



Challenges of learning environments experienced by distance-learning higher education students in Ghana

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Abstract

The study presented here investigated challenges of learning environments experienced by distance-learning (DL) higher education (HE) students in the Greater Accra Region of Ghana. The author interviewed students ($n=24$) in two DL centres, where they attended weekend face-to-face sessions. He asked them to share their personal experiences with respect to classrooms, learning facilities both inside and outside the classroom, and access to library support services. During each intensive one-on-one interview, which lasted 45–60 minutes, the author made audio-recordings and field notes for later analysis. The students' views were complemented with audio-recordings and field notes from staff interviews ($n=4$), each lasting 1–2 hours. The 28 participants in the study were recruited from two University of Ghana Learning Centres, Accra and Tema. Data collection covered the period from April 2018 to December 2019. The field notes derived from all participant interviews were transcribed, coded, categorised and analysed using NVivo 10. Particular attention was paid to students' educational and social well-being, and their *sense of place*. Findings include students' struggle with poor infrastructure conditions, and most reported lack of access to power sources in the classrooms, lack of a cafeteria, IT labs, library space, a student hub, and support services as the most significant barriers to experiencing a meaningful HE as DLs. Participants stressed the importance of infrastructural support and services tailored towards DLs' needs, with an emphasis on DL HE students' physical, social and psychological well-being.

Keywords Higher education · Distance learning · Enabling learning environment · Sense of place

Résumé

Les écueils des environnements d'apprentissage pour les étudiants à distance au Ghana – L'étude présentée ici s'est penchée sur les difficultés que posent les environne-

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ments d'apprentissage aux étudiants de l'enseignement supérieur suivant un programme d'apprentissage à distance dans la grande région d'Accra au Ghana. L'auteur a interrogé des étudiants ($n=24$) dans deux centres d'apprentissage à distance où ils assistaient à des cours en présentiel le week-end. Il les a priés d'exposer leurs expériences personnelles concernant les salles de classe, les moyens d'apprentissage en classe et hors de classe, et l'accès au service de soutien à la bibliothèque. Durant chacun de ces entretiens individuels intenses d'une durée de 45 à 60 minutes, l'auteur a procédé à des enregistrements audio et pris des notes d'observation en vue d'une analyse ultérieure. Le point de vue de étudiants a été complété par la réalisation d'enregistrements audio et la prise de notes d'observation à l'occasion d'interviews du personnel ($n=4$) d'une durée d'une à deux heures. Les 28 participants à l'étude avaient été recrutés dans deux centres d'apprentissage de l'université du Ghana, à Accra et Tema. Les données recueillies couvrent la période d'avril 2018 à décembre 2019. Les notes d'observation prises à l'occasion de toutes les interviews des participants ont été transcrites, encodées, classées et analysées à l'aide de NVivo 10. Une attention particulière a été accordée au bien-être éducatif et social des étudiants et à leur *sentiment d'appartenance*. Les résultats font état du fait que les étudiants sont confrontés à une infrastructure de mauvaise qualité et, ce qui revient le plus souvent, à l'absence de prises électriques dans les classes, mais aussi au fait qu'il n'y a ni cafétéria, ni salle informatique, ni bibliothèque, ni espace étudiant, ni service de soutien, qui constituent pour eux les plus grands obstacles pour que leur parcours d'enseignement supérieur à distance leur soit utile. Les participants ont souligné l'importance d'un soutien infrastructurel et de services répondant aux besoins en matière d'apprentissage à distance, notamment en ce qui concerne le bien-être physique, social et psychologique des étudiants de programmes d'enseignement supérieur à distance.

Introduction

Every educational institution has its particular physical and social environments, jointly comprising the sum total of the learning environment. Research has shown that quality of education depends not only on the quality of teachers and resources, but also on the entire socio-cultural landscape of the learning environment (Mupa and Chinooneka 2015; Kazarenkova and Kazarenkov 2019; Yılmaz and Temizkan 2022). This has resulted in the transfer of some of the attention directed towards the quality of teachers and resources, which remain important factors, towards understanding the overall learning environment. Therefore, it is increasingly important for educators to explore the “big picture” in order to reveal and understand the impact and effect of the learning environment as a whole on students' academic lives. The recognition that the learning environment in an educational institution is not only a designated teaching and learning place (Mupa and Chinooneka 2015), but also

represents a multitude of meanings (such as *sense of place*,¹ personal identity and security) that vary according to class, ethnicity and age (among other socio-demographic factors), turns it into a complex site for study. It is by investigating this site that educators can contribute to the direction of educational policy.

A proper and adequate learning environment is necessary for students' overall academic success. Given that students spend most of their time in school/at university, the environment there influences their academic performance and their well-being in different ways through learning, teaching and relationships. Environment plays a significant role in students' personality development, therefore the general conditions of our educational institutions (such as schools, colleges and universities) are a matter of great concern to everyone (Qazi et al. 2020; Cárdenas Moren et al. 2020). Educational scholars have observed that the physical school environment (including the location and the school climate) may have significant influence on students' academic achievement (Freiberg et al. 1999; Tsavga 2011; Rogers 2018), and the same applies to college and university students. As the saying goes, *a healthier environment leads to a healthier brain*.

Research published by the California Institute of Technology (Caltech) in Pasadena and Cedars-Sinai Medical Centre in Los Angeles supports the fact that a relaxed brain is better at remembering and processing new information (Gordon 2018) than a stressed brain. The study suggests that if you want your brain to be healthier and free from mental health problems, take some time out and reconnect with your natural surroundings. Spending a few hours outdoors will help body and mind in many ways. There is a strong belief in the Western world that people can

attain physical, mental, and spiritual healing simply by spending time out-of-doors or seeking out remote or isolated places where they can "get away from it all", surrounded by undisturbed nature (Gesler 2003, p. 8).

Exposure to nature (e.g. looking out through a window, walking in a park) and practising active awareness of nature promote physical and mental health (Pretty 2006; Maller et al. 2006), both necessary for academic advancement. Adequate quantity and quality of space in one's educational setting have been shown to have a restorative impact, be linked to greater perceived academic performance (Shamaki 2015; Malik and Rizvi 2018) and positively affect quality of life (Bowler et al. 2010; Thompson et al. 2012).

The character of the learning environment in schools, colleges and universities has shifted in recent years, along with changes within contemporary society, and little is still known about how social and physical conditions contribute to the experience and meaning of the learning environment – a sense of place. Alongside the educational mandate, schools and universities are ideal places for community integration, social capital formation and cohesiveness, and the fostering of civil society (Basu 2004; Belete et al. 2022). Accordingly, incorporating the socio-spatial dimension into the range of challenges students face in their educational environments

¹ In a nutshell, sense of place refers to people's attachment to a place and the meaning it holds for them. The concept is considered in more detail later in this article.

is critical for the long-term sustainability of education, including higher education (HE). Dedicated analysis of students' sense of place is helpful to our efforts to consider the entire spectrum of diverse social and physical challenges in our higher education institutions (HEIs).

Background: learning environments

Learning environments are fundamental features of an academic institution. The learning environment is often considered by educators as the third teacher after the family and the pedagogue, regarded not only a tool for educators, but also independently providing a source for discoveries and experience (Cagliari et al. 2016). The literature on learning environments offers insights into efforts to create quality spaces of teaching and learning. Past research on learning environments has highlighted the linkages amongst physical, social and cultural processes (Barrable 2020; Garcia-Carrion et al. 2018; Chism 2006). Richard Shavelson and Tina Seidel (2006), for example, have suggested the involvement of the physical, social and instructional aspects of the learning environment, their measurement and their respective effects on student outcomes.

Recent studies of various psychological measures relating to both well-being and motivation in the context of learning environments have combined psychosocial outcomes with physical contextual factors (Salmi and Thuneberg 2018; Liu et al. 2012). The physical learning environments represent sites of academic excellence, sociability and face-to-face interaction, while their quality is commonly perceived to be a measure of the quality of a particular educational institution. Ideally, learning environments have been identified as a valuable "adjustable" variable that can positively affect cognitive, behavioural and affective student outcomes (Barrable and Arvanitis 2019; Waxman and Huang 1997; Waxman et al. 1997). As such, the learning environment lends itself to research which seeks to embrace the sense of place of the academic environment.

To identify characteristics that can enhance the quality of academic environment for DL students, it is useful to consider recent work on the psychology of education which points to the role of interaction and dialogue in understanding learning processes (Garcia-Carrion et al. 2018; Aubert et al. 2017). Dialogue plays a key role in learning, as it allows for the sharing of knowledge, thoughts and purpose (Rogoff 1990; Bruner 1996), and fosters collaborative knowledge creation (Flecha 2000; Wells 1999; Vygotsky 1962).

Recently, concerted efforts have been made to examine learning environments beyond indoor and traditional classroom settings, to include aspects of the learning environment out of doors. For example, Sonya Nedovic and Anne-Marie Morrissey (2013) examined changes in an outdoor space and their effect on children's responses to those changes. It is worth noting that social and physical (built and natural) environments do not exist independently of each other; any environment is a result of continuing interaction (Yen and Syme 1999). Work in the field of environmental psychology, which focuses on mechanisms involved in fostering a positive mood, has identified restorative benefits of places (e.g. the school) in terms of

“place identity”, a sense of attachment and satisfaction (Korpela et al. 2001; Korpela and Hartig 1996). Following this research direction, *nature schools*² and play-based outdoor learning in general have seen a considerable growth in many educational endeavours. For example, national and regional curricula have introduced outdoor learning expectations in New Brunswick, Canada (EECD 2017) and Ireland (ECI 2015).

Research has already investigated this new learning component, showing that outdoor learning environments and the pedagogical practices associated with them are conducive to student learning outcomes (Barrable and Arvanitis 2019; Maynard 2007). A considerable portion of the literature that supports the idea of the potential benefits of environments or spaces to physical, social, mental and emotional well-being has employed the sense of place concept to explore a wide range of places perceived to promote well-being and satisfaction (Guo et al. 2021; Agyekum and Newbold 2016; Wolf et al. 2015). The concept captures both the physical properties of a given space as well as the subjective ways in which people perceive and interpret that space. Although the initial focus was on conceptual as well as physical aspects of place, recent research has focused on the properties of “ordinary” places, in the built environment and green spaces, and has considered their restorative properties and their role in promoting well-being (Rajala et al. 2020; Bott 2018; Chapin and Knapp 2015). To understand the ways in which learning environments (i.e., social, physical and psychological) promote academic excellence and well-being, and how they respond to intersecting forms of inequality, we still need additional analyses in multiple contexts.

Sense of place

In the context of learning environments, the “sense of place” concept holds as foundational that a “place” (e.g. a learning centre) is much more than an empty container simply filled with people. Rather, “place” emerges as a result of people’s interactions with a space and its population through interwoven and complex social, political and psychological processes (Tonge et al. 2013; Van Patten and Williams 2008). Indeed, studying the challenges arising in an academic environment such as a learning centre is engaging with sense of place. Sense of place research therefore begins with an understanding that social and physical conditions are best explained through the meanings that people ascribe to particular places, thus helping to improve our understanding of educational activities’ effects on sense of place (Kudryavtsev et al. 2012; Puteh et al. 2015).

² Nature schools, also referred to as forest schools, conduct a large proportion of their teaching in outdoor settings. The Child and Nature Alliance of Canada “define[s] Forest/Nature School as an educational ethos and practice that centres the Land and the child-at-play. Children and educators build a relationship with the Land through regular and repeated access to the same outdoor space over an extended period of time. Educators support learning through a pedagogical framework that is rooted in place and play, directed and inspired by the child (emergent curriculum), and driven by a process of inquiry” (Child and Nature Alliance of Canada 2023).

The sense of place concept was first proposed by geographers to understand the relationship between humans and the socio-spatial environment (Relph 1976; Tuan 1974). It encompasses both individuals and groups' attachment to a place and the meaning it holds for them, albeit with greater analytical focus on place attachment (Masterson et al. 2017). Basically, place attachment is a positive emotion that people have about a place. Moreover, Richard Stedman (2003) argues, sense of place involves "place meaning", which describes the kind of place it is, and the images it conveys. Place therefore acts as a locus for transactional processes, which provides the individual with a sense of security (Counted and Zock 2019). The same can be said of places as sites shaped by meaning, experience, association and attachment, described by Yi-Fu Tuan (1974) as *topophilia* [love of place]. In a recent study exploring educational exclusion with DL students in the University of Ghana (Agyekum 2020), I found that students expressed concerns about the poor nature of the physical space which they felt prevented interactions amongst students. This perception carries symbolic meanings that inform place identity in the university's learning centres.

Empirical findings from recent research suggest that sense of place is central to childhood development (Bott et al. 2003; Wilson 1997; Chawla 1992), place-based education (Semken and Brandt 2010; Gruenewald and Smith 2008), situated pedagogy (Kitchens 2009), imaginative education (Fettes and Judson 2011) and HE (Barlett 2005; Orr 1992). These studies emphasise the important role of sense of place, which has implications particularly for education. Thus, a student's sense of place does not solely rely upon being physically located within a given school environment, or being able to physically access that place. Rather, a student's emotional bond with a place, such as a learning centre, also plays a major role. In essence, a place can be meaningful and important to a person both in their mind and/or by being physically present (Gurney et al. 2017; Agnew 1987).

In recent years, educational researchers (Holton 2015; Kudryavtsev et al. 2012; Barlett 2005) have reinvigorated the sense of place concept by focusing on the importance of such factors as student–place relationship in the education context. Sense of place in particular has been characterised a socio-spatial approach that attempts to connote a sense of belonging to places and the "character of places", which relates to place attachment and meaning (Malpas 2010, p. 205). One of the early proponents of the concept, Edward Relph (2007 [1976]), argued that the meaning of places may be rooted in physical settings and objects and activities, but that they are not a property of those places. Rather, they are a property of human intentions and experiences. As an illustration, students may think of a learning centre as a place of learning, of interacting with others, of developing their social skills, while others may regard a learning centre as a place of opportunity for acquiring further knowledge for promotion and/or a change in social status, especially for older adult learners already in employment.

The multidimensional character of place experiences is confirmed by studies in which people name distinctive physical and social attributes of places (Cantrill 1998). Taken together, these studies echo contemporary work about place-based education (Corbett 2020; Vander Ark et al. 2020; Deringer 2017). Another relevant example is a project by Peggy Barlett (2005), who used a "sense of place"

approach to analyse an important factor in understanding curriculum development in HE. Contributing to this body of literature, the present study explicitly incorporates sense of place into its analysis of a specific type of place – a DL centre.

The study and its context

This article looks at challenges experienced at the University of Ghana and two of its learning centres in the Greater Accra Region of Ghana, namely, Accra Learning Centre and Tema Learning Centre. The purpose of the centres is to support DL in the country in an experimental approach to bring HE to marginalised communities with the aim to foster economic development and social inclusion. The learning centres are directly managed by the Department of Distance Education and University of Ghana Learning Centres (UGLCs), both of which are parts of the School of Continuing and Distance Education within the College of Education. The DL track offers both degree (four-year undergraduate) and diploma (two-year undergraduate) programmes in education, humanities, business, and sciences. The DL programme is operated in a hybrid modality. During the week, lecturers, assistant lecturers and tutors use online platforms, such as the Sakai Learning Management System (Sakai LMS),³ Zoom, and WhatsApp, to distribute assignments, lectures, announcements and notes, and to conduct online discussions and examinations (see Kwapong 2022). This virtual component is complemented and consolidated by weekend face-to-face sessions conducted in the learning centres.

Accra is Ghana's capital and largest city, which is situated on the Atlantic coast and has a population of over three million (WPR 2018). Its economy relies on its financial, commercial and industrial sectors, which include pharmaceutical products and textiles. At the same time, a large segment of the city's population is made up of residents who, for various reasons, completed their education up to only high school level or left formal education early. Tema, located 25 kilometres east of Accra, is Ghana's sixth-most populous city with a population of 292,773 in 2010 (GSS 2012). It is popularly known as "the harbour city" because of its status as Ghana's largest seaport. It is the capital of the Tema Metropolitan Assembly. The region's population consists of a large number of employees and those who are seeking to gain HE, creating large demands for DL courses. Both learning centres are places where many of the students' cluster for their weekend classes and provide the relevant proxy for HE within the surrounding areas of Accra and Tema.

The present study is situated in the context of the learning centres' spaces in terms of their mandate to serve the demand for HE through DL in the Greater Accra Region. The proportion of DL students (approximately 80%) in the two selected learning centres⁴ is the highest in the University of Ghana, and both centres are fairly homogeneous in terms of population characteristics, economic status and

³ For more information on the Sakai LMS, visit <https://www.sakailms.org/> [accessed 1 February 2023].

⁴ The University of Ghana has a total of 11 learning centres. For more information, visit <https://scde.ug.edu.gh/department/university-ghana-learning-centres> [accessed 1 February 2023].

living conditions (Agyekum 2020). Besides the lecture halls/classrooms, there are no student interaction spaces in the learning centres, such as parks, a student hub or libraries, among others. This lack leads to DL students being particularly vulnerable to noise, crowding and theft. Because both centres are located in inner-city compounds, large portions of the buildings are crowded with street vendors, residents and pedestrians. These characteristics provide some of the challenges of DL in the learning environments I set out to explore in my study.

Approximately 80% of the student population in the learning centres are defined by the University of Ghana as “mature adult students” (i.e. aged 25 years and above), with the majority entering the programmes with passes in the mature entrance examinations conducted by the University. Many urban residents in cities like Accra and Tema and surrounding communities now enrolling for DL programmes are teachers, nurses, police officers and administrators among others, rather than more traditional students straight out of senior high school. The majority of the DL students are working full time, seeking HE for upward mobility in their career. The rest are students who for various reasons were unable to make it straight into regular university programmes, but were offered a second chance through DL.

If the overarching goal is to provide access to HE and to help adult learners acquire the values, knowledge and skills needed to support themselves and their communities, then much greater attention needs to be dedicated to doing justice not just to DL conditions, but to a far broader range of HE learning environment policies.

Methods

The aim of my study was to investigate the value of “learning centres” as socio-cultural landscapes for promoting learning and well-being, using “sense of place” as a framework. Before embarking on my research, I obtained ethical clearance from the University of Ghana’s Ethics Committee for the Humanities (ECH/037/19-20), and informed written consent from all participants.

In 2018 and 2019, I conducted a literature review and spent nineteen months in Accra and Tema conducting research through participant observation and interviews with the students and staff in two learning centres, Accra and Tema in the Greater Accra Region of Ghana. Throughout my stay, I spent every weekend in the learning centres where DL classes were held. I worked as an observer and participant observer, sitting with organisers, assistant lecturers and tutors as they interacted with DL students, and I had the opportunity to ask DL students about their experience of their learning centre. My aim was to explore links between these students’ perception of their learning environment and diverse published conceptualisations of making sense of place not only by asking direct questions, but also by letting themes emerge from students’ everyday experiences, reflecting a holistic, socio-ecological conceptual model of well-being (Williams 1999).

My interviews and conversations with key staff ($n=2$ in each centre) were informal in nature. They were support staff who helped with the day-to-day running of the DL programme, including two organisers, an accountant, and an

Table 1 Participants' demographics

ID	Gender	Age	Centre Affiliated	Years of Study/Work	Degree Type
ALC 1	F	28	Accra	2nd	Degree
ALC 2	F	31	Accra	2nd	Diploma
ALC 3	M	26	Accra	3rd	Degree
ALC 4	F	30	Accra	2nd	Degree
ALC 5	M	35	Accra	4th	Degree
ALC 6	F	32	Accra	3rd	Degree
ALC 7	F	40	Accra	2nd	Degree
ALC 8	M	33	Accra	4th	Degree
ALC 9	M	29	Accra	3rd	Degree
ALC 10	M	37	Accra	1st	Degree
ALC 11	M	32	Accra	3rd	Degree
ALC 12	M	30	Accra	1st	Diploma
TLC 1	M	44	Tema	2nd	Degree
TLC 2	F	27	Tema	2nd	Degree
TLC 3	M	41	Tema	1st	Diploma
TLC 4	F	34	Tema	3rd	Degree
TLC 5	F	31	Tema	3rd	Degree
TLC 6	F	38	Tema	1st	Degree
TLC 7	M	35	Tema	2nd	Diploma
TLC 8	M	42	Tema	1st	Degree
TLC 9	M	36	Tema	4th	Degree
TLC 10	F	35	Tema	3rd	Degree
TLC 11	F	36	Tema	4th	Degree
TLC 12	M	42	Tema	2nd	Degree
ALC-Staff 1	F	38	Accra	2 years	Staff
ALC-Staff 2	M	41	Accra	7 years	Staff
TLC-Staff 1	M	53	Tema	over 10 years	Staff
TLC-Staff 2	M	47	Tema	6 years	Staff

Source: Interview Data, 2019

Notes: ALC = Accra Learning Centre; TLC = Tema Learning Centre

administrator. My interviews with the students ($n=12$ in each centre), were semi-structured and open-ended in nature, lasting between 45 and 60 minutes. I audio-recorded all of the interviews for later transcription and analysis, and in addition made field notes. Among the 24 students from both centres, only four were diploma students (pursuing a two-year undergraduate programme), while twenty were first degree students (pursuing a four-year undergraduate programme). Table 1 provides detailed demographic information about all participants ($N=28$) in this study. They reflected a broad cross-section of the centres' population in terms of years of study, age and self-identified gender.

The observation stage of my research was relatively broad in scope as it provided background knowledge about the learning centres. I set up meetings in advance with staff and requested a chance to interview students accessing the learning centres for their classes. Staff helped with the recruitment of students for the interviews. At the end of each interview, I asked participants to indicate their willingness to be contacted via phone. The intention was to interview participants twice (for member checking and confirmability), but that proved quite difficult as some participants did not own a mobile phone, mobile networks were poor anyway, and people were very busy. Participant interviews took the form of a narrative, as the students told me about their learning experiences in relation to their centres' environment. This work was important because ethnographic analyses and narratives reveal an intimate relationship between processes and meanings that undergird socio-spatial life (Herbert 2000).

I anonymised all interview recordings and stored them on a secure server available only to myself. To protect confidentiality, I assigned numbers to participants, preceded by ALC and TLC representing Accra and Tema Learning Centres respectively. Supported by my field notes, I transcribed, coded, categorised and analysed the interviews using NVivo 10. After reading, coding, and re-reading the breadth of my interviews and observations, the important themes which emerged were: *place, learning, social support, networks, emotional, mental, relaxation, serene, belonging and sense of place*.

In the next section, excerpts from individual narratives commenting on the learners' environment in the two learning centres reveal how students and staff navigate these places with similar and different expectations. It is worth noting that selection of individual narratives as a qualitative research method has been common practice for several decades in the social sciences. Janice Morse and Peggy-Anne Field (1995) emphasise that selection is in part based on how individual storytellers' narratives assist researchers in interpreting the setting. Sarah Crowe et al. (2011) note that the bringing together of narratives from different participants responding to the same questions is a powerful tool, as some present a unique perspective and interpretation of the setting at hand within the given socio-cultural context (Mattingly and Garro 2000). Thus, the main themes emerging from my data coding were supported by individual narratives purposely selected and screened to explore the link between learning and well-being in depth, and in its natural context (Goffman 1969). These individual narratives offer insights into the physical, social and psychological conditions of the two learning centres, both inside and outside the lecture halls/classrooms, and facilitate critical consideration of the learning centres' spaces of learning and well-being. My thematic analysis relates to students' experiences with the physical and social aspects of the learning centres. Below, I present the findings in four subsections: physical challenges; social challenges; emotional challenges; and symbolic challenges.

Findings

Physical challenges

One learning environment linked to education and well-being of students is the physical/built environment – structures. This physical learning environment

includes not only the classrooms/lecture halls and other physical features in the classroom, but also the embodied experience (where human experience takes on the physical form) and materialities involved in actually visiting the educational institution, in this case, the learning centres. The physical environment comprises classrooms, teaching materials and learning facilities, both inside and outside the classroom. Given that students spend considerable time in the classroom, its physical space can have a major influence on them. Learning centre staff, for example, referred to the physical facilities as being “not healthy”, not “sufficient”:

“Where numerical progress [in recruiting more DL students] has been achieved, it has led to student clustering, usually leading to a condition of ghettoisation. Simply put, not a sufficient measure of equality or well-being of the centre – it is not just a matter of increasing the numbers, but also ... changing the systems or culture of the learning centres. To get the numbers but unable to provide them with a good environment is not healthy” (ALC-Staff 1).

The narrative related to the above quote reflects a perspective held by many students at the learning centres. Many were similarly open in their criticism about the poor infrastructural conditions in the learning centres. The poor quality of service was a frequent complaint:

“Horrible ... I can’t imagine studying in a classroom without power sockets. In this learning centre it is very horrible ... At times, your laptop battery runs down, you look for power to charge it and you don’t find one. You go to another classroom to find a power socket and you don’t find it. Either not working or broken. They need to be fixed” (TLC 9).

“Aside the classrooms, there is no library space or ICT lab, where we can sit and do a bit of studies before we go home. You know, some of us have families and the only place we can learn is here” (TLC 10).

“This learning centre is not a place of my choice. It is a place where I study out of necessity. I’m kind of forced to study here. This place is not appropriate for university-level learning. No access to washrooms, the classrooms are bad, a lot of the tables and chairs are wiggly and broken. So I said, I’m not very happy here” (ALC 3).

These statements demonstrate that DL students would be justified to expect a clean, safe, student-friendly environment, ideally beautiful and replete with student amenities. Suitable locations could be a community centre, a classroom, a computer lab, a science lab, an office or any place where learning occurs. But in these two centres, even the basics such as power sockets or washrooms were scarce. Accra Learning Centre at least has some power sockets and a washroom, but Tema Learning Centre has virtually none. Other physical factors in the learning environment include soundproofing, lighting and accessibility. Through my onsite observations and my discussions with participants, I found that different types of spaces offer students’ different experiences of place; properly equipped

classrooms and labs are conducive to learning and exploring; other spaces potentially invite and enable students to relax. In the present study, participants' narratives about these two centres suggest that the students missed a sense of spatial autonomy.

Social challenges

The social aspect of the learning centres, which is difficult to untangle from the physical space itself, also plays a major role in students' well-being. Prevailing physical facilities dictate which social relations can or cannot be engaged in. This relates to the interaction that occurs among students, between students and teachers/staff and between students and the learning environment. Some participants spoke more often about feeling isolated from the rest of the University of Ghana students, because of limited access to services that would help students connect. The social and physical constraints of the learning centres are reflected in participants' place imaginaries, their perception of what is missing:

“There are no spaces, no parks, no cafeteria, and no student hubs to connect with friends after classes. You just come here to study and for the whole four years of your study, you don't make any friend. The environment doesn't make you feel like hanging out a bit after classes. I think it doesn't help because we need people both in and after school” (ALC 6).

“We feel like we are second-class university students. Students on main campus don't respect us here because the facilities are not up to standard” (TLC 8).

Learning centres' social contexts also affect DL students' sense of self-worth and value and might lead to a reevaluation of their decision to enrol. One of the most distressing themes to emerge from the interviews was that of despair and regret. Although not shared by all participants, when such sentiments were expressed, others offered empathetic examples from their own experiences:

“In area where everyone describes as poor, my friend and I go to centre A [name withheld] for most of our classes. Sometimes you don't just feel like coming here. This is not a good place but nobody will listen to you” (TLC 7).

“Here the facilities pushes [*sic*] you down and it has an influence on your performance because it doesn't motivate you to learn” (ALC 7).

Bringing up the social conditions in their narratives arises from participants' recognition that their desires in terms of the learning centres' range of facilities are not met. Many participants realise that not having the physical and social spaces necessary for interaction with their peers has negative consequences for their academic performance and overall behaviour. Thus, to be more conducive to students' learning outcomes, the learning centres need to make a serious effort to take the social environment into account. A sharpened sensitivity to the importance of social relations and interactions is needed to foster a collaborative learning experience. The main goal of a learning centre is to provide a learning environment which enables a sense of community (this is especially important

for DL students) and fosters social cohesion amongst students and other users of the learning space. A serene learning environment potentially makes students feel psychologically/emotionally connected, resulting in frequent and eager visits to their learning centres and interactions with other students and staff they meet there. Interactions may help promote peer learning and construction of feedback. In schools, students interact with each other and their teachers in classrooms and, also informally, in libraries, cafeterias, student centres, school yards and on lawns. These interactions promote a sense of place (i.e. a sense of community, attachment) and contribute to the students' learning experience.

Emotional challenges

It emerged that the students experienced their learning centre as a place of emotional deprivation (lacking a sense of care, empathy and support), a place where students, in their current academic life, did not feel at home, were surrounded by poor infrastructure, and unable to avoid many of the fears and uncertainties associated with DL. Significantly, research has shown that positive emotion is achieved through deliberate combinations of physical spaces and a range of interpersonal and embodied practices (Beard et al. 2014).

Although the physical and the social were entwined to reinforce ideas of emotional well-being, participants in both selected learning centres contested that the opportunities provided by access to HE promoted positive emotions:

“When you're not in places that are specifically designed for the type of teaching and learning ... you're really forced into a new environment that you're not comfortable with ... It just forces you to engage completely” (TLC 4).

“The centre can bring hectic atmospheres that we try to balance out because this centre is really a copy of what is happening everywhere ... So if the atmosphere is bad, the students can start complaining, going crazy ... It is more stress for us” (TLC-Staff 1).

“I believe that authorities do not accord us the same respect as those on main campus ... that's why they do little to support us at the learning centres. Of course, we can't get everything we need, but not providing the basic facilities we need means they don't care about us. We feel like we're not part of the university” (ALC 7).

The emotional dimension emphasises conditions of love, care and respect. Being respected is a basis for mental and emotional well-being and for human development generally. Participants' narratives clearly demonstrate the range of emotional meanings that a learning centre can entail, involving relationships and interactions within the spaces provided. Thus, places become imagined as evoking positive emotions in ways that are not driven by detached evaluation of educationally instrumental opportunity, but rather by socio-spatial relations, which make them sites of emotional and affective possibility.

Symbolic challenges

In their development of a sense of the learning centres' space, participants symbolically broke away from other meanings, such as the physical, social and emotional domains, contesting the authenticity or genuineness of the learning space as a primary basis of academic satisfaction. Many participants recalled that during their orientation (their first visit to their learning centre), they had such a radically different experience from what they had expected that the environment appeared to be almost inactive and unreal. The emergence of this "negative" experience profoundly disrupted participants' imagination of the learning centres as designated centres of HE:

"Not a nice experience, place to learn ... It doesn't look like a centre for higher learning, you know, you don't really feel that you're in a university" (ALC 12).

"For God's sake, we are adults, and you can't give us these facilities, no wash-rooms, I mean the environment is bad. When there is power outage, then we have to cancel tutorials and reschedule it because we don't have alternative power at the centre" (TLC 11).

These narratives that ran counter to conventional ideas of space as a "container" of activities or events led participants to embark on a discursive explanation of learning centres as a product of symbolic action. Students used both concrete and abstract symbols to ascribe meanings to their learning centres. Examples of this idea are the negative symbols or words they chose, such as "a bad place" or "not nice", to describe the learning centres selected for this study. Thus, a healthy learning centre may be described as a place which inspires hope because it is removed from the stress of learning, the setting is pleasing, and students may enjoy a high quality of life both while and after spending time there.

Discussion and conclusion

Participants perceived the socio-spatial challenges and the generally demanding requirements placed upon the distance learner as the leading causes of their frustration with the DL programme. In this article, I have deployed the sense of place concept as a tool for exploring DL students' challenges in general, and place meaning – the symbolic meaning that people ascribe to settings – in questions such as "what does this learning centre mean to you?" or "what kind of a place is this learning centre?" (Jacobs 2011; Smaldone et al. 2008; Stedman 2008). As Erica Carter et al. 1993 clearly demonstrate, space is invested with historical, social and symbolic meanings for its occupants. Educational settings may have both positive and negative meanings, and Relph (1976) distinguishes between "authentic" and "inauthentic" landscapes. These expressions, particularly the latter, arise from arbitrary social and intellectual fashions and create feelings of "placelessness" or, as Eugene Victor Walter (1988) terms it, "sick places".

The learning environment plays an important role in learning outcomes; it has an impact on teaching and learning processes and can affect students' performance.

One important aspect brought up by several participants was technical infrastructure. Most students do not write on paper anymore, instead they use laptops and other devices (again, this is especially the case with DL students). Therefore, the learning environment must be equipped with appropriate furniture and power sources to meet students' needs. Ideally, a wireless internet network should also be provided, allowing them to use integrated learning tools such as laptops and tablets to find useful information on the web and engage in collaborative learning.

While emotional attachment usually implies a positive bond between people and place (Vanclay 2008), scholars call for a broader understanding of this assertion by considering negative or ambivalent feelings towards places (Manzo 2005). Emotional sense of place includes the subjective ways in which students and staff interpret their learning/teaching environments. It includes feeling good or bad, not only about ourselves, but also about our social relationships – among students, between students and staff, and within settings (Keyes and Haidt 2002). Other educational researchers have emphasised opportunities for the learner to interact with the outdoor environment, supporting the explorative approach (Akinsanmi 2008). Learning centres providing conditions conducive to learning can be interpreted as creating “healthy spaces”, which contribute to students' mental well-being through their facilities.

The physical space provides an avenue for DL students to meet and participate in activities related to their educational endeavour. The physical environment and other built structures of the learning centres offer students a sense of identity; even contribute to shaping their identity. As Wilbert Gesler (1991, p. 8) argues, “Places influence personal identity”. In this way, learning centres represent more than just a physical location for learning, extending to the bonds that students develop with these places, promoting a positive sense of place. This resonates with a study conducted in Toronto, which found that school spaces are imbued with meaning and foster sensibilities of justice, belonging and identity (Basu 2011).

Notwithstanding the number of hours students spent at the two learning centres selected for this study, there were no spacious places for them to wait or hang out with friends, no informal spaces for food or leisure. While the purpose of learning centres is to be places for collective sharing of ideas and cooperation on an interpersonal level, the structural circumstances of many centres makes interactions and encounters problematic. As Patricia Matai and Shigueharu Matai (2007) observe, the design of the physical learning environment has a significant effect on learners' behaviour and, in turn, can shape a particular social organisation. Structural inequalities are an issue that the University of Ghana has yet to address – an issue made especially problematic given its increasing global reach. Weak interaction among students within these centres can undermine otherwise promising initiatives that could enhance their academic achievement or advancement.

Constructivism takes the learner's social, cultural and contextual conditions into consideration, and theorises that the learner constructs knowledge through experience (Pinheiro and Simoes 2012; Devries and Zan 2003). Based on this theory, learning centres should be designed as learning spaces and places for social interaction and as designated spaces where students can study by themselves or within groups, thereby promoting interpersonal intelligence (Guney and Al 2012). This argument is in line with social learning theories which posit that people learn from

observing other people. According to scholars in this field, observations take place in a social setting (Dill 2018; Baird 2016; Morgan et al. 2015). Thus, learning centres must offer choices of learning both inside and outside of classrooms that can reveal potential and help students to achieve their goals.

Finally, positive interaction among students is likely to result in a positive sense of place or place attachment, which in turn leads to positive educational outcomes. Learning centres are but one place where students and staff meet, interact, develop a sense of place, and learn the rules of a new society. Many learning centres are used by a more ethnically diverse population than the students encounter in their home neighbourhoods and as such may be important places of inclusion, even if students do little socialising away from their academic work.

Implications for policymakers

This article calls for more attention towards the emotional learning environment. Learning centres need to factor in the role that emotions play in the process of teaching and learning, to provide the opportunity for students to talk about their feelings and concerns, and to provide the resources that will enable students to develop their emotional or mental skills through interaction and collaborative learning. Research has found that students who lack the cultural capital required to succeed in their education, especially in higher education, and who lack the services and social networks to acquire it, will experience relative educational failure (Badri et al. 2017; Kožuh et al. 2015; Lu and Churchill 2014), i.e. their learning outcomes will not reflect their full potential.

I seek to extend the work of these scholars, arguing for a place-based framework that begins with the learning environment provided in learning centres and includes the intricacies of students' safety, privacy and comfort, with a specific focus on DL in Ghana. In some ways, analysing the learning environment through a sense of place lens represents a scaling down – in this case from the university as a whole to two of its learning centres – rather than a radical shift in approach. As we have seen, using each learning centre with its shared and specific environment as a starting point for DL, and then locating it in a clearly defined, yet broader, university, national, and global context yields surprising insights into where the planning and designing of HEIs in sub-Saharan Africa might be improved.

Given the relative lack of infrastructure characterising the learning centres selected for this study, those learning there are vulnerable with respect to their education and social life. The students' narratives illustrate the degree of their satisfaction with the educational/learning environment, and their ideas of what kind of changes would enable improved learning, better social life and more liberty of those learning there. This article makes an original contribution to the literature on the challenges of HE through DL in Ghana, as it offers a parallel analytical model for understanding the interplay between the physical, social and emotional factors on the one hand, and students' academic experience on the other. This article relates this interaction to how a "sense of place" affects students and staff members based on each individual's unique context. Applied to the learning environment, the sense

of place concept helps us to understand how students' emotional and social investment in their learning centre shapes the way they thrive and flourish.

One limitation of this study is that it was restricted to two learning centres in the Greater Accra Region. Therefore, its findings might not be generalisable on a larger scale and to every DL centre. Moreover, it is my hope that this study might inform future research, including quantitative or experimental approaches, which could address some of the challenges arising from learning centres' environment and expand upon the findings presented here.

This article argues for the application of the sense of place concept in efforts to identify existing challenges and advocate for an enabling learning environment in under-resourced DL centres in Ghana and around the globe. This article suggests research directions to further understand the role of the learning environment in contributing to the experience and meaning of quality education. This is crucial for allowing decision-makers to anticipate future changes in the learning environment, and to proactively develop appropriate governance responses (Darling-Hammond et al. 2020). Applying the sense of place concept to educational settings and vulnerable learners allows us to contribute to the solutions needed to create enabling and sustainable learning environments. The sense of place concept has been a useful tool in providing a space for students and teachers to talk about their feelings and concerns. The insights gained from their first-hand narratives will help facilitate a positive change in bringing about social justice and socio-spatial inclusion as discrete areas of human capability (Holton 2015; Holton and Riley 2013; Barlett 2005).

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