

# **Embedded Library Practices in Africa: A Literature Review**

MICHAEL MENSAH

MICHAEL MENSAH holds a Master of Arts in Information Service from University of Ghana. He is a Junior Assistant Librarian, Takoradi Technical University, Takoradi, Ghana. He is the Electronic Resource Librarian of the University.

CHRISTOPHER M. OWUSU-ANSAH

CHRISTOPHER M. OWUSU-ANSAH holds a PhD in Information Science from University of South Africa. He is a Senior Assistant Librarian, College of Agriculture Education, University of Education, Mampong-Ashanti, Ghana.

## **ABSTRACT**

Embedded library practices are being adopted in many academic libraries to integrate librarians in the research agenda of their institutions. The purpose of this study was to explore the changing role of embedded librarians in academic libraries and how African academic libraries, particularly, in Uganda, Ghana, and Nigeria are exploiting this practice to promote their expertise. The study employs a literature review approach by analysing the extant literature on the subject. The review revealed that most embedded librarianship takes the form of a librarian taking on a dual role as teacher-librarian teaching information literacy or as a co-teacher in another subject who helps with information literacy and research writing around that subject. In some other instances, librarians are involved in online programmes to compliment information literacy skills. Most significantly, the review has brought to the fore the challenge of limited literature on embedded librarianship on the African continent. However, in the selected cases in which

the literature was reviewed, it was found that a number of practices are being adopted by libraries and librarians, albeit unconsciously, to integrate the library into the work of researchers in their institutions.

## **Introduction**

The concept of “embedded librarianship” has been a high-flying buzzing concept in the library and information science literature since 2004 (Sharma et al. 2014; Schulte, 2012; Knapp, 2013). It has received more credence in online discussions, conferences, journals, library and information science literature, academic papers, and presentations. Libraries are in continual struggle to establish their relevance to the academic mission and visions of institutions of higher learning which do not, for all intents and purposes, recognise the broader value of libraries (Monroe-Gulick et al., 2013). Academic libraries have long discussed the need to remain significant and show value to their institutions. Embedded librarianship is recognised as one of the approaches to showcase the significance of academic librarians outside the walls of the library. In this study, the authors review literature on the concept of embedded librarianship with the purpose of establishing the role of an embedded librarian in an academic library with a view of proposing strategies for developing the practice in African academic institutions.

It is believed that developments in information and communication technology (ICT) have exposed the library profession to additional challenges; among others, the proliferation of different technologies that are challenging the traditional role of librarians as preferred information gateways (Bonnand and Hansen, 2012). Users with an internet connection can access a library's collection with their laptops, Ipads, tablets, phablets, and with their mobile phones in the comfort of their homes, offices or restaurants. As pointed out by Saunders (2007 p.21) “the internet and Google have changed the information landscape for the library and librarianship to remain relevant in the 21st century, library professionals must respond to these developments.”

One of the responses to this situation by librarians is the development of the embedded librarian concept. An embedded librarian

is a librarian whose services are integrated in a research group; sometimes his role gets him into the teaching faculty and in other instances s/he is embedded in the project activities of his clients. S/he plays more of a collaborative role than playing a supporting role from his library or his comfort zone. This article reviews important literature on recent developments in the literature of embedded librarianship with specific focus on the African situation. The article takes the form of a literature review and addresses the following themes; the history and nature of background of embedded librarianship, the concept of embedded librarianship, benefits of embedded librarianship, downsides of embedded librarianship, and selected cases of the practice of embedded librarianship in Sub-Saharan Africa.

## **History and nature of Embedded Librarianship**

The history of embedded librarianship originates from the concept of library outreach services in academic departments (Nicholas et al., 2015). Here librarians provide reference services and collections of library materials within the boundaries of the department they serve. These days, however, most departmental library services have been integrated into the main university or college libraries due to the increase in digital content, struggle for space for non-library uses, financial factors, and the costs of preserving the collections (Drewes and Hoffman, 2010).

According to the Merriam Webster Online Dictionary (2015), “to embed”, among others, is to place or set firmly (something) in something else or to make something an integral part of or to surround closely. Defining the term “embedded librarian” is quite difficult since most of the literature defined it from different perspectives with varied justification. Thus, embedded librarianship is not a new term but a novel concept in our modern era of librarianship which according to some authors and first appeared in the literature around 2004 (Sharma et al. 2014; Schulte, 2012; Knapp, 2013).

The term “embedded librarian” can also be traced to the term “embedded journalist”, a concept associated with the Iraqi war in some few years ago. In this context, journalists were integrated into the

general public taking into consideration how close they were “embedded” into the scene of the action (“Pros and Cons of Embedded Journalism,” 2003). According to Dewey (2005: 6) emphasis was on the fact that embedded members in the quest of participating are experiencing and monitoring, as practically as reasonable, the everyday life of the prime group and how “overt purposefulness” is key to this all-inclusive cooperation. Dene (2011:225) succinctly defines embedded librarianship as “an integral part to the whole based on the geological definition of an embedded element”. In their literature review, Shumaker and Talley (2007) referred to embedded librarians as librarians whose main agenda is to recognize the requirements of one or more identifiable groups, establish relationships with those client groups, get enough information about what they do in order to understand the nature of their assignment, and serve them with information that are custom-made and focused on the utmost needs of the group. On his part, Chatterley (2013) describes embedded librarians as “immediate information service providers who present specific services to an individual or group of individuals in an organization”.

Berdish and Seeman (2010), on their part, demonstrate an embedded librarian curriculum which is focused on offering intensive research assistance to undergraduates in business-related courses at the University of Michigan. In particular, they focused their assistance in a results-oriented learning environment named Multidisciplinary Action Program. Librarians in this curriculum offer research assistance to small groups of students, providing them with an outline and references of appropriate resources to use.

Foutch et al. (2007) define an embedded librarian as “a librarian, who audits a formal course with students, is available to the students before and after class for networking and for questions, and who identifies learning needs throughout the semester and provides workshops and individualized instruction based on those identified needs”. Foutch et al. (2007) add that embedding requires more direct and purposeful interaction than acting in parallel with another person, group, or activity. Gaines (2014) describes the embedded librarian as one who becomes part of the customer community rather than a solitary service provider.

## **The concept of Embedded Librarianship**

According to Schulte (2012), the concept and practice of embedded librarianship is still debatable among scholars and professionals alike; and researchers attempt to conceptualise the concept. Chatterley (2013) identifies three models of embedded librarianship: first, academic librarians who are included in the physical or online lessons; secondly, special librarians who move from their primary location and position their services into the user group they serve; and lastly, clinical librarians who serve as clinical “informationist”.

Myers and Warner (2013) argue that there is embedding in librarianship when a librarian plays, to some extent, the role of academics in an academic setting. They further believe that embedded librarianship is evident when the librarians go out of the library and position their work within the work of a particular group they intend to serve. Embedded librarians assist research groups to identify the relevant literature about the subject of study (Schulte, 2012; Freiburger and Kramer, 2009). Gaines (2014) outlines a number of these approaches in several American universities. This assertion is supported by Bartnik (2007) who demonstrates her embedded librarian function in the College of Business and Public Affairs at the Western Kentucky University. Her role permitted her to relocate to the faculty full time. She initiates a close relationship as an ad hoc staff member. Some of her varied responsibilities include attending staff meetings, supporting faculty publications, taking part in interviews with faculty applicants, and offering in-class and online teaching and training assistance. Her relationship gave her the opportunity to champion the negotiation for office space in a high traffic area, and although she remains on the library's payroll, have the benefit of participating in every meeting of the client group. Bartnik's role address to a grand prospect of embedded librarianship to build close client relationships given the right situation and individual involvement.

Federer (2013) sees an embedded librarian as a research informationist who works with a particular group of researchers or a project from beginning to the end of the research. The activities of the research informationist (embedded librarian) in the research group

include data identification, searching and management. It could extend to building permanent relationship between the librarian and researchers around the research activities. However, Foutch et al. (2007) report how librarians were embedded physically within instruction programmes to assist the learners in finding credible sources of academic literature as well as preparing a research paper. At the end of the programme, the quality of the students' work was enhanced academically.

Thomas (2013) argues that embedded librarianship carries the librarian to the domain of his clients rather than waiting for them, in order to showcase his resources, skills and competencies to build working collaboration with his users. He adds that embedding of library services may entail playing a front-runner role in deploying and incorporating technology into teaching and research activities of the university as the case may be, although, all such endeavors were traditionally carried out by librarians through different service products and services such as user education, information literacy, and current awareness.

Sheingold and Harrod (2013) assert that embedding librarians in distance learning is one of the best innovations in twenty-first century librarianship. However, their view of embeddedness, though comprehensive, is essentially concerned with online library instruction, rather than the librarian leaving his comfort zone (the library) physically in order to embed his services to his client's project. This view is also shared by Mathew and Schroeder (2006), and Bonnand and Hansen (2012). Matthew and Schroeder (2006) hold the notion that embedded librarianship involves a situation where library instruction and services are blended into an online educational programme, where librarians attend to users' queries and render all the traditional library services around a particular course of study or assignment through the use of web-based applications. However, they believe that when library instruction is directly linked with a particular course or research work, the result tend to be better. In this arrangement the embedded librarian serves as a teaching assistant to a lecturer. They predetermine the information competency that students need and as far as the course is concerned, the librarian prepares the content and guides the students through. Riccio (2012) also argues that the responsibilities of librarians have moved on from being only in the library to mixed library responsibilities with other non-library programmes.

Embedded librarianship is not a new idea to a certain extent; it is a growing development and expression used to cover series of activities, services, and programmes. The advancement of innovative digital information resources and other cost-effective and administrative alterations have made embedded librarianship seriously considerable to librarians and information professionals (Shumaker and Mary, 2009). "Embedded librarianship is a powerful way to show the impact that librarians can and do have beyond the traditional functions of the library and why librarians are needed now more than ever" (Carlson and Kneale, 2011). For example, one of the emerging roles of embedded librarians is to assist researchers in grant applications, as well as, playing a role of co-principal investigator in literature search to support grant applications (Schulte, 2012). Freiburger and Kramer (2009) also summarize the roles of an embedded librarian in their academic faculty: "She was involved in a number of faculty committees and funding teams, has offered literature searching to help 16 grant requests, and working with faculty, frequently teaching information literacy aspects in different courses. She also conducted several workshops...."

Gore (2013) reports on the dynamic role of a research informationist, as an embedded librarian, within a medical research group. In this role, the embedded librarian assists researchers through the process of writing grant applications and throughout the lifespan of the research. The librarian also worked in the group as data management expert, providing comprehensive literature review, guiding the researchers about technology-related questions and instructing members in advance search techniques. The librarian served as an active collaborator in the group rather than a supportive member.

### **Benefits of Embedded Librarianship**

Embedded librarianship is significant in today's technology-savvy society. The merits of embedded librarianship can never be over-emphasized. Embedded librarianship can enable institutions to see the value of librarians in this era of high technology-ubiquitous era where people can access information in their rooms and cars. Holly and Myers (2012) aver that embedded librarianship is one way to help the library

remain and to be perceived as relevant within an institution. Embedded librarianship is an influential approach to explain the impact that librarians can have; going beyond the usual functions of the library, and why librarians are considered necessary now more than ever.

Embedded librarianship requires initiating cross-training of library staff. This happens due to the fact that librarians, in order to be embedded, are supposed to have diverse knowledge which will enable them to be integrated to other campus activities. Carlson and Kneale (2011) add that an embedded librarian must have an entrepreneurial mindset; the capacity to identify or create a chance and take an action aimed at understanding the modern way of putting knowledge into practice. Thus, the success of an embedded librarian depends on the librarian cultivating an entrepreneurial mindset which involves being practical in discovering and pursuing opportunities through attending different courses and seminars to be able to sell him/herself in the emerging movement of embedded librarianship. It is, therefore, argued that embedded librarianship is an opportunity for librarians to acquire new knowledge and skills.

The practice of embedded librarianship can also ensure stronger relationships with different campus partners. Embedded librarians can improve their value through embedding themselves in other activities such as teaching, consultancy and research. This will require librarians moving from the library building and integrating with different people from different fields in the institution. The resultant relationships will serve as unique tools for librarians to understand their user groups deeply and as a result be able to meet their needs in a simple way. Holly and Myers (2012) explain that embedded librarianship can create an important relationship between librarians and other people in different departments within the institution and this is very crucial to ensuring other departments appreciating the value of librarians.

Furthermore, an embedded librarian enhances the reputation and image of the library within an institution. Gaines (2014) reports that the embedded librarian programme at the Colleges of the Georgia Regents University resulted in increased visibility of librarians. This improved visibility may also result in increased teaching and reference transactions initiated by librarians (Gaines, 2014). In fact, Farragher

(2012) observes that embedded librarians have more research skills which are highly required in a research team. Some of these skills include the use of Web 2.0 in the research process, such as wiki space, LinkedIn, data sharing and curation, organization and preservation of research and study materials. This peculiar knowledge will make the librarian's contribution vital and recognizable.

Finally, the practice of embedded librarianship can make librarians and the library to be more responsive and proactive in the delivery of information services. Carlson and Kneale (2011) opine that librarians must reconsider their roles in their institutions and become accustomed to the new age of research and scholarship. Embedded librarianship creates an opportunity for librarians to connect and interpret library policies and strategic plans, through working with other people of different fields. Librarians can also explain policies and strategic plans of the library and this happens when embedded librarians get the chance to work in research teams which comprise many people such as professors, doctors and assistant lecturers; and this will also be an opportunity for marketing library issues.

### **Problems of Embedded Librarianship**

There are also downsides to implementing the concept of embedded librarianship in libraries. First, some researchers suggest that librarians may lose their professional identity by embedding their services within the services of other professionals (Thomas, 2013). This problem is evident at the University of Arizona when a Dean at the Faculty of Medicine suggested that embedded librarians should change their nomenclature from "College of Pharmacy Liaison Librarian" to "Pharmacy Information Liaison Service", stripping the librarian from his actual nomenclature (Freiburger and Kramer, 2009). In addition to the above, Chatterly (2013) supports this view when he suggests that librarians, when embedded, are identified with various titles such as information specialist, documentalists, researchers, analysts and so on.

Second, librarians embracing additional responsibilities through embedded librarianship may experience increased workload which, sometimes, becomes overwhelming (Foutch et al. 2007). There is

a possibility of relegating one's role as an embedded librarian to doing something else. In their literature review, Bartnik, Farmer, Ireland, Murray and Robinson (2010) reveal how new administrative duties took a librarian away from her ideal embedded situation. Though her “embeddedness” did not end entirely, the overall experience changed, including the loss of ad hoc faculty member privileges, an overall decrease in connectivity with faculty, and fewer research consultations.

Carlson and Kneale (2011) assert that within a different vein of support, embedded librarians require the approval and understanding of fellow colleagues who may need to adjust their boundaries and comfort levels to accommodate the new model of librarianship. Hoffman (2011) emphasises the important responsibility embedded librarians have to support students enrolled in distance education courses so they can receive equal or same resources available to students taking on-campus courses. This requires innovative strategies and creativity, which may result in increased workload for an embedded librarian (Dewey, 2005). Depending on the availability of institutional or academic resources and the degree of embeddedness, embedded librarians may experience varying degrees of job latitude (i.e. job responsibilities that span several areas), over- tasking and burn-out (Bennet and Simning, 2010). As a general caution, Gaines (2014) admonishes embedded librarians to be mindful of their responsibility towards their original duties of collection development, collection analysis, grants application, participation in faculty governance, among others.

Lastly, another challenge involved in implementing embedded librarianship is the fact that embedded librarianship is labour-intensive and requires a hierarchical organizational structure (Bennett and Simning, 2010). Embedded librarianship sometimes takes the librarian to the classroom; he teaches, sets exams questions and marks papers under strict deadlines. This, coupled with, open door policies of librarians can be quite an energy-sapping experience for librarians.

### **Case studies of Embedded Library Practices in Africa**

A number of libraries on the African continent have implemented embedded programmes or those that have the semblance of

embeddedness. This section presents a review of programmes designed by librarians to ensure embeddedness in library services in selected countries on the African continent and they include Uganda, Ghana, and Nigeria.

## **Uganda**

In Uganda, academic librarians are embedding themselves in research groups. For example, Musoke (Library Connect, 2011) explains how Makerere University Library is involved in projects in which librarians develop or repackage information within the digest to support field visits and solve community-based health problems of people living in rural areas where there is no internet connectivity.

Another example of embedded librarianship is manifested in the work of Onan Mulumba, the winner of the Research4life library impact competition designed to recognize the role of librarians in building research capacity and boosting research output among scientists, doctors and policymakers (Schemm, 2013). In his report, he mentions that he supports research through providing awareness and conducting training about the University Library Resources, mainly with the Research4Life resources. He is quoted as saying, "... I have the responsibility of organizing and conducting training for undergraduate students of all years and all programmes... for Master's and PhD students, faculty, and visiting researchers and scholars".

## **Ghana**

Embedded librarianship is a term that might not be popular in Ghana but most librarians' activities in the various universities and technical universities suggest some level of embeddedness in their work. One of the key areas most librarians in Ghana embed their activities is in the area of information literacy. E-learning and e-libraries are used by University of Ghana and University of Cape Coast to train distance education students on how to use information literacy tools effectively. The initiation of e-books and e-resources in our various universities and technical universities by librarians has improved research activities.

According to Dadzie (2005), electronic materials are very useful resources that are used alongside print-based resources. In addition to this, electronic resources are noted to be very helpful, especially to post graduate and distance students who may have restricted access to library resources in conventional formats (Sharma, 2009). It must be pointed out that although most librarians in the universities and technical universities are improving their online databases with full-text journals and articles, Dadzie (2005) indicates that the general usage of scholarly databases was quite low. With “ezproxy” link created by University of Ghana, distance and other non-resident students are able to access the electronic resources of the university without physically visiting the campus.

In addition to this, a number of traditional universities and technical universities in Ghana have, apart from their main libraries, both departmental and hall libraries. Librarians relocate full-time from the main library to the various halls and departmental libraries to build better relationship with the department and hall members. In this way, they are able to fulfil their traditional librarian role and also involve themselves in the programmes and activities of the department or hall. Librarians performing these roles may not be recognized as embedded librarians, but some of their activities in the various faculties and departments suggest embeddedness.

## **Nigeria**

In Nigerian universities, the departments and units in the various faculties communicate with library staff through online portals. Patrons have the opportunity to ask questions in real time, be guided as to how to use the electronic databases and also request training on research skills. One unique practice in Nigerian universities is that librarians in some universities are members of faculty boards and also function as Faculty Board Secretaries. Oyelude (2013) revealed that she played the role of an embedded librarian at the University of Ibadan for the Faculty of Law and Social Sciences. According to her, she used the opportunity to conduct a research survey on the role of embedded librarians at the university. Her findings indicate that the embedded librarian act as gatekeeper for faculty and students, thus helping both to sift information

they need. Her finding also showed that embedded librarians have more than one “boss” including the university librarian and the head of the academic unit which the librarian has relocated to. Some of the activities she was engaged in include advising faculty on students' projects, providing information literacy instruction for students and lecturers, and assisting in general administrative work.

## **Conclusion and Recommendations**

The purpose of this study was to explore the changing role of embedded librarians in academic libraries and how African academic libraries in Uganda, Ghana, and Nigeria are exploiting this practice to promote their services and hone their expertise. The findings, however, suggest a dearth of literature reporting on explicit embedded librarian programmes in academic libraries, at least, in the Sub-Saharan African context (Schulte, 2012). Embedded librarianship is the one way of raising the profile of African libraries to remain relevant in the information society of the 21<sup>st</sup> century.

The review of practices in these African countries shows that there is no standardized approach for the practice of embedded librarianship as it may be implemented strategically or haphazardly. The only common notion about embedded librarianship is the belief that it entails librarians' work being blended or integrated into the work of a particular group of users or a particular project. However, from the review of the practices, it appears that the roles of embedded librarians in the academy include teaching information literacy and conducting literature searches to facilitate the research process of research groups. Based on these insights, the following are proposed for African libraries that wish to implement embedded programmes to support research groups in their institutions.

1. Librarians may provide assistance to research groups by making available to them resources and skills for development of their ideas and ensuring research creativity. This may be achieved by identifying relevant resources that are of interest to these researchers and groups. This may be complemented by conducting literature

- searches, reviewing and indexing which is one area that librarians are very excellent at.
2. A librarian on a research group can also help in identifying funding sources, while providing much needed training on grant proposal and report writing. Here, the librarian provides guiding materials on research writing, citation and referencing recommended by funding bodies.
  3. A librarian's role is also visible when it comes to ensuring that intellectual property rights of authors are protected. Some researchers sometimes ignorantly or inadvertently give up their copyrights without knowing the implications on their career and professional development. It is the role of librarians on a research team to initiate training on copyright and intellectual property rights in general.
  4. In the dissemination of research output, a librarian has knowledge of social media tools to market and share results instantly. Some of these qualified platforms for dissemination of research results include academia.edu, LinkedIn, Google scholar, Researchgate and Open Access Institutional Repositories. In addition, links to open access publishing and manuals on how to use open source publishing tools can be provided to the group. Also, providing information to research groups on upcoming conferences and workshops to present research findings can be the librarian's contribution to the research agenda of the institution.
  5. During project closure, researchers rarely pay attention to details. The librarian is good when it comes to information management and providing feedback. S/he can document the whole research process, index, file, and later provide feedback to funders and respondents on behalf of the research group s/he embeds.

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