Not a knee-jerk reaction: openness - a UX imperative

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Abstract:

The assertions made by Nwagwu and Ahmed in 2009 that Africa generates less than one percent of the world's knowledge production still holds true today. In fact, Africa is a confirmed net consumer of the world's knowledge production (Raju, Raju and Claassen 2015). In the current digital age characterized by a glut of information, Africa is in a paradoxical state challenged by a dearth of information due to severely constrained access to information as a result of poor infrastructure and exorbitant subscription costs. Scholarly research addressing African challenges and by African scholars published in international journals are inaccessible to Africans thus pushing Africa further down the road of 'information deprivation'.

Using the definition by Walker (2010) that "user experience seeks to create products that people will want to use" and Hassenzahl's (2008) claim that UX is the inclusion of all aspects of the user's experience in interacting with the service, the authors explore in this paper openness as an imperative for African development and empowerment through unhindered financial access to scholarly content. Academic librarianship is in transition and the move away from being a supporter of the teaching and learning and, research processes towards being a collaborator in these processes demands a new suite of services to fulfil the needs of the teaching and learning and, research communities. The delivery of openness services significantly contributes to regional, national and continental development. This paper will engage in discussion on two areas of the openness movement namely, open access to scholarly content and to open educational resources.

Keywords: Openness, diamond open access, open educational resources, OMP, OJS.

Introduction

The assertions made by Nwagwu and Ahmed in 2009 that Africa generates less than one percent of the world's knowledge production still holds true today. In fact, Africa is a confirmed net consumer of the world's knowledge production (Raju, Raju and Claassen 2015). In the current digital age characterized by a glut of information, Africa is in a paradoxical state challenged by a dearth of information due to severely constrained access to information as a result of poor infrastructure and exorbitant subscription costs. Scholarly research addressing African challenges and by African scholars published in international journals are inaccessible to Africans thus pushing Africa further down the road of 'information deprivation'.

Using the definition by Walker (2010) that "user experience seeks to create products that people will want to use" and Hassenzahl's (2008) claim that UX is the inclusion of all aspects of the user's experience in interacting with the service, this paper explores openness as an imperative for African development and empowerment through minimal financial challenges to accessing scholarly content.

Open access within the African context

The format via which scholarly literature is distributed or disseminated is in transition from print to digital and so too is the method of distribution from traditional publishing to open access publishing. In terms of the transition of the method, publishers are offering one or a combination of the following options: the traditional subscription option, the hybrid option and the open access option. Africa needs to exploit the latter, that is, the open access option. This option is viewed by the author as the future of dissemination of scholarly literature for African researchers as the other two options are not affordable to the researchers either as readers (because of exorbitant costs) or as authors (unaffordable page fees or article processing charges). It is proposed that the open access option, especially the repository route and the diamond open access route, will assist Africa convert its status from a net consumer of the world's knowledge production to a significant contributor to knowledge production. The user experience via the open access conduit is enhanced and will contribute to Africa's move from the periphery of the world's knowledge production to the epicenter. Given that Africa produces only 0.7% of the world's knowledge production of which more than 70% is produced by South African researchers, these South African researchers have a moral obligation to freely share their scholarly output with the rest of the continent and the developing world (Tise 2011).

In both the traditional model and the future model, academic institutions are the financiers of research publication. In the traditional model, the significant beneficiary is the publisher (through large profit margins) and the disenchanted are the reading audience (especially those from the developing world with limited access), the research output, and the researcher. In the future model, the disenchanted are commercial publishers and the beneficiaries are the reading audience through free access to the research output and the researcher via drastically improved visibility and concomitant impact. The user experience is radically different in both the models. In the traditional model, users from the developing South have limited to no access to scholarly content due to the issue of affordability. This lack of access to scholarly content negatively impacts on the generation of new knowledge and creation of innovation. In the open access model, unhindered access through the removal of the cost element, there is radically improved access to scholarly literature and the user experience is such that it enhances the researcher's capacity and desire to generate new knowledge.

Academic librarianship in transition

The transition from print to digital and from subscription to open, has contributed to a change in the role and responsibility of the academic library. Academic librarianship is moving away from being a supporter of the teaching and learning and, research processes towards being a collaborator in these processes. In this transition, there is a demand for a new suite of services to fulfil the needs of the teaching and learning and, research communities. The delivery of openness services significantly contributes to regional, national and

continental development. Due to constraints of space, the discussion in this paper will focus on two areas of the openness movement, namely, open access to scholarly content and to open educational resources.

As can be seen in *Figure 1* (Raju, Adam and Powell 2015), the open scholarship movement has three significant pillars with the fourth pillar, open data (management) fast becoming mainstreamed as a service provided by libraries. The gold route pillar, sitting on the open access pillar, now has a sub-pillar referred to as 'diamond open access'. As reflected in *Figure 1*, the OER pillar has a sub-pillar referred to as 'open textbooks'. The openness movement is growing exponentially and with every new pillar introduced, the user experience is enhanced. The products or services associated with the current pillars and the new pillars are extensively sought by the users, and the users (either as readers or authors) interact with the product or service for the generation of new knowledge.
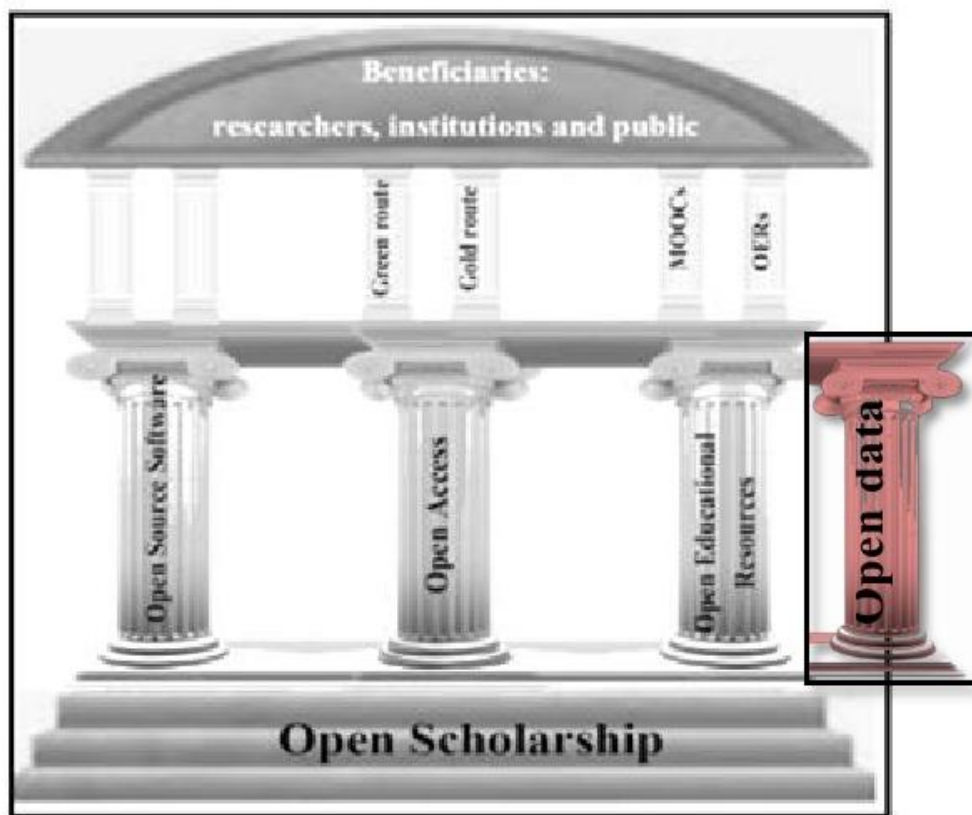
Figure 1

The user in an inter-connected open access relationship

Joseph (2012) maintains that open access (OA) provides a strong foundation for research. She goes on to state that OA provides "most efficient ways to communicate results and amplifying all of its desired outcomes such as accelerating discoveries, fostering innovation, creating new business opportunities, and contributing to the welfare of society as a whole". In the open access continuum, the researcher (as the consumer and producer of information), society and development become inter-connected. Such inter-connectedness points to the fact that the research process is only complete when the end product in the form of scholarly output is read; hence its wide dissemination is important. The UX benefactors are both the author with improved visibility and the end user with vastly improved access to scholarly content.

As can be seen in *Figure 2,* the author is the producer as well as the consumer of scholarly literature. As a researcher and consumer, the author is in need of scholarly content to support or refute a theory or hypothesis. In the developing South, limited access to scholarly literature, due to financial challenges, has stifled the production of new knowledge or innovation. In an openness environment, the author is a benefactor of an openness services as he/she has access to scholarly content that is not locked in prohibitive subscription costs. The user experience (as a reader/ consumer) is radically enhances in an openness environment.

As indicated by Joseph, the fundamental purpose of the production of research is for it to be consumed by peers and the general public en route to finding solutions to challenges that beset society. The author, as the producer of the research output, has further benefits as the openness movement facilitates the radically improved accessible of the research to the widest possible user audience. This improve accessibility has the domino effect of improving visibility and the concomitant increase in usage and impact (via views, downloads and citations). The institution of the author also benefits from the improved visibility of the research output as increased visibility attracts funding, collaboration (including international collaboration), the best postgraduate students (again, including international students) and such.

Despite the fact that the openness movement sprouted from a very philanthropic ethos, it is generally accepted that researchers seek publication outlets that maximize the chances of their work being read and cited. In the current research evaluation system, citations are the only public statement of intellectual recognition of the cited author. Davis et al. (2008) argue that citations are an indicator of the dissemination of an article in the scientific community and provide a quantitative system for the public recognition of work by qualified peers. Davis et al. (2008, p. 1) go on to say "having work cited is therefore an incentive for scientists, and in many disciplines it forms the basis of a scientist's evaluation". There is significant evidence in the literature that corroborate the view that there is synergy between OA and citation counts. Davis et al. (2008) claims that freely available online research generates more than three times the average number of citations received by print articles. The primary explanation offered for the citation advantage of OA articles is that freely available articles are cited more because they are read more than their subscription-only counterparts (Davis et al. 2008).

There has been a number of assertions made stating that open access content is not quality scholarly literature: the author refutes these assertions. Nonetheless, the comments of Cullen and Chawner (2011) need to be shared to demonstrate the significant benefit of open access for the author as producer of scholarly literature. Cullen and Chawner (2011) point out that OA content is more citable, not because of the quality of the output but rather because of the advantage that OA brings in maximizing accessibility, and thereby improving citability. Clearly, for the author, open access is a product that they would want to use and as stated by Rentier (2011), "it is a no-brainer". For the end user, open access is not a knee jerk reaction, it is an absolute imperative in an age of exorbitant cost of scholarly literature.
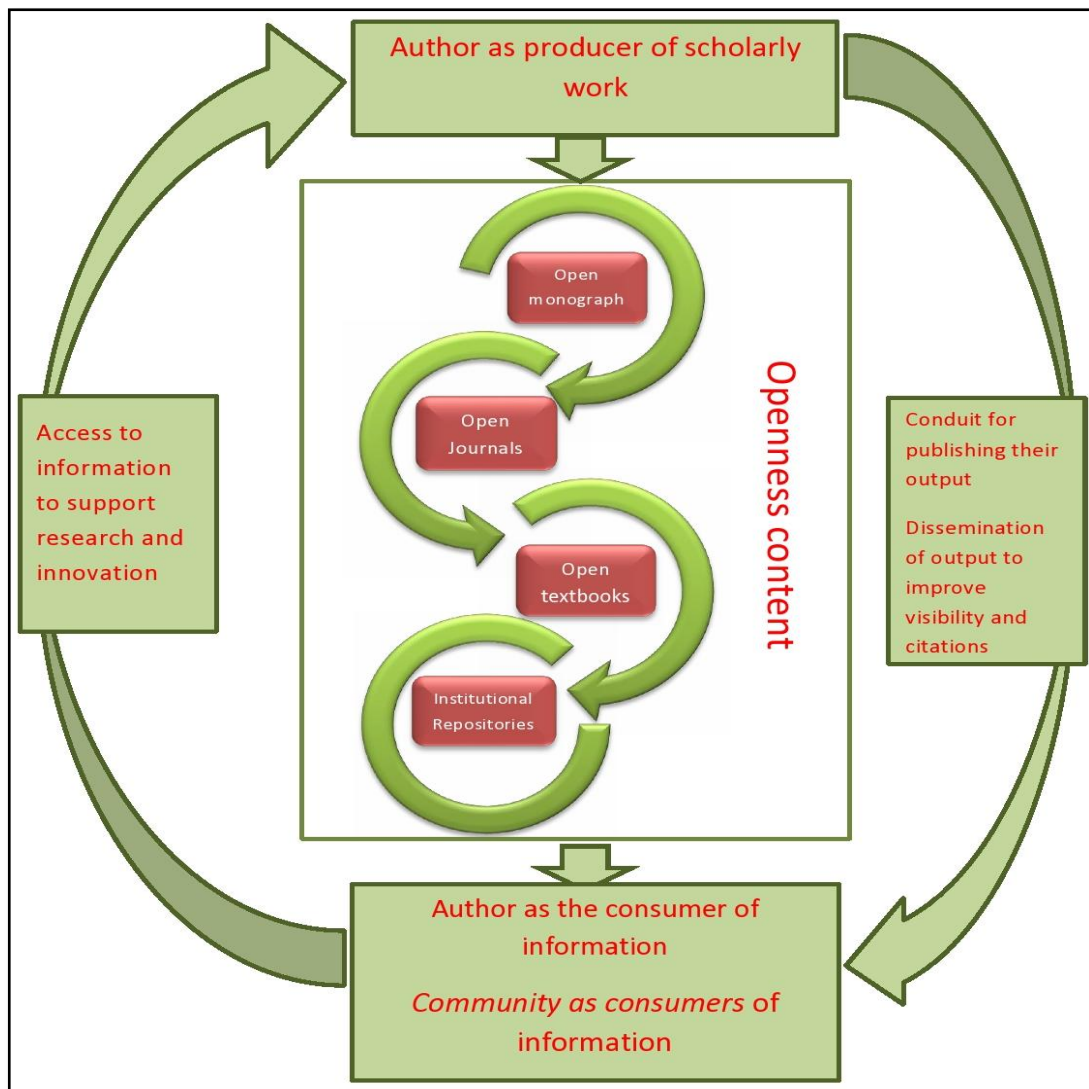
Figure 2

There is significant evidence in the literature that point to the fact that the motivation for the initiation and growth of the openness movement for the authors was the need for them to share their research findings. For the library, the stimulus for the adoption of the openness movement was in response to the spiraling costs of subscriptions. The libraries have responded positively to the growing openness movement through the provision of new services.

New suite of services

As part of the new suite of services, libraries are rolling out two streams for the collection, organization and dissemination of scholarly content. The first is the publishing of content in repositories, especially institutional repositories. The second is the publishing of scholarly content in 'gold' open access journals. As much as institutional repositories have gained substantial traction and is fast becoming a mainstreamed service provided by the academic library, the focus of this paper is on new services provided by academic libraries - the publishing of scholarly content in 'diamond' open access platforms.

Fuchs and Sandoval (2013) define 'diamond open access' as a 'free of charge' publication. Essentially, what this means is that neither the author nor the end user nor institutions such as libraries pay for access to literature published via the diamond open access route. Further, in this model, neither do the authors nor their institutions pay publication fees, article processing charges or other fees for getting articles published. This model is still in its infancy with great potential for a great future. Libraries have taken on the challenge and are developing skills to provide a hosting or publishing service for the publication of journals and monographs.

As much as the suite of services associated with diamond open access is not yet mainstreamed at South African academic libraries, there are a small number of institutions that are embracing the diamond open access model. These institutions have been piloting, experimenting and rolling-out diamond open access services.

Publishing services

There are four South African higher education libraries that offer a hosting (or library acting as publisher) open access journals service. Although publishing is compatible with librarians' traditional strengths, there are additional skill sets that librarians must master in order to provide a robust publishing services to their academic communities. In the South African academic libraries publishing environment, the software that is currently being used to provide this publishing service is the Public Knowledge Project (PKP) software. The Open Journal Systems (OJS) platform is being used for the publishing of journals and Open Monograph Press is used for monograph publishing.

Journal publishing

Stellenbosch University had taken the lead and began carving a path for the use of OJS—three other institutions followed in the footsteps of Stellenbosch University. Currently, Stellenbosch University is hosting 21 titles. The University of South Africa publishes five titles via OJS. These titles are: *Journal of Philosophy in Schools*; *International Journal for Educational Integrity*; *The Journal of Educational Enquiry; The Journal of Student Wellbeing*; and *Teaching and Learning in (Higher) Education for Sessional Staff*. The University of the Western Cape publishes two titles and they are *Critical Studies in Teaching and Learning* and *Journal of Student Affairs in Africa*. The University of Cape Town began its OJS journey with the publication of an undergraduate journal *UR@UCT: undergraduate research*. As a research intensive institution, UCT's ambition is to increase the number of postgraduate students through the growth of the pipeline of undergraduate students. The University pursues the principle that research begins at the undergraduate level and hence the objective of this journal is to give undergraduate students an opportunity to get published.

Further, the creation of *UR @ UCT: undergraduate research* provides a conduit to showcase scholarly output from undergraduate students. The journal is also meant to encourage and explore intellectual capabilities beyond the classroom and provide a forum for the exchange of research ideas. Publishing research as an undergraduate provides a bridge between knowledge and experience. The opportunity to publish in a journal allows undergraduates to explore creating new knowledge and career opportunities in the academic world.

To demonstrate that the products created (or hosted) are used by the user and that it is what the user wants, the author uses the exemplar of the *South African Journal of Libraries and Information Science* (*SAJLIS*) to examine the growth in usage. The author posits that there is a positive association between usage and want: the users want access to the articles hence there is an increase in views and downloads. If there is not a want or a need, there will be no views or downloads. The exemplar shows that this open access title is what users want as there is evidence highlighting an increase in visibility, accessibility and usage.

The total number of articles in SAJLIS that are hosted on OJS is 85 and this includes digitally born articles and those that have been retrospectively digitized. In less than 24 months, the 85 articles that were available via open access had 26 887 downloads with an average download of 323 per article. This is phenomenal given that this has been a title that was 'limited' to a very local readership. The 26 887 downloads are distributed among 126 countries with 55.85% of the downloads coming from South Africa. *Table 1* lists the 'top ten countries' and their respective percentage downloads.

Country	% Downloads
South Africa	55.85
India	5.10
USA	4.84
Nigeria	3.79
UK	2.26
Kenya	2.19
Australia	1.30
Tanzania	1.12
Philippines	1.09
Malaysia	1.08

Table 1: Percentage downloads from 'top ten countries'

The fact that the journal has been made available to the international reading audience is the first benefit for the author. All researchers aspire to have their research output read as widely as possible. Readers, especially those from countries outside the African continent, now have access to content that they may not have had when the journal was locked in a subscription model. There is very little debate that this new service is what both the authors and the readers want.

Monograph publishing

As indicated above, there are only four institutions in South Africa that provide a journal hosting service. At this point in time, in South Africa, there is only one academic library that is providing a monograph publishing service. The support for the publishing of OERs, via open monographs, is still in its incubation stage.

Much of this slow development is attributed to what Hylén (2006) says is a relatively new phenomenon which must be viewed against the backdrop of the trend towards openness in higher education. At the centre of the monograph publishing service is the desire to distribute open educational resources (OERs). The founding principle of OERs is that the end-user should not only be able to use or read the resource but they should also be able to adapt it, build upon it and thereby reuse it, given that the original creator is attributed for his/her work (Hylén, 2006; UNESCO, 2008).

A distinction must be drawn between OERs, open monographs and open textbooks. As much as there is a great deal of overlap, the distinct will help articulate the direction that libraries need to pursue.

The distinction between open monographs and open textbooks is based on the primary characteristics and/or purpose of the book. In terms of the similarities, both open monographs and open textbooks are material that are freely available and are managed by creative commons licenses. Essentially, both books can be downloaded, customized or printed without the expressed consent (written or otherwise) of the author.

In terms of the differences, open monographs are written primarily for a community of scholars, be it students, peers of the authors or any other persons. Open monographs may be used as required or supplementary reading in teaching process. However, its primary purpose is not that of a curriculum linked educational text. Open textbooks on the other hand are closely linked to the curriculum and aligned to teaching philosophies and pedagogical approaches of the academic. It is written primarily for students and is intended to be used in the lecture halls.

There is close synergy between open textbooks and OERs. Open textbooks are created **specifically** for teaching purposes which is the golden strand in OERs. OERs, *per se*, is the broad concept with open textbooks being one of the modes of delivering an open educational service. An open textbook is no different from an open journal article which can be added to online course readers for students.

The development of open textbooks is an imperative given that the cost of textbooks is spiraling out of control. This is the case not only in South Africa and the developing world but the world at large. Open textbooks help solve this problems as they are available online for free and licensed under a creative commons license. Students who would like a hard copy of a book can choose from a variety of lower cost printing options.

Open monographs

The University of Cape Town Libraries is in the throes of its OMP (open monograph press) pilot project having already published two open access monographs (see Appendix 1 *Figure 3*). Currently (as part of the project), the Libraries are experimenting with two other titles showing distinct enhancement from the earlier two publications. The capacity to hyperlink content to audiovisual material residing in a platform created for that specific purpose exponentially improves the user experience, especially for learners and educators from the developing world.

It is anticipated that before the end of May 2016, the third open monograph will be made available. Further, it is anticipated that, by the end of June 2016, the citation handbook that is being prepared will be published.

As part of its commitment to the institution's and the country's transformation agenda, UCT Libraries are in discussion with the Faculties of Law and Health Sciences for two open textbooks. It is estimated that, with the publication of the law open textbook, the student community engaging in legal studies will save, at the least, $50 (750 South African rands). If one has to extrapolate this saving, the country will be saving in excess of ten million South African rands. This saving (R750.00) is much more than what student's want (law students at this point in time) – for many it is an absolute necessity: it is a enabler for continued studies.

The second open textbook is as much an open textbook as it is an open monograph. This book is done in collaboration with the Faculty of Health Sciences. This is a specialist book on ears, nose and throat surgery and treatment. The audio and video clips will help students understand surgical procedures and well as assist practicing doctors in Africa and many parts of the world with the latest surgical procedures. Given the complexities associated with the above two publications, the anticipated date of launch is January 2017.

Conclusion

The openness movement gives new meaning to 'creating products that people want to use'. The growth of the openness movement, for authors/researchers, started with the need for them to share their research with the widest possible audience. The libraries joined the fray as a direct response to the serials crisis. In both instances, the purpose for the adoption of openness principles were underpinned by the need for scholarly output to be accessible to the widest reading audience with minimal financial barriers. For the author, the availability of the research to the widest audience was, amongst others, to gain recognition for his/her contribution to the knowledge base of the discipline. For the libraries, the acquisition and dissemination of scholarly literature to meet the demands of the user population became paramount. What MAY have started out in the 1990s, when access to the World Wide Web became widely available, as a knee jerk reaction to the need to share research output has now become an imperative for both the author and the library.

The 'call to duty' to meet the wants of both the readers and the author has significantly influenced academic library transition. In response to the needs of both the reader and the author, academic libraries are redefining their roles and responsibilities with open scholarship becoming center and front. The influence is such that librarians are required to gain new skills to meet this tsunami. Services such as repository management and the hosting of journals and monographs are fast replacing traditional services such as reference services. It is not going to be too long before 'the library as a publisher' becomes a mainstream service. The openness movement is not a knee-jerk reaction - it is fast redefining academic librarianship ensuring a relevant and efficient UX experience.

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