

Use Of E-Learning as A Teaching Method To Improve Academic Efficiency In The Distance Learning Institute, University Of Lagos, Nigeria

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ABSTRACT

E-learning has come to stay as a 21st century phenomenon and has deeply impacted our daily lives in diverse ways, whether in economic, academic, socio-cultural or political spheres. This study, which is based on the theories of andragogy and heutagogy explored and documented the application of modern technology and e-learning facilities to improve academic efficiency in distance education in a specific distance learning Institute in Nigeria and came up with some observations. Students and Lecturers (n=250) participated in a survey that assessed the effectiveness of e-learning methods as a tool for improving academic quality and learner engagement. It was a participatory experimental research in the University of Lagos' Distance Learning Institute (DLI) with students in four levels of study and across different courses and departments. Self-administered structured Opinionnaire and Interviews were used for data collection. The research was guided by seven research questions. The response trends quantitatively revealed that majority of the learners were still wary of e-learning as a teaching/learning method and have no choice but to use it. It was suggested that ways be found to expand the use of, and make e-learning more learner- friendly, with more time devoted to initiating learners into the use of modern technology and e-learning as a method. E-learning remains the best option for distance education, in spite of the attendant challenges and must be adopted for self development, global conformity and best practices.

Keywords: Adult Teaching Methods, Andragogy, Heutagogy, E-learning, Distance Education

INTRODUCTION

Electronic learning or E-learning is a necessity in the 21st century and Adult Education must join the millennials by ensuring that its processes accommodate and incorporate e-learning into teaching/learning. The computer and other forms of technology are 21st century phenomena, commonly incorporated into our daily lives in diverse ways, whether for work, education or entertainment. This study, which is based on the theory of andragogy and heutagogy explored the use of e-learning in a specific distance learning Institute in Nigeria and came up with some observations.

LITERATURE

1. E-Learning And The 21st Century

New 21st century challenges call for 21st century solutions and Adult Education is thus moving more in the direction of transformative learning, following heutagogical principles. With increased globalization, new modes of learning require more technological skills that will require interaction, collaboration, practical, introspective and self-directed efforts (Blaschke, 2012). These are tilting towards the ideal practice of adult education in a digital age. This is because the adult is called upon to progressively become more problem-solving, self-directing, flexible and make decisions based on informed choices. 21st century learning demands more than mere use of digital technology like Smart Phones and the computer to learn. The adult is increasingly challenged to move beyond learning the content, to managing resources, collaborating and being more analytical in a more globalized world, where the rise of new technologies has revolutionized learning methods, and even challenged a re-evaluation of traditional teaching methods

(Canning, 2010). The incorporation of modern technology into teaching/learning inevitably changes the experience to a more learner-centered one, making the learner a more active participant, and thus more invested in what is learnt, and how.

2. Andragogy And Heutagogy

This study borrows from the theory of Andragogy, the art and science of helping adults to learn (Knowles, 1984), which emphasized self-directed learning in support of transformational learning. This, according to (Blaschke, 2012), promotes emancipatory learning and social action. Heutagogy, or self-determined learning (Kenyon and Hase, 2001) as a natural progression from andragogy puts the learner firmly in control so that he determines what will be learnt, how and when it will be learnt. Heutagogy is in line with Knowles' andragogical principles as updated by Finbel (2011). His rendering of the adult learner's characteristics is equally supported by Kolb (1984). This made Ford (in Kenyon and Hase, 2001) to further describe it as knowledge-sharing rather than knowledge-hoarding. The theory supports the principle of e-learning as it mirrors all the precepts of andragogy and heutagogy on self-directed learning, enabled by technology-driven education to fit learners into the 21st century.

From pedagogy, the art and science of teaching, there is a shift from dependency on the teacher towards andragogy where the learner sees the teacher more as a resource or facilitator for learning such that the learner becomes more self-directing. Kenyon and Hase (2001) took a step further, favouring heutagogy, to advocate vocational adult education for the 21st century, using more self-determined learning. This has been a natural progression that increasingly ceded control to the learner from the teacher. There is also the newly coined technoheutagogy by Pelz (2012) which describes the use of technology to enhance learning in a self-directed learning environment, and also discussed gynegogy (about women's learning). Heutagogy as a theory supports digital education. This is because heutagogical learning methods inherently promote autonomy and the learner-centered approach with the support of different learning resources including self-evaluation, using technology as a tool for enhancing learning. It is believed that adults are more self-directing, but there is also a maturity that comes with autonomy that makes the learner more independent and requiring less instructor guidance (Canning, 2010). A more scaled down version of andragogy, as used with children, is the Montessori method.

3. Distance Education

Distance Education refers to teaching and learning modes occasioned by the geographical distance between the learner and the educational institution (which changes the function dynamics), while online learning focuses on the method of learning where course content is delivered via the internet, Berg and Simonson (2019). The learning is usually attached to an institution for purposes of accreditation which differentiates it from learning by oneself. The intensity of incorporation of e-learning can then be determined by both learner and facilitator. E-learning as a method invariably creates access to more learning opportunities and resources and makes for more interactive encounters. Historically, other modes of delivery of distance education are Open Learning (referring to the openness of educational provision as an approach that uses distance learning techniques); Correspondence (learning, using the postal system, telephone, cassettes, etc); Independent Study, External Study, Continuing Education, among others (Bakare, 2012). Most of these approaches have coalesced into new e-learning modes, and many now use the different terms like distance learning, online learning and self-directed learning synonymously (Dringus and Cohen, 2005). Distance learning is often undertaken with multiple and often mixed methods which may include telecommunications, computer based, audio visuals, different types of media broadcasts, CD, video and also print materials; the communication between learner and the resource may then occur synchronously or asynchronously. Distance education makes higher education more easily accessible to adult learners. It is thus becoming more popular as a flexible mode of learning, ideal in its combination and mix of teaching/learning methods, resources, and its fit into 21st century learning.

4. E-Learning As A Teaching/Learning Method

There are different methods of teaching/learning. Methods are the tools that connect the learner and the learning task (Bakare, 2013) and are vital to teaching/learning outcome. It is believed that certain methods work better for adult learning. There are a multitude of methods that could be used, and the selection of appropriate method to match the learning task is pivotal to the success of learning-goal achievement. If care is not taken, the choice of a wrong method

could negatively affect the learning outcome. Learning mode could be individualized, group or participatory, using methods like Lecture, Discussion, Seminar, etc (Bakare, op cit). Pedagogy dictates that the prerogative of method choice rest on the teacher, but the more mature learner has more input. E-learning involves learning using technology as the fulcrum and it is popularly used for Distance Education (Bakare, 2012). The Education System and Solution - EDSY (2020) calls it the method of teaching purely through technology in a blog that asks what e-learning is and its importance to the education system. E-learning as a method has become the automatic choice for distance education by default. Since it also obeys all the theoretical underpinnings of adult learning, it has become almost synonymous with adult education. This flexible mode of learning can also be incorporated, even into face-to-face learning encounters, but is more commonly used when learners and facilitators are separated. Technology is now used to improve educational delivery and the quality of education.

Classroom-based type of face-to-face learning could make use of methods like Seminars, Lectures, Discussions and other proximity-based methods suitable for such encounters. E-learning on the other hand, tries to incorporate these methods using technology as the media. Any form of distance education considers the learning goal in deciding the most suitable methods. It is always best to use a combination of methods and teaching aids/devices that will ensure that all learners have a chance of gaining from the experience, no matter their learning style (Kutumela, 2016).

The use and integration of e-learning to connect learners and facilitators who are physically apart enriches learning when they use multimedia to communicate. Nowadays, distance education is conducted as a ‘Smart Class’ in a more digitally updated environment. Books could be accessed through virtual Libraries and learning conducted in a virtual classroom situation. Knowles’ theory of andragogy already manifests in distance education as it takes the convenience of the learner into consideration and learning can be done at their own place, pace, time and general comfort, incorporating self evaluation. As many as possible of the senses are also engaged simultaneously and constant feedback interwoven into the process. Overall, learning essentially becomes interactive, stimulating and meaningful and engages the learner’s interest. One of the benefits of distance education is that its flexibility gives the learner a higher level of autonomy and self-directedness that is essentially adult learning. E-learning in distance education encourages self learning; however, the learner may miss out on the frequent physical human contact and may even feel isolated, unless there is constant virtual contact with the facilitator and other learners, which e-learning encourages (Berg and Simonson, 2019). The different e-learning tools thus make teaching/learning more interesting, interactive, meaningful and stimulating for the learners, using suitable teaching strategies.

Learning Management System (LMS) is a software application (App) used to manage training (Quigley, 2018). This allows the facilitator to select different approaches to fit the topic and media, or a mix, to conduct the class. Site management can equally be automated to reduce the need for the host facilitator to install and maintain software which learners simply access online. In its case, the University of Lagos Distance Learning Institute (DLI) manages access, security, availability and performance, along with the Open Education Resources (OER). LMS can incorporate other Apps and be used to create and upload modules, video, pictures and audio materials. Other basic features on the computer are PowerPoint, Word and Excel, all basic Microsoft Office Apps used for e-learning in its part time programme. They are used to create content, documents, to present, compute and manage reports and can be embedded and e-mailed. The functions, including typing, and desktop publishing are the easiest to master and everyone uses them as basic computer skills. Arguably the best networking tools for e-learning include LinkedIn (which provides a platform to network) and Twitter (a social network that promotes interactions and contributions). Others are Facebook and Instagram, among others; all of which can be downloaded from the computer to assist or manage self learning. Another is the YouTube, popularly used to deliver and upload video content and is a popular site to watch ‘how to’ videos and for learners and facilitators to interact (O’Neill, 2019). The only disadvantage is that particular Courses cannot be taught online. There are many more Apps, but this study is limiting to the most used. Computer Apps can also be synchronized with other personal devices like Tablets and Smart Phones.

5. Adult Teaching/Learning Methods

For the adult, learning occurs more easily when the learner takes a more active rather than the traditionally passive role in the process. Thus the world has navigated the spectrum through pedagogy, andragogy to the more 21st century-appropriate heutagogy. Heutagogy caters to different learning styles and suits different kinds of learning (whether knowledge based, skill oriented, practical, etc). In heutagogy, because the role of the facilitator is less pronounced,

the learner has to go through the process of analysis, critical thinking and questioning to determine what they wish and how to learn, thus become progressively equipped with the tools to make all the decisions necessary (Bakare, 2018).

Facilitators equally benefit from technology use when they create content, arrange and host sites for virtual meetings, evaluate, give short lectures and tutorials and upload video and picture content. They could organize blended learning and Webinars, PowerPoint presentations and evaluate using tests with multiple choice answers and feedback provided.

PROBLEM OF THE STUDY

It is obvious that e-learning has defined the noughties, this study is therefore interested in how, and the extent to which e-learning is enabling learning within the context of distance education in the University of Lagos (Unilag) DLI part time programme. There is yet to be enough research into how e-learning is enabling learning in distance education; many studies have focused more on the provision of facilities. It is taken for granted that e-learning tools are to be used for distance education, but not enough has been done to find out the extent to which they are applied and how successful they have been in aiding distance learning.

PURPOSE OF THE STUDY

The study examined and documented the application of modern technology and e-learning facilities to improve academic efficiency in the teaching/learning process. The study was to explore the extent of use of e-learning provision and how it has helped the self-directing efforts of learners in DLI. Specifically:

- a) which e-learning tools were used
- b) the level of use and the adult learners' response to the method, and
- c) how far e-learning as a teaching method is effective in enabling self-learning.

SIGNIFICANCE OF THE STUDY

The DLI would benefit from an objective mirror of their processes which should inspire positive change. Learners would explore the wider range of available e-learning facilities in the Institute's repertoire and become more comfortable using them so that they can maximize the DLI part time mode of learning, using technology appropriately.

RESEARCH QUESTIONS

The research was guided by seven research questions:

- a) Which e-learning tools are available in DLI?
- b) Do students have access to the e-learning tools?
- c) What do they use the Apps for?
- d) What is the frequency of use of the available Apps?
- e) How comfortable are the learners with e-learning?
- f) How far is e-learning as a teaching method helping self-learning?
- g) Which are the challenges encountered in the course of e-learning?

RESEARCH MEHTODOLOGY

The study was survey in nature, seeking opinion of the learners and lecturers in the Unilag DLI. The Institute had an estimated 15,000 learners for the 2017/2018 session according to university records. There were levels 1 to 6 including all the departments. The participants were stratified according to their levels and years 1 and 2 were not sampled; only those who have experienced the use of e-learning for longer responded. Respondents were proportionately sampled, made up of learners (120 from the department of Accounting and Business Administration; 75 from Social Sciences, and 25 from Education (Sciences) - all from levels 3 to 6) making a total of 220. Also 30 facilitators in the Institute were interviewed, mainly to corroborate learner's input, but also to get their own handling of the e-learning facilities for teaching/learning purposes. Respondents were randomly selected, making a total of 250 in all. A 20-item structured, appropriately tested Opinionnaire was used for data gathering, along with structured interview sessions with facilitators including an Administrative staff, and responses were analyzed quantitatively, using percentages.

FINDINGS AND DISCUSSION

In response to the first research question on available e-learning tools in DLI, the level of availability of e-learning resources were given by the Administrative Office and supported by Lecturers and Students responses. The Institute provides computers and online facilities with Learning Management Systems (LMS) and Open Education Resources (OER), apart from the regular Microsoft Office features like PowerPoint, Excel, Word and YouTube, which the learners could use for desktop publishing and e-learning. However, though the Institute has computers available for student use and free internet services, they were hardly enough to service the multitude of students. In any case, the idea was that students should be able to use their own facilities from their location, as long as they can connect centrally. Students are given tutorials on how to use the LMS during their orientation through the Application Induction Course. The LMS contains different Apps that could assist the learners to organize their work, link up with other learners to network and generally communicate with fellow learners as well as their lecturer on the internet. Reciprocally, students have their own individual devices they use to connect.

The second question sought to find out students' access to the available e-learning tools. Up to 187 (85%) of students claim to either have their own Personal Computer or have individual access to one at work, albeit with limited internet connections. Some 64 (29.1%) students have individual Smart Phones which could be synchronized with online Apps for group or individual learning. 201 (91.36%) have access to Facebook, Twitter and Instagram accounts where they could perform several functions - follow, post, friend, receive and send messages, send out information, chat, ask questions and get instant feedback as well as research; and majority of their examinations are taken online within the school premises and facilities. They use the regular Microsoft Office features with internet connection to link with DLI's LMS to download and upload learning materials and for desktop publishing. In addition, all Lecturers claim to blog instructions (and the odd vlog), podcast and post reading materials and ensure students' modules are uploaded on to the website. Thus the LMS remains the primary mode of contact with students by the lecturers where they post assignments and receive responses from the students.

The third question was interested in how the available Apps were used. In terms of what the Apps were used for, responses were diverse; Lecturers post blogs on news and updates on the students' website and the dedicated LMS supports self learning. Respondents were asked what they used the most popular e-learning tools for in reality, their responses are documented below in Table 1:

Table 1: Use of Apps for e-learning

e-learning App	What students use it for
YouTube	To watch videos, mostly leisure, and for personal business
Microsoft Office, LMS/OER, LindedIn	To download and read modules and lecturer's posts, do individual assignments and quiz after, to e-mail as well as for minor desktop publishing
WhatsApp	To send messages to friends and make personal contact

Facebook	To find, make and keep up with friends, post photographs, send messages
Instagram	To send information to fellow students, gossip and post the occasional promotional personal advertisement for product sale
Twitter	To state personal opinion on any topic, which can be controversial, re-tweet other people's tweets
Cell phones	Networking, to call and text, to send information to others, update, etc

Table 1 details what the students use the Apps for, and it is seldom for academics. The LMS is still the most convenient for the DLI but other features could be explored to expand the functions and make them more suitable for cooperative and collaborative learning, also more academic use could be found for even the Social Media Apps, for example:

Twitter: to follow key officials of the university like the Vice Chancellor and Institute Director as well as their lecturers; the Examination Board for curriculum updates, follow the government for comments on policies or general educational situation and the Institute's Administrative Office.

YouTube: lecturers could post tutorials and forward links to educational channels and students could self-teach with instructional videos.

WhatsApp: could be used for emergency messages like a quick instruction, it can be used for sharing ideas and brainstorming among students, etc.

Facebook: could be used to follow academic groups, follow the Department, University, Administrative Staff, NUC, and its video capabilities put to more use. It also has dedicated pages for specific subjects that could be used as resource.

Instagram: Would be good for Marketing students in Business Administration Department as they could follow huge corporations, follow celebrities to see how they use the App to advertise and monetize their products by using them as Case Studies.

Generally, because of the anonymity involved and because sources of information cannot usually be verified, some of these Apps may be difficult to use for serious academic work. However, ways could be found to make them relevant.

For virtual learning situations, other useful Apps like Zoom and MSTeams, which are academic platforms could be used to create virtual classrooms situations and group discussions scheduled. It will be necessary to first plot a calendar for events, using Office 365 (Microsoft e-mail) to schedule the chat time.

Class Notebook is Software that could be used to give lectures in real time. There is also **Virtual Notebook** where whole essays could be written online in real time, whether individually or in groups, and everyone can contribute and edit, even the lecturer can do virtual grading of assignments as they are being written and the student will get instant feedback.

Excel is especially useful for Accounting students – they could work with Live Excel Spreadsheets where they all collaboratively edit, add, remove and everyone can see what is being done and by whom. Group or individual assignments could be completed online in real time even including the lecturer's input.

The Massive Open Online Courses (MOOC system), where university short courses are taken online could also be used as a resource for learning. However, the prohibitive cost of maintaining such platform has prevented many universities from running it.

The fourth research question was on the frequency of use of the e-learning tools. Respondents claimed to use the Apps thus: WhatsApp 97 (44.1%); LinkedIn 5 (2.3%); Instagram 38 (17.3%); Facebook 54 (24.5%); Twitter 26 (11.8%).

They also used the internet to remotely connect to the Institute's LMS to upload, download, e-mail and generally interact with their lecturers. The LMS is the one that all claim to use for educational purposes, though further query revealed it was more of a one-way communication, as the lecturers post and students check the website. Wider dissemination is largely by cell phone to other students in the department, often from the class representative. YouTube was popular, though lecturers do not post content on it. They all use the basic computer functions in Microsoft Office, though the proficiency levels varied. In terms of frequency, they all generally connect to DLI's LMS an average of once a week or even a fortnight and may go for a while without connecting. But they do use the social media more frequently, albeit for different reasons; they call their mates to chat and send texts and share pictures and videos on WhatsApp and Facebook, etc, but not to do assignments or group work collaboratively on the platform. As can be noted, these Apps are more suited for social communication. However they can be, if properly harnessed, useful for e-learning as well. Limitations in message lifespan, privacy issues and length of messages mean social media can only be used for more specific educational purposes. YouTube, on the other hand, has huge potential as it can be used more for academic purposes. Lecturers can post instructional videos and even full lectures. Lecturers can recommend links, while students can self-teach from the videos. Some students also claimed to have used it for research. Everyone uses text messaging and phone calls to stay in touch and pass on messages. Only 59 (26.8%) claimed to have submitted any form of assignments online on the Institute's LMS platform. Social Media is used occasionally to inform others about instructions from their lecturer for assignment. There were no reported cases of student to student academic interactions, group projects or collaborative work online, nor synchronous group discussions; devices were largely used asynchronously at the students' convenience.

The lecturers claimed, as part of the teaching/learning process, to post assignments in chat rooms for students' reaction and learners were expected to respond via the same avenue, alternatively by e-mail. The DLI's ultimate goal is virtual learning, to satisfactorily service their vastly dispersed clientele, and obviously this is yet to be achieved. Lecturers agreed mainly to uploading modules (which were available in hard copies too). They also had audio CDs to augment learning. Even lecturers did not utilize Smart Phone facilities as much. It is Smart Phones that were sophisticated enough to raise levels to true e-learning as they can perform multiple functions, same as computers can, with remote access capabilities. The Institute now has e-tutors who are experts in e-learning to enhance the use of technology-dedicated learning. If the available e-learning tools were used as prescribed, the learning opportunities will be multiplied while continued use will heighten students experience as mature learners and encourage more self-learning initiatives.

The fifth question was on how comfortable the students were with the use of the e-learning tools. Findings revealed that majority of the learners were still wary of e-learning as a teaching/learning method, and have no choice but to use it. Lecturers were also reticent as all of them largely used the LMS and e-mail to exchange academic work. 53 (24.1%) of the learners claimed to be very comfortable with e-learning, 77 (35%) were averagely comfortable, while the majority at 90 (40.9%) confessed to not being comfortable at all with the use of e-learning tools and learning on their own without the help of their lecturers. When asked if they would suggest another method 125 (56.8%) would like more face to face contact. This suggests that there is still a bit of technophobia with those not totally comfortable with technology. Many still struggle with independent learning and benefit more from the mandatory 6 week contact hours of revision they have before their examinations. Nobody used the virtual library facilities, and some were not even aware of its existence. They were still dependent on physical books, though they can use the computer to search for information and research.

The sixth question asked about the effectiveness of the e-learning tools in terms of helping the learners realize their academic goals and become more independent learners. It asked how far e-learning as a teaching method was helping DLI part time students. 77 (35%) of the students felt that e-learning was not helping them with self-learning. Not much has changed as this agrees with the previous finding by Bakare (2018). Although students have posted comments on the website's chat rooms and retrieved assignments, none had created nor hosted group collaborations and live discussions in a virtual classroom environment. There is so much untapped potential for cooperative learning that efforts need to be greatly increased to ensure that e-learning is used as it should be; learners need to be more comfortable in order to benefit from e-learning. The use of e-learning tools would help the learners become more proficient through regular practice. Independent learning cannot flourish under the wrong conditions; neither will critical thinking, active learning and reflection foster self-directed learning. E-learning will suffer unless proper tools and skills are given to the learners, otherwise, heutagogical and other required principles are not being adhered to.

The high figure of disagreements that e-learning improved learners self-learning suggest that there were still underlying unresolved issues. This may be related to many still being uncomfortable with technology, and favouring face-to-face encounters; especially since previous study by Bakare (2018) showed that students did not necessarily become better users of the internet as they progressed on to the next class. There is thus the need to ensure learners get familiar with e-learning enough to gain confidence in the method and be able to maximize learning gains.

In terms of challenges encountered, 64 (29.1%) listed cost of equipments for e-learning, 26 (11.8%) cited lack of proximity to the DLI; 88 (40%) complained of the lack of time to combine work and other responsibilities with their academic pursuit, while 42 (19.1%) confessed to the fear of technology or simply not knowing how to use some of the Apps. On the whole, the lack of access to internet and constant power supply, especially by learners has been the bane of e-learning efforts by DLI's prospective learners.

The recent COVID-19 pandemic and the emerging culture of social distancing has exposed the glaring need for more distance education in Nigeria and the grossly unprepared nature of tertiary institutions for this mode of learning. It is apparent now that the education system, in general, must consider e-learning more in mainstream education, and not only for distance education. This calls for massive investment in the education system and retraining for learners and facilitators to handle it. The education systems in advanced nations that have currently seamlessly transitioned to online contact with students to continue their education from their homes have spent years preparing and supporting e-learning.

CONCLUSION

There is no doubt that e-learning is beneficial to the distance mode of education and self-education. However, when users do not maximize the opportunities, or are not comfortable, the advantages are reduced. Some benefits accrue in distance education, like lack of pressure from specific timelines, location and resources and this could increase opportunity for reflection and critical thinking, and ultimately, self-learning. Also, the internet makes for a vast storage space as resources can be accessed online and kept in the 'clouds'. The flexibility makes learning more comfortable. It is also easier to link up with fellow learners, collaborate and organize virtual meetings that can expand the reach of what is learnt, and extend the range of interaction for more globalized education. Virtual universities are examples of how e-learning can be successfully harnessed for best results, as facilitator and learner may never meet, yet content is covered and examined and certificates awarded. What DLI has at the moment is more of blended learning in a dual rather than mixed mode setting. Mastering the basic e-learning functions could assist the learners to organize their work, link up with other learners to network and generally communicate with fellow learners, as well as their lecturers. The formality of the learning situation in DLI makes it even more imperative to maximize the use of e-learning. DLI students tended to do more during the required mandatory contact hours of face-to-face revision sessions before their annual examinations. If distance learning is to be practiced the way it should be, then using the various tools available in e-learning remains the best option for students to fulfill their learning goals, and in line with adult education principles to fully gain autonomy and self confidence.

Distance, by default, simply translates into more focus on the individual learner. This flexibility of the e-learning experience invariably saves time and creates a more matured learner who gets better at managing his learning using various forms of communication technologies.

There are multiple Apps that could be used as tools for engaging learners in collaboration, using different forms of cloud technology. Apps used as a base where learners, working in a group or alone, could remotely access information from cloud storage. Multiple benefits are derived from group efforts including idea development and sharing, holding of virtual meetings, project collaborations, online essays where all can contribute and edit, instant feedback to queries, all of which will help to enhance productivity; learners could even multitask. The flexible and interactive use of online Apps gets learners more involved, invested and in control, which promotes knowledge retention and autonomy. The more they use and become skilled with the apps, the more they mature as learners. All these agree with the principles of andragogy, heutagogy and transformative learning in adult education. There is no reason why e-learning cannot be fully deployed as it can only engage learners more, encourage learning and successful goal achievement; and reliance on their own ability and resourcefulness to become more independent learners. Facilitators must however be re-trained and re-orientated to manage e-learning and embrace ceding control of learning to the learners more.

RECOMMENDATIONS

- Findings indicate that the myriad of tools for delivery of distance learning are yet to be fully explored in the Unilag DLI. More e-learning tools should be made available for students' use and more students enabled (through university soft loans and subsidy) to acquire their individual computers and data subscription.
- Lecturers and students should dedicate more time to familiarizing themselves with the various e-learning options available, more classes taught on how to maximize the use of available resources.
- More Apps should be incorporated, but more importantly, online collaborative work encouraged through group assignments scheduled at mutually agreed time so that students can contribute to discussions, ask questions and be more invested in their learning through the virtual classroom experience. YouTube use could be expanded and lecturers upload instructional videos and forward useful links, while students equally use it to self-teach. There should also be better use of the university's virtual library with its extensive and current book and Journal selections.
- Obviously the more students use and get familiar with the Apps, the more comfortable they will become as self-learners, and less fearful of technology. This will make them appreciate how technology is adding value to teaching/learning.
- Students should be challenged to be more adventurous learners who would explore fearlessly with curiosity for self discovery, be more introspective and motivated to initiate learning, which makes for a mature and lifelong learner.

It is mandatory for distance learners to adapt to the changing times, teaching/learning methods, curriculum content; sourcing for resources on their own and locating where, when, how and what to learn continually. The lecturers should be guides whose role diminishes as the learner becomes more confident and self-driven and develop their capacity and capability to learn. Visual elements must be copiously utilized to fill the gap created by the distance that limits the physical human contact in the delivery of distance education. Facilitators should slowly transition from andragogy to heutagogy as a 21st century necessity for teaching/learning.

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