Chapter 16
Cloud Computing:
An Agent of Promoting Interdisciplinary Sciences, Especially Information Science and I-Schools – Emerging Techno-Educational Scenario

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ABSTRACT

Cloud is, in today's age, one of the important and valuable names not only in computing but also in all most all the fields of science, technology and engineering and even in several branches of humanities and social science—the reason behind this is its ultimate benefit of virtualization and elasticity of IT products. This is actually a type of virtualization; here computing is geared up with the wonderful virtual platform which provides a remote accessibility of hardware, software, IT resources, as well as application packages. Interestingly, 'Cloud' also supports the green agenda of the organization and society. There are so many subjects and domains gaining or injecting the cloud benefit to their services. The information field and domain is more close to the computing and information technology, but it has another core agenda of information activities, which include collection, selection, organization, processing, management, and dissemination of information; here, cloud plays a potential and healthy role.

INTRODUCTION

Cloud computing is a kind mechanism or tool treated as a platform for easy, flexible resource sharing. Here, resource sharing includes hardware, software, IT applications as well as software packages and all other content and facet. After the Internet, this is the most advanced computing used by almost all the organizations and institutions whether it is private or governmental, small or large, profit making or nonprofit making. During the 1940-70's, computing speed was slow and non-flexible but later, after the development of the Internet and the integration of several applications to this platform, it was popularized. During the 1990's and 2000's, the traditional arena of computing was changed due to the virtualization technology which promotes and provides hardware, software, IT application resource sharing by online services.

Connection between some subjects regardless of domain, direct and indirect connections with the main facet or sub field is called interdisciplinary domain. The information field is actually a vast domain and field of computing with so many subjects which are directly and indirectly responsible for the information activities and more clearly information transfer cycle. The information field may be automated, supported by many core computing and IT applications or it may be included in some more advanced intelligence tools for information sharing and storage. However, the information field may also be supported by many knowledge organization tools such as indexing, abstracting, classification, cataloguing, and so on. More importantly, cloud computing may be most beneficial in terms of advancing the information field by fulfilling its main aim and objective in an intelligent way.

Cloud computing is an architecture which has a virtualization principle and also provides online and round-the-clock computing platform and services. As the information field needs help so that cloud computing is needed for so many activities. More clearly, information technological tools such as monitor, printer, database as well as other applications and packages are possible to avail in a cost effective and green context. Hence ultimately, the information field as well as information schools may save costs on IT applications using cloud computing which does not require extra software, hardware and IT packages, due to the third party solution.

Hence, information schools or the information field not only is getting information support from the cloud but also other support of technologies for virtualization. Advanced information services are positively possible to gain up with cloud supported technologies.

BACKGROUND

Cloud - a name of business, entertainment, education, family, politics, social development in modern age. During the first generation of computing and onwards, computing was very slow and elasticity of the computing was not so much heavy. Right from big mainframe computers to personal computers, single user to client server architecture has been emerged recently. Today, client service or several computing made a revolution of computing and, in the IT world, where several IT application sharing is possible to the client by the servers.

The distributed computing changed the entire IT and computing solution and services. Soon after this, the cloud computing concept emerged with several facilities and features on the anytime and anywhere basis. Fortunately, price was also a matter during the initial stages of introducing cloud computing in most of the organizations or institutions. Virtually, this is more transparent to users and applications, and able to build in multiple ways. The degree of computing utilization also mobilized by cloud computing services where one provider provides all types of data storage, hardware, software to its client through strong Internet connection.

Informatics is another name in the contemporary world; it is responsible for information processing and management with technological tools and engineering principles. Information science is also similar to informatics, but it is much wider and also includes some more aspects of information such as information & its values in information foundations and others (mainly in society & community aspects) & without ignoring the practical foundation of 'strong' computing application and integration. All the disciplines which are related to information are called *information field*, and the school or academic wings engaged in such activities are called *information schools* or *i-schools* in short. Practically, IT and advanced computing are an integral part of such a domain, due to their interdisciplinary property. Cloud computing is helpful in fulfilling the objective of information science and other domains of information in many ways. Academically, it is true that programmes on the cloud are not at all offered by any leading i-schools (as per web

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