, and insufficient space for maneuvering. As a result, many pupils sought alternative facilities outside their schools and in many instances, they did not return to school afterwards. How

ever, the pupils in mainstream schools did not necessarily find the toilet facilities as problematic. Their responses probably reflected their limited expectations of improved facilities compared to those enrolled in inclusive schools.

These frustrations were summed up by a teacher who remarked

"*……How could they concentrate in class when there is an urgent need to answer nature's call?*"

In the words of a head teacher, "*they were sitting on a time bomb……maybe one day when something serious happens to a child with disability, although we do not pray for harm to come, something drastic will be done but until then they will have to endure.*"

As a result of these conditions, the pupils have been cautioned to seek for assistance when using the toilet facilities.

Maneuverability and utilization of classrooms and verandas

The orientation of buildings allowed the sun to directly intrude into classrooms thereby exacerbating vision difficulties. A pupil expressed their frustration in the following words:

"*In the mornings I sit in front because the classroom is dark in order to see what madam is writing. In the afternoon, I move to the back because too much light brings tears to my eyes. If madam could find a way to control the entry of light, things will be a whole lot better.*"

The pupils also regularly expressed concerns about the slippery surfaces, broken down furniture, and overcrowding in the classrooms. A physically impaired pupil complained as follows:

"*…the many desks in the classroom leave little space for movement. I have to adjust myself sideways to be able to move with my crutches. When everyone is in hurry to pass, I have to wait because when I am moving, I take all the space even though it's not enough*".

Another complained about the use of standard furniture in the following words

"*…the desks are the same for everyone, so I have to adjust to it. If my mother could afford, I would have asked for a desk that suits my legs to avoid the turning and turning around.*"

Another pupil said that, "*…I don't want to appear to be complaining but I only wish the space beneath the desk was wider so that I can relax my legs and make it easy to move when it's break time*".

Yet another pupil expressed their discomfort with the seats as follows:

"*…. If the teacher would allow me to stand, I would prefer standing throughout the lesson than endure the pain of squeezing my legs beneath the desk. When I am in pain it's hard to concentrate so what I do is to pray for the lesson to end so that I can stand.*"

A teacher expressed their shock when they learnt for the first time that their school was officially classified as an inclusive school in the following manner:

"*… I have been here for a while now; nothing has come to the school for inclusive education. No letters, no program, and no screening. Nothing. How are we supposed to know that our school is an inclusive school?*"

Their frustrations about the physical conditions in the schools were summed up in the following words by a head teacher in the following words:

"*…. When they come here as new pupils, I see them through my window struggling to find their way around the school. They slip and fall but they don't give up. Soon they learn to adapt but that shouldn't be the case.*"

These audits and interviews have shown that the physical conditions in the so-called inclusive schools were perceived to be poorer than those in mainstream schools. Perhaps these concerns reflected the expectations of im-

proved physical conditions in the inclusive schools. While the head teachers were mostly aware of the inclusive policy, they regularly blamed the current conditions in their respective schools on the lack of commitment and funding for retrofitting and logistical support on the Cape Coast Municipality.

CONCLUSIONS AND THE WAY FORWARD

This research has revealed a mismatch between guarantees of the right to basic education (as expressed under United Nations conventions, the Disability Act, Ghana Inclusive Education Policy and the Standards and Guidelines for the Practice of Inclusive Education in Ghana in 2015) and the ideals of inclusive education. Contrary to expectations, both types of educational settings were characterized by spatial disorganization, poorly developed approach routes, obstructed school yards, overcrowding, poorly surfacing and unsuitable facilities. These conditions not only exposed pupils to risks and injuries and compromised their learning outcomes but may also disincentivize other children with impairments from enrolling and remaining in schools with negative implications on their quest for socio-economic mobility and independence in adult life. This half-hearted approach to the implementation of inclusive education, which has been similarly observed by Ackah-Jnr and Danso (2019); Haug (2017) and Adetoro (2014), reflects not only on lack of funding but more so on the lack of political commitment and low levels of awareness and appreciation of the spatial needs of pupils with restricted mobility.

While the National Council for Persons of Disabilities established under the Disability Act could institute legal action against municipalities and schools for compromising basic rights education for pupils with impairments, legal experts believe that such actions are unlikely to succeed due to the lack of accompanying subsidiary legislations that spell out minimum standards, modalities for implementation as well as liabilities for non-compliance. Therefore, the passage of subsidiary legislations, along with mechanisms for enforcement and applicable sanctions are key to full inclusion.

However, inclusive education needs to be seen as a process rather than a one-off event. By implication, the mere placement of pupils with mobility restrictions in regular schools and the additional supply of special education teachers to augment the efforts of regular teachers should only be seen as a first positive step in the overall process of the transformation of educational system. Therefore, the presence of physical obstacles cannot be used as a pretext for abrogating the inclusive basic school concept. The challenge now is to create a more inclusive and embracing physical environments that reduce susceptibilities to harm and injuries and thereby contributing to improved learning outcomes. To achieve these objectives, the paper recommends several remedial actions. First and foremost, the study calls for a full review of the Ghana's Inclusive School Policy with a view to incorporating collaborative approaches that capture not only the voices of pupils but also spell out the roles and responsibilities of key stakeholders including advocacy groups, alumnae of the various schools, municipalities and local community members.

Given that the inclusive school concept requires substantial funding for retrofitting of the physical environment and for procuring specialized learning tools and services, the overly reliance on Municipalities will not yield the desired results. Collaborative approaches with school authorities, school alumina, civic society groups, along with funding commitments by central governments could move communities closer to the benefits that flow from inclusive education.

This research, which has illustrated the physical dimensions of inclusivity in the educational environments, provides the initial raw material for collaborative social action to improve the physical environment and enhance learning experiences of pupils with impairments. However, in the long-term, pressure must be exerted on the government by disability groups and advocates to pass the much-needed subsidiary legislations which would constitute the basis for the enforcement of universal design standards in schools.

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