

WEB BASED EDUCATION IN NIGERIAN UNIVERSITIES - CHALLENGES AND PROSPECTS TO UNIVERSITY TEACHES

By

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Abstract

Developments in Information and Communication Technologies have been extraordinary. The pace of change has amounted to technological revolution, resulting in near instantaneous global communications. The educational sector has over the years been significantly transformed by this dynamism in technological revolution.

This technological swift in the educational domain has led to online collaboration learning among students and teachers despite their geographical location. The WEB has served as a pivot of this learning methodology.

This paper reports a study that investigates the extend to which Nigerian university teaches have utilized the WEB medium to promote learning and disseminate knowledge to their students.

Nigerian Premier University, the University of Ibadan is taken as a case study.

The factors that impede the successful utilization of the WEB medium in knowledge dissemination and feedback are highlighted. Suggestions and strategies for achieving a viable web-based programme is given.

The paper maintains that for a successful WEB based programme in Nigerian universities, several pedagogical and didactic issues need to be considered and addressed.



**The WiderNet Project's Second Annual Technician
Training**
December 2-4, 2003

Conference Description

WiderNet Project director Cliff Missen will lead a three-day computer technician training at the University of Port Harcourt, December 2-4.

This three-day intensive workshop is for Nigerian federal university ICT staff members and is funded by the U.S. Agency for International Development, the University of Iowa, and the University of Port Harcourt. Focusing on the creation of campus networks, the workshop will cover a variety of topics ranging from computer assembly to satellite links to the Internet.

Participants will hear lectures on computer and network topics, watch demonstrations on computer assembly and basic networking, and then get hands-on experience building computers, preparing network wires, and building local area networks.

But three days of lectures and hands-on exercises are only the beginning: participants will be provided with a WiderNet Project CD containing thousands of documents and tutorials on building and maintaining campus ICT, as well as computer-based training (CBT) software from

LearnKey, Inc. (Worth \$500 USD.)

The LearnKey CDs provide 28 hours of multimedia training in personal computer support and maintenance. It prepares the trainees to take and pass CompTIA's much sought after "A+" certification. After workshop participants return home to their universities, they will continue their training -- with coaching via email from the WiderNet Project staff. When ready, they can return to Abuja to sit for the exam and gain their WiderNet Project "A+" Exam certificate.

Once trainees pass their "A+" exam, their university will also receive a grant of LearnKey's "Network+" CBT as well as copies of Microsoft's Windows NT and Red Hat's Linux Server Professional. (Valued at over \$1,200. One set per university.) The project goal is to have all of the workshop participants pass both of the WiderNet Project's "A+" and "Network+" exams in the next year.

This training is designed for entry-level computer staff (no PhDs allowed, sorry), who will be responsible for setting up computers and installing networks on their campuses. This training is a repeat of previous year's training, so only those who have not taken the training before are eligible to apply.

Universities sending trainees will be responsible to provide them with housing and per diem. Lunch will be provided at the workshop. For more information on lodging, contact Prof. Mbuk Ebong at the University of Port Harcourt:

email: mbukebong@hotmail.com or mbuk_ebong@yahoo.com

tel: 084-230-890-6

Last year the training was attended by 38 persons who gave the workshop **very high marks**. We expect as many or more to attend this year's training, but the seats will fill up fast. Please sign up soon, either by visiting the **On-Line Sign Up Web site** or by contacting Dr. Aminu Ibrahim at the National Universities Commission.

email: ibrahim@nuc.edu.ng

tel: 09-413-5396

Conference Schedule

Day One

Opening ceremony

Introduction to the WiderNet Project and the scope of the training

Lecture: **"Academic Information and Communication Technologies"**

There's a myriad of ways that ICT can be used in the academy -- from managing the payroll to teaching in the classroom. In this lecture we review the options and describe what it takes to digitize the various domains of academia.

Lecture: **"Nuts and Bolts of Computers and Networking"**

We cover some of the basic technical concepts and terms we think will make your computing experience more fluid and will act as a solid foundation to your understanding of the Internet.

Demonstration: **Computer Based Training (CBT) Materials**

LUNCH

Demonstration: **Building Computers**

Demonstration: **Making Network Cables**

Hands-on Practicum: the class will divide into two groups and either make and test network cables or build a computer from the basic parts.

Day Two

Lecture: **"The Network Wire"**

So how do these wires work, anyway? What does it mean to be "wired?" What constitutes a wire? Packets, IP addresses, and DNS explained...

Lecture: **"Guerrilla Networking: Building Local Area Networks"**

Even without a connection to the Internet, wiring computers together has zillions of benefits. We look at the reasons to connect computers and the remarkable ease with which this can be done.

Lecture: **"Low Cost Internetworking"**

So you want to connect but don't have the N10,000,000/yr for a dedicated line? I explain some of the alternative, cost-effective ways that people are connecting to the Internet.

LUNCH

Lecture: **"Inside the Internet: The Basic Internet Services"**

Email, TELNET, and FTP -- how these long-established Internet tools have evolved into HTTP and today's vibrant World Wide Web.

Hands-on Practicum: the class will divide into two groups and either make and test network cables or build a computer from the basic parts. (Reversing the task done the prior day...)

Day Three

Lecture: **"The Internet in the Developing World: Making the Connection"**

A look at the technologies currently employed to provide Internet services in the developing world.

Lecture: **"Big Birds, Bent Pipes"**

Wireless networking via satellites is already used throughout the world where hard wired Internet connections are absent. However, their impact is only just beginning to be felt. This lecture explains some satellite technology and terminology and examines how new developments may make for plentiful bandwidth worldwide.

Lecture: **"Power Supply Protection"**

Reliable power and regulated power are necessary for any computer installation. We cover strategies for protecting individual computers and whole buildings.

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Demonstration: **Creating a Local Area Network**

Hands-on Practicum: the class will divide into several groups to make small LANs with workgroup hubs and switches and then interconnect them.

Closing ceremony.



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School of
Library and Information Science
The University of Iowa



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Topic: Utilization of Minimum Internet Facilities for Maximum Output in University of Jos
by Babatunde Kolawole.

The advent of the internet has brought tremendous awareness to the importance of global communications and availability of information. Information that took several processes and procedures to obtain is now readily available 'on the fly'. In Nigeria, to be more specific, in Jos, there is a great demand across the length and breadth of its boundaries for accessibility to the internet and wealth of information. This has brought up business sectors, one of which is the Computer Center of the University of Jos.

The pace at which the internet facilities are moving are at a rate that would, in the nearest future, be spurned by most people and would vanish in oblivion. So far, quite a number of internet café services are being utilized, but yield only little or no profit in comparison with the money being paid to the ISP's (Internet Service Providers).

Firstly, the number of computers should be increased and flat panel screen computers introduced which would be to the interest of most customers in Jos. As it were, the 'compatibility' of the available computer systems to the modern world – fast moving generation systems is almost unbelievable. In this age and sooner in a few years to come, computer hard disks would come with a space of 1 TB(terabyte) and a speed of about 4 GHz with an OS (operating system) like Windows Longhorn which would just be wonderful. The computers in the university should, I think, be nearly extinct in the first world countries like the USA – computers having a space ranging 544MB – 4GB at most and a speed of 233MHz with an OS of Win98 for most systems.

Secondly, Excellent technicians and administrators should be sought for who will be able to render help desk and support by the use of customer friendly softwares like the LBE helpdesk software in which customers can contact their vendors easily through chatting and telling the network technician or administrator their problems which are solved on-line if minimal or by physical contact. It could be summarized in the following phases:

PHASE 1: Establishing a professional relationship with the customer.

PHASE 2: Determining the problem situation.

PHASE 3: Performing the service.

PHASE 4: Completing the transaction.

A good customer relationship should also be sort for where the customer is greeted, the network technician or engineer maintains a professional image, informing the customer of what is necessary. It is also important that there is no loss of revenue due to improper assessment of the amount of time being used by a customer when browsing the internet. Proper billing softwares should be used, not ones that can easily be hacked or tampered with.

If the above are implemented in the Computer Center, internet facilities would be more efficient and customers would be eager to use the available facilities which would then pave the way for greater successes and strategies and lead to the approbation of the

Center. The networking of the Staff Quarters to the internet which is just about a hundred meters away from the University premises.

Also, more competitions should be put forward, like the one organized by the Widernet Corporation at present, so that new discoveries and ideas could be figures out from the amazing ideas of talented minds especially youngsters. Internet usage training, video chat/conferencing and printing just to mention a few, should also be employed.

Strategic Planning For ICT At The University Of Jos

by L. S. O. Liverpool

The University of Jos was the first university in Nigeria to embrace strategic planning. Its first comprehensive strategic plan covered the five-year period 1998-2003. To nurture a university of the highest standard, rated as one of the best three in Nigeria, it adopted the eight goals below and fifty-five strategies.

- * Comprehensive strength in undergraduate programs.
- * First class PG and professional programs in a significant number of areas.
- * A quality academic and conducive working environment.
- * Academic and administrative staff of national and international distinction.
- * Effective and efficient utilization of limited resources.
- * Increased provision and use of information technology.
- * Decentralization and transparency in administration.
- * Increased participation of a diverse range of stakeholders.

Our experience presents some success stories! We have started new degree programs in Mass Communications and Computer Science. A VSAT now provides full Internet access on all our three campuses. Generators and pilot solar-powered hybrid systems provide uninterrupted electric power supply for essential services. Automatic training positions are offered to our first class graduates. We are fostering cooperation with research institutions nationally and abroad. We are using our strategic plan to seek international funding partners.

The plan assumed university autonomy would be in place but this is still not the case. We have therefore been handicapped to implement certain aspects of the plan. We have been unable to introduce an admission quota for privately sponsored and foreign students. Tuition fees from these students would have subsidized the publicly sponsored ones. Recently the President held discussions with the universities, banking and other financial houses. Government now wants to foster partnerships between universities and the private sector to manage student hostels and staff accommodation.

The University has already initiated action to produce the second cycle of its strategic plan. Strategic planning has come to stay! This second round of strategic planning is under way under the chairmanship of the DVC Academic; a real planning culture is taking root as we review successes and failures of the first cycle of the plan and begin to formulate the second. Areas of strength and innovation highlighted in the first cycle of the plan include Pharmaceutical Sciences and ICT—areas in which the University continues to nurture emerging centres of excellence.

This paper will examine the strategic planning experience at the University of Jos and in particular look at strategic planning for ICT. It will review the evolution and implementation of the ICT plan, in the context of strategic planning across the university and the Nigerian HE sector. It will also look at problems and prospects for strategic planning for ICT as the second cycle of the plan is put in place.

Student-run Computer Lab

by Mr. Richelieu Lomax, with the assistance of two other senior interns

The topics we propose to cover in our presentation will include:

- * Origins, inception, and takeoff of the Lab
- * Working organization
- * Leadership structure
- * Recruitment into the corps of interns
- * Incentives for interns
- * Services and income generation
- * Financial management
- * Maintenance of equipment; security
- * Challenges so far and solutions
- * Conclusion: the future, towards a ICT friendly legal education

The presentation will be made by the current head of interns, Mr. Richelieu Lomax, with the assistance of two other senior interns. We propose to use PowerPoint in making our presentation. We request a presentation time of 30 minutes.

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Making your Network Work: Getting Your Money's Worth out of Your ICT Investment

by Cliff Missen

While our initial forays into information and communication technology (ICT) seem cluttered with "CPUs" and "VSATs" and "mbits" and "Internet cafes", it is "services" that make an ICT enterprise successful. This presentation will examine the role of services and demonstrate how to find a balance between buying stuff and improving productivity.

Creative Connectivity: Ideas for the Inexpensive Delivery of Internet Services to African Universities

by Cliff Missen

This presentation will demonstrate the variety of ways that universities can implement bandwidth strategies to reduce their Internet connectivity costs and deliver more services to their campuses.

Focusing on a three-pronged approach to improving Internet connectivity:

- Bandwidth procurement
- Bandwidth management
- Bandwidth augmentation

This presentation will show how each of these approaches -- individually -- has the potential to deliver practical results to universities, but -- taken together -- can multiply their impact and create resoundingly good results.

**THE INTERNET AS A CATALYZING AGENT IN SCIENTIFIC RESEARCH -
CHALLENGES AND PROSPECTS**

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ABSTRACT

The Internet is a vast resource that can enrich scientific research and teaching on national and international issues. It has become an important tool particularly in international communication, development and education.

There is an extremely wide variety of materials on the Internet, varying in subject, reliability and value. This information exists in a large variety of forms and is created for many purposes. For each of these various forms and purposes, information exists on many levels of quality and reliability.

The vast amount of information potentially available on the Internet has made it a prime target for dedicated researchers who invariably seek knowledge. Internet research offers great potential for improving scholarship in a wide variety of fields and for assessing the key practical impacts of an increasingly critical technology.

Internet research, however, raises a number of complex issues for the scientific community, research subjects and policy makers.

This paper highlights some of the ethical and legal aspects scientific Internet research. Some suggestions for effective and efficient use of information from the Internet and strategies for dealing with the challenges posed by Internet research are given.

The paper maintains that a better understanding of the Internet is essential if we are to make effective and efficient use of the materials from the Internet. Those

materials need, however, to be evaluated before usage. The Internet should be seen as an evolving medium for research and should be viewed as a paradigm of the larger question of how we deal with value-laden questions associated with technological advances and the capability they offer.

Informal User Training (IUT) as a Panacea for Administrator Overstress in a University Network -- An Administrator's Experience

by Mrs. M. Ojebode, University of Ibadan

Administrator's overstress is a common phenomenon in both corporate and academic network in Nigeria. This problem, especially in the University, is caused by 3 major factors--poor networking which leads to frequent loss of signals; low proficiency on the part of the users, and assignment of too many terminals to a network administrator. Each of these three exerts undue pressure on the administrator and causes her to be overworked.

In our university (University of Ibadan), many lecturers are yet to be proficient in the use of computers. As a result, the network administrator is called upon for every little hitch, some of which are caused by the users' mistakes or lack of proficiency. The logical way out is to organise a formal, thorough workshop for users. But my experience and interaction with lecturers show that they are hardly available for workshops especially if it costs money. The only way out is Informal User Training (IUT). IUT is the art and practice of explaining to and instructing users in their offices in the course of their normal duties and as they used their systems.

This paper discusses some recurrent problems I encounter, how I use IUT to solve them and forestall their recurrence. I also discuss the problems I face as I use IUT on a daily basis.

Developing Data Warehouse Design for the Postgraduate School, University of Ibadan

by Dr. Mrs. Adenike Osofisan and Rising Osazuwa

We have been involved in the Design of a Data warehouse for the postgraduate school of the University of Ibadan. This strategic Information Technology project is of utmost relevance, in view of the emerging systematic transformation of the University of Ibadan to a Postgraduate University.

Developing a good data warehouse is no different from any other IT project; it requires careful planning, requirements definition, design, prototyping and implementation. The first and most important element is a planning process that determines what kind of data warehouse strategy the organization is going to start with.

Only a small fraction of the data that is captured, processed and stored in the University enterprise is actually available to executives and decision makers.

In developing the data warehouse for the University of Ibadan, we are pragmatically addressing the critical issues of developing a balanced data warehousing strategy that is appropriate for its needs and its user population.

The emerging Data warehouse is tuned to achieving the sustenance and maintenance of good quality data, as well as the deployment of an effective, robust Decision Support System for the University Of Ibadan, thus making significant contribution to the realization of the VISION of the University of Ibadan as the leading educational Institution in Nigeria.

Performance Indicators

1. Common data definitions
2. Properly trained users
3. Improved Community communication level
4. Increasing stress elimination (communication) path
5. Improved Human resources efficiency
6. Improved SQL skills
7. Improved Data Quality
8. Reduced Information Management cost

Benefits and Improvements

1. Capacity Development and Knowledge sharing.
This project and interaction with professionals from different parts of the world has improved the development of the University ICT, communication and management skills.
2. The University has an improved and effective Decision Support System.

4. Training and Capacity Building for the University community.
5. Reduction in cost of operation.
6. Increase in resource utilization and preservation.
7. Transparent and stress free information Processing.
8. Commencement of Training the Trainer's scheme

By investing in managing and improving data quality, the University is bountifully reaping tangible and intangible benefits.

Dr. Mrs. Adenike Osofisan
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&
Rising Osazuwa
Systems Analyst, Management Information System (MIS) Unit, Vice-Chancellor's Office,
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Managing Departmental Networks: Experiences from University of Ibadan

by O. Osunade

The University of Ibadan has been developing its Information and Communication Technology (ICT) infrastructure over the last couple of years with significant results. The University is currently connected to the Internet using a VSAT and by means of wireless Local Area Networks (LANs) connect the dispersed users to a central location for Internet access. The need to utilize the University Internet access has given rise to more computer systems and computer networks in the various units of the University. These LANs vary in configuration, size and in number of computer systems connected. Most of these networks were implemented by IT professionals. However, the task of managing these networks after the contract period has led the networks to be underutilized, problematic and inefficient from the user's view point. This paper presents solutions applicable to some of the common problem

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Setting up and Managing ICT Lab in Nigerian Library School: Ahmadu Bello University, Zaria Experience

by Gbaje Ezra Shiloba

This paper discusses the setting up of an ICT lab in Nigerian Library School with special reference to the Department of Library and Information Science, Ahmadu Bello University, Zaria. The ICT lab set up by the Emporia-Nigeria Project, an educational partnership between Emporia State University's School of Library and Information Management (SLIM) in Emporia, Kansas, USA and three peer institutions in Nigeria: Bayero University, Kano; Ahmadu Bello University, Zaria; and the University of Maiduguri. The 4-year project is sponsored by Bureau for Cultural and Educational Affairs, College and University Affiliation Program and U.S. State Department. The School of Library and Information Management of Emporia State University on its own donated computers, networking kits and provided the Human resources for the project and training for the Lab supervisors in the Library Schools both in Nigeria and at Emporia State University, USA.

The paper highlight how the computers donated by the Emporia-Nigeria Project and the Management of Ahmadu Bello University were networked by the trained lab supervisor and connected to the internet for use by the students and staff of the Department free of charge. Specifically, the following are discussed in the paper: IT Status of Ahmadu Bello University, Zaria, Setting up the Computer Lab for Department of Library and Information Science, the Network/Internet implementations, Internet Training for Staff and Students of the Department, Use of the ICT Lab, Management of the ICT Lab, University Management contribution, Training of the ICT Lab Supervisor and finally Challenges Encountered in the setting up and Management of the Lab.

The following Practical lessons can be drawn from this presentation:

- * The important role academic link program play in capacity building and academic development
- * How the ICT lab has affected the review of curricula of the department.
- * The role IT staff trained can play in the deployment/implementation of network and Internet connection when given the opportunity.
- * The Cost effectiveness of setting up and maintenance of Network and internet connection by the staff of the institution
- * The importance of involving the staff of the institution in setting up Network and Internet connection for easy maintenance after the installation.
- * The importance of demystifying ICT facilities and giving the students opportunity to work in the lab as lab assistants which in turn develop their ICT skills and foster ICT culture.

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