

# Modern Methods in the Development of Education Using Cloud Computing Applications

Dr. Yasser Elmalik Ahmed Seleman

PhD in Computer Science, Omdurman Islamic University, Degree (Excellent).  
M.sc in Information Technology, Newcastle (USA)  
M.sc in Information Technology, the National Ribat University. Sudan –Khartoum

**Abstract:** *The world is a big scientific and technological revolution, have had an impact on all aspects of life, he became Education demanding to search for new methods of teaching and models to meet the many challenges at the global level, including the increased demand for education with a reduction in the number of educational institutions, and increase the quantum informational in all branches of knowledge , appeared E-Learning to help the learner to learn at the place where he wants while preferences without the obligation to come to the classroom at specific times, Became the methodology and ways of educational and search for information and easily obtained and the acquisition of new knowledge through cloud computing applications.*

**Keywords:** cloud computing: Sophisticated technology is based on the processing and transfer of computer storage space for the so-called cloud (Cloud), a server device to be accessed via the Internet, to turn information technology products from software to services.

## 1. Introduction

Facing the use of cloud computing in education a lot of challenges which returns the relative newness of the cloud services market and defaults on the market for cloud services. For education, the decisions will be affected by the adoption of cloud computing technology and the nature of cost considerations. Information is the important part for education, and to make decisions about how to manage this information can be linked to many of the political and social considerations, and economic. Adoption of cloud computing faces many risks and challenges in the process of deciding when to use and similar in the case of the use of more traditional outsourcing. Increase the possibility that the service provider or the source of this service abroad does not follow the regional and state laws; it can make some of these concerns more acute. Cloud computing offers educational institutions of various resources and opportunities for the development of modern applications, easy to use and effective for students[1], and there are many concerns about security and privacy in the cloud, but most of these concerns are related to being a new technology is still evolving, and therefore can be considered as temporary problems. In the future will be cloud computing a major impact on the educational environment, as they can provide the infrastructure and resources necessary for learners to perform any number of tasks on the cloud while minimizing cost and offering them easy access huge amount of information that is available on the internet[2].

## 2. Methods and uses of Cloud Computing

Will explain and clarify cloud computing and various ways to the process of storage and access to information.

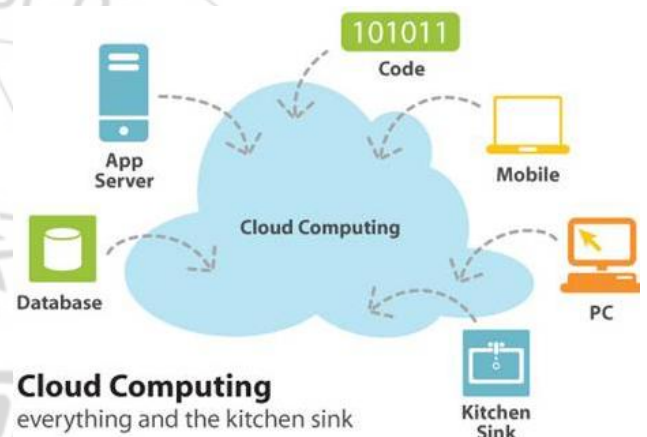


Figure 1: Action cloud computing method.

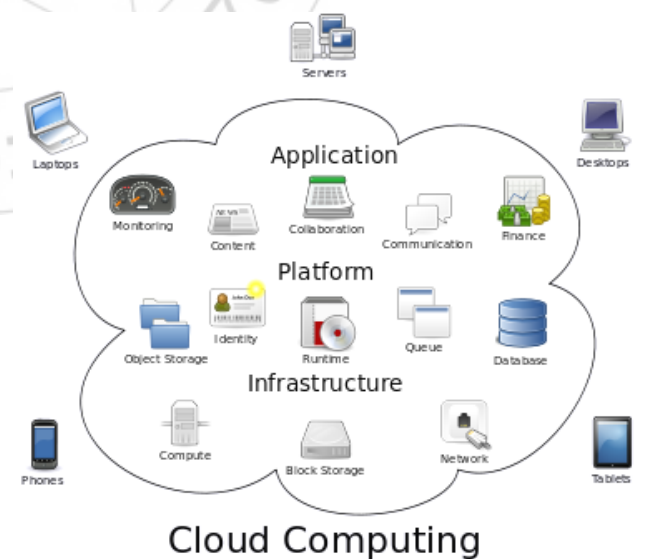


Figure 2: Cloud computing needs.

**We find that cloud computing offers many of the benefits discussed in the paper:**

Cloud computing provides users with the possibility of the use of resources beyond the capacity of their own devices,

such as Internet applications and storage spaces; at lower prices than if they had bought these resources. It gives anyone who has access to the Internet the opportunity to use resources whenever they need it without having to install new programs or buy new equipment. That is why cloud computing has emerged as a new and easy to use economic environment for all types of users whether it's in business or education, or even personal uses. Cloud computing is a model offers easy access via the Internet to a common set of resources (networks, servers, storage, applications, and services) that can be processed to work quickly and a little effort[3].

### 3. Objectives of the Scientific Paper

Institutions of higher education take advantage of cloud computing and the adoption of the latest technologies and solutions is essential to increase competitiveness and retain students. Cloud computing helps to reduce the expenses that go to buy hardware, software or maintenance. The cloud computing provides universities virtual data centers accessible to everyone from professors, staff and students, at Help cloud computing help educational institutions to:

- accommodate the rapid increase in the use of the mobile device dependencies.
- Storing extended amounts of sensitive data and information which can be accessed easily.
- Stay with the developments (for example, providing a digital repository for students within the university to store and chapter notes and projects Notes [5].
- Access to the latest software updates and applications.

**There are several important steps to rely on cloud computing, whether public or private, and identify all potential opportunities and advantages to switch from the existing arrangements to cloud services, it requires:**

**A.** Ensure that the existing infrastructure of the institution complements existing services on the cloud. The transition to cloud services is not all or nothing, and some cloud services have the ability to support existing technology and increase its effectiveness both in terms of its ability to add accounts and capacity default storage and compatibility with the infrastructure of the institution will be a crucial step to go to cloud services and adoption.

**B.** Put the cost / benefit and risk assessment framework to support decisions related to where, when, and how you can adopt cloud services?

**C.** Preparation way to improve the current information technology environment at the adoption of public and private cloud services map.

**D.** Identify the data that cannot be made available in public cloud computing environments legal or security reasons.

**E.** Identify and secure the competencies that will be required for the adoption of cloud services and departments effectively.

**F.** To evaluate the technical challenges that must be addressed when the transfer of any stream or my application to the cloud environment, even if a private cloud.

**The paper discusses the most important set of recommendations:**

- To provide teacher and student tools of creativity and innovation, participation, and by providing methods of simulation, interaction and flexibility to deal with the sources of the information provided by cloud computing- Help students access to programs and the acquisition of knowledge should use cloud computing and reduce cost.

- Must be exposed to a range of topics in cloud computing delusional focus on privacy and censorship. - Focus on the security of cloud computing to work out in all fields, especially educational fields - Educational interest in the adoption of cloud computing and should be the basis for the efforts of information technology in the future, and must be addressed and the integration of this factor in the information technology strategy.

### 4. Conclusions

Cloud Computing System, like other technologies contain the pros and cons, but in the field of education from the perspective of a researcher that it will be one of the essentials of e-learning and private mobile education, education, widespread, and must be comprehensive coverage of the service and fast Internet access to benefit the student and the teacher of the applications that will call it from now on Services cloud computing. Modern development in industry, medicine and all fields depends on the evolution of technology in the fields of communications, networking and e-learning must.

### References

- [1] "Gartner Says Cloud Computing Will Be As Influential As E-business". Gartner.com.- Gruman 'Galen "What cloud computing really means". InfoWorld.
- [2] "Cloud Computing: Clash of the clouds". The Economist, Cloud Computing Defined 17 July 2010. Retrieved 26 July 2010.
- [3] "NIST.gov – Computer Security Division – Computer Security Resource Center" ..
- [4] Buyya 'Rajkumar' Chee Shin Yeo, Srikumar Venugopal. Market-Oriented Cloud Computing: Vision, Hype, and Reality for Delivering IT Services as Computing Utilities (PDF). Department of Computer Science and Software Engineering, University of Melbourne, Australia..
- [5] "What's In A Name? Utility vs. Cloud vs Grid". Datacenterknowledge.com.
- [6] "Distributed Application Architecture". Sun Microsystems. "Sun CTO: Cloud computing is like the mainframe". Itknowledgeexchange.techtarget.com

### Author Profile



University

**Dr. Yasser Elmalik Ahmed Seleman**, Sudane did PhD in Computer Science (Excellent) from Omdurman Islamic University, Sudan. He did M. Sc in Information Technology of Newcastle- USA and MSc in Information Technology- The National Ribat