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Role of academic libraries in the achievement of quality education as a sustainable development goal

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Abstract

Purpose – This study explored the role of academic libraries in the achievement of quality education as a Sustainable Development Goal.

Design/methodology/approach – The study adopted a qualitative research approach and descriptive case study design. This study focuses on academic libraries from four universities in Ghana. From each university, the researchers purposely selected four respondents, comprising the heads of the libraries, deputies, and two assistant librarians or library assistants. Primary data were collected through semi-structured interviews, observations and document reviews. The results were analyzed and presented in descriptive and interpretive forms.

Findings – The study established that the majority of the library staff were aware of the sustainable development goal, SDG 4. The libraries provided relevant materials to support students' learning, organize training on information literacy and engage library patrons in periodic information literacy programs to create awareness of the SDG 4. Since the libraries do not have their own internally developed policies on the SDG 4, they depend on the general United Nations (UN) document on the SDG and SDG 4 as a guide in information delivery; and the general policies on information delivery, teaching and quality assurance of the universities in general and the libraries in particular. The study concluded with a framework to guide the successful accomplishment of the SDG 4 in libraries.

Research limitations/implications – The study focused on academic libraries in Ghana and adopted the purposive sampling technique which makes it assume a weak power of generalization.

Practical implications – The study has implications for academic libraries and librarians in Ghana in achieving the SDG 4. It will guide librarians and academic libraries in formulating policies to guide them in their activities. The framework developed as a result of the findings will equally guide the librarians in their quest to provide information to achieve the SDG 4.

Originality/value – This study's originality lies in its articulation of academic libraries' initiatives in the actualization of the SDG 4 in Ghana with a developed framework to guide librarians and academic libraries. Academic libraries and librarians who are eager to contribute their quota to the achievement of the SDG 4 will find this study useful.

Keywords Academic libraries, Sustainable development goal 4, Policies, Awareness, Information literacy, Ghana

Paper type Research paper

1. Introduction

Libraries serve as information centers and provide information for the communities they serve. They provide access to qualitative information through various means to meet the information needs of their users. They serve as the engines of change and have to contribute effectively towards the development of their country in several key areas, such as quality education, ending poverty and hunger, improving the living conditions of the people, gender equality, access to water and sanitation and healthy lives (Benson *et al.*, 2019).

Academic libraries are set up to support the curriculum, teaching, learning and research needs of the faculty and students of institutions of higher learning. Academic libraries provide a variety of information services to support the educational environment they are part of (Ojiambo and Kasalu, 2015). The role of the academic library is to serve as a focal point



for information provision in a tertiary educational institution (Roy, 2015). As an institution designed for information provision and preservation of relevant documents of value, academic libraries can achieve the following roles through awareness creation, provision of quality space, creating metadata and teaching information literacy. Provision of library services to all users without discrimination is crucial to libraries in this century. Inclusive academic libraries provide services to all users regardless of users' disabilities. They enhance access and increase meeting the needs of all library users. Academic libraries promote literacy, innovation, creativity, offer access to information (IFLA, 2016) and promotion of the achievement of the sustainable development goals (SDGs).

The SDGs are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate, environmental degradation, prosperity, peace and justice. The SDGs interconnect and in order to leave no one behind, it is important that the world achieve each Goal and target by 2030 (United Nations, 2019).

One of the goals of the SDGs is the SDG 4: "Quality Education". Education is the key that will facilitate the other SDGs to be achieved. Thus, when people get quality education, they can break down the cycle of poverty, get better jobs and live better lives. Obtaining quality education is the foundation to creating sustainable development (Boeren, 2019). SDG 4 aims to provide children and young people with quality and easily accessible education plus other learning opportunities. One of its targets is to achieve universal literacy and numeracy. This goal ensures inclusive and quality education for all and promotes lifelong learning (Nazar *et al.*, 2018). In the attainment of the SDG 4, academic libraries have a critical role to play as individuals are given access to information in various formats without contradiction and discrimination. Seeing great potential in the role of Academic libraries in achieving the SDGs, many African countries have signed a declaration in support of providing the resources necessary to support the contribution of libraries in their nations (Bradley, 2016; IFLA, 2016).

The quest for academic libraries to achieve the SDG 4 calls for understanding the pivotal role of academic libraries in achieving the SDG 4. In delivering these, the librarians must also possess some basic understanding and knowhow in the creation of awareness and the delivering qualitative information towards achieving the SDG 4. The absence of these poses challenges or frustrations in their quest to provide qualitative resources and information for the attainment of the SDG 4. It is against this background and problem that the study examines the role of academic libraries in realizing quality education as an SDG and suggests pragmatic strategies for harnessing the impact of academic libraries in achieving the SDG 4. Specifically, the study sought to achieve the following objectives:

- (1) Find out the level of awareness of the libraries of quality education and SDG 4.
- (2) Assess the policies deployed by the academic libraries in achieving quality education as an SDG
- (3) Find out the information literacy programs established by the academic libraries toward achieving quality education as an SDG
- (4) Identify the challenges academic libraries encounter in the cause of achieving quality education as an SDG

In order to achieve these research objectives, the researchers adopted the qualitative research design and descriptive case studies in these studies. The study focused on four (4) academic libraries from 4 universities in Ghana.

The next section will discuss the conceptual and empirical reviews of existing literature, concepts and theories that sought to address the research objectives.

2. Literature review

2.1 Concept of SDGs

The SDGs were adopted as the UN agenda for 2030 by the UN's 193 members in September 2015 and they came into force on 1 January 2016 (Chewe and Imasiku, 2018). Sometimes referred to as the UN agenda 2030 (Arhin, 2016), it is a universal call to action to end poverty, protect the planet and ensure that everyone, everywhere enjoys peace and prosperity (Mensah, 2019; Siakwah *et al.*, 2020). While the SDGs are not legally binding, governments are expected to take ownership and establish national frameworks for the achievement of all of the Goals (Michael and Salleh, 2021; Tuokuu *et al.*, 2019). The SDGs are the blueprint to achieve a better and more sustainable future for all (Gyamerah, 2019). They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice (United Nations, 2019). It is often the key to success for one will involve tackling issues more commonly associated with another (Gyamerah, 2019).

There are seventeen goals with 169 targets covering a broad range of sustainable development issues, from ending poverty and hunger to improving health and education, reducing inequality and combating climate change (World Health Organization, 2015). The SDGs are complex, ambitious and interconnected and relate to themes ranging from industry, sustainable cities and communities, climate action and infrastructure (Kumi *et al.*, 2020). The interconnected nature of the SDGs reflects the complexity of the agenda involving efforts by multiple stakeholders (Kumi, 2019). They are intended to be universal in the sense of embodying a universally shared common global vision of progress towards a safe (Gyamerah, 2019; Chewe and Imasiku, 2018), just and sustainable space for all human beings to thrive on the planet (Omisore *et al.*, 2017). They reflect the moral principles that no one and no country should be left behind (Kumi *et al.*, 2020; Gyamerah, 2019) and that everyone and every country should be regarded as having a common responsibility for playing their part in delivering the global vision (Kumi *et al.*, 2020). In general terms, all of the goals have, therefore, been conceived as applying both as ambitions and as challenges to all countries (Owusu-Manu *et al.*, 2020). All of the goals and targets contain important messages and challenges for developed and developing countries alike (Osborn *et al.*, 2015).

The SDGs reflect an opportunity for us to come together to advocate for positive change (Mukhi and Quental, 2019) built on the values of solidarity, human dignity, care for creation and inclusive participation (Owusu-Sekyere, 2019; Chetty, 2018). Actions to achieve these global goals should always have those who are far behind (the poorest and most marginalized people) at their heart (Rosa *et al.*, 2019; Chetty, 2018) so that no goal or target is considered achieved unless met for all people, whoever and wherever they are (Omisore *et al.*, 2017).

2.2 Libraries and SDGs

Libraries play critical roles in achieving the SDGs (Omona, 2020; Dzandza, 2017) by going a step further in advocacy and exploring a more advanced narrative of policies and indicators (IFLA, 2016). Libraries are globally considered as a center of research and a place of information empowerment whose role can never be over-emphasized, as the public benefit immensely from it (Cyr and Connaway, 2020; Pinto and Ochôa, 2017). Libraries are institutions that are responsible for the selection, ordering, acquisition, processing, storing, preservation of resources in diverse formats to users at the appropriate time to help in the achievement of the SDGs (Igbinovia, 2016; Abata-Ebire *et al.*, 2018). Similarly, Chigwada (2021) pointed out libraries are centers that acquire, process, organize, store, retrieve and disseminate information to users with the desire to achieve the SDGs.

Libraries, whichever form or type, have a greater responsibility in the development of a global partnership for development by acquiring, packaging, organizing and disseminating knowledge and experience (Tbaishat, 2021). Libraries, therefore, can foster understanding

and communication through library awareness campaign strategy and this brings together some of the ideas for global development (Uhegbu and Igwe, 2006). Libraries contribute to improved outcomes across the SDGs by promoting universal literacy, including digital, media and information literacy and skills, with the support of dedicated staff; closing gaps in access to information and helping government, civil society and business to understand local information needs better; providing a network of delivery sites for government programs and services; advancing digital inclusion through access to ICT; serving as the heart of the research and academic community; and preserving and providing access to the world's culture and heritage (IFLA, 2016).

Libraries provide information literacy skills and long-life learning for the public (Bahrami and Harandi, 2020; Abata-Ebire *et al.*, 2018) by educating and enlightening youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship (Nwankwo *et al.*, 2020; Abata-Ebire *et al.*, 2018). More so, they must organize and disseminate information that society will access and use to inform themselves on various issues of life (Agboke, 2019; Chukwuyere *et al.*, 2020) and by empowering communities through knowledge and the ability to access information for themselves (Agboke, 2019; Abata-Ebire *et al.*, 2018).

2.3 SDG 4: quality education

Obtaining quality education is the foundation for creating sustainable development (Hickel, 2015). For quality education to be effective, investment is needed in educational scholarships, teacher training workshops, school buildings and improvement of water and electricity access to schools (Kumar, 2017). Quality education thrives on information and knowledge (Karkouti *et al.*, 2021; Dei, 2019). Information and knowledge again serve as the foundation for the growth and development of individuals, organizations and societies (Dei, 2017). This is because they are the supporting tool for all decisions and actions regarding any development and enterprise (Centobelli *et al.*, 2018). Information and knowledge are, therefore, strategic tools for achieving sustainable development in the areas of quality education, economic, social and environmental objectives (Alakpodia, 2010).

The SDG 4 is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all and has seven targets and three means of implementation (Owusu-Ansah, 2021; English and Carlsen, 2019). This goal came about through an intensive consultative process led by member states, but with broad participation from civil society, teachers, unions, bilateral agencies, regional organizations, the private sector and research institutes and foundations (Unterhalter, 2019).

Progress has been made towards achieving the SDG 4 (Gyamerah, 2019) and there are new knowledge horizons and opportunities for strengthened solidarity and partnerships around the provision of quality education and lifelong learning for all (Boeren and Field, 2019). Yet the context is also changing with new technologies and skill demands (Comyn, 2018), as well as economic shocks and environmental degradation (Usman *et al.*, 2020). Many barriers to education access and educational outcomes remain in place while challenges to the monitoring of progress persist (Kioupi and Voulvoulis, 2019).

2.4 Libraries and quality education during COVID-19

COVID-19 has caused many many countries (Agyekum *et al.*, 2021) and their educational systems (Agormedah *et al.*, 2020; Upoalkpajor and Upoalkpajor, 2020). This has made educational institutions blow up and adopt new methodologies for teaching, learning, research and information dissemination (Adarkwah, 2021; Dutta, 2020). It has forced many institutions to discontinue the old systems of teaching and information delivery (Alea *et al.*, 2020) which were mainly face-to-face (Ali, 2020). Within a short span of the COVID-19

pandemic, many researchers have shared their works on teaching and learning in different ways (Pokhrel and Chhetri, 2021).

The COVID 19 largely affected teaching and learning and ultimately (Agormedah *et al.*, 2020), quality education (Elumalai *et al.*, 2021; Pokhrel and Chhetri, 2021). While many educational institutions were shut down during this period due to their inability to render their service, this affected the quality of education (Sahu, 2020; Tsolou *et al.*, 2021). The shut down of the educational institutions affected the contact hours (Pokhrel and Chhetri, 2021) which later translated into it affecting the quality of education negatively (Jacob *et al.*, 2020). Admittedly, while the impact is realized to be negative, others tried to deploy mechanisms and strategies to improve the quality of education (Pokhrel and Chhetri, 2021). Some of these strategies include the adoption of e-learning systems (Aboagye *et al.*, 2021; Adzovie *et al.*, 2020) and improving information delivery via e-libraries (Omeluzor *et al.*, 2022) among others.

Universities and libraries across the world rebooted and deployed virtual and remote information delivery (Omeluzor *et al.*, 2022) and other technological systems to ensure quality education during the COVID 19 (Adarkwah, 2021; Edem Adzovie and Jibril, 2022). While most of the libraries adopted the social media platform (Animante *et al.*, 2021; Darko-Adjei and Zewu, 2021), others adopted the web-based system for information delivery (Adarkwah, 2021; Acheampong and Dei, 2020; Dei, 2020).

In developing countries like Ghana, some of social media platforms adopted by the libraries include Facebook, Twitter, WhatsApp, LinkedIn, Skype, Viber, etc (Animante *et al.*, 2021; Friday *et al.*, 2020). The use of the social media serves as search engines (Chisita, 2020) and allows people to search, share and receive information (Bunker, 2020) and a source of news or gateway for finding news online (González-Padilla and Tortolero-Blanco, 2020). Social media again facilitated the dissemination of information to many users at the same time (Brindhya *et al.*, 2020) and enabled people to stay connected (Dow *et al.*, 2021). These systems largely helped to ensure quality of education as a sustainable development goal (Manu *et al.*, 2021; Al-Mulla *et al.*, 2022).

Some of the mobile technology-based library services adopted to ensure quality of education as a sustainable development goal during the COVID 19 (Zaidi *et al.*, 2021) include mobile online public access catalog (MOPAC), mobile e-journal, mobile databases, short messaging services (SMS) for reference services, mobile collections (e-books, audio materials), mobile digitized thesis, mobile library tour/instruction (Zaidi *et al.*, 2021; Acheampong and Dei, 2020; Dei, 2020). A study by Mansouri and Asl (2019) revealed that the most contemporary services that users want to have on their mobile devices are mobile collections and databases, circulation and renewal services, mobile reference services (ask a librarian) and mobile library tours or instruction. On the global scene, different strategies are adopted by top university libraries to offer mobile technology-based library services (Naemi *et al.*, 2018).

3. Methodology

The researchers employed the qualitative research approach in this study since it (qualitative research) uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon. This enabled the researchers to unfold and explain the phenomenon under study (knowledge and awareness of librarians on SDG 4 in academic libraries). Furthermore, the researchers adopted the descriptive case study design in this study. The descriptive case studies aim to analyze the sequence of interpersonal events and attempt to discover key phenomena. This design enabled the researchers to carefully scrutinize and articulate the phenomenon at the outset, collect data, analyze them and capture the complexities of the real-life situations for the phenomenon to be studied in greater levels of depth.

The study focused on four (4) academic libraries from 4 universities. From each university, the researchers purposely selected 4 respondents comprising the heads of the libraries, the deputies and 2 assistant librarians or library assistants. Thus, 16 members served as the sample and respondents for this study. The purposive strategy was adopted since the elected respondents were extremely key to the issues relating to the research objectives. The researchers considered the participants as qualified to participate in the study because they are officers who have been working in the library with at least a bachelor's degree in information studies while others have a master's degree in information studies.

Data for this study were from both primary and secondary sources. The secondary sources were mainly from existing literature, journals, documents, reports and other materials that sought to provide information to address the research purpose. Primary data was collected using interviews, observation and document review. The interview (semi-structured interview) served as the data collection instrument as the study was qualitative (Kankam, 2020; Ahlin, 2019). The observation enabled the researchers another avenue to assess the nonverbal expressions and feelings of the respondents and the research environment (Barrett and Twycross, 2018). Just like any other qualitative research tool, the document review enabled the researchers to analyze and interpret relevant documents and exhibits in support of the data collected for analysis (Sileyew, 2019). The data collection took place from 25th September 2021 to 15th October 2021.

The researchers arranged for a convenient time with the interviewees (library staff) of the various academic libraries for the interviews to be conducted in their offices. The face-to-face mode was adopted at this stage. The researchers used a recorder to record the interviews with the consent of the interviewees. The researchers also took notes of the responses from the interviewees as a means of backup. Additionally, document reviews and observation were used to solicit information and analysis for the study. The document review and observation were aimed at augmenting and solidifying the interview responses from the participants.

The data collected via interview first went through "content analyses" to assess the response of the interviewees. Verbatim transcription of the interviews was then applied and compared with the recordings via the audiotape to ensure there is no distortion of fact. The researchers then coded and categorized each of the transcribed data for interpretation by exploring the idea and agreed concepts that relate to the research objectives. The result was presented in a descriptive and interpretive form.

4. Data analysis and findings

The researchers were able to interview all the 16 respondents scheduled to participate in the study. This represents a 100% response rate which confirms the assertion by Holbrook *et al.* (2007) and Choung *et al.* (2013) that the response rate that every researcher should pursue is 100%.

4.1 Awareness of SDG 4

Firstly, the researchers sought to find out the level of awareness of quality education as an SDG by the respondents. It was established that most of the interviewees responded in the affirmative. This clearly shows that the majority of the library staff was aware of quality education as an SDG and had knowledge about it. This was demonstrated in their responses and further prompts to interview questions. Ejechi (2018) posits that awareness plays a very critical role in trumpeting and championing the ideas of the SDG 4 in the library arena. Thus, if people are not aware that quality education as an SDG is part of their agenda as information professionals and then get to know its importance, they will not be in the position to work assiduously towards the achievement of quality education as an SDG. This showed a great

impression that the librarians and the libraries have a role to play towards the achievement of quality education as an SDG.

Further, the researchers enquired to know how they got to know about the SDG 4. From the responses of the interviewees, it was found that most of the librarians got to know about the SDG 4 through news from both mass and print media as well as the Internet. Other interviewees indicated that they had the opportunity to know about the SDG 4 through training organized by their Library. This shows that the majority of the participants became aware of the SDG 4 from the media and the Internet. Some of the responses include

I initially got to know about where the SDG 4 from the newspapers and internet.

I got to know about it during a news program and reading online.

I learned about it at a CPD training in South Africa in 2017

It was during a training organized by the Library that I became aware of the SDG 4

I became aware of the SDG 4 through a training course which was held at GIMPA

The study revealed that the majority of the respondents were aware and did possess some level of knowledge about the SDGs towards achieving the SDG 4.

From the researchers' perspective, awareness alone does not make any significant impact on the SDG 4. If library staff are aware of the SDG 4 without having knowledge about it, of course, they will not be in a position to champion the agenda. Therefore, to explore their knowledge about the SDG 4, the respondents were asked to indicate what they knew about the SDG 4. The responses from the interviewees revealed that their knowledge about the SDG 4 was mostly about quality education and promoting lifelong learning as indicated by ten (10) of them, representing the majority. For instance, some of the interviewees opined that one of the core functions of the library is to support teaching and learning and since SDG 4 is all about quality education, there is some relation to it. This is how one of the participants expresses it:

The SDG 4, talks about quality education and promoting lifelong learning opportunities for all. Since the role of the academic library is to support teaching and learning, the SDG 4 is mostly related to it.

Other interviewees were of the view that the SDG 4 is about equity and quality education for both males and females. Some of their responses include

The SDG4 is about ensuring equitable, quality and inclusive education for all.

To the best of my knowledge, all countries must achieve lifelong learning and equitable quality education by 2030

Since the role of the academic library is to support teaching and learning, they are ensuring equitable, quality and inclusive education for all. These findings showed that the libraries and the librarians were phenomenally relevant in their quest to achieve the SDG 4. In terms of staff's knowledge about the SDG 4, it was centered more on quality education and promoting lifelong learning.

In the quest for the researchers to ascertain the libraries' role in promoting the SDG 4, the researchers sought to find out if the libraries create awareness about the SDG 4. The interviews show that 8 of the respondents indicated that the libraries have awareness creation on the SDG 4 on their agenda of activities the other 4 interviewees said although they know the libraries create awareness, they think it is not enough and the libraries need to put in more efforts to reach more members of the universities. Some of the responses include

Yes, there is a corner the SDG 4 material has been displayed in the Library.

LM

Yes, the Library has a corner for it with materials being displayed. There are posters and flyers too

We create awareness about the SDG 4 through the lecturers and also through direct users of the United Nations site

during orientation for new coming students or “freshers”, they are informed about the SDG 4

some of the avenues for creating awareness about the SDG 4 is through lecturers and direct use of the United Nations site

awareness creation efforts at the library is enough

These findings were corroborated by the observation of the researchers as they discovered that there were SDG materials posted on notices and vantage points at the libraries. The findings showed some concerted effort by the Libraries as they try to create awareness and increase the knowledge of the librarians and users through the display of banners, exhibitions and flyers in the library as well as special literature related to such issues. Nevertheless, there is a call for various academic libraries to prioritize awareness creation towards the achievement of the SDG 4 since some respondents indicated that the effort in awareness creation to them was not enough.

Additionally, some of the interviewees indicated that they do not only create awareness through the aforementioned ways but as mentioned by a number of interviewees,

the Library also takes the opportunity to propagate information about the SDGs during orientation

On the other hand, 2 of the librarians said their libraries do not really create awareness on SDG 4 despite its phenomenal benefits. Some of the interviewees revealed that they do not create awareness about the SDG 4 but they have a few materials in their collection for readers to read and sometimes the Library does mention the SDG 4 to some students. Some of their responses include:

No, we do not really create awareness as it's supposed to be. The Library has a few materials on them and we occasionally talk to students about them

Not really, but we provide information on SDG 4 to our students

These responses show that while most of the respondents (librarians) are aware that the libraries create lots of awareness, some few members (librarians) were really unsure of any awareness creation of SDG 4 although the latter agree that some information on SDGs are provided by the libraries.

Again, all the interviewees opine that the first point of the SDG 4 awareness creation and information dissemination for the fresh students is during orientation. Aside from the orientation, it was realized that the libraries take advantage of other events or activities in the libraries and the universities at large to further create awareness for the SDG 4.

We always take advantage of the orientation process of the university to create awareness on the SDG 4

The first point of awareness creation for the SDGs including the SDG 4 is during orientation.

An opportune time for creating awareness of the SDG 4 among students is during orientation for newly admitted students when the Library organizes such programs to alert students on the critical importance of the SDG 4.

The SDG 4 awareness creation is done twice a year during orientation for fresh students.

the library liaise with the organizers of conferences and events of the university for slots to create awareness and information dissemination on SDG 4

There's always a stand at graduation ceremonies on SDGs that include Quality Education
Apart from whether the libraries create awareness about the SDG 4, the study sought to establish how often awareness creation does happen. The study established that the libraries have deployed mechanisms to create awareness on the SDG 4 on a regular basis as some of the respondents indicated that

The SDG 4 awareness creation is Very often,

The awareness creation about the SDG 4 is almost done every day.

The SDGs have been placed at the entrance of the library. This, therefore, serves as an avenue for awareness creation every day for the library

Furthermore, it was established that libraries target this information (SDG 4 awareness creation) at students and staff of the universities although some of their patrons are not students nor staff of the universities. To this extent, it was again established that the beneficiaries go beyond the members of the universities. Some of the direct responses are as follows

Most students are being told about it.

Our main target for the SDG 4 are the students and staff (mainly teaching staff)

Any user of the library is our target

Although we mainly target the students and the staff, other users of the library who are not students nor staff also benefit from the SDG education which includes the SDG4

It was again established that one of the core roles of the library is to provide relevant materials to meet the information needs of students to support learning. The responses further show that the Libraries provide educational programs through training and workshops to create awareness about the importance of reading. For instance, some of the participants stated that:

Academic libraries provide relevant materials to support students learning

The library organizes training on information literacy, focusing on how to evaluate resources and use available reading materials

The library engages in periodic training in the form of a seminar, workshop and conferences to create awareness on the SDG 4 to users of the library

We organize information literacy programs that focus on SDG 4 to users

In the same vein, the majority of the respondents cited examples of what comprise the information literacy programs. It was established from their responses that they support users by teaching information retrieval skills with the original intention of supporting research and continuous learning. Some of the respondents had this to say:

We train users to acquire information retrieval skills so that they can utilize the electronic resources at their disposal

We educate students on how to retrieve relevant information and encourage them to research on SDGs

Further, as inferred from the interviewees, the library does not only provide training on the educative program as their role towards the achievement of the SDG 4 but also provides remote online services to users to support learning and research studies. One of the participants who carefully detailed the role the library plays said:

We provide online facilities remotely so that they can access the Library's online resources on/off-campus

This information shows that the libraries provide relevant materials to support students learning, organize training on information literacy, focus on how to evaluate resources and use available reading materials, engage in periodic training in the form of seminars, workshops and conferences to create awareness on the SDG 4 to users of the library, organize information literacy programs that focus on SDG 4 to users, train users to acquire information retrieval skills so that they can utilize the electronic resources at their disposal, educate patrons on how to retrieve relevant information and encourage them to research on the SDGs.

4.2 Established policy towards achieving the SDG 4

For the libraries to sustain the awareness and delivery of information to achieve the SDG 4, the libraries need to have clearly laid down policies on SDG and SDG 4 in particular. Library policy on the SDGs and concerning the achievement of the SDG 4 cannot be overemphasized (Ejechi, 2018). In this regard, it was realized that none of the libraries have laid down policies on communicating or delivering the SDG 4. This was evidenced by the responses from the respondents and observation by the researchers. It was however realized that all the libraries depend on the general United Nations (UN) document on the SDG and SDG 4 as a guide in information delivery in regards to the SDG 4 in particular. It was also discovered that the libraries depend on general policies on information delivery, teaching and quality assurance policies of the universities in general and the libraries in particular. Some of the responses include:

No, the library does not have a separate policy on SDG 4 but has something on quality education in the Library Policy

We have a general library policy but not one specifically on SDG 4

Based on the responses, the researchers probed further if the libraries have the intention to develop a dedicated policy on the SDG 4 for their libraries. It was discovered that just one of the librarians gave positive feedback but was unable to indicate when and how it will be developed and deployed in the library. The absence of policy towards the achievement of the SDG 4 can be attributed to the fact that most of the libraries had been established before the focus of the SDG 4 where they are also required to play their roles.

4.3 Information literacy programmes available towards the achievement of the SDG 4

Information Literacy programs are set up to achieve goals such as the SDG 4 within a lifelong learning perspective. In line with this, the researchers sought to find out if the libraries organize information literacy programs for their patrons. While most of the respondents explicitly expressed that they do organize information literacy programs targeted at the SDG 14, some of the respondents indicate that the information literacy programs are implied and may not be direct programs. The programs were mainly targeted at the 3rd and final year students and the graduate students. For instance, some of the respondents opined that:

Yes. Information literacy programs are mainly organized as a workshop.

The library organizes pieces of training for the level 300, 400 and graduate students

Some lecturers are were provided with information literacy programs

Yes, we do organize training for students, especially graduate students, but we call it library user training.

This shows that the libraries organize information literacy programs. However, they were mainly targeted at the 3rd and final year students and the graduate students.

The researchers further established that most of the information literacy programs organized by the libraries are general programs on information literacy instead of the targeted literacy program on SDG 4 as mentioned by the respondents. Some of the information literacy programs mentioned by the respondents include online searches and search engines, research techniques, referencing styles, computer literacy and the use of Mendeley. Specific responses include;

Computer Literacy Skills . . . because we believe if the user's IT skills are sharp, it will be very easy for them to easily learn how to effectively use the retrieval tools to search for relevant information.

Searching skills or techniques involved in searching

Training on the ethical use of information

Training on citation and Mendeley referencing

How to evaluate information

The interviewees were again asked to indicate how the information literacy program facilitates or improves quality education. From the responses, the majority of the respondents indicated that information literacy programs had a great impact on both students and lectures. It helps them in accessing and retrieving relevant information. Some of the responses include:

Information literacy helps them in their academic work and also, students are taught how to do referencing.

The information literacy programs have helped the patrons to acquire lifelong skills to use even after school.

Information literacy enables students to do their research and learn the skill of information retrieval.

It helps them to know the sources of information and it helps them to know how to look for information and how to organize them.

Since students are provided with scholarly information, it helps them to go through their studies successfully.

The above response has revealed that the patrons of the library are provided with scholarly information which helps them go through their studies successfully and acquire lifelong skills. Users learn how to look for information, evaluate and use it to solve life problems and it gives them an edge in research. In effect, students are happy with the information given to them and come back for more as shared by respondents.

4.4 The challenges academic libraries face in contributing to the achievement of the SDG 4

The researchers finally sought to find out if the academic libraries encounter some challenges in the achievement of SDG 4. The respondents outlined a series of challenges. Primus is the inadequate funding of SDG 4 awareness and service delivery activities as opined by all the respondents. The other challenges outlined ranged from inadequate support from the management and administration of the various universities; lack of interest in the SDG 4 by the library patrons; lack of priority setting in service delivery at the libraries; lack of staffing and staff support in the library to deliver the SDG 4 activities; inadequate infrastructure; inadequate materials on the SDG 4; lack of computers, Internet and related services to facilitate the delivery and implementation of the SDG 4 in the libraries. Some of the challenges outlined by the participant are as follows:

limited source of funds to support the SDG 4 initiatives

lack of space to showcase the SDGs

audio-visual materials, posters, signage, bills, books are inadequate

some of our patrons are simply not interested in the SDG information and awareness creation. They simply ignore us

inadequate computers

limited internet connectivity

inadequate information literacy

The responses provided clearly show that the libraries are unable to fully roll out the SDG 4 due to the challenges outlined such as limited source of funds, limited space, lack of information literacy materials, inadequate computers, inadequate Internet connectivity among others.

5. Discussion

This section provides a discussion of the findings of the data analyzed and presented in the previous section (Section 4).

5.1 Awareness of SDG 4

The study established a high level of awareness and knowledge about quality education and the SDG 4 by the library staff. This showed a great impression that the librarians and the libraries have a role to play towards the achievement of the SDG 4. Thus, if people are aware that the SDG 4 is part of their agenda as information professionals and then get to know its importance, they will be in the position to work assiduously towards the achievement of quality education as a sustainable development goal. Since the role of the academic library is to support teaching and learning, they are ensuring equitable, quality and inclusive education for all. These findings showed that the libraries and the librarians were phenomenally relevant in their quest to achieve the SDG 4. In terms of staff's knowledge about the SDG 4, it was centered more on quality education and promoting lifelong learning. As Ejechi (2018) confirmed from his studies, awareness plays a very critical role in trumpeting and championing the ideas of the SDG 4 in the library arena. Further, the findings on one hand are consistent with the works of Atta-Obeng and Dadzie (2020) as they cited avenues through which they became aware of these developmental goals, such as through the internet, materials from the United Nations, conferences attended both home and abroad, alerts from the news and continuous professional development programs.

The study further showed some concerted effort by the Libraries as they try to create awareness and increase the knowledge of the librarians and users. These findings are consistent with the works of Atta-Obeng and Dadzie (2020) who reported that specific efforts currently show some signs of promoting SDG targets where some libraries display banners, exhibitions and flyers in the library as well as special literature related to such issues. Nevertheless, there is a call for various academic libraries to prioritize awareness creation toward the achievement of the SDG 4 since some respondents indicated that the effort in awareness creation to them was not enough.

On the other hand, the study was incongruent with the works of Omisore *et al.* (2017) who undertook a study on awareness and knowledge of quality education as an SDG in a University Community in Southwestern Nigeria where less than half of the respondents were aware of the SDGs but the majority had more knowledge about their roles as librarians. The study further contradicts the works of Omisore *et al.* (2017), where the awareness of and

attitudes towards the SDG 4 was fair but the level of knowledge was abysmally low, having serious negative implications for the attainment of quality education as an SDG. In light of this, the author concluded with suggestions that pertinent individual and population-level methods of enlightening people about the SDGs must be put in place in educational settings where curricular changes are imperative. Similar findings were reported in the works of [Bonnici and Neves \(2017\)](#).

This shows that by building up the knowledge of librarians and patrons with regard to quality education as an SDG, the libraries provide relevant materials to support students learning, organize training on information literacy, focus on how to evaluate resources and use available reading materials, engage in periodic training in the form of seminars, workshops and conferences to create awareness on quality education as an SDG to users of the library, organize information literacy programs that focus on quality education as an SDG to users, train users to acquire information retrieval skills so that they can utilize the electronic resources at their disposal, educate patrons on how to retrieve relevant information and encourage them to research on the SDGs.

5.2 Established policy towards achieving quality education as an SDG

The study established the absence of institutional library policy on quality education as all the libraries depend on the general United Nations (UN) document on the SDG and SDG 4 as a guide in information delivery in regards to the SDG 4 in particular. The libraries also depend on general policies on information delivery, teaching and quality assurance policies of the universities in general and the libraries in particular. The absence of policy towards the achievement of quality education as an SDG can be attributed to the fact that most of the libraries had been established before the focus of the SDG 4 where they are also required to play their roles.

For the libraries to sustain the awareness and delivery of information to achieve the SDG 4, the libraries need to have clearly laid down policies on SDG and SDG 4 in particular. The libraries developing policy on information delivery towards quality education is key as it will comprise the principles and decisions that govern the operations of qualitative information delivery to ensure quality as well as improving on the social, emotional, mental, physical and cognitive development of each student. [Ejechi \(2018\)](#) opined that library policy on the SDGs and concerning the achievement of the SDG 4 cannot be overemphasized. Thus, libraries must have laid down policies on communicating or delivering the SDG 4. These findings are in support of [Ampiah and Adu-Yeboah \(2009\)](#) who established that librarians failed to perform well due to the absence of laid down policies with regard to achieving the SDG 4. [Atta-Obeng and Dadzie \(2020\)](#) indicated that for the academic libraries to champion the agenda towards the achievement of the SDG 4, there should be a well-structured policy towards it, as [Jain and Jibril \(2017\)](#) brought to light that lack of structured policy hinders the effort of libraries towards the achievement of the SDG 4.

The achievement of the SDG 4 is becoming a global focus by academic libraries, and as this study has clearly indicated, the absence of a policy will not yield good results in academic libraries that want to contribute much towards the attainment of the SDGs.

5.3 Information literacy programmes available for the achievement of the SDG 4

Libraries need to organize information literacy programs. This study established that the information literacy programs organized by the libraries were mainly targeted at the 3rd and final year students and the graduate students include online searches and search engines, research techniques, referencing styles, computer literacy and the use of Mendeley. These programs help in accessing and retrieving relevant information. Since the role of the academic library is to support teaching and learning, they are ensuring equitable, quality and inclusive education for all through information literacy programs.

This finding is consonant with the study of [Bakermans and Plotke \(2018\)](#) and [Marineo and Shi \(2019\)](#) in which it was emphasized that information literacy programs are usually organized by libraries for students, especially first-year students who are new to an institution. Also, these findings are in support of the works of [Nworie et al. \(2018\)](#) where it was found that digital platforms like institutional repositories, mobile technologies, open access, databases, emails, websites, social media, etc are used to get information across to users. And in light of this, libraries make a conscious effort to train patrons in these aforementioned areas to contribute to the attainment of the SDG 4.

This shows that it is through these information literacy programs that patrons, especially students, are provided with scholarly information which helps them go through their studies successfully and acquire lifelong skills. Users learn how to look for information, evaluate and use it to solve life problems and it gives them an edge in research. In effect, students are happy with the information given to them and come back for more as shared by respondents. It can, therefore, be stated that all the information literacy programs organized by the library directly contribute towards the attainment of the SDG 4. This is because all in all contributes to quality education and access to all. These findings are in agreement with the works of [Assefa and Demissie \(2019\)](#) where it was explained that in the quest for an academic library to contribute towards the achievement of the SDG 4, in information literacy programs, academic libraries offered instructions on how to find, evaluate and use information. Academic libraries have helped users to critically evaluate the veracity of information sources and the proper and ethical use of relevant information to create new knowledge.

5.4 The challenges academic libraries face in contributing to the achievement of the SDG 4

From the analysed responses, it is clear that despite the benefits of quality education an SDG and the fundamental role of academic libraries in achieving quality education an SDG, the libraries are unable to fully roll out the SDG 4 due to the challenges outlined by the respondents. For academic libraries, it is expected that they should receive lots of support from the management of the universities and their patrons but this is not the case in this study as opined by the respondents. It is obvious that if academic libraries are given the needed support to reduce the challenges that they are burdened with, they would contribute a lot towards achieving quality education an SDG. If the challenges cannot be wholly eradicated, they can at least be reduced to the barest minimum which in effect would put them in a better position to contribute towards the achievement of the SDG 4.

The financial constraints established in this study can be corroborated with the findings of [Abata-Ebire et al. \(2018\)](#) and [Samantaray \(2017\)](#) who also found that the issue of inadequate funds has made most academic libraries unable to perform their roles effectively towards the achievement of the SDG 4. [Osborn et al. \(2015\)](#) and [Nworie et al. \(2018\)](#) also found that inadequate computers and inadequate audio-visual materials and books impeded the libraries in playing effective roles in achieving the SDG 4. Further, with regard to inadequate staffing, the finding is consistent with the studies by [Ezeani et al. \(2017\)](#) and [Abata-Ebire et al. \(2018\)](#) in which inadequate staffing was associated with the fact that staff training has not been given the needed attention, even though staff training is a vital factor that would improve the skills of librarians and equip them better for disseminating information for attaining the SDG 4.

Based on the findings of the study, the researchers developed a conceptual framework that will guide academic libraries in their quest to achieve SDG 4. Below is the framework (see [Figure 1](#)).

The framework suggests that for libraries to achieve quality education as SDG 4, they need to seek support from the management of the universities within which they operate; and establish a partnership with other libraries and stakeholders of the libraries and the agencies that seek to facilitate the achievement of SDG 4. These agencies may include international

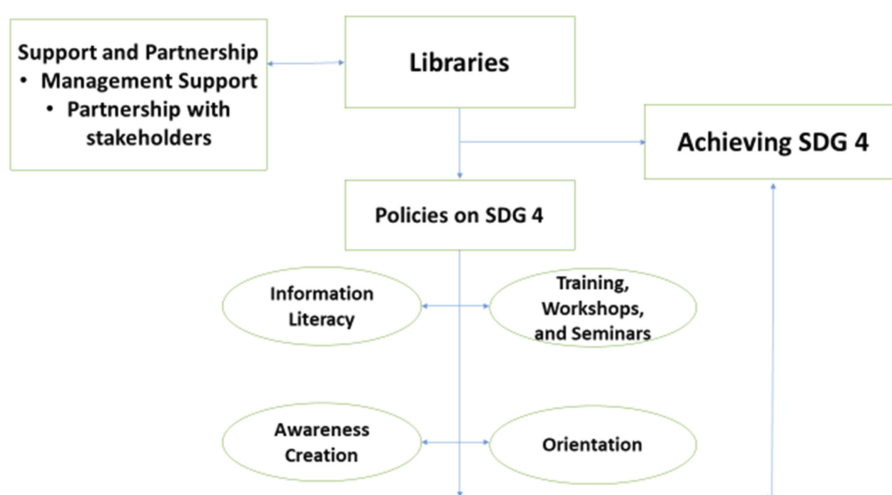


Figure 1.
Framework for
academic libraries to
achieve SDG 4
(Academic Libraries
and SDG 4)

Note(s): Academic Libraries and SDG 4

agencies such as the United Nations (UN); library consortiums such as the Consortium of Academic and Research Libraries in Ghana (CARLIGH); Library Associations such as the Ghana Library Association (GLA), International Federation of Library Associations and Institutions (IFLA) and Africa Library and Information Associations and Institutions (AFLIA); and Educational agencies and institutions such as the Ghana Tertiary Education Commission (GTEC); among others. This partnership will provide the libraries with the necessary support and resources that will enable them to operate and function effectively in order to achieve the SDG 4.

The framework again suggests that libraries need to formulate and deploy policies that aim at achieving the SDG 4. These policies will help the libraries to deploy strategies to effectively provide the awareness services on the SDG 4, guide in the information literacy programs of the libraries, the type and form of training, workshop and seminars needed for the achievement of the SDG 4 and how orientation and other literacy programs should be organized toward the achievement of the SDG 4. The absence of a policy makes the achievement of the SDG 4 difficult.

6. Conclusion and recommendations

The study explored the role of academic libraries in achieving quality education as an SDG. To a large extent, the study established that the libraries have contributed to the achievement of quality education as an SDG through awareness creation, information literacy, training, workshops, seminars and orientation. This was achieved despite the absence of internally deployed policies on quality education as an SDG by the libraries and some other challenges they encountered.

Based on the findings of the study, the researchers recommend that:

- (1) The academic libraries should establish policies that focus on the achievement of quality education and the SDG 4. There should be continuous education on the policies regarding the use of the same, encouragement of members to abide by the policies as well as an emphasis on their importance to the library and the ultimate goal of achieving the SDG 4.

- (2) The management of various libraries must ensure that enough orientation and training is organized on the existence of the SDG 4 and the roles that librarians have to play in achieving this goal. This can help create more awareness amongst the library staff on the existence of the SDG 4, thereby enabling them to promote it to the university community.
- (3) Finally, the management of universities is encouraged to provide the necessary support in terms of finance, equipment (computers etc) among others needed by the academic libraries. Academic libraries should also deploy innovative means to raise funds to support their activities, effective information delivery and in achieving the SDG 4.
- (4) Academic libraries must partner with other agencies or organizations (governmental and non-governmental organizations) to implement strategies and be able to deliver qualitative and quantitative information and achievement of SDG 4.
- (5) Further studies should be conducted to
 - Assess the role of academic libraries in achieving quality education during the COVID 19 pandemic.
 - Assess academic libraries' role in achieving the sustainable development goals (SDGs) during the COVID 19 pandemic.

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