RESEARCH ARTICLE

Campus shuttle experience and mobility concerns among students with disability in the University of Cape Coast, Ghana

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Although Ghana's Persons with Disability Act 715 calls for the provision of an accessible environment, attention paid to the mobility needs of persons with disability has focused on their access to public facilities like libraries and schools without paying attention to the transport environment connecting the homes of commuters to these public facilities. This study was carried out to examine the road transport infrastructure and mobility needs of students with disability at the University of Cape Coast. Participants consisted of 31 people with visual impairment and one wheelchair user who were engaged through snowballing. Also, the Transport Officer and selected shuttle operators were engaged to ascertain transport support services to students. These were reached through purposive and convenient sampling, respectively. Findings from the study indicate that hostile reception from shuttle operators and the absence of disability-friendly accessories on campus shuttles constitute a major barrier to participants' use of campus shuttles. The study recommends documentation and enforcement of the free shuttle services for students with disability as well as the modification of existing transport facilities.

KEYWORDS
accessibility, disability, mobility, shuttle, snowballing, University of Cape Coast

1 | INTRODUCTION

The United Nations (UN) Convention on the Rights of Persons with Disability in 2006 provides guidelines to address the needs of all persons with disability (PWD) regardless of their economic, social, or geographical status (Mitchell & Rickert, 2010). Article 1 of this convention defines disability to include all persons with a long-term impairment that hinders their ability to equally and actively engage in activities that are enjoyed by persons without any form of impairment. Inherent in this definition is the notion that disability is no longer considered a personal tragedy of an individual as postulated by the medical model of disability (Barnes, 2015; Reindal, 2008). Rather, the cause of one's disability can be attributed to society's poor appreciation of varying functional abilities and how this notion influences the design, planning, and usage of the built environment, including the transport sector (Lang, 2007; Oliver, 1996; Terzi, 2004).

The World Health Organization (2011) estimates that about 15% of the world's population have some degree of disability, while the Ghana Statistical Service (2012) identifies 3% of Ghana's population have a disability. At all levels, both institutions cite visual and physical impairment as the two leading disability types since these forms of disability are the

easiest to account for in a census (Ghana Statistical Service, 2014, p. 13; Gregorius, 2014, p. 86). For people with these forms of disability, mobility presents a challenge because existing transport facilities seem to focus on the travel needs and accessibility issues of the general population who do not have any disability (Tudzi et al., 2017).

While considering mobility as a basic human right that is crucial to one's attainment of health, employment, and social goals, a series of multilateral and national policies have been enacted to address the travel needs of vulnerable populations like PWD (Odame & Amoako-sakyi, 2019). These policies include the UN Review of International Best Practice in Accessible Public Transportation for Persons with Disabilities, America's Disability Act, UK's Disability Discrimination Act, and Ghana's Persons with Disability Act (Adjei, 2013; Bezyak et al., 2017; Darcy & Taylor, 2009; Frye, 2013).

In Ghana's Persons with Disability Act, just like other policies elsewhere, the law has a wide array of issues that primarily focus on protecting all PWD from discrimination in economic, social, political, health, and the transport environment (Addo, 2014; Government of Ghana, 2006). Having identified mobility as critical for the attainment of various life-enhancing opportunities, the Ghana Federation of Disability Organizations Disability (GFD) has held public demonstrations and also sought a court injunction to halt the commissioning of a highway that did not meet their travel needs (Ghanaweb, 2012). Additionally, the conditions of commercial vehicles and conduct of transport operators in Tanzania, Zimbabwe, Papua New Guinea, and Ghana have been identified as critical factors that influence the quality of life experienced by PWD, especially in urban centres (Agbenyo et al., 2017; Badu-Agyei, 2018; Mensah et al., 2008).

In terms of movement, walking accounts for over 50% of the daily trips in sub-Saharan African cities, but for rural areas, 95% of all trips are undertaken on foot (Bradbury, 2016). Walking still remains the most preferred form of movement for PWD, largely due to poverty or incompatibility of vehicles to meet their travel needs (Frye, 2013). Having identified the role of walking to one's quality of life in the rural setting, most movement in urban centres like Accra, Takoradi, and Cape Coast is known to be achieved by publicly shared vehicles known as "Trotro" in Ghana (Abane, 2011).

While demand for transport services is known to exist, the focus on the delivery of such services is largely based on meeting the preferences of the population that is likely to pay for such services. This arrangement largely marginalises PWD since they are well represented in Ghana's poverty bracket (Park & Chowdhury, 2018, p. 3). To meet the travel aspirations of PWD, Ghana's Persons with Disability Act offers a series of guidelines relating to the reservation of seats on public transport, importation of non-conventional cars, reservation of parking spaces for commuters with disability, as well as the attitudes of transport operators towards PWD (Government of Ghana, 2006). Though this law offers some recognition of the travel needs of PWD, it fails to enjoin public transport providers like the University of Cape Coast to acquire disability-friendly vehicles or even modify existing ones to reflect key aspects of PWD's travel needs. Additionally, the law further fails to state clear punitive measures for organisations that flout this legislation.

Being the third oldest public university to be established in Ghana, the University of Cape Coast is also known to be the first of its kind to train teachers for Ghana's second cycle educational institutions. In recent times, this mission has been broadened to develop human resources for other sectors of the economy, ranging from medical doctors to oil and gas experts. In view of this new direction and its decision to ensure equal access to education for all, the University adopts an integrated educational approach that admits students irrespective of their disability, creed, or social status (University of Cape Coast, 2016).

In line with Ghana's Persons with Disability Act and other multilateral policies, the University of Cape Coast has also enacted its local disability policy, which intends to improve the quality of life of students with disability on campus. This policy covers disability issues relating to admission, residence, financial aid, and provision of other services (University of Cape Coast, 2010). With reference to admission, entry requirements for prospective students are known to be different from students without disability. Additionally, students with disability are guaranteed residential facility throughout their four-year undergraduate studies in any of the hostels managed by the University. By contrast, students who do not have any disability are only assured accommodation in the University's managed hostels in their first year of schooling. Considering the sparse distribution of students' residential and academic facilities, one key area that has not received much attention is the condition of the campus shuttle services, given their role in connecting students to various facilities on campus.

In perusing documents on shuttle services for students, the only citing of such transport services in the University's disability policy mentioned the University staff as the recipients of such services while no mention was made of students with disability. In the absence of an explicit citation, there exists a convention that offers free ridership to all students with disability. This convention was instituted at a time when the University was the sole provider of shuttle services for all students. Over the past five years, the University has franchised a significant proportion of its shuttle services to private operators, which has resulted in a decline in use among students with disability. As an immediate substitute, taxis have become the next suitable option, though this option does not offer free ridership and charges more than twice the fare of campus shuttles. If the cost of using a taxi becomes a barrier, the best-observed option for students is to walk, which

increases travel time, requires more physical effort, exposes students to risk of injury, and reduces the desire to engage in non-academic or social activities. This paper seeks to examine the accessibility of campus shuttle services for students with disability and how it influences students' travel options.

This paper hopes to contribute to practice and literature relating to students' living conditions and mobility experience on campus. The study deviates from previous studies that have focused on the loss of a body part as the primary contributing factor to one's inability to engage in various activities, as seen in disability studies relating to stigma (Ocran, 2017), rehabilitation (Grischow, 2011), and human rights (Opoku-Boadi, 2015). Further, this study is viewed from the context of a social model of disability where the emphasis is placed on how the design and usage of the built environment as well as social interaction influence students' ability to enjoy opportunities. The study finally sheds light on the living experience of students with disability in an academic institution which offers a good basis to improve literature and policy for such students.

2 | STUDY SETTING AND METHODOLOGY

The study setting is the University of Cape Coast, which is in the Central Region of Ghana. This study focuses on the living experience of students with disability in their use of campus shuttle services, hence a phenomenological research design was adopted. With 3% of Ghana's population in the disability bracket (Ghana Statistical Service, 2014), a relatively small number of participants were expected to take part in this study. Though the current student population stands at 18,949, the total number of students who engaged in this study was 32, comprising 31 students with visual impairment and one wheelchair user (University of Cape Coast, 2016). The degree of visual impairment ranged from students with low or blurred vision to those who were totally blind.

To build a sample frame for the study, the Office of Disability Services (ODS) within the University offered some data on the number of students with visual impairment. However, the data provided were not detailed enough to offer the needed background information, such as contact numbers and locations of these students. Furthermore, some students with blurred or low vision who identified as being visually impaired upon admission were not captured by these data. This was because this group of students had declined the braille and other support services offered by the disability office, hence their omission in the data set received. Locating research participants was not easy since their different academic schedules did not allow all participants to converge at a common venue for data collection. Therefore, the snowballing technique was employed to reach participants. Participants for this study comprised both undergraduate and graduate students aged from 17 to 35 years. From a gender perspective, 20 male students and 12 female students were engaged. Also, the Transport Officer and selected drivers of campus shuttles were engaged through purposive and convenient sampling, respectively. This was done to ascertain support services offered to students with disability on campus.

Data collection was carried out using an unstructured interview guide and this helped to gain a better understanding of the living experience of students. It also helped in probing further for clarity on specific issues, which would not have been permitted in the case of a questionnaire (Creswell, 2012; Lewis-Beck et al., 2004). For students with physical disability, the interview guide was focused on participants' experience in their usage of campus vehicular services, interaction with transport operators, access to transport information, as well as the conditions of the shuttles they travelled in. Data collection lasted for a month and the interview session ranged from 26 to 58 minutes. To protect the participants and the integrity of the study, approval was obtained before recording the interview, and other ethical issues regarding informed concern, privacy, and anonymity were upheld. After the interview, the data were transcribed using NVIVO. The transcribed data were then grouped into themes to make analysis easier. Text searches on relevant words were also done to help place the analysis in context.

Using the guidelines of the UNDP's International Review for an Accessible Public Transport (Mitchell & Rickert, 2010) and Ghana's Persons with Disability Act (Government of Ghana, 2006), an accessibility audit was also developed to determine the University's compliance level to vehicular standards by examining presence, number, and condition of selected facilities on campus shuttles. Variables observed included designated space or priority seats, the floor height of shuttles, as well as the presence of a boarding platform and assistive technology. As a participant-observer, the researcher also enjoyed bus rides on all shuttles and this was intended to examine the attitudes of transport operators towards students with disability. All 18 shuttles were examined and photographs of observed variables were also captured as supporting evidence to complement the findings of the study.

3 | RESULTS AND DISCUSSIONS

This section discusses experiences of students with physical disability at the University of Cape Coast as they use existing shuttle services on campus. The discussion is informed by the UN Review of International Best Practices for Integrated Public Transport, Ghana's Persons with Disability Act, the University of Cape Coast Disability Policy, and the experiences of students with physical disability.

3.1 | Floor height and boarding platform

The floor height of a vehicle describes the vertical distance between the ground on which the vehicle stands and the first level of access to the vehicle. This difference greatly influences the extent to which students with physical disability, pregnant women, and children can make use of a public transport service. In total, 18 shuttles were examined and the floor height of these vehicles ranged from 320 to 520 mm (Figure 1). These measurements contravene the assertions of Frye (2013), who recommended a maximum floor height of 230 mm if the travel needs of commuters with disability are taken into consideration.

Although most vehicles had a floor height over 230 mm, none of the students with visual impairment who were interviewed considered it a challenge. On this note, some students with visual impairment cited the use of equally high floor vehicles when they patronised buses outside campus, while others identified the use of the white cane as an aid in boarding the shuttles. To them, the white cane acts as an indicator to identify the first step of the shuttles and once this height is determined, necessary steps are taken to board the shuttles.

Unlike the students with visual impairment, boarding high floor vehicles was considered a significant challenge for the wheelchair user. In addition to the vehicle's height exceeding the recommended floor height of 230 mm, there was no boarding platform to assist wheelchair users to independently board campus shuttles. The absence of this facility made it impossible for the wheelchair user to board the shuttle while seated in a wheelchair. This further contravenes the Mitchell and Rickert (2010) recommendation for an accessible transport service which requires the presence of boarding platforms to reduce the time and efforts required for PWD to board shuttles. In recounting challenges in using high floor campus shuttles, a first-year male wheelchair user had this to say:

> When I am entering the shuttle, I have to fold my wheelchair. Sometimes I have to hold the entrance of the shuttle and drag myself into the bus and at other times, I crawl to the seat. I have not seen any platform which
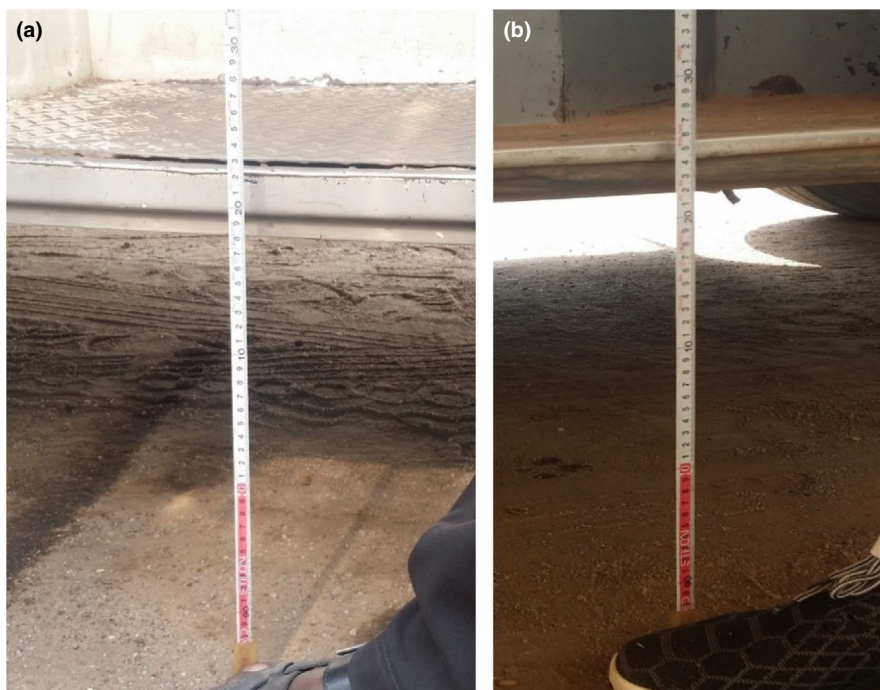

FIGURE 1 Floor height of campus shuttles ranging from 390 to 410 mm.

I can use the wheelchair on. I really don't like this experience since other students always have to come to my aid anytime I join the shuttle. [Level 100 male wheelchair user]

The absence of a boarding platform further compels the wheelchair user to rely on taxis as an alternative transport means since taxis have a relatively low floor height, require only four passengers, and have a boot where the wheelchair can easily be placed when folded. While the UN categorically stresses on the need to provide low floor buses or inclined planes for buses with high floors, such provisions were not cited in Ghana's Persons with Disability Act and the University of Cape Coast Disability Policy.

3.2 | Priority space or designated areas on campus shuttles

Meeting the transport needs of PWD also includes the provision of exclusive facilities like priority seating for people who are visually impaired and designated areas for wheelchair users. In examining all 18 shuttles, the study found that none of these buses had designated spaces for wheelchairs or priority seats for people who are visually impaired. The absence of this facility also implied that a wheelchair user who intends to board the bus would have to do so without being in the wheelchair since there is no room for the wheelchair in the shuttle. Here, persons who are not disabled would have to assist the wheelchair user to join the shuttle and subsequently find a place to put the folded wheelchair. The absence of the wheelchair space breaches the recommendation of Mitchell and Rickert (2010), which called for the inclusion of such spaces in buses. It should be noted that none of these buses had a ramp and there was no clear way at the entrance that would even allow wheelchair users to board the shuttle while seated in the wheelchair.

Interactions with some campus shuttle operators on why their vehicles did not have space for wheelchair users yielded varying results. Some drivers of low occupancy vehicles like the "Urvan" and "Ford" (minibuses) remarked that replacing the existing seats with space for wheelchair users was not economically viable since there were very few wheelchair users on campus. To them, replacing the seats would translate to a loss of income since the University also decided to make shuttle services free for all students with disability on campus.

Secondly, the ceiling of these buses was measured and found to be less than 1.8 m from the floor of the vehicle. This would make it difficult for people to stand in the designated spaces if no wheelchair users boarded the shuttle before it left the station. Before the University authorities franchised the shuttle services to private individuals, all buses used for the shuttle services were more spacious and had a floor height over 1.8 m, which gave students the opportunity to stand when all the seats were occupied. Although these buses do not come with designated spaces, efforts to provide such areas would have been possible. Unfortunately, franchising the shuttle services resulted in the use of minibuses, which offered little room for such modification, though they were cheaper to maintain and had a quicker turnaround time for transport operators.

While no designated spaces for wheelchair users were provided, no signage or inscriptions depicting priority seats for people with visual impairment or other disabilities were seen on any of the shuttles examined. As a result, seating on campus shuttles was based on a "first come, first served" basis rather than a deliberate attempt by campus authorities to provide such dedicated services. The absence of such seats contravenes Section 29 of Ghana's Persons with Disability Act (Government of Ghana, 2006), which strictly mandates commercial vehicle operators to reserve at least two seats for PWD. Mitchell and Rickert (2010) further recommend that these priority seats should be located directly behind the driver's seat or close to the entrance since this would make it easier for PWD to communicate with transport operators.

In addition, the study found that transport operators did little to reserve specific seats for students with visual impairment. During the accompanied trips, no driver asked any non-disabled student to vacate their seat for participants with visual impairment, and when participants were asked if a driver had ever asked someone to vacate their seat, only six of the 31 participants said they had.

When asked where they sat when they boarded the shuttle, a fourth-year female student with visual impairment at the South Campus said:

Anywhere, it could be in front, sometimes at the back. We don't have a specific place. When you board the car and your sighted colleagues are seated in front, some of them may vacate their seats and let you sit down, others too would not care about you at all.

When asked if any driver had asked non-disabled students to vacate their seats, this respondent remarked:

Yes! They always say 'Oh please, let your friend (referring to visually impaired student) sit here.' And for some of them too (the sighted colleagues), when they see you, they just vacate their seats for you.

Further analysis of the data found that some of the drivers decided to find suitable seats for students with disability through their own free will or out of kindness, not because they were enjoined by any regulation to do so.

3.3 | Assistive technology

Communication plays a key role in allowing PWD to independently relay their intentions to bus drivers. This could take the form of informing drivers where they would like to alight or relaying any other details that may be necessary at certain points in time. Communicative tools like push bells, audio transmitters, and smart screens were not seen in any of the study buses on campus. In Frye's (2013) view, the absence of these facilities increases the dependency of PWD on people without disabilities, which reflects society's poor knowledge on the transport needs of travellers with disability. To attain some level of autonomy in movement, travellers with disability may resort to walking or using the pedestrian sidewalk, though this also has its own challenges. The absence of these facilities as seen in Figure 2 breaches Litman's (2018) principles on a universal transport system, which indicates that factors such as independence in usage and use of less physical effort are some of the key factors that characterise the movement of all persons including travellers with disability.

Mitchell and Rickert (2010) further maintain that transport operators consider the modification of vehicles as increasing operation costs, hence their hesitation in doing so. Frye (2013) suggests manual techniques like calling out the names of various bus stops as this would give persons with visual impairment and strangers a fair idea of where they are. Calling out names of various bus stops was used by drivers of campus shuttles, but the study found this approach to be unsustainable since it would require drivers to shout at regular intervals throughout the journey. In view of this, there might be the tendency to become forgetful or tired, which would eventually limit the driver's performance.

In an interaction with some shuttle drivers on why their shuttle buses did not have these facilities, some made it clear that students with visual impairment who board their shuttles can easily draw the attention of other passengers on board. According to the drivers, this act would be enough to prompt them to stop at the desired destination. Aside from having to rely on other commuters, other shuttle drivers also revealed that students with and without disabilities alight at common destinations, and these stops are mostly identified by the non-disabled students.

The above narration by the drivers still points to the fact that students with disability are still dependent on support or assistance from students without any form of disability. This plays down the principle of independence in usage as postulated by Venter et al. (2002) and Odufuwa (2017). Although communication gadgets come in various degrees of sophistication and cost, there are simple ones like the push bells that transmit audible notes to prompt drivers to stop. The use of this technology would spare students with disability from shouting or having to prompt the drivers by proxy.

In recounting the experiences of students with disability on how they make their intentions clear to the driver, a third-year, male student with visual impairment revealed that:

God being so good, whenever I join the shuttle, I always know where I would alight but before I shout it out, someone else in the shuttle had already prompted the driver since he or she would also alight at the destination I have in mind. [third-year undergraduate student with visual impairment]

FIGURE 2   The interior of a shuttle without any assistive communication tool.

When asked if the drivers call out the various stop points, the participant further stated that:

> Some drivers do call out the names of some stop points especially when the bus is coming from the South to North Campus. The driver would ask if any passenger would alight at 'VALCO' (one of the traditional halls of residence for students). This does not happen at only VALCO per se. Some call out other stop points like Casely Hayford Hall (CASFORD), Café Roof Top (CRT), SSNIT or FELT junction. Some drivers call out all these stop points before they finally end up at the shuttle station at the North Campus. [map of the campus bus route can be seen in Figure 3]

With reference to calling out the names of the various stop points, participants revealed that nothing was heard when the shuttle commutes from the North to the South Campus, but in reverse. Very few drivers call out the identified stop points since the route to the North Campus has two distinct paths and drivers cannot assume whether students want to take one route or the other.

3.4 | Driver behaviour

In commuting via 18 different shuttles as a participant-observer, it was noted that the drivers had the patience to wait for students with various degrees of disability to alight before the buses drove off. In one instance, when a student with visual impairment was alighting, the driver patiently waited for a longer time and no passengers on board complained. It was also observed that drivers did not suddenly apply their brakes since such actions had the tendency of causing injury to passengers who may not be well seated or positioned in the vehicle.
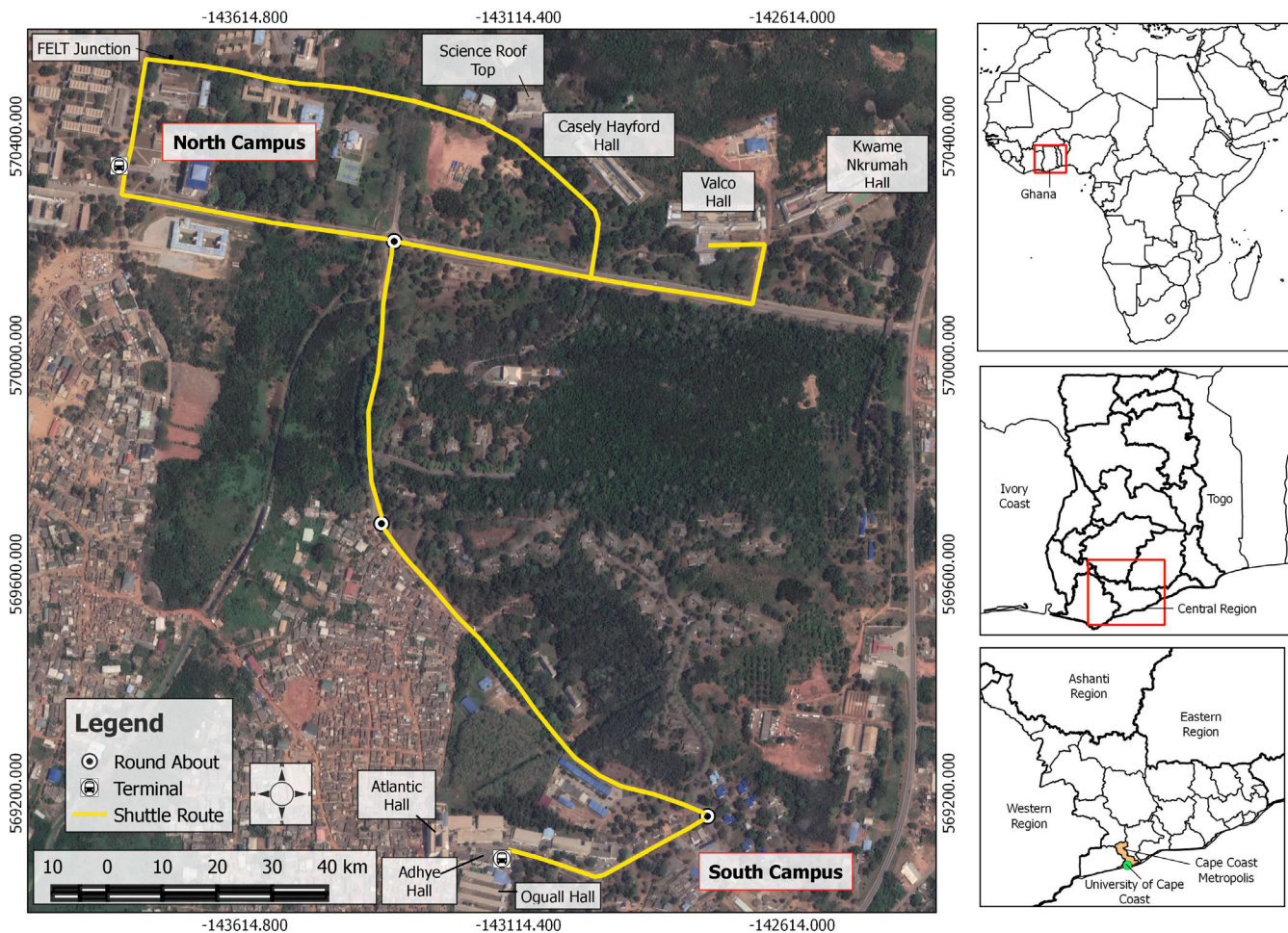

FIGURE 3 Map of UCC Campus showing campus shuttle routes.

It emerged from the study that drivers' decisions to wait for students (including those with disability) to alight from the shuttles stems from their wish to prevent any injury associated with falling from a moving shuttle. Discussions with the Transport Officer of the University revealed that the University transport policy had just been approved by the University's Council and was in print at the time of this study, and so the University had no published transport policy. Therefore, most of the activities of drivers in the past and at the time of the study were guided by locally formulated codes of conduct and "common sense."

While personal observations showed that drivers' attitudes regarding stopping and alighting were positive, students with disability had a contradictory view of drivers' reception when they join the shuttles. The unfriendly behaviour of some shuttle drivers, especially drivers of privately owned shuttles, was attributed to the University's decision to exempt students with disability from paying shuttle fares. In the account of most students with disability, this exemption made them unattractive to most drivers, which led to their frustration in accessing shuttles on campus. Further interactions with students with visual impairment on how they differentiate the University shuttles from the privately owned shuttles revealed that the basis for this differentiation hinged on their perceived size of the shuttle.

In most cases, the University shuttles comprise the "Coaster" or "Tata" buses which were high occupancy and spacious. In this light, smaller shuttles were deemed to be privately owned. Though this differentiation approach was being used by students who were visually impaired, this method did not provide an accurate distinction since a few private shuttles were found to be high occupancy and spacious. A look at the University's Policy for the Provision of Disability Services (p. 9) emphasises the provision of shuttle services for persons with disability, however this provision was limited to the staff of the University and did not mention students. The policy also failed to explicitly state if the services should be free. Additionally, certainty on the number of students who can enjoy such free ridership on a bus is not known.

With this gap in information, all students interviewed in this study identified the attitudes of conductors at various terminals to be a major barrier to their movement. These attitudes ranged from physically obstructing students with disability from joining the shuttles to the use of derogatory remarks in reference to students with disability. The degree of hostility towards students with disability seemed to increase when students had boarded a shuttle more than once in a day or when more than one student with disability attempted to join a shuttle. When asked to rate drivers' level of reception and give reasons to support the claim, a third-year student with visual impairment remarked:

> I will score them 3 out of 10, and even with that score, I have been lenient. The shuttle drivers are not doing well. I fear God and if it were not for God, I would have given them 1 out of 10 because they don't do well at all. Sometimes, when you get into the shuttles and you are not careful, the shuttle driver will even ask you to get down. I remember a time that we were returning from a lecture to the hall. When I got to the shuttle station, there were two visually impaired students who were already seated in the bus. I was the third visually impaired student to join that shuttle and the driver told me: 'the car was full; I own the car and I say it is full' so he didn't allow me to join.

While revealing participant experiences with shuttle operators on campus, none of the students with visual impairment was able to mention the name of at least one driver who had ever been hostile to them. The study did not find this surprising since drivers' identity was not essential to ridership. However, some participants shared opinions about a few campus shuttle drivers who had been friendly to them and the basis for this friendliness covered the driver's politeness in speech, assistance in identifying the right shuttle, as well as assistance in finding a suitable place to sit. Though none of the names will be cited in this paper, the study found that these were names of operators of University shuttles but not those of privately operated shuttles.

In citing reasons or examples of occasions when some drivers were friendly, a partially sighted third-year undergraduate student claimed that:

> I will say that some of the drivers are friendly. When I get there, they find me a place to sit and they do not deceive me that it is full when indeed it is not full. Some of these people are friendly but I cannot remember their names. There is one man, I know him but I don't know his name. He is very good and he is very respectful. I don't know his name and it is unfortunate.

The participants expressed that, in their experience with the campus drivers, privately owned shuttles operators were more hostile to them than those employed directly by the University.

4 | CONCLUSION

This study seeks to examine the accessibility level of campus shuttle services for students with disability and how it influences students' travel options. Additionally, this paper has brought to the fore the vehicular support services available to students with disability and highlighted challenges faced by participants in using campus shuttles. The University's poor acknowledgement of the transport needs of these students limits the extent of convenience and attractiveness in using campus shuttle services. With the prevailing transport services, attempts by any wheelchair user to enjoy vehicular services would mean that such students would have to rely on the services of taxis, even though they charge twice as much as the regular campus shuttle services. This raises the cost of transportation for these students and further limits their ability to enjoy services available to other students on campus.

Even if students with disability are afforded the opportunity to enjoy transport services for free, existing vehicular conditions disenfranchise these students since support services like priority seats and assistive technology were found to be absent on campus shuttles. Additionally, the hostile reception received from transport operators was known to be one of the reasons for these students not wanting to use campus shuttle services.

Finally, the study recommends a complete overhauling of the campus shuttle services. The University should revise its transport policy to explicitly guarantee free shuttle services for students with disability, while also ensuring the existence of a rigorous process in the selection of shuttle operators. Additionally, the University should ensure the use of disability-friendly shuttles as well as providing disability-related training programmes for all shuttle operators.

5 | POLICY IMPLICATION

With reference to documentation, the existing University disability policy makes no provision for free ridership for students with disability. Since the University has declared its intention to offer such services, this paper suggests that such provision should be unequivocally spelt out in the existing student's handbook, transport policy, and the University's disability policy. Punitive measures for transport owners and operators who flout this directive must be clearly outlined in these documents.

At the state level, the National Commission on Civic Education in collaboration with the Ministry of Transport should also undertake an intensive disability awareness programme that targets transport operators. An appreciation of such issues will make transport operators more responsive to the transport needs of PWD. Nevertheless, the current national disability policy speaks against all forms of discrimination, so enforcement of the existing laws that would severely punish transport operators who are found to discriminate against PWD would send a clear message to all.

5.1 | Limitations and areas for further research

Inadequate data on the state of compliance with transport provision outlined in Ghana's Persons with Disability Act made it difficult for the authors to compare shuttle services across various tertiary institutions as well as on a national level. Additionally, the University of Cape Coast represents a small area in the whole Central Region of Ghana and transport services offered to students may not represent events and services in the everyday lives of Ghanaians. Finally, the choice of qualitative study does not offer room for generalisation of the findings of this study, but only represents the personalised and in-depth views of participants. Given that none of the authors possess any impairment, this may hinder the authors' ability to contextually connect with some thoughts and views of participants.

The study suggests similar research is needed to ascertain compliance levels at other tertiary institutions in Ghana. This research would offer enough data to compare compliance among various tertiary institutions in Ghana. Additionally, the discussions on transport services at the local or national level may engage key stakeholders like conductors and representatives of various transport unions who did not engage in this study. Further research into the role of these players may offer a broader perspective on the compliance level at both the local and the national level.

CONFLICT OF INTEREST

No potential conflict of interest was reported by the researchers.

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