Chapter 6
Cloud Computing and Academic Libraries in Nigeria

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ABSTRACT

The advent of computers and other communication technologies led to major transformations in the way library services are rendered and the profession practiced. The libraries have been automated, networked, and are now moving towards paperless or virtual libraries. This chapter examines various facets of cloud computing, describes types and applications. It also outlines the benefits and challenges of cloud computing in academic libraries. Further, the chapter gives direction about the use of cloud computing services to the library professionals and academic libraries in Nigeria. This chapter may be helpful in generating cloud-based services for academic libraries. The chapter suggests that quality service assurance by cloud providers must be ensured, upgrading of internet bandwidth for fast access and quick information dissemination that would improve academic library services. It concludes that cloud computing is crucial and vital in modern information innovation, especially in academic libraries.

INTRODUCTION

Academic libraries are established in higher tertiary institutions such as universities, polytechnics, mono-technics, colleges of education, colleges of agriculture, institutes of technology and the like to play strategic role in complementing vision and mission of their parent body. The prime objective of any university is to provide world-class environment for learning, research and community service. This can only be achieved with the support of academic library that supports teaching, learning and community service. The primary responsibility of the Library is to select, acquire and organize books, periodicals,

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documents newspapers, and maps, other print and electronic resources that are required for teaching, research and self-development activities. Prior to application of Information and Communication Technologies (ICTs), the tasks in the libraries were performed manually and independently from one another. Such library services include collection development, cataloguing and classification, circulation and reference services, current awareness (CA), selective dissemination of information (SDI), interlibrary loan (ILL), information and referral service and other bibliographic services.

Advancement in ICTs has transformed the way information resources are stored and disseminated in all kinds of libraries and information centres. The application of ICTs in many activities in libraries has commenced. Recently, libraries all over the world have commenced the adoption of cloud computing into their various library activities. Cloud computing is a technology innovation that is enticing a great deal of attention amongst both academics and practitioners. Cloud computing, along with big data, is the biggest buzz of tech world these days. Just like Internet and Web took the world by storm in 1990s and early 2000s, and smart phones have transformed the new world order in communication in last decade (Walker, 2018). Similarly, cloud computing is expected to revolutionize the way in which organizational businesses would be conducted and services would be provided to potential subscribers/consumers. Libraries are not excluded from the huge benefits abound by the application of cloud computing into variety of library activities. According to Alzahrani (2016), cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources. Resources such as, networks, servers, storage, applications, and services which can be rapidly provisioned and released with the little efforts from management or service provider interaction.

This chapter examines various features of cloud computing, describes types and applications. It also outlines the benefits and challenges of cloud computing in academic libraries in Nigeria.

BACKGROUND

Nowadays, emergency of Internet Technology (IT) has brought changes in the ways information is being access and share among the stakeholders. Cloud computing as a product of advanced ICT transforms the way system are built and services delivered, providing libraries with an opportunity to extend their impacts (Matt, 2010). In today's world, cloud-computing services are growing exponentially (Hickey& Rahmouni, 2010). This might be due to cloud computing benefits like cost saving, high storage capacity, universal accessibility, promoting effectiveness and efficiency. However, with the accrued benefits to cloud computing application, it seems, there is low adoption. Cloud computing is a style of computing where computing resources are easy to access, simple to use, cheaper to obtain and work faster with the availability of Internet connectivity. Cloud computing has been defined by many scholars (Hayes, 2008; Gartner, 2012). According to Hayes (2008), cloud computing is defined as a kind of computing which is highly scalable and use virtualized resources that can be shared by the users. Similarly, Gartner (2012) defined cloud computing as a style of computing in which massively scalable and elastic IT-enabled capabilities are delivered as a service to external customers using internet technologies. Therefore, cloud computing could be described as an internet based platform computing where virtual shared servers provide infrastructure, software, devices and other resources and hosting to subscriber on pay-as-you use basis. Cloud computing involves the subscriber and the provider. The subscriber is anyone who uses the services which can be referred to as a customer while service provider can be IT organization, a trusted third party or a combination of both. Several countries (UK, USA) began to develop and embrace cloud