

E-Learning and Student support in survey profession in (Nigeria)

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Key word: e-Learning – content development methods, tools and student support.

SUMMARY

E-learning is complex connections between strategies, design, and technologies. The development process for an e-Learning course is a cycle of analysis, design, building, and test. This iterative process is continued until the final product is completed. In this paper, e-learning is basically focused on the use of electronic applications and processes to learn in survey profession for the connections between strategies design and technologies. First, this paper entails e-learning policies and strategies and followed by the software tools.

Then, the main steps and overall procedure of developing an e-learning course are explained in details, and illustrative examples are provided as well. This paper contains as well future vision about possible extensions of e-learning through Geographical Information System (GIS) in survey profession in Nigeria.

This paper also discusses the role of student support services in e-learning systems which is used for those parts of a distance or electronic learning courses which are additional to the provision of course content. These student support services can be either;

- i. Learner support.
- ii. Learning support.

Learner support comprises all the assistance provided by a distance education or an e-learning system in surveying which matches the facilities which a face-to-face system provides for the success of its students.

Learning support entails the assistance provided by the institution in the actual learning to ensure that the learning task are performed successfully.

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1. INTRODUCTION

Learning is a lifelong process of skill and knowledge acquisition. It is critical in this era of rapidly increasing global innovation. The chief economic priority for countries is to raise the productivity of knowledge, the country that does this first will dominate the twenty-first century economically. Due to the rapid technology revolution, the e-learning is a must to improve the surveyors' skills and to update them with professional knowledge.

E-Learning is gradually becoming the fastest growing form of international and domestic education in recent times. The e-Learning technology is a phenomenon that has taken the entire globe by storm in the field of education. The rise of this new model has been enabled by the increasing deployment of the world wide web and information communication technologies (ICTs) across the globe. This rise has enabled a process where instructors and students use the computer to generate, advance and share knowledge because e-Learning is a computer supported collaborative learning process with the technology of the computer deployed as the main platform. On the global terrain, e-learning has enabled scores of people to get their degrees online while from the comfort of their homes, offices, countries etc. E-learning, which refers to any education received electronically through the Internet or from a software program, began at the University of Alberta in Edmonton, Alberta, Canada with a few brave faculty members who decided to try something new. The faculty members were said to have started the process by making their course syllabi, lecture notes and class assignments available to students via the Web. The students enchanted by this new offering from their lecturers responded positively and started seeking out the particular instructors or courses that featured online components. That small seed planted in Canada has today grown into a worldwide phenomenon that has gradually overshadowed the traditional method of learning and enabled scores of people around the globe to acquire knowledge and expertise in various fields.

2. IN SURVEYING PROFESSION

The power of technology in changing lives is in no doubt. Computer dramatically changed the computational habit in surveying world during its introduction in the sixties, the remote sensing satellites(1970s), the Global Positioning System (GPS) in the eighties generated more basic changes and transformation in surveying. The introduction of internet and the rapid changes of Information and Communication Technologies (ICT) brought yet another transformation for surveying, hence the birth of e-learning with the

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1/14

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objective to provide a high quality and an advanced training in the field of surveying and to meet the demand for professionals in this field. The challenge is not to use new technologies to recreate traditional systems, but rather to create a new learning environment providing improvements to both the instructor and the learner.

To stay viable in this global competitive professional market and to maintain a leading role, e-learning initiative is to be embraced in Nigeria to meet surveyors needs. E-learning planning requires broad capabilities that help to advance learning effectiveness and efficiency to produce real education/training value.

To make Nigeria's quest for a place among the 20 economies of the world by 2020 feasible, access to information and communication technology at all levels and surveying professional sector should be accorded priority, this is the only way to reposition the Nigeria surveying profession to meet global standards and to respond appropriately to the needs of the society and contribute immensely to the economic development, as developing countries such as China, Malaysia, India, South Korea, Singapore and others, have used ICT and e-learning to fast-track their economic development.

“As a nation and key player in world affairs, Nigeria cannot afford to be left, trailing behind other nations in the global ladder of ICT. We must, therefore, mobilize our resources towards e-learning, in order to achieve the Millennium Development Goals,”(Mr. Sam Egwu).

E-learning is a logical and strategic approach to achieve the technological transformation of Nigeria, the deployment of the ICT is critical in the implementation of professional roadmap, which is designed to revamp the surveying system, it is an important platform for alleviating most of the problems currently facing the Nigeria surveying system.

Most Nigerian surveyors are so busy working in sites to meet their needs that they have little or no time left to pursue professional programmes or acquire specialized skills that they desire to enhance their positions and move them forward their surveying career. Because of the flexibility of e-Learning, which is not restricted to a particular place or time, most Nigerians will realize that they can plan their time around a convenient schedule to take advantage of the benefits of e-Learning because with e-Learning one can study anywhere as long as there is access to a computer, PDA or even smartphones.



E-learning participants at the university

3. E-LEARNING POLICIES

Most professionals interested in the use of technology in education understand the importance of an e-learning course site, whether the course is taught totally online or in hybrid environment where the instructor has some face-to-face contact with students. On a typical course site, an instructor posts announcements, a course syllabus, class notes and presentations, and related learning materials for easy access by students. In addition, some instructors use the course site to facilitate forums and chats, to receive and return student assignments, to administer online quizzes and tests, and to maintain an online grade book. In any learning environment, students should have a clear understanding of what the instructor expects from them, as well as what they can expect from the instructor. This need is more urgent for e-learning students than for traditional students because e-learning activities, typically technology-based and self-directed, often occur in an environment where students may have difficulty getting timely answers to important questions. Thus, instructors should anticipate their students' needs for clarity by posting detailed policy documents in a prominent section of the course site. These policies will help instructors as well as students, since they make managing an e-learning course much easier. There are 10 broad components of e-learning Policymaking;

- Strategic planning and vision;
- Curriculum and content;
- Use of the Internet and acceptable use policies;
- Quality assurance and accreditation;
- Conductivity, infrastructure, and networks;
- Professional development;
- Intellectual property and copyright;

- Cost, finance, and partnerships



Components of e-learning policy making.

4. COMPONENTS OF E-LEARNING

Creating e-learning material involves several components: once content is developed, it must be managed, delivered, and standardized. Content comprises all instructional material, which can range in complexity from discrete items to larger instructional modules. A digital learning object is any grouping of digital materials structured in a meaningful way and tied to an educational objective.

Learning objects represent discrete, self-contained units of instructional material assembled and reassembled around specific learning objectives, which are used to build larger training materials such as lessons, modules, or complete courses to meet the requirements of a specified curriculum.

Examples include tutorials, case-based learning, hyper-media, simulation learning modules. Content creators use instructional design and pedagogical principles to produce learning objects and instructional materials. Content management includes all the administrative functions (e.g., storing, indexing, cataloging) needed to make e-learning content available to learners. Examples include portals, repositories, digital libraries, learning-management systems, search engines, and e-Portfolios. A learning-management system such as Internet-based software that facilitates the delivery and tracking of e-learning across an institution.

E-learning-management system can serve several functions beyond delivering e-learning content. It can simplify and automate administrative and supervisory tasks, track learners' achievement of competencies, and operate as a repository for instructional resources twenty-four hours a day.

There are more than 200 commercially available systems in learning management, a number that is growing rapidly. Content delivery may be either synchronous or asynchronous.

Synchronous delivery refers to real-time, instructor-led e-learning, where all learners receive information simultaneously and communicate directly with other learners. Examples include teleconferencing (audio, video, or both), Internet chat forums, and instant messaging. With asynchronous delivery, the transmission and receipt of information do not occur simultaneously. The learners are responsible for pacing their own self-instruction and learning. The instructor and learners communicate using e-mail or feedback technologies, but not in real time. A variety of methods can be used for asynchronous delivery, including e-mail, online bulletin boards, newsgroups, and Weblogs. In addition to establishing, managing, and delivering content, a fourth component is part of the e-learning equation.

5. E-LEARNING STRATEGIES

In surveying, e-learning is an important technology to improve the quality of teaching and enhance surveying profession. It also has the potential for effective further and continued education in the public sector. The paradigm shift in instruction and learning puts the learner at the center of the learning process and gives the instructor more time for individual interaction with learners. E-learning enhances student-centered learning because learning becomes a two way discussion not a one way delivery system.

E-learning strategy makes a statement about ;

- i. The technology that has been chosen to deliver the training,
- ii. Why that technology was chosen, and
- iii. How that technology will help to achieve e-learning goals.

6. MAJOR CHALLENGES

E-learning provides a strategy to respond to three major challenges: Cost, Quality, and Demographics

Cost: There is a need for fundamental changes in the tools used to match improved quality with increased learners enrolment; e-learning can do more with less.

Quality: Maintaining/improving quality with increasing numbers of learners can only be achieved with fundamental changes in learning instruction using new tools and methods. E-learning is judged by what learners have learned, not what they have been taught.

Demographics: Most e-learning target students are working adults; these learners typically are place bound. This dictates that the classroom should no longer be constrained by time and space.

The following are the specific e-learning goals that relate to the integration of GIS in the teaching and learning processes.

Goal 1: To improve the quality of survey professionals, by utilizing modern instructional materials and methods, including increased use of ICT in teaching and research.

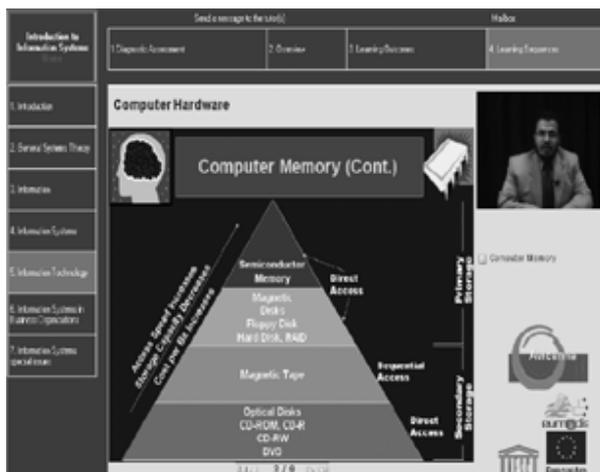
Goal 2: To provide greater access to professional education by developing capacity for increased enrolment through unconventional approaches in teaching and learning i.e. distance education and virtual university.

Goal 3: To enable institutions to meet the needs of surveyors and their own aspirations for development.

Goal 4: To support surveyors in the strategic planning, change management and process development that are necessary to underpin their development and embedding of e-learning,

Goal 5: To promote learning research, innovation and development that begin with a focus on learning rather than on developments in technology per se, enabling professionals to learn through and be supported by technology,

Goal 6: To support lifelong learning by joining up our strategy with those of other professionals all over the world, enabling connections between academic learning and experiential learning in the workplace and other aspects of life.



7. SOFTWARE TOOLS

7.1 Learning Management System

The Learning Management System (LMS) is concerned with development of tools for resources and courses. These tools are for delivery, administration, collaboration, and assessment. LMS helps in resources development by creating and maintaining a learning structure or sequence. Through the LMS, it is easy to load and replace resource files, support the editing of resources, integrate management tools with content, allow the import of external resources, and support the export of the learning structure. LMS can enhance delivery methods or teaching techniques of instructors. It can help in organizing learning groups, tracking activities of learners, marking and providing feedback, supporting group activities, supporting sequenced learning, and supporting customized learning programs. For administration, LMS can help in managing the resource library and student information, controlling access to resources, controlling editing processes, and integrating with other management systems, such as content management and identity management. With regard to collaboration, when LMS is integrated into the system, it is easier to have an asynchronous peer communications as well as synchronous communications or chats. Students and learners are able to communicate properly and comfortably. LMS assessment tools include creating and maintaining a repository of questions and tests. The questions can be reused and differently valued in different types of tests, such as multiple choice, true or false, match, crossword, etc. The LMS is very easy to use, making it easy to build content and create interactive activities fast and efficiently. It provides support for both educators and administrators, especially when collaborating on new developments in e-learning. Finally, this LMS supports international SCORM standards.

7.2 Authoring tools

In this section we focus on the tools used for the course preparation and publishing on the internet. The two authoring tools that we have used are the active tutor and the Power-Edu and they will be discussed respectively.

i. The Active Tutor

Active Tutor 4.1 is a multimedia lecture authoring program and uses general graphic user interfaces of windows. Also, interfaces of Active Tutor 4.1 are intuitive so that the tutor can easily create lectures. Active Tutor supports the streaming technology that is efficient in terms of economy and learning, it accepts multimedia learning materials. It has convenient internetworking with existing lesson plans with easy lecture recording and various voice quality levels. There are other features that encouraged us to choose the

active tutor as an authoring tool like easy lecture editing, undo and redo menus in each phase, compatibility with other application programs, various clip arts, user-friendly interfaces, ability to play lecture on the web without program installation, strong notepad and PDA support.

ii. The Power-Edu

The Power-Edu is an online education and video conferencing tool at a time, in other words, it is another multimedia textbook authoring tool and it is also used to perform real time online lectures. The real time online lecture has various real time session options for example, there are two modes: lecture mode and meeting mode, voice encoding options and different video resolution options.

Most developers agree that e-learning product should conform to the standards of the web - HTML, JavaScript, perhaps a little Flash or Java - and not require users to download enormous plug-ins just so they can view the output of legacy authoring systems. On the other hand, not all e-learning developers have access to programming support and will not want to be restricted to simple HTML. They need something more than generalist web tools. A number of new, specialist e-learning authoring tools have arrived to fill the space. Each provides the functionality of a full-blown authoring system, yet delivers its output as standard web files. Several of these have attracted a strong reputation, not least Trainersoft, with more than 4000 users, and the strangely-named DazzlerMax from MaxIT. So as not to be left behind, Click2Learn has adapted Toolbook, so learners now have the option of outputting directly to HTML and JavaScript.

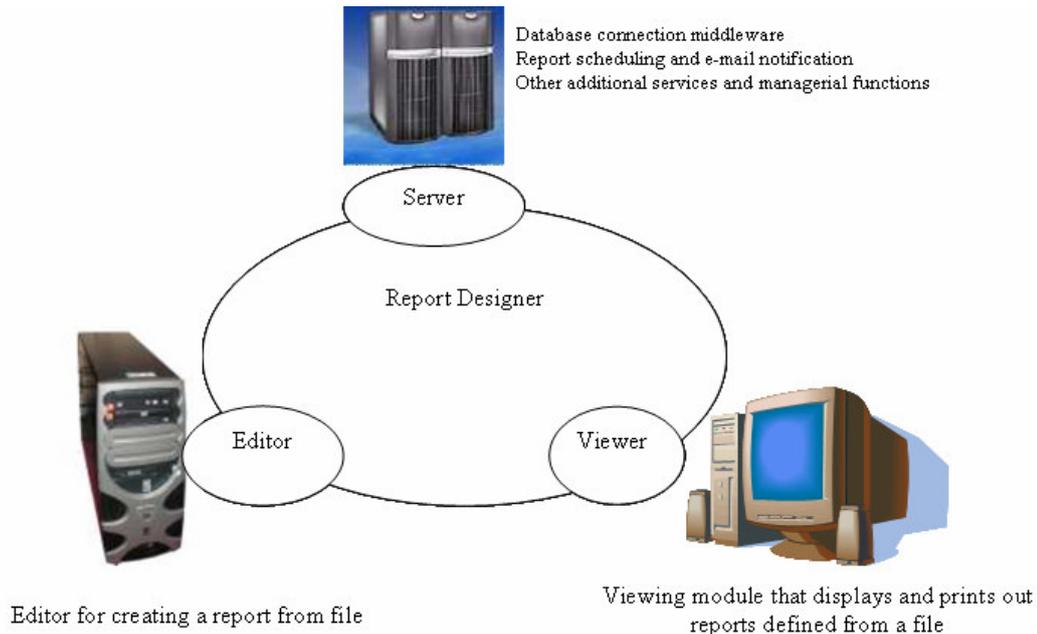
Unfortunately, similar functionality is not available for Authorware or Director. And, of course, with the enormous projected growth of e-learning, there will be many new entrants to the market, exploiting new technologies and new approaches to development. Amongst these is Edugen, from Maris Technologies, which is based on XML, to provide platform independence and the flexible deployment of a learning object-based approach. Specialist e-learning systems do have their advantages. They protect the learner from the need for specialist programming expertise. They make it easy for the learner to employ a wide range of interactive techniques and to have their content communicate with a learning management system. If there is a price to pay, it is some loss of flexibility: the easier the tool is to use, the less you can do with it. But given that the real worth of e-learning content is in the design and the writing and not the bells and whistles, many learners will be prepared to sacrifice a little flexibility if it means a sensible budget and timetable.

Learning tools compared

Tool	Purpose	Browser delivery
Authorware	Learning applications	Using Macromedia Authorware Web Player
Director	Interactive multimedia	Using Macromedia Shockwave Web Player
Flash	Web animation and interactivity	Using Macromedia Flash Player (also included in Shockwave Player)
Toolbook	Learning applications	Either using Click2Learn Neuron plugin or standard HTML and JavaScript
ReadyGo	Learning applications	HTML and JavaScript
Trainersoft	Learning applications	HTML and JavaScript
DazzlerMax	Learning applications	Java
TutorPro	IT training applications	OCX file
Dreamweaver	General web development	HTML and JavaScript
Coursebuilder	E-learning templates as an add-on to Dreamweaver	HTML and JavaScript
FrontPage	General web development	HTML and JavaScript

7.3 The Report designer

An easy and fast reporting tool from various data bases is needed in any educational system. The report designer is divided into three modules: the report designer server, the report designer editor, and the report designer viewer. The report designer server has an agent function, a managerial function, tight integration with other security solutions, parameter encryption over web reporting and security functions. The report designer editor has a word processor like environment with easy GUI, a powerful query support, variety of report form support with powerful table editing, various data and charts handling, and other functions like hyperlink, data navigation, filtering toolbar, conditional page break, document encryption and security level setting, database and record browsing. The report designer viewer has advanced graphical interface, final report editing functions, ability of conversion to other file formats, and various printing options.



7.4 Conditions of high quality e-learning in surveying profession

While advanced technology and leading-edge software are key to the functionality of every e-learning operation, it's the content that delivers knowledge to the learner. Quality content can make the difference in a successful e-learning environment, the most important thing one should take into consideration while designing an e-learning course is that the course should be learner-centered. It is important to ensure that learners are highly motivated to learn by encouraging their attention, persistence, Participation. Also, the learners need to be guided to appropriate content through excellent indexing & clear assessment and finally they are provided with meaningful and memorable learning experience, to ensure proper guidance & practice through the following steps;

7.4.1 Requirement Analysis

In this step, there are several questions that need to be answered, for example, what is the subject that many students want & need to study? What is the degree of the student's fore experience about this subject & e-learning? How about skills or network environment? This step helps in selecting the most appropriate and needed subject to the learners.

7.4.2 Plan Subject Matter

This step is concerned with determining the number of learners that are expected to apply to this course and target their knowledge level about this subject. Also in this step the content type is decided, whether it will be sound, movie or clips according to the requirement analysis of the network environment and according to the target learners

information. Also a decision must be taken concerning the course sequencing if it is needed or not. The result of the two steps is the decision of the teaching material syllabus.

7.4.3 Content Structuring & Analysis

In this step, the content is structured such as to divide each chapter properly to sections and make an introduction to each chapter to explain to the learner the objectives of the chapter and the benefit of studying it. The chapters usually should end by a proper application to make the learner think twice, memorize and apply what he/she have studied during this chapter, this is followed by a summary to stress on the important topics of the chapter and an introduction to the following chapter. The content is then analyzed to determine its degree of difficulty, and whether it is adequate to the learners or some customizing is needed and how much content is adequate to study once according to human learning system. Also, for each part of the content the proper multimedia element must be chosen.

7.4.4 Educational Design

This step is concerned with the storyboard design. The storyboard is like an organizational table, it has the course information on top of it like the title, the topic name, the organization name, the designer name, the file name and the date. The educational designer uses the story board to illustrate his ideas. In the view part all media components and wording that will be used in this slide are placed and numbered according to the sequence of their appearance. In the explanation of view the sequence and speed of events is explained and finally the narration part the wording of the audio part that will be used for this slide if any.

7.4.5 LMS Analysis

This stage follows the educational design stage. The content analysis is concerned with the structure needed to make files and folders on the LMS, to arrange the course material in a suitable way. The learners can access the material either by downloading or streaming, this is decided by the LMS analyst in this stage according to the requirement analysis results and to the material's multimedia elements. This is only a preparation stage for material structuring on the LMS, but still the material is not ready.

7.4.6 Main Development

In this stage, the course developers use the story board provided by the educational designer and start making the necessary multimedia elements, such as animated pictures or clips. They also help the instructor or the subject matter expert in recording the narration part, or the video part, if any. Afterwards, the software editing tools, such as the Active Tutor are used in developing the e-learning course. User Interface design principles and approved customer design requests are applied to the interface design

7.4.7 Demonstration

At this stage the content development is terminated. The course now is ready but needs to be criticized from e-learning team members and the subject matter expert to see if there are any remarks on the course concerning the scientific content, the animation speed, the sound of the video, ...etc. The course content for instructional soundness is carefully tested and edits are made as needed. The course then goes through an approval process before being launched. Finally, any finely-tuned adjustments are done to ensure that the course meets the objectives.

7.4.8 Upload LMS

After having the approval of the e-learning members, the LMS analysts start uploading the contents on the LMS, according to the structure decided previously. Administrative issues such as registration period and course period, grading system, and others are arranged.

7.4.9 Usability Test

Now, the course is ready and uploaded. A usability test is needed to make sure the course is accessible to everyone with proper speeds and to check for any bugs for the uploaded course. After this usability test, the course is finally launched and ready.

7.5 E-learning through Geographical Information System (GIS)

GIS is an auxiliary tool with the ability to storing, processing, applying, displaying the numerical Geographic information and it has been widespread applied. In e-learning, students/learners must understand the basic concept of GIS in depth before GIS applying. With science and technology developing, there are tools and methods to solve the questions which chiefly relate to position and distribution of space, GIS will become valuable to apply. GIS combines traditional map with abundant information and computer with powerful processing ability. It can be applied to activities of daily livings and works of space decision-making. The technology and architecture of GIS have greatly changed recently. It combines Global Positioning System (GPS), Remote Sensing, 3D, mobile equipment, Web and other information technologies to promote government organizations, educational institutions and surveying profession through e-learning. It also applies to personal electronic guiding system with PDA and GPS, indeed, to Location Based Service with livable and instantaneous. Undeniably, the application of GIS is closely linked our daily living and professional development.

The use of GIS for education has become more and more widespread. GIS as a tool, has been applied to different subjects outside surveying which include natural science, social science, literature and other knowledge fields. It helps students easily discover with different subjects knowledge and mutual relations by spatial viewpoint. GIS does not only reserve enormous and valuable cultural heritage but offers scholar related information to retrieve and search for professional growth. E-Learning adopted GIS to

assist in teaching and learning activities. The famous e-Learning Website, GLOBE, in America is a successful case. GLOBE collects the environmental data all over the world and builds up a completed globe environmental database. It displays the results in form of maps. The common characteristics of most e-Learning.

Websites are displaying the data with location and offering learner to enquire related attributive data with spatial location. For example, we can select a location on the topic map and click the button first. The topic map will show the picture, snack information, hotel information and other about the location chosen by your click, this also brought GIS into e-Learning proving that Global Information System plays an import role in professional education, basically in e-learning presently and will play more in the future.

7.6 Role of Student Support Services

The collection of student feedback is seen as a central strategy to monitor the quality and standards of teaching in e-learning. The increasing use of technology to support face-to-face, blended and distance courses has led managers, as well as practitioners to become increasingly concerned to identify appropriate ways of assuring the quality of this e-learning provision. Many students' physical time on campus has become virtually nonexistent as community colleges have expanded their e-learning programs. Successful online student support services in e-learning aid both trainer and learner. As education expands its distance education offerings, "the diversity of its student population increases, particularly in the area of students' proficiency with technology" (Bruso, 2001).

The term **student support services** refers to a variety of non-academic interactions that the student has with a college or university (Dirr, 1999). These include pre-enrollment services (recruiting, promotion, and orientation), admissions and registration, academic advising, financial planning and management, library and bookstore services, academic and career counseling, social support services, degree and transcript auditing, and technical support. Student support services were crucial in the accreditation process of distance education courses and the decision of national and international bodies to award university degrees, college diplomas and training certification for studies done at a distance through e-learning and still is.

7.7 Analysis of student support services

A grid developed for the analysis of student support services in e-learning by the Socrates project 'Student Support Services in e-learning' identifies clusters of tools under the headings 'learner support' and 'learning support'.

The learner support grid comprises:

- Information Phase
- Guidance Phase
- Registration Phase
- Integration Phase
- Final Results Phase
- Accreditation Assistance Phase
- Guidance on Further Study Phase

Learning support lists the assistance provided by the institution in the actual process of learning. This is the Learning Phase which facilitates online learning. Online learning typically occurs via access to e-Learning content, discussion forums, bulletin boards, email queries, telephone support, group work. These structures support both student to student and student to tutor interaction.

Included might be:

- Dispatch of printed and other physical learning materials
- Instruction on Online Learning techniques
- Bulletin Boards- Online discussion rooms for all users to post comments, questions, learning support documents etc.
- Email- The facility to contact tutors and / or peers.
- Online tutorials; Online tutorials to support students in meeting their learning objectives.
- support the students in meeting their learning objectives.
- Resources / Library- Online access to additional material to support student Learning.
- Student - Self Assessment. The online facility to check learning progress during the course. The results of these tests are not usually recorded towards the final result.
- Automated Assessment- Typically occurs at the end of a course, produces a result which may count towards certification.
- Tutor Assessment- The facility to send work to a tutor / teacher for correction and evaluation.
- Assessment Feedback – electronic Face to face tutorials- The facility to arrange online, face to face tutorials that
- Assessment Feedback – manual
- Student Portfolios- A personal home-page per student to allow them to introduce themselves to online colleagues, showcase their work, provide alternative sources of course information to colleagues.

7.8 What Students should have in mind when Evaluating E-Learning Programs In a recent study sponsored by NEA(National Education Association) and Blackboard Inc., 24 ways to measure quality in Internet-based distance learning programs were established. World Student has condensed the list into 7 essential ways to measure e-learning programs.

1. Institutional Support- Does the program have a reliable technology plan that includes electronic security measures to ensure both quality standards and the integrity and validity of information?

2. Course Development- Do they have strict guidelines regarding minimum standards used for course development, design and delivery? Are the instructional materials reviewed periodically to ensure they meet program standards? Are the courses designed to require students to engage themselves in analysis, synthesis, and evaluation as a part of their course and program requirements?

3. Teaching/Learning- Is the essential act of student interaction with faculty and other students facilitated through a variety of ways, including voice mail and/or email? Is the feedback to student assignments and questions constructive and provided in a timely manner? Are students instructed in the proper methods of effective research, including assessment of the validity of resources?

4. Course Structure- Are students properly advised about the program before they begin, to determine if they possess the self-motivation and commitment to learn at a distance and if they have access to the minimal technology required by the course design? Are students provided with supplemental course information that outlines course objectives, concepts, ideas, and learning outcomes for each course? Do students have access to sufficient library resources that include a "virtual library" accessible through the world wide web? Do faculty and students agree upon expectations regarding times for student assignment completion and faculty response?

5. Student Support- Do the students receive information about programs, including admission requirements, tuition and fees, books and supplies, technical and proctoring requirements, and student support services? Are students provided with hands-on training and information to aid them in securing material through electronic databases, inter-library loans, government archives, news releases, and other sources? Do the students have access to technical support throughout the duration of the course/program? Are questions that are directed to student services personnel answered accurately and quickly with a structured system in place to address student complaints?

6. Faculty Support- Are faculty members assisted in the transition from classroom teaching to online instruction, and assessed in the process? Do they have access to technical assistance in course development? Are faculty members provided with written resources to deal with issues arising from student use of electronically accessed data?

7. Evaluation and Assessment- Is the program's educational effectiveness and teaching/learning process assessed through an evaluation process that uses several

methods and applies specific standards? Are intended learning outcomes reviewed regularly to ensure clarity, utility, and appropriateness?

8. CONCLUSION

E-Learning offers a powerful and a more alternative to the traditional form of learning that has worked for many centuries. Perhaps as importantly, it has forced us to rethink our working environments, our professional growth, what we need to learn, why we need that learning, how easily accessible it has become and how we go about measuring success. In some ways, that process may be as important as the new form of learning Implementation, just as changes in commerce have forced corporations to evaluate how they convey and add to their core capabilities to produce goods and services, so e-learning now offers us a chance to 'rethink' learning in Surveying Profession in Nigeria. The initiation and integration of e-learning into surveying profession will catalyze the shift toward adult convenient learning in surveying education in Nigeria, wherein educators will no longer serve solely as distributors of content, but will become facilitators of learning and assessors of competency. As e-learning continues to be widely integrated in the training of professional surveyors, it is critical that our efforts in conducting evaluative studies should target specific e-learning features that can best mediate intended learning goals and objectives. Without an evolving knowledge base on how best to design e-learning applications, the gap between what we know about technology use and how we deploy e-learning in training settings will continue to widen. Student support services must be redefined and implemented systematically and must be continually evaluated to ensure satisfaction and success among all learners.

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