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THE CHANGING ROLES OF LIBRARIANS IN THE 21ST CENTURY: A LOOK AT EMBEDDED LIBRARIAN

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Abstract
The advent of 21st century which is characterized by constant and consistent adoption and use of internet and ICTs have greatly changed the roles of Librarians from being book's guards or traditional reference librarians to digital information service providers. Hence, this paper discussed who an embedded librarian is; as one who collaborates with users through incorporating information literacy into class, partnering to provide specialized research assistance to students over a semester, helping a faculty member find resources, provide needs-based services, offer convenient and user-friendly services outside the library settings. Similarly, the paper explored the constituents of embedded librarian which include: ability to take library service outside the library, ability to be a team player, ability to build a trusted relationship etc. The paper also highlighted the nature of services provided by embedded librarian that entails narrowing topics and brainstorming idea for research, helps students locate credible information sources and peer reviewed articles among others. Also differences between traditional and embedded librarianship services were captured. The paper further discussed technology in embedded librarianship which involves online, hybrid and inverted classroom embedding. Subsequently, the paper discussed the future of embedded librarian. In addition, challenges of embedded librarian were also discussed which encompasses, lack of technical know-how for new technologies, lack of human relations among others. Consequently, solutions to the challenges facing embedded librarian were also expounded which has to do with provision of in-house training, acquisition of technical skills among others.

Keywords: Changing Roles, Librarians, 21st Century, Embedded Librarian

Introduction
The advent of 21st century which is characterized by constant and consistent adoption and use of internet and ICTs have greatly changed the roles of Librarians from being book's guards or traditional reference librarians to digital information service providers who acquire, select, organize, store, preserve and disseminate information electronically in order to meet the information needs of users. Moreover, the modern librarian's role has evolved into one of the most multifaceted job as it

involves engaging the patrons with the latest resources and technological developments, which is not an easy feat given how quickly technology changed (Shumaker and Talley, 2013). However, these changes had shaped the work of librarians as they took part in academic, administrative, athletic, cultural, research, teaching and learning arenas of users through collaboration, to enable users understand their teeming information needs and provide services to them base on such needs. Subsequently, the emergence of these new roles had led to the rise of what is called "an embedded librarian" Thus, this article will discuss the concept of Embedded librarian, the constituents of embedded librarianship, difference between traditional library services and embedded librarianship services, technology issue in embedded librarianship, challenges of embedded librarian and the way forward.

Who is an embedded librarian?

An Embedded librarian is one who collaborate with users through incorporating information literacy into class, partnering to provide specialized research assistance to students over a semester, helping a faculty members find resources, supporting their research form, partnerships on the department and campus level, provide needs based services, offer convenient and user-friendly services outside the library settings, become immersed in the culture and spaces of users, understand the discipline including the culture and research habits of their users (Shumaker, 2013). Similarly, an embedded librarian is one with the zeal, determination and desire to follow users to their locations interact with them, know their information needs, assist them with the information or teach them the techniques of locating and searching the information as well as helping them to evaluate the credibility and certainty of the information they want to use (Staurt, 2019). Furthermore, an embedded librarian is one who equips himself with the new trends not only in librarianship but also in other professions in order to be versatile and presentable in-service delivery (Lamley, 2016). An embedded librarian is a librarian that is integrated into an online class for a period of time to support the students in their research process. He/she is a mobile librarian who goes as far as faculty, departments and students gossip centers to create awareness about the available resources in his/her library and invite the users to use them for their academic purposes. Consequently, an embedded librarian is a technology-based librarian who has the technical know-how of almost all the new technological devices that are useful in the library such as computers, scanners, integrated library software, databases, search engines, search strategies, Cloud computing etc.

Constituents of embedding practice

Embedded librarianship deals with a number of features which without it, the task of embedding practice cannot be possible. In view of this, the following are what constitute embedding practice of embedded librarian (Kemp, 2013).

a) **Ability to take library service outside the library**: To practice good embedding task, embedded librarians should have the zeal, determination and courage to take library services to user's locations, so as to collaborate with them and assist them to meet their information needs. This will of course fulfil the requirement of good embedding practice.
b) **Ability to be a team player**: As an embedded librarian you will be a part of team and therefore you must be able to play well with others. In particular, you will need to have an understanding of how the team will operate and perform its duties. This includes not only knowing what your roles and responsibilities are, but also understanding the roles of the other team members and how you will interact with, support, and receive support from them.

c) **Ability to secure support from your organization and colleagues**: Working directly with clientele outside of the library is a change not only for the embedded librarian but for his or her library, as well. To be successful you need to solicit the understanding and approval not only of the library's administration, who may need to adjust your responsibilities, but your colleagues who may also be affected by your new role (Nagarka and Murari, 2010).

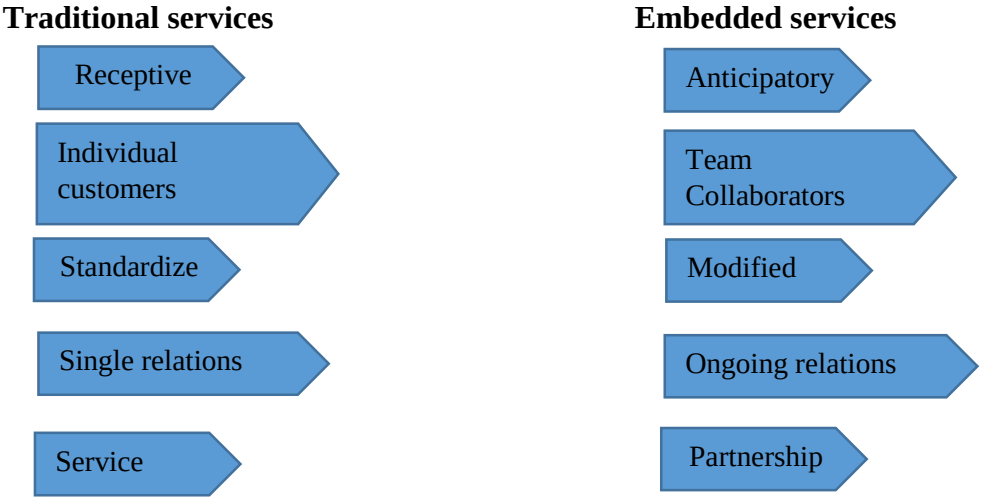
d) **Ability to translate library science to other disciplines:** Librarians are adept at translation. In reference work, librarians ascertain a patron's needs and then translate these needs into the language of the relevant information ecology in order to connect patrons to appropriate sources. Embedded librarianship requires you to apply this skill in new ways. Very few people have a real understanding of what librarians do, outside of working with books and journals. A key component of becoming an embedded librarian is being able to explain your knowledge, skills, and expertise to others in ways that are relevant and meaningful to them and their situation. This is not small task and may take much time, effort and repetition.

e) **Ability to build a trusted relationship**: At its most basic level, the embedded librarianship practice rests on the interplay of talking and listening with the researchers that you serve, with an emphasis on teaching and learning from each other. The primary objectives behind talking/listening/teaching/learning are not only to construct an understanding of researcher needs and librarian capabilities, but to build trusted relationships. Researchers need to be able to get to know you and what you can do so that they will come to trust you and see you as a valued colleague and resource. You in turn need to get to know the researcher and trust that he or she will support you and your work in your research collaborations.

f) **Ability to do not just think, but act outside of the box:** At this point most librarians recognize the need to re-examine our roles at our institutions and adapt our work to a new age of research and scholarship. The challenge of course is to actually go beyond mere recognition and to move forward with actual change on the ground. And, while good planning is important, ultimately the actions taken by you and your library in pursuing opportunities for embedding librarians will count more than word

Difference between Traditional and Embedded Librarianship Service

The fact that the overall services delivered by any type of librarian lies upon the provision of effective and efficient information to customers in order to enable them meet their information needs, yet there are some remarkable differences that exist in the context of service delivery. Thus, the following form the differences between typical traditional library services and embedded librarianship services (Staurt, 2019).



Technology in Embedded Librarianship

Recent Developments in the field of information technology particularly emergence of social networking tools and mobile technologies have forced the embedded librarians to rethink about their strategies (Lamley, 2016). This is because, due to digital revolution now large amount of library resources are available in electronic form over the internet with anywhere anytime access option. So, to bridge this gap, embedded librarians saw it necessary to do the practice virtually without necessarily meeting the users in their various locations. Thus, users are now guided by the embedded librarian on how to search latest and updated information using different search strategies such as advance search, Boolean search as well as using different search engines which provide free access to large amount of information. Similarly, issues relating to available and important resources in the library which are not known to them are being taking care of in the practice. It should however, be noted that all these activities are done virtually through online class. Meanwhile, an online class is a class designed to be hold online. Lessons are recorded in form of video, audio or both then uploaded and made viewable on a designated site. Students may go to a certain designated site to view the lessons online at a time which is convenient for them (Hanggi and Valk, 2014). Nevertheless, technologically, embedded librarians carry out their practice into three major categories which can be discuss below:

a) **Online embedding**: An embedding practice of embedded librarian is considered to be fully online if it has been designed in such a way that all the collaboration, integration and guiding of users on how to search, identify and locate information easily occurs without the user of information and embedded librarian being in the same physical location. In this regard, the embedded librarian prepares all what to discuss with the users and upload it on specific website and ask the users to visit the website and download the lesson so as to use it in their convenient time.
b) **Hybrid embedding**: A hybrid embedding is one in which face-to-face embedding task's time is reduced, but not eliminated. It should be noted that, hybrid embedding is considered to be hybrid if at least 30% of scheduled lesson time is replaced by online activities. Instruction may be offered via synchronous or asynchronous web-based learning technologies, including video, discussion, collaborative tools or self-directed learning to ensure a successful delivery of the lesson.
c) **Inverted Classroom embedding**: Also known as the “flipped” model, the inverted classroom embedding does not reduce face-to-face class time. Instead, the course is enhanced with additional digital resources such as video lectures and quizzes that user’s review prior to the lesson (Lamley, 2016). This allows for design of active learning and hands-on activities to be incorporated into the lesson term “flipped” refers to the idea that video lectures might be provided outside of classroom, and what would have been homework assignments completed during the lesson.

Shortcomings of Embedded Librarian

The following constitutes the shortcomings of embedded librarian:

a) **Lack of technical know-how for new technologies:** the dramatic changes in technology require libraries and librarians to acquire necessary skills that can enable them to work in an ICT related environment. Yet many librarians including the embedded librarians especially those in colleges and other institutions of higher learning libraries still finds it difficult to have the skills of operating and using new technologies effectively and efficiently. Hence,

these have resulted in creating great threats to them especially in carrying out their embedding work. Meanwhile, users, these days find it more interesting and understanding to be thought or guide technologically via online class, power point presentation or online chat where the embedding practice will be done virtually. Unfortunately, a lot of embedded librarians don't have the skills to do that. Some embedded librarians don't even know how to search information online, talk more of knowing different search engines and databases that allows for free scholarly articles, journals, eBooks and conference proceedings. (Mathew, 2011) concluded that librarians do not have traditional skills and sufficient background knowledge to meet the changing needs of their customers, as many of them cannot be able to search through OPAC and institutional repository of their library. And because of this challenge they suddenly, resort to teach, guide, integrate and collaborate with the users traditionally.

b) Poor communication skills: One of the critical factors that contribute to the challenges of embedded librarian in the course of doing the work is his/her inability to communicate well and express things clearly. Some embedded librarians find it difficult to spend one hour or thirty minutes talking in front of their users without speaking vernacular. This may likely affect the users in comprehending the program. Meanwhile, embedding practice require sufficient skills and experiences in communication, and in a situation where such crucial skills are miss up then there will be a high tendency of gap in communication and where there is gap in communication the embedding task will not achieve the desired result. Subsequently, (Mathew, 2011) was on the opinion that, many librarians including embedded librarians have problem in communication with their clients, and this makes it nearly impossible for them to deliver what is expected of them.

c) Lack of good human relations: Friendly and polite attitudes are a core to any interaction regardless of its type. Unfortunately, the kind of irritating and unaccommodating attitude embedded librarians exhibit to the users is totally unacceptable and very disappointing. Some embedded librarians will embed with a moody and unfriendly attitude, by shouting, and speaking harshly to users in a manner less way. In its most basic level, an embedded librarianship is expected to showcase interplay of talking and listening with the users with special emphasis on teaching and learning from each other in order to create a mutual trust over the relationships (Carlson, 2011). Hence, unfortunately, this is not the practice from embedded librarian. It's very pertinent to know that, this attitude is giving negative impact to the embedding practice.

d) Poor cooperation from faculty members and the students: One of the most disturbing issues in embedding task, is the issue of an I don't care attitude that faculty members and students portrays to embedded librarians while doing the embedding task. This is to say that, very vast majority of those users have gone on the fact that, with the advent of internet librarians have nothing to give them, they have the opinion that going to library or listening to librarians is a complete waste of time. Worth still, they regard librarians as useless because of the present of internet. To this end, embedded librarians find it difficult to get the cooperation of faculty members and some students which have subsequently affect their role.

e) Poor teaching skills: Teaching skills are paramount important in embedding task. This is because; the embedding practice is more of teaching and guiding

the users through collaborating, interacting and guiding them in order to meet their information needs. Similarly, embedding practice is aim at promoting critical thinking, increase information competence and equip embedded librarians for a lifelong teaching (Kemp, 2013). Hence, this cannot be achieved without proper teaching skills such as lesson plan, classroom management and mastery of the subject matter of what to embed on. Unfortunately, the embedded librarian of these days lacks these important skills and because of that, they find it very difficult to deliver the task successfully.

Solutions to the Shortcomings of Embedded Librarian

The following are the way forward to the constraints encounter by embedded librarian in the course of carrying out the work:

a) **Having good knowledge of new technologies that are used in libraries:** embedded librarian should stick to be potentially versatile and equip him/herself with the skills, knowledge and experiences regarding the new technologies not only in librarianship but also in other academic disciplines (Staurt, 2019). He/she should cultivate the habit of exposing him/herself to the world of technologies. Thus, embedded librarian is expected to know how to make a PowerPoint presentation, be able to search online using different search strategies like simple search, advance search and alternative search method, know the different search engines like google scholar, libgen, freefulpdf, duckduckgo.com, Know the databases like, AGORA, JASTOR, HINARI and TEAL which contains latest, verified and updated information for subsequent retrieval. Possess the skills of uploading information into the institutional repository of his/her own library, create awareness and enlighten users on the importance of it. He/she should further, know how to use OPAC to search and locate books in his/her library, strive to be competent computer literate and be able to use the internet at any point in time.
b) **Having good communication skills:** Embedded librarians should as a matter of urgent need develop themselves with good Vocabularies so as to be fluent and expressible in communication. However, this can be achieve through, self-training, preliminary preparation and constant practice. This practice will bring about confidence, resilience and competency in communication, which will result in achieving the overall aim of the program.
c) **Having Good Human Relationship:** To create favourable environment for good embedding practice, embedded librarian should be friendly, polite and accommodating to users. Moreover, embedded librarian should cultivate the habit of showing a caring and polite attitude in the course of discharging his or her duty. As doing that will enable the users to be very attentive and comprehend the program effectively. For an embedded librarian to work effectively, he/she must cultivate favourable and pleasant interaction with the users (Hanggi and Calk, 2014). Moreover, cultivating this type of relationship will undoubtedly encourage the users to constantly visit the library or to partake in his programs. It should always be noted that, embedded librarian should be courteous, patient and always willing to help library users in the most accommodating and diplomatic way.
d) **Ensuring good cooperation from faculty members and the students:** However, In order to ensure proper cooperation and cohesion from faculty members and the students, embedded librarian should create value to him/herself by embarking on an active and comprehensive campaign of marketing their products to faculty members and the students. This can however, be achieve through educating them

on the number of verified, authenticated, valid, and currents books, databases and search engines that provide for free access to hundreds and thousands of eBooks, articles and journals in the library. Also, He/she should encourage them to use those resources as they have been acquired solely for their academic consultation. Similarly, the embedded librarian should also enlighten the faculty members and the students to desist from using any types of information over the internet without proper evaluation as doing that may leads to using information that is not genuine. However, by putting this campaign into practice, the embedded librarian will automatically boast the confidence and interest of faculty members and the students on the practice and the library and therefore bringing about cooperation and unity which may yield an important result in the practice.

e) **Having good teaching skills:** teaching skills in embedding practice is a dynamic endeavour which serves to build bridges between the embedded librarians and the users (Kemp, 2013). Therefore, to set the record straight, embedded librarian, should be aquatinted with the necessary skills in teaching profession by breaking the items to be discuss into syllabus, scheme of work, lesson plan and lesson note. This will of course bring of sanity, clarity and mastery of the subject matter of what to present. Finally, embedded librarian should try to maintain good contact and presentation in order to achieve the aims and objective of the program. Teaching skills in embedding practice is of course an essential ingredient that makes the work of embedded librarian easier.

Way Forward

The primary goal of an embedded librarian has always been to ensure that information has not only been made available and accessible to the users, but also users are properly guided on using the right information in the right format and in the right personal way for effective and efficient decision-making. Consequently, an embedded librarian has to be innovative in information service provision. He/she should also be in touch with the ever-changing needs of the community served (Carlson and Kneale, 2011). Subsequently, an embedded librarian should adapt easily in a permanently altered environment of information; he/she should have an imperative experience in education and possess a considerable amount of communication skills. Embedded librarian survival will be ensured by the fundamentals of his science, skills and roles played.

Conclusion

Embedded librarian educates information users about research methods, proper citation and the use of reference sources of his library reference materials. Embedded librarian helps libraries to get closer to the users and build a collaborative platform that will guarantee users information satisfaction in a manner that will enable the libraries to stay and keep in touch with their users and know how they feel about services rendered to them. Consequently, He/she also advocates reaching students in their preferred environments to extend library services beyond the responsive traditional library walls.

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