LIBRARIES AS INNOVATIVE ORGANISATIONS:
A REVIEW OF RELATED LITERATURE

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The concept of innovation as defined by classical innovation theorists such as Rogers, Shoemaker, Havelock and others are examined in general terms, and related to specific aspects of the theory and practice of modern librarianship. While the basic objective of this paper was to highlight the major trends in the innovating process in library organizations, it is argued that innovations as the introduction and application of new ideas, procedures or processes or the manufacture of new products is not new, the scientific study of such developments in libraries is however, a recent phenomenon. Efforts are made to collocate and thus familiarize interested scholars of library innovations with the literature reflecting the state of the art in this apparently new field.

The concept of innovation as viewed and studied from different perspectives has lent itself to a variety of definitions depending on the approach. It may be viewed by different disciplines and organizations with different perceptual prisms. In this paper, it is revealed that majority of the literature currently existing on the study of innovations are outside the field of library and information science. And this situation has been projected further by the absence of any acceptable theory of innovation in the field. This accounts for the fact that a great deal of concrete concepts and theories have been developed in other disciplines leading to even wider applications.

A few classical definitions of the concept will, however, be examined. One of the most often cited theorists of innovation is Rogers who views innovation as “an idea perceived as new by the individual”[1]. A more explicit definition was later given by Rogers and Shoemaker by defining the concept of innovation as “an idea, practice or object perceived as new by an individual’ [2]. While the above definitions are basically the same, the one by Rogers and Shoemaker goes much further to explain that an innovation is not just an idea but also a change which could be substantial encompassing changes in practices, and the manufacture of products or objects. Lucas takes a more critical look at the concept by distinguishing between “hard innovations” and “soft innovations”[3]. In his view, public policy is an example of a soft innovation while a change to a completely new practice or the turning out of a new product by a manufacturing firm is hard innovation. Innovations from the above definitions, therefore, could be seen as a new idea, procedure or product usually involving substantial changes.

LIBRARIES AND INNOVATION

Innovations as new ideas, processes or products are not recent developments in libraries. In fact, it could be safely asserted that innovations are as old in libraries as libraries themselves. It is widely believed in library history that in the great ancient libraries of Egypt and Mesopotamia which dates back to about 3000 B.C., information resources of that period underwent a series of developments in the storage methods. Thus, library records at this time became popularly stored in papyrus and clay tablets in Egypt and Mesopotamia respectively[4]. And we have since then continued to witness the transition of these information storage devices to the present day books along with other forms of electronic storage media such as magnetic disks, tapes, etc.
What could be viewed as relatively recent, however, is the scientific study of these developments in the form of innovations in libraries.

It was not until the last decade that scholars in the field of library and information science began to give serious thoughts to this emerging but important aspect of knowledge utilization. Technological advances and the development of theories of management science such as those developed by Frederick Taylor (1911), Gulick and Urwick (1937), March and Simon (1958), Etzioni (1964) and more recent works by Evans (1976) and Steward and Eastlick (1981) have been instrumental to the awakening of thoughts and consequently to the quest for the scientific planning of different attributes of innovation in library administration.

RELEVANT CONCEPTS IN INNOVATION RESEARCH

Before actually looking at the literature on this topic, it will be worthwhile to examine some concepts that are pertinent to the study of innovations in organisations vis-a-vis libraries. These concepts could also be referred to as general variables upon which the successful implementation of any form of innovation in a library environment depends. And they include the concepts of actors, barriers to innovating and the development of strategies for successful implementation of innovations.

In order to carry out the process of introducing innovations into libraries or any organizations, some individuals termed actors within and outside that organization have to be actively involved in its planning and implementation.

The university library systems, like many other organizations, are organized along a hierarchical structure with different actors, i.e., library staff and users possessing varying degrees of influence. The idea of influence calls for an active but meaningful role by all categories of university library staff and users in the innovating process. But studies have shown that this is not always the case in many innovative attempts.

Munson and Pelz [6] in one of their frameworks identified seven types of actors in any innovating process:

1. The source of the innovations, i.e., the innovator;
2. Managers who make top level decisions;
3. Workers;
4. Clients (i.e., the community of library users in the case of libraries);
5. Suppliers who provide the necessary support system;
6. Social controllers; and
7. Intermediaries.

The roles of the last two actors are usually not very pronounced in a university library situation since they would not normally involve outside persons in the decision making process except for consultancy services.

In any innovative attempts, there are barriers that have to be overcome. One of such observations was made by Argyris [7] when he observed some problems in introducing innovations from management perspective. He was of the view that when innovations are implemented only from the above, there could be the danger of mistrust and condemnation from the subordinates below. He, therefore, suggested the active participation of all actors in the innovating process. Zaltman, Duncan and Holbek [8] also focused on barriers as crucial variables in the innovating process in organizations. They observed that lack of clarity, skill and knowledge about an innovation, unavailability of required materials and equipment including certain organizational arrangements were the critical factors to the effective implementation of innovations. These observations support and reaffirm earlier observations by Havelock that there has been a real need for new ideas, and approach to introducing innovations along with the economic and organizational ability of organizations to utilise or act upon new knowledge [9].

Discussing his own view on this issue, Lindberg in a study identified sociological and behavioural factors apart from technological as also very crucial in determining an innovation’s effective implementation [10].

As far back as 1969, Robert Chin and Kenneth Benne had already developed three major strategies which they believed could be applied to the innovating process. These include:
1. The empirical rational strategy;
2. The normative re-educative strategy; and

In his own approach Utterback focused on the influence of the organization's external environment and the former's ability to achieve the effectiveness of innovations[12]. Although the author did not make himself clear on this issue by pointing out specific cases of an external environment, it is true to a great extent that the nature of an organization's external environment could be a crucial factor in determining the effectiveness of its innovative efforts. He goes further to express the fears which could be generated about job security that changes in organizations could create. This is a very relevant point in current library practice where different forms of technologies are finding their way into such practices and supplanting older norms.

Glaser et al in their own view identified a set of strategies which they considered were conducive to successful innovation. These include:

"... a climate of trust, critical information regarding anomalies, an incentive system, shared interest in solving common problems and a careful planning for structural changes or organizational rearrangements that require adoption of certain procedures or action"[13].

While Glaser and Baker still on this point see an alternative approach when innovations are introduced on a pilot basis[14]. Although this could be a feasible approach, its success will depend greatly on the nature of the innovations also. Glaser from another perspective emphasized variables such as integration, discussion, need, feedback, reward, adaptability etc. as having major effects on the analysis and durability of innovations[15].

The rational-social-interaction political strategy developed by Lindquist in 1978 emphasized on an integrated process of needs assessment, linkage of principal actors, open development and decision making with a support for the actual implementation of the innovation[16]. Innovations by their nature need to be introduced carefully if they are to achieve any appreciable success. Havelock in this regard warned about skipping any important phase in total implementation process[17].

Havelock in another work was more expansive than Lindquist's model by developing a more concrete set of strategies. He focused on perspectives to development, and knowledge utilization in planning innovations in social systems. His first strategy is the social interaction perspective whereby an innovation is brought to the attention of a potential user population. His second approach is the research, development and diffusion in which he emphasized change from the perspective of the originator. And the third approach is the problem solver perspective[18]. This approach basically emphasizes the process of change by first identifying an area of concern or by fulfilling a need for a change with a view to improving the effectiveness of such performance. For Havelock, this perspective primarily focuses attention on the user of the innovation. All of the above models have some relevance to library innovation but of particular significance in this paper are the problem solver and the social interaction models because of their emphasis on the innovating process in organizations. Also crucial is their emphasis on the users' need being of paramount importance coupled with a thorough diagnosis of the problem as part of the innovating process. Many innovations have been introduced into libraries without adequate analysis of the library's community of users as to whether or not such innovations are actually desired.

Gray in another classical model identified four different types of strategies in the process of introducing innovations. The first strategy according to him is (a) assistance strategies which in his view should provide technical or fiscal support for making organizational arrangements to receive and use the innovation; (b) educational strategies which provide individuals with information and training needed to use the innovation and integrate it into their routine performances; (c) power strategies which are supposed to be applied to establish rules and functions to force the innovation into operation.
and provide organizational control over its use, and finally (d) persuasive strategies that will shape people's attitudes and values to foster personal commitment to the innovation[19].

RELATED RESEARCH ON LIBRARY INNOVATIONS

It was reiterated earlier in this review that the literature on innovation research in librarianship has been relatively scanty. In fact, empirical studies in this aspect of librarianship started only during the past decade. This situation has called for more analytical studies of different kinds of innovations in library based systems of not only the developing countries but also of the developed countries. It is through such studies that the principles and theories of innovation applied to other disciplines and organization can also be applied to librarianship, and may be from there theories of innovation as applied to libraries will develop.

However, there have been some theoretical attempts to find out the nature of innovations in libraries. Attempts have also been made to identify their origins and the channels by which they are communicated and problems associated with them in different library environments. Perhaps Lucas' observation of innovating processes have some relevance to libraries. He was of the opinion that:

"... it is not generally accepted that most developing nations have had difficulty in integrating the available technological and organizational policy innovation equated with modernization. Instead, most developing nations are seen as saturated by "dual" urban/rural political economies that frustrate adaptation and even effective trial adoption of innovative techniques and politics"[20].

Many scholars in library and information science have tried to relate the problem of innovating in libraries to a variety of factors like administrative, financial, social, technical and cultural. Recognizing these factors, Charles McClure[21] stressed the importance of an efficient planning process as a means of improving the effectiveness of innovations in library organizations. He went further to point out that most library managers give several irrational excuses for not planning. He identified these factors as too few staff; not enough time; too little money; dispersed geographical location; too many projects already in hand; etc.

With regard to managing innovations in libraries, Drake pointed out that certain factors are critical to efficient management of innovation particularly in academic libraries. The factors identified by her are as follows:

1. Performance gaps;
2. Incentives to innovate;
3. The nature of the innovation; and
4. The implementation of innovative strategies[22].

Furthermore, Drake expressed the optimism that:

"If libraries are to continue their important contribution to the instructional and research missions of academic institutions, a climate conducive to change and generation of new ideas must be created"[23].

She thus warned that:

"Library administrators must view innovation seriously and provide followthrough to develop ideas into innovations that can be integrated into library operations"[24].

McClure[25] after a study conducted in 1980 supported the observation made earlier by Drake. He concluded that researchers must recognize certain factors that are crucial to the development and implementation of new ideas. In this regard, he identified variables such as the effectiveness of shared decision making, management styles, etc. He also stressed the importance of professional associations, communication channels and research activities of organizations as sources through which innovations can be introduced.

Drake and Olsen on the other hand focused on the economic aspects of library innovations. Focusing on university libraries, the authors...
defined their economic environment in terms of the following areas:

1. the external environment in which economic factors are beyond the immediate control of the library;
2. the university setting in which the library has importance and influence; and
3. the internal operational environment in which the library has varying degrees of control over the allocation of resources [26].

While it is becoming interesting to note the various discussions on the theoretical aspects of innovations in libraries, some writers still have certain reservations about the ability of libraries to embrace innovation. In this regard, Taylor's essay in which he focussed on whether or not libraries can adapt meaningfully to the number and rate of changes being faced cannot be ignored. He raised a crucial question which states:

“Will innovation in present-day libraries change their objectives?” [27]

He went further to observe that most of the technology is available for large scale innovation in information disseminating institutions such as libraries. But that the problem is now that of acceptance, suitability, and adaptation.

A review of some empirical studies that have been conducted prove some of the above theoretical concepts in different directions. Thus, while some studies have been able to reaffirm some of these principles, others have not supported them. One of the early studies on innovations in libraries was Forman's study of innovative developments in 1193 liberal arts college libraries in 1967 [28]. Innovations studies were various in nature ranging from change in administrative practices to automation. Given his limited objectives for the study and the limits of his research instruments, he could hardly conceptualize any theories from his findings. Nevertheless, the study revealed that libraries were already embracing general substantial changes.

In 1974, Dougherty and Bloomquist [29] published the results of an investigation conducted on centralized and decentralized library services at two universities and the reaction of the faculty to an innovative rapid delivery service of library materials to their offices. Results revealed that the new service was enthusiastically received at the university where it had been implemented and not at the other university where they were not adequately informed. They, therefore, concluded that personal experience or lack of it strongly affects one’s perception and his/her subsequent evaluation of new services.

Dougherty [30] in another study tried to identify innovative solutions to existing library organizational, bibliographical and service problems. This study was basically descriptive as no relationships were determined as in the case of Dougherty and Bloomquist. They nevertheless, provided some good work on which many subsequent empirical studies of innovation in libraries were based.

On perceptions and evaluations of innovative attempts in libraries, Berk did a study on an information innovation in a scientific community [31]. The study was concerned with the limited use of the MEDLARS demand service of the National Library of Medicine. The findings of this study suggested that there is a positive relationship between the level of knowledge of an innovation or its awareness and its adoption, thereby increases the effectiveness of such innovation.

Using a different methodology, Luquire conducted a study aimed at identifying the selected factors and variables that affect librarians’ perception of the Ohio College Library centre as innovative project. Basing the findings, he concluded that:

“technological change as a force in libraries must be coped with from the attitudinal or psychological point of view perhaps even more than from the technical approach” [32].

Luquire and Berk seem to agree on their findings that exposure to an innovation by its users have a great deal of influence on the
latter’s evaluation of such innovation. Luquire, however, goes further to substantiate the fact that some relationships exist between the rate of adoption and effectiveness of innovations. Whitmore conducted a study on user acceptance of microforms as innovative projects. The findings of the study revealed a positive correlation between knowledge of the innovation and its acceptance which goes further to reaffirm Beck and Luquire’s earlier findings on the same issue.

Helen Howard[33] conducted a study on the relationship between certain organizational variables and the rate of innovation in selected university libraries in the United States. This study was built on the framework of an earlier study by Haye and Aikem[34] who field-tested some variables with a sample of sixteen social welfare agencies. The results of her findings showed positive relationships between complexity, professional training and the rate of innovation as the dependent variable.

Igwilo conducted a study on automated circulation systems in university libraries in Nigeria[35]. Although this investigator did not study automated circulation systems as an innovation per se, he did recognize the magnitude of the problem of introducing new ideas, products or procedures in university libraries. This was evidenced by his observation that:

"It is necessary to understand the structure of the system and the forces of the environment to which it is subjected"[36].

He did not elaborate on this, but there is no doubt that he raised an important point which in turn gives rise to series of diffusion of innovations in university libraries.

It is clear from the above literature review that while some empirical studies have already been done on innovation in libraries, a great deal of research is still needed in this area. It is through these research studies that the library profession will be able to develop theories which will eventually lead to concrete principles and laws from which we can build upon. It is also very apparent that a majority of the theoretical concepts examined in this review have been developed by theorists outside the field of librarianship. We, therefore, do have an urgent need in the profession to develop our own concepts or adapt the current ones with greater relevance to the library situation. Furthermore, more empirical studies whether they are new or even replications of those already done either in librarianship or in other fields are needed. This approach will enable us to test the reliability and validity of concepts and methodologies already utilized in other fields to librarianship.

With the current pressures on libraries, particularly university libraries, for better services and performance measures amidst the current financial constraints and in some cases decreasing library budgets, it becomes all the more crucial that libraries have to seek changes to render their services in more cost-effective ways. In the area of technological innovations, it is hoped that as technology advances, the cost of introducing such innovations will decrease, if not in the short run, at least in the long run. But at the same time, libraries will have to plan efficiently to be able to face the challenges. The libraries of the developing countries have a greater task in this direction. More detailed studies in the area of library innovation are needed. The results from such studies will serve as indicators to be used by university libraries and administrators in planning the introduction of innovation into their library systems.

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