Abstract
This paper is basically for comparison of different learning techniques. The main concern is on ubiquitous learning, which is the combination of e-learning and m-learning. Here the advantages of adaptive learning are combined with other learning techniques.

Keywords: Learning Strategies, Adaptive Learning, Ubiquitous Learning, M-Learning.

Introduction
The e-learning is not a new fact in promoting education in some parts of world. Presently, some institutions in Nigeria [6] are using it to promote distance education (DE) and life long learning. E-learning according to Sale (2002), is the use of electronic technology to deliver education and training applications, monitor learner's performance and report learner's progress. Hedge and Hayward (2004), defined it as an innovative approach for delivering electronically mediated, well-designed, learner-centered and interactive learning environments to anyone, anyplace, anytime by utilizing the internet and digital technologies in concern with instructional design principles. It is all about learning with the use of computers. In this age, learning with the use of computer is simply online ways of acquiring knowledge through the internet or through the offline – CD-ROM. The alphabet “e” in e-learning stands for the word “electronic”, e-learning would incorporate all educational activities that are carried out by individuals or groups working online or offline or standalone computers and other electronic devices. It is first use in 1960 Stanford University psychology. The client-server and centralized server approaches are metaphors of student-teacher and repository centric which reflect real world learning scenarios in which teachers act as the content producers while students act as the content consumers [1][2][3]. There are the several benefits of e-learning: saves time, efficient, less expensive and flexible. Drawbacks of e-learning: Software must be updated on a regular basis and Not Portable. Example of e-learning: E-mail, Fax, Courier. The alphabet “m” in m-learning stands for the word “mobile”, m-learning can be defined as ‘any educational provision where the sole or dominant technologies are handheld or palmtop devices’. This definition may mean that mobile learning could include mobile ‘phones, smart phones, personal digital assistants (PDAs) and their peripherals, perhaps tablet PCs. In 1970 Alan Kay and his colleagues in the Learning Research Group at Xerox Palo Alto Research Center [PARC] propose the Dynabook as a book-sized computer to run dynamic simulations for learning. M-learning is not wireless or internet based e-learning but should include the anytime/any place concept without permanent connection to physical networks. The advantage of m-learning compare to u-learning includes flexibility, cost, size ease of use and timely application [4]. Advantages of m-learning: Portable, easy to use, handwriting with the stylus pen is more natural than using keyboard and mouse and can draw diagrams, maps, sketches directly onto a tablet, using standard software.

Limitation of m-learning: There is no denying that the storage capacities of PDAs are limited, short battery life and frequent changes of batteries are a great nuisancel, limited wireless bandwidth and chances are that it may further decrease with the number of users ever on the increase and in the M-Learning venue, we are incapable of printing, simply because it requires a network connection. This is obviously not feasible in a number of real. Examples of m-learning: Mobile Phone, Handheld devices, Tablet.

Ubiquitous learning also known as u-learning is based on ubiquitous technology. Ubiquitous learning environment to which enable anyone to learn at anytime at any place. U-learning is the combination of both e-learning and m-learning (u-Learning = e-Learning + m-Learning). It’s almost the same as m-learning except that in u-learning universal information access (UIA) is required [5]. UIA means that the published courseware can be accessed anywhere, anytime, any network and by any device. UIA has been
one unresolved key problem in ubiquitous computing which is also called device independence. The term “ubiquitous learning environment” are taken from the term “ubiquitous computing”, which is used to describe the moving of general computing off desktops and into many devices, to make computing available in all facets of everyday life.

Comparison on basis learning features

The main characteristics of ubiquitous learning are shown as follows [7] [8]. The table I provide a comparison on basis learning features such as Availability, Permanency, Accessibility, Immediacy, Interactivity and Adaptability. Availability: information should be available each and every time. Permanency: Learners can never lose their work unless it is purposefully deleted. In addition, all the learning processes are recorded continuously in everyday.

<table>
<thead>
<tr>
<th>Features</th>
<th>E-learning</th>
<th>M-learning</th>
<th>U-learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>Information not available each and every time</td>
<td>Information available each and every time</td>
<td>Information available each and every time</td>
</tr>
<tr>
<td>Permanency</td>
<td>Information can be lose</td>
<td>Information may or may not be lose</td>
<td>Information can not be lose</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Learners can not get the right information at the right place</td>
<td>Learners may or may not get the right information at the right place</td>
<td>Learners can get the right information at the right place</td>
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<tr>
<td>Interactivity</td>
<td>Lack the dimension of real world interactivity</td>
<td>Interactivity is specified with expert, teachers or peers</td>
<td>Interactivity in the form of synchronies or asynchronous communication with experts, teachers, or peers through interfaces</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Learners can not access to their documents, data, or videos from anywhere</td>
<td>Accessibility of documents, data, or videos is specified for learners</td>
<td>Learners have access to their documents, data, or videos from anywhere</td>
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</table>
Conclusion

The development of a ubiquitous learning environment combines the advantages of an adaptive learning environment with the benefits of ubiquitous computing and the flexibility of mobile devices. Students have the freedom to learn within a learning environment which offers adaptability to their individual needs and learning styles, as well as the flexibility of pervasive and unobtrusive computer systems. The advancement of computing and communication technologies have promoted the learning paradigms from conventional learning to e-learning, from e-learning to m-learning and now it is evolving to u-learning. U-learning aims at accommodating learners in their learning style by providing adequate information at anytime and anywhere as they wish for it, from the comparative study it is quite clear that u-learning is better than the both e-learning and m-learning. With the growing availability of mobile technologies, on-line learning environments will need, increasingly, to encompass ubiquitous learning facilities.

References


