Exploring OER Awareness and Engagement of Academics from a Global South Perspective – a Case Study from Ghana

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Exploring OER Awareness and Engagement of Academics from a Global South Perspective – a Case Study from Ghana

Abstract

This study explored how academics in a Ghanaian university conceptualized and engaged with OER through a qualitative approach (in-depth interviews). "Access" emerged as the most dominant theme in how OER was conceptualized. Academics regarded OER positively; emphasizing its role in reducing the knowledge imbalances between the Global North and Global South and enhancing academic practices. Whilst some quality concerns about OERs were expressed, the reputation of sharing-institutions turned out as a significant factor in determining quality of the materials. Overall, the study revealed a deep-seated culture and practice of (re)use, revise, remix and redistribution of e-resources – akin to open practices, only that, this occurred locally among faculty, and at highly informal levels without the application of relevant open licences due to low awareness. In effect, the existing practices among faculty signal open-readiness.

Keywords

Open Educational Resources, OER awareness, OER engagement, Higher Education, Global South

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1 Introduction

Open Educational Resources (OER) have been suggested as a means of delivering access to higher education through the creation and sharing of learning resources (ATKINS, BROWN & HAMMOND, 2007; BEETHAM, FALCONER, MCGILL & LITTLEJOHN, 2012), and also seen as an attempt to correct the imbalances of quality education between the Global North and the Global South (UNESCO, 2015). Unfortunately, however, evidence of the promise of openness, and in particular, OERs to democratize and make education equitable and accessible to all learners around the world is inconclusive (ROLFE, 2017; WELLER, 2014).

Despite the implementation of a number of locally and externally driven OER initiatives within the Global South, BOZKURT, KOSEOGLU & SINGH (2019), KANWAR, BALSUBRAMANIAN, & UMAR (2010), KING, PEGRUM & FORSEY (2018) found the Global South and particularly Sub-Saharan Africa (SSA) to be consumers rather than producers regarding OER scholarship, open educational practice (OEP) and the creation and sharing of learning resources. This generally mirrors the trend in educational technology research (BOND, ZAWACKI-RICHTER & NICOLS, 2019). The underlying issue of inadequate technology infrastructure and low internet bandwidth, which have been long-standing barriers to OER adoption in the Global South, continue to linger (MTEBE & RAISAMO, 2014). This made BUTCHER (2015) advocate for a high percentage of learning resources to be shared as printable resources.

Despite the global and regional efforts towards mainstreaming OER in HEIs, its level of engagement, particularly among faculty members were found to be relatively low in previous studies (REED, 2012; ROLFE, 2012; SAMZUGI & MWINYIMBEGU, 2013). However, in light of recent digitization in HE delivery which has spurred an increase in access to global information, understanding the awareness of, and engagement with OER by faculty becomes essential. Even more so, a clearer picture of OER awareness and engagement among faculty in institutional contexts that are yet to implement any formal OER initiative provides a basis for a nuanced description and a barometer for the extent to which the OER move-

ment permeates H.E in the Global South. Researching into the lived experiences of faculty who are users of digital learning resources -which may possibly include OER- could generate insights into the complex intersection of access, perception and engagement in a context with major structural constraints.

Thus, the study explored the level of OER awareness and the OER engagement levels among faculty members in a Ghanaian University.

In this regard, the following questions emerged and led the investigation of this topic:

1. What is the shared understanding of the concept of OER among the academic fraternity at Ghana TU?
2. What are faculty members' perceptions regarding OER in relation to academic practice?
3. What are the major OER engagement levels among academics of Ghana TU?

2 Theoretical Considerations

2.1 Open educational resources (OER) and their adoption

A universal construction of the concept of "openness" remains a subject of debate (WILEY, BLISS & McEWEN, 2014; WELLER, JORDAN, DE VRIES & ROLFE, 2018), resulting in varied interpretations in terms of scope (BAKER, 2017) and span of adoption (WELLER, 2014). In ROLFE's (2017) view, a constant calibration of the definition of "openness" is critical as the activities of the open movement advances and diversifies.

The term "OER" first emerged from a UNESCO forum in 2002 as "the open provision of educational resources, enabled by information and communication technologies for consultation, use and adaptation by a community of users for non-commercial purposes". Since then, different authors (e.g. ATKINS et al., 2007;

GURELL & WILEY, 2008) have offered varying definitions, albeit agreeing largely on key underlying concepts such as licensing and the cost-free nature of the resource to the user.

According to the Hewlett Foundation[2], open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. In light of the widening scope and evolution of the OER concept, open platforms, systems, and architectures (KOSEOGLU & BOZKURT, 2018) as well as MOOCs (BOGA & MCGREAL, 2014) are regarded as a progressive step in the evolution of OER.

Perhaps, the most widely accepted definition of OER is the one updated in 2015 by UNESCO:

> Open Educational Resources (OERs) are any type of educational materials that are in the public domain or introduced with an open license. The nature of these open materials means that anyone can legally and freely copy, use, adapt and re-share them. OERs range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation.[3]

Despite the growing importance of OER, navigating around its wide-ranging practices remains a challenge (WILEY et al., 2014). WILEY's (2014) 5Rs of openness – retain, re (use), revise, remix and redistribute – provides the guiding framework around which the use and development of OER revolves. Therefore, a basic knowledge of copyright and licensing permission such as the Creative Commons is fundamental to understanding OER.

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[2] http://www.hewlett.org/programs/education-program/openeducational-resources

[3] http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-rsources/what-are-open-educational-resources-oers/ (accessed February 13, 2019)

Barriers to OER adoption manifest in different and varying contexts. Its importance is emphasized by a recent study (BOZKURT, KOSEOGLU & SINGH, 2019) which found "barriers in OER" emerging as the most prominent theme from a lexical analysis of OER research paper titles and abstracts. According to WILEY et al. (2013), the following themes summarize the barriers to OER use and adoption:

- The discovery problem (making OER easier to find)
- The sustainability problem (financially self-sustaining),
- The quality problem (the pervasive notion that free represents low quality)
- The localization problem (improving knowledge to adapt OER to different contexts)
- The remix problem (the lack of exercise of revise and remix permissions)

These findings are consistent with PERCY & VAN BELLE (2012) and more recently by SEAMAN & SEAMAN (2018), who cited a lack of awareness and a perceived lack of offering as the cause for the slow but steady growth in the uptake and adoption process of OER.

2.2   OER and higher education

The OpenCourseWare initiative by the Massachusetts Institute of Technology (MIT) is regarded as the springboard for the start of OER movement in the early 2000s. Following that, a number of initiatives (e.g. OpenCourseWare Consortium and Open Education Consortium), whose membership are largely made up of HEIs, have been established to sustain the OER movement by creating and sharing content in an effort towards mainstreaming OER in HEIs

McGILL et al. (2013) outlines five major motivations by UK universities in making materials freely available: (1) building reputation of individuals or institutions or communities, (2) improving efficiency, cost and quality of production (3) opening access to knowledge (4) enhancing pedagogy and the students' learning experience (5) building technological momentum.

By the use of open licenses, academic knowledge has widened due to fewer restrictions, and education materials are now beyond the campus, giving further relevance to the Open University models (WELLER, 2014). In another university in the UK, benefits derived by faculty from using OER include timesaving, which allowed for more finer-points discussions on subjects with students (ROLFE, 2017). Faculty in a non-English instructional context also shared similar sentiments (KURELOVIC, 2016).

Regarding OER and students' performance, PAWLYSHYN, BRADDLEE, CASPER & MILLER (2013) reported a higher pass rate among students who used OER in maths courses compared to those who used traditional materials. HILTON III, FISCHER, WILEY & WILLIAMS (2016) on the other hand found associations between OER adoption by faculty and improvements in course throughput rates. Thus, OER is seen as crucial for the promotion of innovation and change in educational practices (PITT, 2015). However, issues related to quality assurance of (open) learning materials are an area of major concern in university contexts (JUNG, SASAKI & LATCHEM, 2016).

2.3   OER in the Global South

The term "Global South" is a designation for developing countries usually characterized by low-income status, and experience political or cultural marginalization (DADOS & CONNELL, 2012). Global South is used in the context of this study with a restricted reference to regions and states in Sub-Saharan Africa (SSA).

The anxiety about the uptake and adoption of OER in the Global South is not a new phenomenon. Concerns for its upscale and impact (ATKINS et al., 2007), barriers regarding technology (MTEBE, 2014) and the need for localization (WILSON, 2008) have long been highlighted. Recently, the gap between the North and South, in terms of contribution to scientific scholarship (BOZKURT, KOSEOGLU & SINGH, 2019) and the unidirectional flow of knowledge regarding OER creation and dissemination (KING, PEGRUM & FORSEY, 2018; WELLER et al., 2018) has been a source of worry. Accordingly, it is settled that interest from the North in

OER, far exceeds interest from the South (KANWAR et al., 2010; BATEMAN, LANE & MOON, 2012).

Other studies have been critical of the situation, describing it as limiting local academic development and in effect, consolidating the "northern hegemony" (CZER-NIEWICZ et al., 2014). BORZKURT et al. (2019) wonder whether the goal for open education to lessen the digital divide could be achieved in the face of an "open divide" (p. 86).

Despite what may appear as a drawback for advancing the integration of the South into the open ecology, recent developments signal opportunities rather than distress. Firstly, the growth and increasing popularity of mobile devices, portend well for OER adoption. Rather than computers, mobile devices have been suggested as ideal for accessing and sharing educational resources (CONOLE, 2014). Secondly, the establishment of new open universities have been observed in the Global South (QAYYUM & ZAWACKI-RICHTER, 2018; ZAWACKI-RICHTER & QAYYUM, 2019), indicating an opportunity for the expandability of the adoption and use of OER.

Locally and externally driven OER initiatives have also increased in the last decade. For example, OER Africa, which collaborates with HEIs in the development and use of OERs to enhance teaching and learning, developed the Teacher Education in Sub-Saharan Africa (TESSA) project under the auspices of the South African Institute for Distance Education (SAIDE). Another is the OER@AVU project by the African Virtual University (AVU), and the School of Open project, being instrumental projects. In a study by PERCY & VAN BELLE (2012), African academics' attitude towards OER was seen as positive and they believed it added value to their work.

2.4   Levels of OER engagement

Beneath the veneer of open practices lies the level of awareness of OER practitioners, which informs their engagement levels. This study thus conceptualizes engagement through the lenses of WELLER (2014) and WILD (2012). OER en-

gagement is discussed in the context of this study as involving awareness and knowledge in wide ranging practices by faculty related to the (re)use, revision, remixing, retention and sharing of OER under an open licence (WILEY et al., 2014). In essence, OER engagement levels describe a hierachy of proficiency that people demonstrate in how they use OER, usually being a function of their level of awareness and understanding.

According to WELLER (2014), engagement with OER could fall into one of three categories: Primary, Secondary and Tertiary – representing varying degrees of explicit awareness and utilization of OER. WILD (2012) on the other hand, conceptualized engagement with OER to reflect adoption from three stages – Piecemeal, Strategic and Embedded – signifying a continuum of very low to optimal levels of engagement.

Table 1 shows a mapping of the WILD (2012) and WELLER (2014) models.

Table 1: Mapping of WELLER (2014) and WILD (2012) OER engagement levels

WELLER (2014)	WILD (2012)	KEY CHARACTERISTICS	AWARENESS AND ENGAGE-MENT LEVEL
Primary usage	Embedded use	Knowledgeable in open licences and use of OER is rooted in their practices	High
Secondary usage	Strategic use	Fair idea of open licences and use of OER is selective, so far as it aids innovation	Medium
Tertiary usage	Piecemeal use	Use of OER and other digital resources cannot be differentiated	Low

Faculty awareness of OER has been a subject of previous and recent studies. AL-LEN & SEAMAN (2014) found that 34% of college faculty members in the United States were aware of OER. Similarly, SEAMAN & SEAMAN (2018) reported that 46% of faculty were aware of OER compared to 34% in 2015. However, WILEY et al. (2014) cautions that, faculty awareness of the term OER does not ensure that they fully understand the ideas of open licensing, and the ability to reuse and remix content, which are central to the concept of OER.

3 Design and method

3.1 Research approach

The study utilized an exploratory research approach, which is appropriate for a study of this nature that is concerned with discovery and insight generation into faculty members' awareness and engagement levels with OER. According to SCHUTT (2012), social exploratory research involves the investigation of social phenomena without explicit expectations (p. 12). The aim of this study was not to provide the final and conclusive answers to research questions, but to explore, with varying levels of depth (SINGH, 2007) to inform future research direction.

3.2 Participants' selection and background

The study population was the entire academic staff of a university based in Ghana. The case university is a public campus-based university, founded in 2006, and runs both undergraduate and postgraduate programmes. The university is reputed for its rich international collaboration profile, and prides itself as a leading university in Ghana with a strong technological focus.

In all, 18 interviews were conducted across the three faculties of the university (Engineering, Business and Computing), library and the Center for Online Learning and Teaching (COLT) (see table 2). Respondents' experience at the HE level

spans between 4 years and 15 years, representing a blend of experienced academic staff who have worked within an era of digital advancement.

Table 2: Distribution of study participants

FACULTY/SECTION	Deans	Head of Dept.	Lecturers	Sub Total
Engineering	1	1	1	3
Computing & Info Systems	1	2	3	6
Business	1	2	4	7
Library		1		1
COLT		1		1
TOTAL				**18**

Respondents interviewed were from diverse disciplines including Accounting & Finance, Management Sciences, Economics, Computing Sciences, Telecommunication and Computing Engineering, Information Studies and Communication Studies, of whom nine (9) were terminal degree holders.

3.3 Data collection and analysis

Semi-structured interviews were conducted in the month of January 2019, with special focus on: (1) understanding of OER, (2) perceptions of OER in relation to academic practice and (3) OER engagement practices (5Rs), with all interviews, recorded and transcribed.

In this study, a thematic analysis approach was utilized, which allowed transcribed data to be analysed by identifying themes and concepts important to the description of the phenomenon of interest (DALY, KELLEHEAR & GLIKSMAN, 1997).

Usually in thematic analysis, patterns and themes that emerge from the textual data become the categories for analysis. However, both implicit and explicit ideas were analysed in order to derive meaning (BRAUN & CLARKE, 2006).

Leximancer software, a text-mining tool, was used to identify core concepts and how they are related to each other (SMITH & HUMPHREYS, 2006) within the responses provided by academic staff regarding their understanding of the term OER, which addressed research question 1: "what is the shared understanding of OER among academics in Ghana TU?"

4 Results

4.1 RQ1: What is the shared understanding of the concept "OER" among members of the academic fraternity at Ghana TU?

To understand how the term "OER" is conceptualized among academic staff in the university, verbatim responses (n=18) to the question asked were transcribed and inputted into Leximancer software to generate a concept map as depicted in Figure 1.

The thematic summary reveals that, "access" (100% relative count) had the most mentions, followed by "learning" (78%), "internet" (44%) and "open" (44%). The two most prominent themes – "access" and "learning" – signifies a primary emphasis on the removal of barriers to enable equitable participation in a learning process. This found expression through the concepts *people, educational, material, available, free, resources, location.* The third theme, "internet" highlights the role internet technologies play in enabling both access to the resources and learning. The connections between the concepts *location, resources and internet* implicitly highlight the dimension of flexibility, which is a key affordance of the internet technology.

The quotes below illustrate a cross-section of respondents' understanding of the concept "OER"

"What comes to mind is that it is any learning material that is free, easily accessible by anybody who wants to access it and it is not restricted" – Lecturer W.

"Library Resources that are made available for people to access mostly for free under some permissions" – Head of Department.

"They could be journals, they could be books, they could be instructional materials that are online for anybody at all who has need for it to access and use for his benefit. If you write a book and put it online and put a password on it and ask me to pay before using it, then it is not open". – Lecturer B.
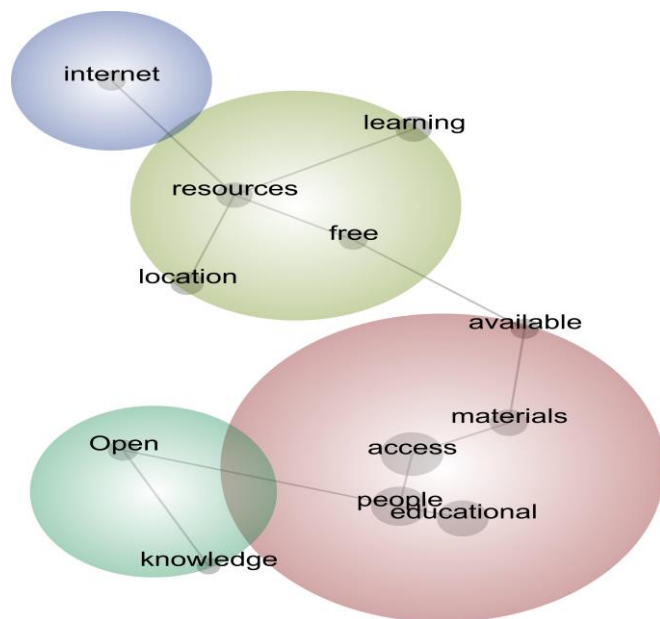

Figure 1: Concept map of the shared understanding of the term OER by faculty of Ghana TU.

4.2 RQ2: What are faculty members' perceptions regarding OER in relation to academic practice?

Perceptions regarding OER and its implications for the academic practice of respondents were mixed but mostly positive. The emerging themes from views expressed were categorized in the following contexts:

4.2.1 Facilitation of knowledge sharing and dissemination

This theme emerged and was viewed largely through the lenses of easy access to relevant learning resources particularly for people from deprived regions of the world. A Head of Department in explaining how OER in his view, facilitates knowledge sharing and dissemination, remarked:

"You know textbooks is an issue, bearing in mind we live in the developing world. We have a few but many of them are old so I advise lecturers to go online and look for updated materials".

"It is good in terms of sharing and knowledge dissemination. Luckily, somebody else has done it [developed learning resource] for you or aided you....why do you have to start it from scratch?" – Lecturer C.

In what he considered as a minor downside to the easy access to knowledge sharing, a Dean was of the view that:

"Some faculty members may take things for granted since they know they can always get materials, hence do not develop authentic materials of their own and always depend on others" – Dean A.

4.2.2 Improvement in educational practices

This theme's emergence espouses three key points related to how OER could improve the educational practice of faculty members who engage with OER. Firstly, faculty members who develop content get the opportunity to receive feedback in order to improve their resources. Secondly, there is an opportunity to benchmark with established scholars and institutions from other parts of the world. Thirdly, an

enhanced reputation and high satisfaction, derived from knowing how far a resource developed by an academic reaches. A lecturer explained how his teaching methods are improving from using a free instructor manual from CENGAGE Publishers:

"For me I think it [free instructor manual] is good because, first, it acts as an instructor to you, before you go and instruct your class. It has really improved my teaching methods" – Lecturer F.

In terms of possible benefits that could be derived from peer review:

"*It [OER] is very good, especially if you develop content and share, and people all over the world have the opportunity to provide feedback to help improve the content".* – Lecturer P.

4.2.3 Quality and reputation of OER

The notion that OER are free and accessible anywhere made some respondents apprehensive regarding its quality. To some of the academics, the very good books and learning resources are mostly commercial and proprietary. These concerns were expressed as follows:

"When a book is very good and they want to use it as a textbook, the publishers want their money so they won't put it up for everybody to access…at best good open access books will only be used as reference books". – Library Respondent.

"It is just a fact of life that the best books must be paid for. Some free books are okay, but the best ones are mostly not free". – Lecturer M.

However, a Head of Department who held a contrary view, said as follows:

"When a resource is open, it does not make it inferior to the proprietary resources. In fact, some open resources and books are funded…and are of higher quality compared to proprietary textbooks because it goes through a rigorous academic review process". – Head of Department 4.

The source of an OER also emerged as an important indicator of quality. There were indications that, some shared content could be of questionable quality since content on the internet can be uploaded by anybody. Some of the respondents alluded to an inclination towards resources created by revered scholars and institutions, which provides assurance of the quality of the resource. The following quotes demonstrate how resources from highly reputable institutions are perceived:

"If a formidable university such as MIT [Massachusetts Institute of Technology] has developed materials and shared for free, why wouldn't you use it? This is MIT we are talking about. They will not just share anything because their reputation is at stake" – Lecturer P.

"For example, when I want to take an online course, I pay attention to the institutions offering the course before I go ahead [to sign up]. When it is from Harvard, Yale, Princeton etc…. you are sure to get the best [quality]. – Lecturer N.

4.3 RQ 3: What are the major OER engagement levels among academics of Ghana TU?

In assessing, the levels of OER engagement among faculty, activities and practices were examined with emphasis on awareness of OER through (re)use, discovery, creation and sharing practices.

4.3.1 OER Awareness among faculty of Ghana TU

The use of digital resources for teaching and learning were found to be widespread among faculty members interviewed. Among other things, resources such as presentation slides, lecture notes, videos, books, course materials and sample questions (sometimes with answers) were used to support teaching and learning. An important but unsurprising revelation was that, although many lecturers used a mix of media and resources, they could not distinguish between an ordinary free digital resource and OER. For some, it was their first time learning about the term "OER", while others considered any freely accessible resource on the internet as an open

resource, which generally stemmed from their knowledge of open access. A quote from a lecturer captures this notion:

"For me once I am able to access a material online without having to pay any subscription or download fee, then it is an open access resource." – Lecturer T.

Whilst a few were familiar with the MIT Open Courseware and popular MOOC sites such as Coursera, OpenLearn, Lynda and edX, (most mentions), many however, did not conceptualize MOOCs within the context of OER.

Additionally, knowledge of open licenses was found to be very low, with the exception of three (3) respondents, predictably, majority of whom were affiliated with the Faculty of Computing and Information Systems. A Head of Department who had a very good understanding of the creative common licensing and its application said:

"...people think once a resource is openly shared, you lose control of ownership. Normally, the licensing regime gives you an indication of the type of permission given and the specific boundaries for use of the resource..." – Head of Department 4.

4.3.2 Content sharing and redistribution

Whilst it was clear that many of the respondents were not explicitly aware of OER, sharing of learning resources – print and digital – locally was common practice. No lecturer reported ever sharing a resource under an open licence, but rather, through informal means such as: peer sharing or passing it from senior academics to junior colleagues. A lecturer provided an account of how he and another colleague, teaching the same course, but to different class sections (morning and weekend), shared teaching resources. In addition, lecturers who were new to a particular course sometimes relied on materials developed by the previous course lecturer. Some respondents also indicated receiving and sharing instructional materials with colleagues from other universities but within the same field. It is instructive to note that the resources (presentation slides, lecture notes, test items) developed by the lecturers were not shared under any open licenses.

At a more formal level, mostly initiated by the Deans and Heads of Department, relevant resources are brought to the attention of faculty at meetings, or the links shared via the faculty-emailing list. Other faculties have instituted mentoring schemes for new lecturers to enable them fully integrate and adapt to the ethos of the faculty by sharing resources with them.

Below are what some respondents said of sharing practices:

"This semester for example, I am mentoring a new lecturer who has joined our faculty....so we are teaching a course I have taught before together, and I have given all my materials to him to help him develop his". – Dean B.

"For instance, I had to teach a new topic I had never taught before, so I contacted two lecturers who had taught it in the past. I took their lecture notes and test items and it served a good guide" – Lecturer O.

A lecturer who shared instances of how they direct students to various online resources to obtain materials to supplement their leaning had this to say:

"There is this site called "lynda.com" and "pdfdrive.net", ... I get materials from there myself, but I always ask students to go there to get additional resources to help them with further reading" – Lecturer T.

Notwithstanding, some lecturers download the resources (presentation slides, pdf, etc.) and share with students via the LMS or email. It also appeared to be a common practice to share links via WhatsApp messenger. Occasional photocopies of books are made, particularly of books whose e-versions were not available.

4.3.3 Resource discovery and acquisition

Typically, faculty members discovered digital resources through referrals from colleagues or by simply exploring the internet through search engines or from specific MOOC sites. The university's library shares links to digital resources for use by academic staff. In the case of e-books, they are either purchased online or downloaded at no cost. Furthermore, some faculty members have signed up to commercial publishers (eg. CENGAGE, Pearson and Wiley) and occasionally receive free

instructor manuals, presentation slides and evaluation copies of textbooks for their use.

In what appears to be a call for greater use of library resources, the Librarian said:

"Accessing open resources through the library is better than just ordinary google search"

The rationale for such line of thought was that, the library staff, who are professionals, were better equipped to collate the best OER, relevant to the disciplines of the academics.

Similarly, the Centre for Online Teaching and Learning (COLT) has provided links to e-resources on its website and linked the LMS to the university's e-library system. Unfortunately, however, the patronage of such resources were observed to be very low. Reasons provided included: (1) some faculty members belonged to professional bodies (e.g. IEEE) and rather preferred to utilize those resources; (2) some faculty who are/were studying abroad have access to libraries from their universities and still use them. Although faculty who fall under the scenarios described may be in the minority, it is believed they share these resources with colleagues.

Nevertheless, a number of lecturers still purchase printed books when the e-versions are not openly and freely accessible. While the university provides support in the form of book allowance (equivalent of $600 per academic year), the high cost of some books leads to the use of unapproved and unorthodox means of finding books hidden behind the paywalls of publishers. Two lecturers narrated their difficulties in accessing some resources online:

"From time to time, the library sends out links to some resources, but because we have to pay for some of them, we are unable to access it". – Lecturer W.

"Sometimes when I am not able to buy the book, I ask a friend who then goes online to look for a crack version to use. I know it is not right but without it, I cannot have access to some very good books". – Lecturer F.

On the possible repercussions of breaking copyright laws, a respondent remarked that:

 "*Some do it out of love and passion to learn, but others also do it out of ignorance. But the truth is that, as a developing country we get away with a lot of things we otherwise wouldn't if we were in a developed country*" – Head of Department 3.

4.3.4 Revise and remix practices

The most common contents created by lecturers are course outlines, presentation slides, test questions and a few video contents. According to COLT, about 10 short videos have been shared on the centre's YouTube site. Majority of respondents also confirmed that they sometimes create content by relying on some resources found online. However, due to lecturers' limitations in the awareness and utilization of open licenses, most of the revise and remix activities are done unconsciously without applying any open licensing.

In shedding light on informal revise and remix practices, a lecturer said:

"I don't use them [digital resources found online] as I get them but I also use other resources to modify the contents to suit the needs of my students" – Lecturer S.

5   Discussion

Findings indicate that, "access" formed the key focus of faculty members' conceptualization of the term "OER". This perhaps accentuates their belief that learning resources and opportunities for learning, should be made available to all who wish to participate without any inhibition. Also evident was the fact that, allusions to *free* in the context of understanding OER represented (no) cost, and not in ways reflecting the freedom and choice a user has in adopting and utilizing OER (WELLER, 2014). A first-hand sense and interpretation of the thought processes of the academics regarding their collective understanding of OER as seen in the concept map represents access to materials for an activity (learning), which is undertaken at no cost (free) and enabled by a medium (internet) which makes the activity

flexible (location). It was apparent that the role of technology in achieving the objectives of OER was clearly recognized.

In what appears to be a recurring theme of OER research, concepts related to licensing and copyright permissions were absent (e.g. ALLEN & SEAMAN, 2014; DE HART, CHETTY & ARCHER, 2015). Given that licensing determines the level of "openness" of a resource, knowledge of it is a precondition to the understanding of the concept of OER (WILEY et al., 2014). This situation transcends the Global South (DE LOS ARCOS & WELLER, 2018) therefore, a re-think in the advocacy strategies is required. Licencing and copyright issues should be put at the forefront in discourse of openness in order to deepen the concept of OER.

Interesting views were expressed regarding respondents' perception of OER on their academic practice. First, OER was perceived as a public good, and as such, knowledge must be shared and disseminated. However, the view was held that, people of the Global South stand to gain more from the public good, and this reflects OER's acclaim to be a means to increase access and provide quality learning resources to people in deprived regions (UNESCO, 2015).

Secondly, faculty members' perception of OER as an enabler for the improvement of their academic practice was telling. They believed this could be achieved through activities such as public peer review, peer scrutiny and benchmarking to improve pedagogical practices. This perhaps indicates a reflective recognition of how open practices could improve the quality of materials made available for use and adaptation for teaching and learning, which mirrors findings by ORR, RIMINI & VAN DAMME (2015), stressing the need for quality materials through OER.

Thirdly, the perception that "free" could connote inferior resources emerged quite strongly. This may possibly be due to long-standing familiarity with resources from commercial publishers, or a lack of capacity to evaluate the quality of an OER or perhaps, a discovery problem (WILEY et al., 2013; PERCY & VAN BELLE, 2012) where faculty are unable to locate discipline-relevant OER. It was also noteworthy that, resources shared by institutions considered as renowned, would most likely be held to a relatively lower standard of scrutiny by virtue of their repu-

tation. The implication of this perception is that, knowledge flow in the North-South direction is expected to continue, given that more matured and better quality educational systems are located in the North.

The observation of pervasive use of digital resources for teaching and learning appeared to be a culture within the institution. Regardless, awareness of OER was low, with an overwhelming majority of faculty using a mix of media without necessarily being able to distinguish clearly between OER and other digital resources accessible on the internet, which are characteristics indicative of primary users (WELLER, 2014) or piecemeal users of OER (WILD, 2012).

Resources for teaching and learning were accessed from both internal and external sources. Although the library provided e-resources, kept on the university server, the majority of those accessed were from external sources, mainly through faculty exploration using search engines, or subscriptions with commercial publishers. It emerged that, many faculty members resorted to digging up alternative digital materials only when recommended books (mostly commercial) could not be accessed, generally because of high costs. These kinds of situations provide an incentive for people to gain access to copyrighted resources through illicit means. This is also suggestive of a deficiency in locating open textbooks, relevant for their subject areas. This is perhaps due to the absence of a community of practice, which emphasizes ELHERS & CONOLE's (2010) call for a focus on open educational practices in order to derive the full benefits from of OER.

The 5R principles – retain, reuse, revise, remix and redistribute – which underlie OER were abundantly seen in practice among faculty members, albeit locally and informally, without the application of relevant open licences. Despite that, these signs portend well for OER uptake.

6 Conclusion and implications for further research

The study addressed faculty members' shared understanding of OER and assessed their perception of same regarding their academic practice. Useful insights were gained from the study which has implications for OER adoption and use. First, "access" was the most fundamental consideration when conceptualizing OER among faculty of Ghana TU while the issue of licensing remained latent. Secondly, perceptions of OER were positive and mostly centred on the benefit the Southern users derived in terms of knowledge, improvement in the quality of resources through peer practices and regarding learning materials originating from institutions of repute to be of high quality. Thirdly, faculty use of digital resources are intense, however, there is a dearth in distinguishing OER from other ordinary or proprietary digital resources. Finally, OER engagement levels were found to be low and informal for the reason that, faculty created, reused, revised and redistributed digital resources with no open licences.

Despite the well-known structural obstacles facing the Global South in terms of OER adoption and use, the growing use of mobile devices provide practical and targeted pointers on reducing the "open divide". Additionally, collaborative research projects with Northern practitioners and deepening open educational practices at local levels through the deliberate creation of communities of practice are but a few strategies for promoting increased OER engagement.

Due to the sample size and the exploratory nature of the study, findings cannot be generalized to the population and must therefore be interpreted with caution. This study is the first step towards understanding OER engagement practices within a Southern institutional context yet to formally adopt OER. Future research will focus on a large scale study aimed at investigating opportunities for fostering open educational practices.

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