

## Cost- Benefit Analysis of ICT in Libraries : A Current Scenario

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### Abstract

*The cost benefit analysis play an important role in the smooth functioning of an organization and helps in the optimum utilization of its resources. Information and Communications Technology (ICT) has accelerated exceptionally during the last decade, which has also increase the cost of it. So, the need of the cost-benefit analysis has been arise for the usage of ICT in an academic institution specially in libraries. Now ICT recognize as a valuable organizational resource, like any other resources in an organization. ICT should also receive serious attention of management for the adequate utilization of its benefits compared to its cost. ICT is the key to the evolution of our practices in many domains, such as education, work effectiveness and National productivity. The cost-benefits analysis helps in effective usage of ICT for its excellences. This article gives brief introduction about cost-benefit analysis, its needs, importance as well as meaning of ICT and its importance in the current scenario.*

**Keywords:** Cost-benefits analysis, Information and Communication Technology, Services.

### 1. Introduction

The cost- benefits analysis is one of the effective tools in the hand of management for the proper functioning, growth and development of any organization. There are basically two types of organization i.e. some are for the earning of revenues and others are for the welfare of the society. Education fall in the second category. The cost-benefit analysis of such institution can be measured in terms of the services they render to the users. In India, the cost of providing various library services to it users and managing their resources is a very important aspects, but a very few libraries have the detail picture of their cost-benefits analysis

Webster (1981) cited a number of sources of cost increase, due to which economic and financial pressures on most libraries have grown enormously in the last few years. He also identifies some methods of cost-benefit analysis in a library. The cost benefit analysis can now be calculated by determining the total usage of resources by all the users during a specific period of time and then evaluating it by some standard methods of cost benefit analysis.

### 2. Meaning of cost

In general "cost" means " the amount of expenditure (actual or notional) incurred on, or attributable to a given thing". However, the term cost interpretation depends upon

- A) the nature of the business.
- B) The context in which it is used

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The broad elements of cost are as follow:

- ◆ Material
- ◆ Labour
- ◆ Expenses
- ◆ Overhead

Basically, cost may be classified as fixed variable and semi-variable. Costs, which may further be divided into product and period cost, direct and indirect cost, decision making costs and accounting costs, relevant and irrelevant costs, controllable and uncontrollable costs etc, which helps in assignment of cost to the different activities of both servers and users.

Cost accounting enables the libraries to improve these two basic unit costs. The cost accounting is mainly concerned with the determination of cost, with the help of process cost accounting and job cost accounting.<sup>(1)</sup>

Robert (1985)<sup>(2)</sup> received fine different types of cost study for library and information service, out of which cost benefit analysis is one of them. He found that work measurement techniques are the best tools available for libraries to analyze the cost.

Bryson (1996)<sup>(3)</sup> stated that cost analysis in libraries can be used to determine the anticipated value for certain activities or to measure efficiency for comparative purposes.

Welshmer (1991)<sup>(4)</sup> also conducted cost analysis of library and information system and standard pattern in controlling the cost of information technology in India. So, the cost analysis help in determining the benefits of a particular services or products during a period of time.

### **3. Cost-Benefit Analysis Need and Importance**

The concept of cost-benefit analysis is now increasing day by day and applied to all the areas of the library. Beside, welfare activity libraries also use the resources of the organization/institution and also see the associated cost and benefits to the organization/institutions. The concept of cost-benefits analysis has now starts taking practical shape in these days. The planning commission has already decided about the feasibility studies for the various welfare and social projects of different institution/organizations. The United Nation Industrial Development Organization (UNIDO) and center for organization of Economic Co-operation and Development (COECD) have come with the unique publication dealing with the problem of measuring cost benefit analysis.

Lancaster (1971)<sup>(5)</sup> made a distinction between cost-effectiveness analysis and cost benefits analysis as applied to information system and also discuss the relationship between cost, performance and benefits. He found that system benefits are usually more difficult to express and to measure.

Baliarsingh and Mahaptra (1986)<sup>(6)</sup> conducted the cost benefit analysis of university library and said that user surveys are the best means of measuring the benefits in the context of library and information center.

Narayna (1991)<sup>(7)</sup> explained the concept of cost-accounting, different types of cost etc.,. He explained the model of cost-effectiveness and cost-benefits analysis. He found certain limitation while applying cost-effectiveness and cost benefit analysis to libraries.

The cost benefit ratio are helpful for evaluated the total cost benefits of ICT, which include all economic and non-economic, internal and external benefits. According to it, an ICT giving a higher output per unit of capital employed is to be preferred over project giving a lower output. However, a broad decision on ICT acceptability on welfare grounds by looking to the different welfare aspects associated with it. The cost-benefit analysis helps determining the cost of ICT in a library by taking into account various costs i.e. Network costs, Website development cost, user cost and miscellaneous projects costs and compare it with the benefits arises from these activities for a particular period of time. The lack of national ICT strategy and inadequate ICT skills leads to the slow rate of polices of ICT sector, which create the need of its cost analysis.

#### **4. Meaning of Information and Communications Technology**

In the past Libraries were regarded as store houses of books. They were not for use. But today, the Libraries, through their books, are actually repositories of information and knowledge. Information is indispensable for any human activity aiming at social progress. The researcher, the teacher, the student, the administrator, the worker in the factory and in the factory and in the field, all need information to equip themselves better for the fruitful pursuit in their respective fields. The basic information role of the Library is to collect the materials containing the information required by the various sections of the society and disseminate the information to them through appropriate methods. It is primarily in this sense that a Library is described as an information center.

The advancement of science and technology has made tremendous improvement and change almost in all fields of life. Especially the magnetic word "Information and Communications and Technology" has been chanted in all carriers of global arena.

The services rendered with the help of ICT are faster and more effective. Moreover, it creates faith and confidence about the products and services of an organization among its customers. ICT is an important catalyst for social transformation and national progress.

As already mentioned, that Libraries which were earlier considered as store houses have got a new outlook in the modern information communication technology Era. The activities which were carried out manually in the libraries with so much of pain and strain are being carried out smoothly with the help of ICT with greater effectiveness. Library organization, administration and other technical processing have become easier and more quantum of work can be done in relaxed mood. ICT, which is the basis for MBO, generally more results are given time.

All kinds of Libraries, especially the University Libraries are not exempted from the impact of ICT. Such Libraries are very much interested in incorporating the latest ICT in their administrative function,

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technical work and user services. University Grant Commission also contributes grants to the University and other affiliated colleges to provide ICT facilities and generate digital environment. INFLIBNET is actively involved in the automation and digitization of these libraries. The encouragement, facilities and cooperation by INFLIBNET such as funding, training, orientation, workshops and publication make the Libraries equipped with all ICT tools and now they are in a position to provide better services to the students, researchers, teachers and other users community effectively.

### **5. Importance of Information and Communications Technology (ICT)**

Libraries are mainly entrusted with predetermined tasks like acquiring, organizing, preserving, retrieving and disseminating information to the users. Right from the ancient times to present internet era, the primary objective of library has always been this. However, the way this purpose has been achieved has drastically changed.

As the information technology has influenced the very nature of business and management of libraries. They are underlying significant changes to not only in outlook but also in function, services, methods and techniques for collection development, processing and dissemination of information.

With the advancement in technology and the direct application to libraries, Business and management Libraries are becoming lean and agile. Most of the libraries now a days streamline information supply. The developing of Information and Communications and Technology (ICT) and its applications in library developing science have forced.

The library and information professionals are functioning at present to change the way. LIS information has released that the users are increasingly becoming web based users. So, an overwhelming attraction is being given to the web based information services in libraries.

ICT have brought a lot of conveniences to the library users, as the information being accessible at their desktops, the productivity of users has been increased. ICT have become centres of education and training of library and information science and services because of great influence of it on the profession. The implementation of ICT in the libraries has demanded new forms of Library Services to get more user satisfaction.

### **6. Cost-Benefit Analysis and ICT in Library and Information Science**

The cost of ICT has been changed so much in the last decade. The custom duties for software imports were reduce 112 percent 1991 to merely 10 percent in the recent times. The development of the ICT in the recent years due to declaration of IT sector is one of five National priorities. The cost-benefit analysis is feasible for ICT due to the introduction of 10 years tax exemption for software producing companies located in free economic zones and STPs, thus reducing the cost of IT related products and service to a reasonable effect.

The training of the relevant staff, who are using ICT enables services for optimum utilizations of

resources through innovative collaboration, which results evaluate of cost-benefit analysis of the library.

The strategic decisions taken by the information scientist/librarian regarding the implementation of ICT is finalize by taking into cost-benefit analysis of various inputs. The information must be managed itself and cost-benefit analysis is the best solutions for the using of such information is measured in shape of its cost-benefit analysis.

The cost-benefit analysis are instrumental in developing a strategy for identify specific ICT opportunities for innovation and for sighting process for rapid adoption to new technology in an optimistic manners.

The learning and educational Programme in the field of ICT helps in the effective utilization of various sources ICT and thus, help in reducing the escalating cost of education. The good and sound ICT helps in attracting sound investment and foreign players, thus reduce the elementary cost of an institution/organization. ICT is a key factor contribution to a nation's development, and as a cohesive force for integrating a nation into global economy.

The assessment of staff and manpower related with ICT is another thing to take into consideration for the cost-benefit analysis of different types of libraries and institution by taking into account their job-description, job-specifications, job analysis, etc.

The cost-benefit analysis also necessary in these days due to greater participations of library users and key stakeholders, i.e. individual, government, Private sector, manpower, NGO's with ICT industry

## **7. Conclusion**

In India, there is no standard pattern or procedure of cost-benefit analysis is being followed by libraries. By using ICT with a view to work out unit cost of various objects, services and functions. The cost benefit analysis of ICT in India not being done at all. Continuous increase in the cost have practically brought the growth and development of ICT to a standstill. This situation cannot be allowed to continue indefinitely. A very small amount(i.e. less than 5% of GNP) is being spent on education in India, which results in the unsatisfactory financial conditions of Indian libraries. Cost benefit analysis can be implemented both in traditional and knowledge organizations, which includes the innovations in ICT which are always looked upon with great expectation.

The continuous improvement of all operations, activities as well as providing a high quality products with the applications of cost-benefit analysis. To promote cost-benefit analysis, libraries must consider cultural, social, technological as well as organizational changes related to ICT. The development of the ICT competencies and capabilities helps in optimum utilization of services thus, increase the productivity of a library.

The utilization of existing ICT infrastructure with a very low cost of its uses is only possible with the help of effective implantation of cost-benefit analysis.

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