

**OPTIMIZING LIBRARY AND INFORMATION SERVICES IN TECHNICAL
EDUCATION AND INDUSTRIAL DEVELOPMENT IN NIGERIA**

By

Peter O. Olubiyo**Abstract**

The paper explained the general overview of library, library and information services, technical education and industrial development. The work spelt out technical education as it cannot unilaterally realize its objective of industrial development without the supporting role of the library. The library is the pivotal hub of information services in any educational activities. Therefore technical education is a variety of education that is normally received in polytechnics, universities and institutes that do grant bachelors degree and diploma. The paper analyzed the various roles of library and information services in technical education and industrial development. The paper concluded that library plays a central role in educating students, faculty and other patrons of the library who are in technical education fields. And after being educated, the patrons turn to become assets for industrial development. Academic libraries in technical colleges and institutes should be well equipped with latest information resources in the field of technical education for patrons' consumption. Seminars, conferences and symposia should be organized by the library management for patrons to sensitize them on the importance of visiting the library for knowledge update. Librarians should be made to go for further studies in order to impart advanced knowledge of professional display of services among others.

Key words: Optimizing, Library and information services, Technical education, Industrial development, Nigeria

Introduction

The library is the live wire of academic institutions because it provides the atmosphere and materials conducive and necessary for learning, teaching and research. In any academic environment, learning, teaching and research are the integral activities done in the existence of information in the library. It is therefore clear that library has a role to play in the development of education (technical education) for industrial development. In other words, industrial development comes through human activity – processing of raw materials and valuable goods for the purpose of satisfying societal material needs and creating wealth which can be generated through the infusion of library into technical education (Fliss, 1999). Thus, the library provides the information needed to enable technicians and technologists well educated in the knowledge

of processing of raw materials and goods. Along with the basic concepts of e-learning technology and its applications to technical education using software's and hardware requirements, the basic objective of science and technical education is to devise and guide reforms that will transform a nation into a strong and vibrant knowledge economy (Kattimani and Naik, 2012).

Technical education is the application of scientific and technical knowledge to solve human problems. It is the use of imagination, judgment and reasoning to applied science, technology, mathematics, and practical experience, which resulted in the design, production, and operation of useful objects or processes. Technical education is a basic and essential input for national development and for strengthening the industry, economy and ultimately the quality of life of people. Technical education contributes a major share to the overall education system and plays a vital role in the social and economic development of a nation. Libraries in higher technical education institutions have largely developed along with various institutions. These libraries are becoming knowledge centers. The libraries in these institutions are distinct among libraries as they serve the needs of users and their nature is also an indicator of an academic library as it supports and supplements academic programs. Hence, they come in the category of academic libraries. Such kind of library is an important resource of the academic community and helps its members for their self-development, fulfillment of curriculum requirements and for promotion of study and research (Vasishta, 2007). Libraries of higher technical education institution like polytechnic library is the main channel of bringing information to cater for information requirements of the users. The overall functions of a library in technical education institution include building up a comprehensive collection, technical literature, to organize and provide access to the information sources with the help of a variety of tools, and retrieve the vast

and continuously expanding technical knowledge through multifarious information services. Libraries are a vital component of higher technical education institutes and need to be equipped with proper infrastructure namely proper space and furniture to accommodate users; trained staff to provide services to the users for making use of the collections; optimum and appropriate collection to satisfy most of the needs of all the users; essential technological devices to help in speedy and efficient provision of services and so on (Vasishta, 2007).

Concept of Libraries

Libraries are collections of books, manuscripts, journals, and other sources of recorded information. They commonly include reference works such as encyclopedias that provide factual information and indexes that help users find information in other sources; creative works, including poetry, novels, short stories, music scores, and photographs; nonfiction, such as biographies, histories, and other factual reports; and periodical publications, including magazines, scholarly journals, and books published as part of a series. As home use of records, CD-ROMs, and audiotapes and videotapes has increased, library collections have begun to include these and other forms of media, too.

As technology has changed and allowed ever new ways of creating, storing, organizing, and providing information, public expectation of the role of libraries has increased. Libraries have responded by developing more sophisticated on-line catalogs that allow users to find out whether or not a book has been checked out and what other libraries have it. Libraries have also found that users want information faster, they want the full text of a document instead of a citation to it, and they want information that clearly answers their questions. In response, libraries have provided Selective Dissemination of Information (SDI) services, in which

librarians choose information that may be of interest to their users and forward it to them before the users request it (Britannica, 2020). Libraries are much more than a place to read books and journals. Libraries also houses advanced electronic resources, including the Internet, digital library collections, remote access to a wide range of technology and instruction (Cornell University Library, 2020).

Concept of Technical Education

Technical education is a kind of education which equips with skills that involve the use of practical approaches and other physical instruments in executing projects (IGI Global, 2020). Technical education is typically offered in post-high-school curricula that are two years in length, and are offered in a wide variety of institutions, such as technical institutes, junior colleges, vocational schools, and regular colleges and universities. Technical education, the academic and vocational preparation of students for jobs involving applied science and modern technology. Technical education has as its objectives the preparation of graduates for occupations that are classed above the skilled crafts but below the scientific or engineering professions. People so employed are frequently called technicians. Technical education is distinct from professional education, which places major emphasis upon the theories, understanding, and principles of a wide body of subject matter designed to equip the graduate to practice authoritatively in such fields as science, engineering, law, or medicine. Technical occupations are vital in a wide range of fields, including agriculture, business administration, computers and data processing, education, environmental and resource management, graphic arts and industrial design, and health and medicine; technical educational curricula are correspondingly specialized over a broad range (Encyclopedia Britannica, 2020).

Technical education is typically offered in different institutions, from technical high schools to polytechnics. Its object is not necessarily a university degree. Technical education prepares students in a hands-on manner to deal with auto-repairs, masonry, welding, electronics and other fields. In the 6-3-3-4 educational system, which was adopted in 1983, the goal was to provide educational needs by equipping the youths with skills that would make them self-reliant. Under that arrangement, students who were skilled in the technical field were expected to grow into skilled junior and medium levels artisans (Guardian Newspaper, 2019). Technical education, in the other hand is not designed for any particular vocation but provides general technical knowledge. This type of education prepares people for entry into recognized occupation at a higher level but usually lower than the first degree.

According to Uwaifo (2009) in Okoye and Arimonu (2016), technical education is the training of technically oriented personnel who are to be the initiators, facilitators and implementers of technologically development. This training of its citizens on the need to be technologically literate would eventually lead to self reliance and sustainability. It was observed that technical education more than any other profession has direct impact on the development of the country. Technical education contributes so much ranging from electrical and electronics technology, metal work technology, mechanical/automobile technology, building technology, woodwork technology etc, technical education is practical oriented education which makes it unique in its content and approach thereby demanding special attention (Okoye and Arimonu, 2016).

Academic libraries and Technical Education

Ezine, (n.d.) as cited in Trivedi (2019) explained that academic libraries are the soul of any research or academic institution. They form the most vital forum of education, especially in the field of technical education. Due to the rapid pace of development taking place in various fields of science and technology (S & T), it becomes imperative for libraries to remain up-to-date with the latest advances in technology so that the dissemination of information becomes efficient, quick, feasible, economic, accessible and useful. Academic libraries serve colleges and universities, their students, staff and faculty. Larger institutions may have several libraries on their campuses dedicated to serving particular schools such as law and science libraries. Many academic librarians become specialists in an area of knowledge and can have faculty status.

The nature of technical library being a special academic library is that it identifies, acquires, organizes, stores, retrieves and disseminates information not only on the specific subjects covered by the curriculum, but also on the current directions of technological advancements. Print as well as non-print documents serve as foundations of information especially in the realm of higher education. A good collection of print as well of non-print documents is a prime requirement of the technical institution in the fulfillment of its objectives of dissemination of information resources for industrial education and development (Vasishta, 2007).

Education is important for every individual in a nation. It plays a vital role to change the status of a country. No country could bring about a revolution unless everybody is educated enough to meet the challenges. Education makes a man realize about himself and his goals and how to achieve that goals. Thus, academic libraries' services have changed very fast in the last twenty years. Nowadays, electronic resources, networks and the World Wide Web represent a large parcel of the library services for industrial development. Therefore, academic librarians

must manage staff, information in several supports and technical activities to produce quality services for industrial development (Trivedi, 2019).

The integration of information in a library is the most important working framework of modern library for technical education. For this purpose, the web 2.0 services is the most advance and highly applicable services. However, the implementation of library evaluation model is not an easy task. It is necessary to break certain concepts and inertia and stimulate team work, evaluate services, in order to satisfy user's needs, which implies complex attitudes, guided by a set of solutions that vary according to the context and to the specificity of each community for industrial development (Trivedi, 2019).

Technical education and Industrial development

Uwaifo (2010) explained that technical education is the training of technically oriented personnel who are to be the initiators, facilitators and implementers of technological development of a nation by adequately training its citizenry on the need to be technologically literate, leading to self-reliance and sustainability. Technical education contributions are widespread and visible ranging from metalwork technology, mechanical/ automobile technology, electrical and electronic technology, building and woodwork technology.

It does bear reiteration to state that technical education “provides special practical knowledge of technologies and skills” and it is different from general education. It promotes independence and self-learning and “tunes the student effectively by increasing the potential of students. It helps students to develop both practical and theoretical knowledge of their chosen field.” It is crucial to “human resource development in a country by creating skilled manpower, enhancing industrial productivity and improving the quality of life. To produce fully skilled

manpower/ knowledgeable technocrats in the present era of science and technology is the need of the hour.” (Guardian Newspaper, 2019)

The presence in the community of men with a technical education contributes to the more rapid development of industrial enterprises. Each factor is at once a cause and a result and neither could be most effective without the other. The history of industrial development and industrial education are naturally inseparable. They must be treated together if one would understand their interdependence. In view of all these and scores of other inventions, it is not surprising that the attention of thoughtful men was directed to the fact that the development of our industrial enterprises was a matter of prime importance to the prosperity of the country, and that some special training should be provided for those who were to engage in such occupations and this training is what technical education holds.

Roles of Library and Information Services in Technical Education and Industrial Development

Itedjere, Achugbue, and Sokari (2012) explained that in this era of technological advancement and information explosion, reliance on lectures note alone is no longer enough for a student to record a reasonable success in their field - technical education. To complement lectures note, the library provide the students with varieties of reading materials for academic success. This it offer in both print and non-print format. It may not be far from this unique role of the library to institutions of higher learning that no tertiary institution of technical education the country can be successfully accredited without a library house in it. Therefore, the library and information services rendered to the students of technical education help to develop manpower for industrial development.

Usoro, (2007) in Ogbemor (2011) asserts that to facilitate the planning and implementation of learning programs that will equip students with the skills necessary to succeed in a constantly changing social and economic environment through resource-based programs, students acquire skills to collect, critically analyze and organize information, solve problems and communicate their understandings through library. The library provides and promotes quality fiction to develop and sustain in technical education students the habit and enjoyment of reading for pleasure and to enrich students' intellectual, aesthetic, cultural and emotional growth.

Library caters for differences in learning and teaching styles through the provision of and equality of access to, a wide range of materials, fiction and non-fiction, print, audio, video and digital. Library provides technical educators with access to relevant curriculum information and professional development materials within and outside the educational system; and opportunities to cooperatively plan, implement and evaluate learning programs which integrate information resources and technologies.

Recommendations

Library has a lot of roles to play in technical education and industrial development. Based on this, the following recommendations are made:

- Academic libraries in technical colleges and institutes should be well equipped with latest information resources in the field of technical education for patrons' consumption.
- Seminars, conferences and symposia should be organized by the library management for patrons to sensitize them on the importance of visiting the library for knowledge update.
- Librarians should be made to go for further studies in order to impart advanced knowledge of professional display of services.

- The users who have graduated from the technical institutions should be contacted to donate to the development of the library.
- Government should give special attention to libraries in the technical institutes through fund allocation for the development of the library resources.
- Government should allocate more fund to research in technical education as this will lead to industrial development.

Conclusion

It can be concluded that libraries play a central role in educating students, faculties and other patrons of the library who are in technical education. And after being educated, the patrons turn to become assets for industrial development. The knowledge gained from the information resources in the library is the technical asset which the graduates use in the development of various companies, firms, departments and agencies for economic growth.

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