

OVERCOMING BARRIERS TO NEW LEARNING TECHNOLOGIES IN A UNIVERSITY SETTING: THE CASE OF COVENANT UNIVERSITY

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Abstract

Covenant University aspires to be one of the ten leading university in the world by 2022. To achieve this noble goal, the university has set in motion various strategies, some of which are to improve the learning process of students, empowerment of faculty and staff in gaining skills in teaching methodologies and the use of e-learning/new technologies. The university has currently invested a lot of funds in the acquisition of relevant and contemporary e-learning technologies, such as teleconferencing centres (five in all), e-learning lecture and delivery and assessment platforms (e.g. Moodle, TurnitinTM, et cetera), Smart interactive digital boards, fully digitized podiums etc. In a bid to maximize these investments, the need for identifying and addressing teachers' phobia and demonstrated barriers to the new technologies and aids becomes imperative. The barriers to the use of appropriate teaching methodologies and the use of new technologies relevant to teaching were identified. The paper focused mainly on barriers related to lack of awareness of effective teaching methodologies, non-availability of appropriate e-learning/new technologies and psychological barriers to effective use of new technologies acquired by the institution. The paper also highlights efforts made by the institution in acquiring new technologies applied to education, sensitisation of faculty and staff to the effects of teaching pedagogies in the educative process and the personality factors in the utilisation of new technologies.

Keywords: New technology, teaching pedagogy, e-learning, psychological barrier.

1 INTRODUCTION

Covenant University is a private based university established in 2002 in Ota, Ogun state in South West Nigeria. The goal of the university among other things is the training of graduates who are mentally resourceful, intellectually equipped, entrepreneurially self-dependent, futuristically visionary and responsibility sensitive (Mandate 2012). The university, despite its few years of existence, has made notable achievements in different spheres and has achieved recognition as a leading private university in Nigeria.

To take its stride of achievement worldwide, the university recently embarked on vision of "one of ten in ten". This is also referred to as Vision 10:2022, a vision to see Covenant university become of the ten leading university in the world. To achieve this goal, the university has embarked on different parameters used in ranking university. The focus of this paper will be on teaching which carries 30% according to Times Higher Education system, the other ranking parameters being research 30%, citation 30%, international outlook, 7.5% and Industry income 2.5%.

Covenant University in line with vision 10:2022 has embarked on different strategies to improve learning and the teaching process. It has begun capacity building and academic leadership development of faculty, series of seminars and interactive workshops in form of Executive Advance to ensure faculty productivity. The university with the intention to perform effectively in the teaching parameter of ranking has currently invested a lot of funds in the acquisition of relevant and contemporary e-learning technologies, such as teleconferencing centres (five in all), e-learning lecture and delivery and assessment platforms (e.g. Moodle, TurnitinTM, et cetera), Smart interactive digital boards, fully digitized podiums etc. have also been acquired.

To enhance the quality of teaching and learning in the university, the purchased e-learning /teaching aids purchased must be effectively used, barriers to effective usage must be identified and addressed to maximise investment.

Objectives of the Study

The main objective of this paper is to examine the efforts of the university in achieving and succeeding in the teaching parameter of ranking in assessing world class university. Specifically, the study intends to:

- i) Investigate the frequency of usage of various e-learning technology and the teaching and learning aids available in the university
- ii) Investigate the reasons for non-usage of the facilities
- iii) Examine the feelings of faculty in the use of facilities
- iv) Determine the level of participation of faculty in the training for usage of facilities
- v) Identify reasons for non-attendance of training
- vi) Seek suggestions on how to ensure constant usage

2 LITERATURE REVIEW

The art of teaching and pedagogy has employed various concepts and strategies from the classical times, during the Renaissance period and through the middle ages to the contemporary times. Presently, professional bodies are also involved in how effective teaching can be accomplished. For example, The National Board for Professional Teaching Standards (1998) among others things indicated that the characteristics of accomplished teachers must include commitment to students and learning, knowing the subject matter, the necessary pedagogical knowledge and the mastery of instructional materials that can be of useful assistance when imparting knowledge to students.

What constitutes effective teaching has also been highlighted by Dalton, (2012), Alao, (2014), Ogbulogo, (2014). Computers based instructions are also being employed to serve different purposes during the learning process among students, where instructions are not only given to learners but responses are also called for, feedbacks are provided to modify learning.

The relevance of electronic technology and teaching aids in enhancing the learning process among students have been discussed by different scholars and educators. Adeyemi (2014) and National Economic Summit (2014) noted among other things that the use of technology in the learning process such as audio-visual services is what an academic leader must concentrate on to be successful academic leader. He also noted that capacity building at Covenant University must stress the availability of facilities including academic complexes and instructional aids that reflect the state-of-the-Art technology.

Others who have identified and highlighted the need for improved teaching facilities and the use of these facilities in universities especially those in Africa in order to meet the parameters used to rank world class universities and to enhance the learning process, include Okebukola, (2012), Ogbulogo, (2014), Alao (2014), Ateyero (2012), Atayero, (2014). Strategies to enable Covenant University attain Vision 10:2022 were also discussed by Ayo, (2014), Abioye, (2014) and Oludayo, (2014)

3 METHODOLOGY

3.1 Population

The population of study was teaching staff at Covenant University from where the sample about 10 percent of the population, that is, 49 faculty members, 28 from the College of Development Studies and 21 faculty members from College of Science and Technology was drawn.

3.2 Instrument

The instrument used in data collection was the Teaching/Learning Aids Questionnaire. Part A of the questionnaire focused on the background variables of the subjects while Part B explored i) the frequency of usage of learning facilities by faculty, ii) the reasons for not frequently using/not using facilities iii) the feelings towards using facilities, iv) frequency of participation in training on how to use facilities, v) reasons for not attending training provided on the use of facilities and vi) steps considered

by faculty as appropriate to ensure use of facilities. The questionnaires were reviewed after its application on a few subjects and the ambiguous items were removed. The comments of experts were also taken into consideration in refining the questionnaire.

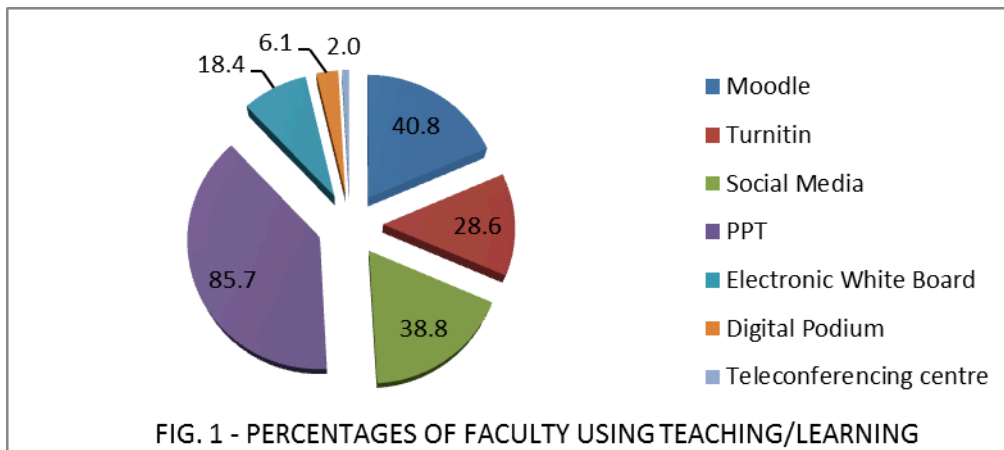
3.3 Procedure

To ensure coverage of both colleges, that is the College of Development Studies and the College of Science and Technology in the university, questionnaires were sent to selected departments in each with instructions to the Administrative Officer of each department to distribute questionnaire at random to faculty members. The questionnaires were collected from each department by two research assistants

4 FINDINGS

Table 1 and Figure 1 indicate the frequency of usage of various teaching and learning facilities. The data in Table 1 and Figure 1 show that the most frequently used is the power point which was used by 85.7 of the respondents followed by moodle, 40.8% , social media, 38.8% , turnitin 28.6%, electronic white board, 18.4% the digital podium 6.1% while the teleconference centre was used by 2%. It is observed that 69.4% of the subjects have never used the teleconference.

	TOTAL	Moodle	Turnitin	Social Media	PPT	Electronic White Board	Digital Podium	Teleconferencing centre
NEVER		4.1	8.2	14.3	0.0	28.6	38.8	69.4
SELDOM		8.2	8.2	8.2	2.0	8.2	10.2	10.2
SOMETIMES		34.7	38.8	18.4	2.0	18.4	14.3	2.0
ALWAYS		40.8	28.6	38.8	85.7	18.4	6.1	2.0



The data also revealed that 38.8% of the subjects have never used the digital podium.

Table 2 and Figure 2 indicate the reasons why subjects have not used facilities.

Lack of awareness of existence : was given for non-usage of the digital podium by 12.2% of the respondents.

Lack of knowledge of usage: The subjects 14.3% indicated lack of knowledge of usage with reference to the digital podium, followed by electronic white board and turnitin both 10% of subjects and Moodle, 4.1%.

No motivation for usage: The highest percentage, 12.2% indicated lack of motivation for the none usage of the electronic white board, followed by 10.2% for the non-usage of turnitin, 8.2% for the none usage of Twitter /Facebook. Lack of motivation was indicated by 6.1% of subjects for none usage of Moodle, 6.1% for digital podium and 4.1% for none usage of power point.

Non availability: was indicated by 10.2% of the subjects for the none usage of the electronic white board and 6.1% indicated none availability for none usage of the digital podium.

	TOTAL	Not aware of existence	Lack knowledge of Usage	No motivation	Not in Dept.	Localised	Not Enough items
Electronic White Board			10.2	12.2	10.2	0.0	8.2
Digital Podium		12.2	14.3	6.1	6.1	2.0	2.0
Turnitin		0	10.2	10.2	0.0	0.0	0.0
Moodle		0	4.1	6.1	0.0	0.0	0.0
Powerpoint		0	0.0	4.1	0.0	0.0	0.0
Twitter/Facebook		0	2.0	8.2	0.0	0.0	0.0

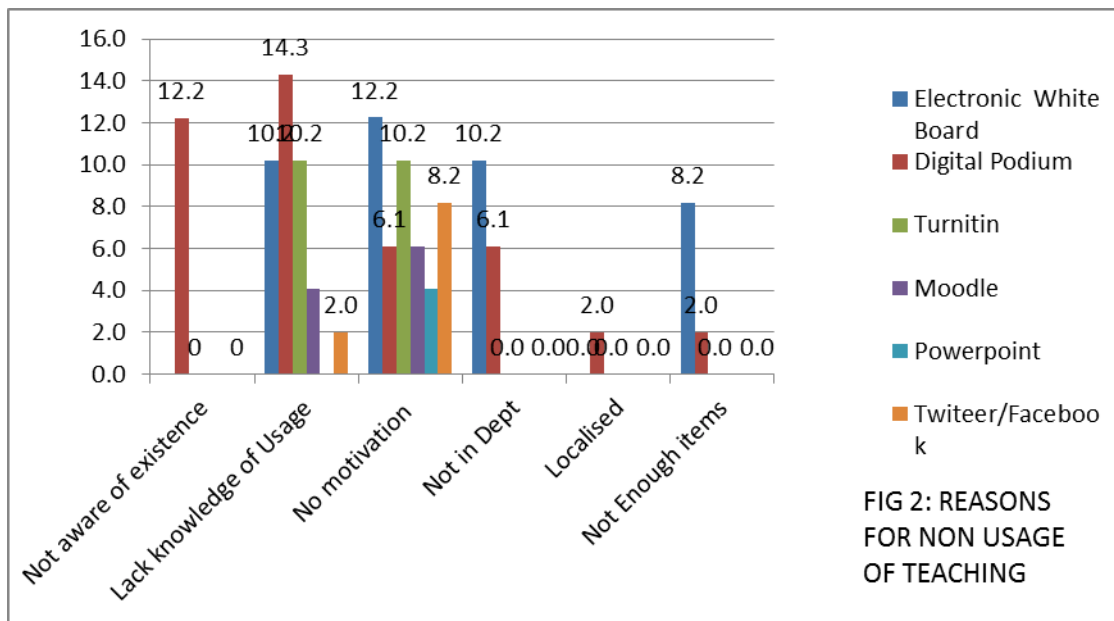


FIG 2: REASONS FOR NON USAGE OF TEACHING

Table 3 and Figure 3 provide information on the feelings of subjects towards the usage of facilities. Whereas some subjects indicated positive feeling and are comfortable with usage of facilities, in the following order, PowerPoint (20.4%), electronic white board (12.2%) and Turnitin and moodle (8.2%) there were negative feelings expressed in the usage of the facilities. Subjects who have either felt nervous/fidgety, or fearful and uncomfortable in the usage of facilities were as follows: Digital podium (8.2%), teleconferencing centre (8.1%), turnitin (6.1%), moodle, (6.1%) and electronic white board (6.0%).

	Teleconferencing Centre	Electronic White Board	Twifb	PPT	Turnitin	Moodle	Digital Podium
Not useful	4.1	0.0	0.0	0.0	0.0	0.0	0.0
No adequate Knowledge	0.0	4.1	0.0	0.0	2.0	4.1	4.1
Not oportuned	6.1	4.1	0.0	0.0	4.1	0.0	6.1
Nervous/fidgety	6.1	2.0	0.0	0.0	2.0	2.0	8.2
Fearful of usage	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Uncomfortable	2.0	2.0	0.0	0.0	4.1	4.1	0.0
Optimistic	4.1	6.1	0.0	0.0	2.0	0.0	2.0
Comfortable with usage	2.0	12.2	8.2	20.4	8.2	8.2	0.0

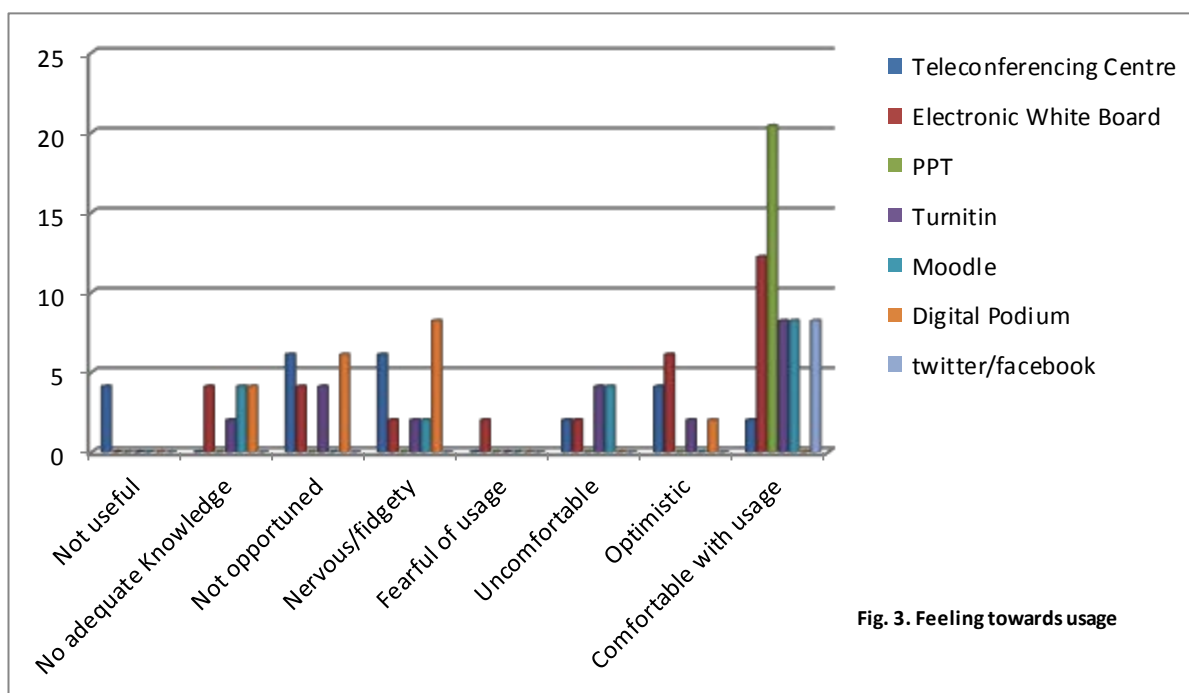


Fig. 3. Feeling towards usage

Table 4 and Figure 4 indicate the attendance of training on the use of facilities.

Less than one third of the subjects 14 or 28.6% attended all training schedule on the use of facilities, about two thirds 31 subjects or(63.3%) attended partial training and three (6.1%) did not attend at all.

TOTAL	Attended All	Partial Training	None
%	28.6	63.3	6.1
Frequency	14.0	31.0	3.0

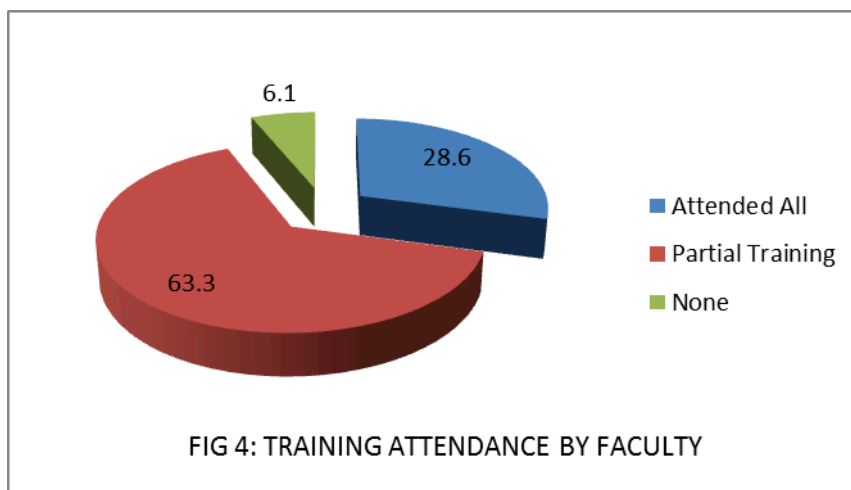


Table 5 and Figure 5 indicate suggestions by subjects on ensuring participation in training

Regular training was suggested by 44 or (89.8%) of the subjects compulsory attendance of training and using facilities to be part of staff assessment were indicated by equal number 18 subjects, or (36.7%) as ways to ensure constant usage of facilities.

	Regular training	Compulsory attendance	Usage of facilities as part of assessment
TOTAL			
%	89.8	36.7	36.7
Frequency	44.0	18.0	18.0

5 DISCUSSION

5.1 Frequency of Usage of Electronic Technology and Other Teaching Aids

Covenant University has invested substantial amount in the provision of different electronic technology and a variety of teaching aids that could facilitate effective teaching and learning. Consequently, it is anticipated that faculty members would play their own part in effective use of these facilities. From the sample of faculty sampled for this study the percentages utilising the various facilities are not encouraging, except for the PowerPoint. The least utilised facility is the teleconferencing centre. Is an indication of the need for faculty to get involved with more net working with colleagues outside

5.2 Reasons For Non-Usage Of Facilities

Whereas the non-availability of facility may appear logical as a reason for non-usage of facility, the indication of reasons such as lack of awareness of facility, no motivation for usage of facility and lack of knowledge of usage of facility seem to suggest that suggest faculty members may not be adequately exploring the opportunities provided by the institution in terms of the variety of facilities the institution has provided.

5.3 Feelings Associated With Usage Of Facilities

Ideally it is expected that every faculty should feel comfortable using any of the facility. However, it has been observed that subjects who have either felt nervous/fidgety, or fearful and uncomfortable in the usage of facilities were as follows: Digital podium (8.2%), teleconferencing centre (8.1%), turnitin (6.1%), moodle, (6.1%) and electronic white board (6.0%). The percentages of faculty whose feelings range from being nervous or fidgety, to fearful and uncomfortable during usage of facilities are of concern. Faculty with such negative feelings may need to use the facilities more often to overcome and negative feelings.

5.4 Attendance of Training on Usage of Facility by Faculty

It has been observed that some faculty have not attended any of the training on the use of the new e-technology and other teaching aids, about one third attended all the training, while majority about two thirds attended partially. Regular attendance of training schedules is the way to get familiarised with the facilities so that they can be used.

5.4.1 Reasons for non-attendance of training session on use of facilities

To this open-ended question the reasons provide by faculty for nonattendance of training session were in the following order a) clashes with my lectures, b) time of training competes with other university functions, c) too many other activities of interest going on in the university during training sessions

5.4.2 Suggestions by Faculty to Ensure Participation in Training on Usage of Facility.

While regular training on use of facility was suggested by majority of the subjects, it is noteworthy that faculty members support compulsory attendance of training with sanctions for non-attendance by building attendance of training as part of assessment of staff. Other suggestions include organising training early at the beginning of session; provide training at departmental level, schedule training during out of office hours or during week-end.

6 SUMMARY AND CONCLUSION

Covenant University has demonstrated commitment to satisfying the teaching parameter which carries 30% of the ranking criteria of world class universities that will enable the institution fulfil the Vision 10:2022

Different facilities that could enhance the teaching and learning are also being made available.

It has been observed that not all faculty use or know how to use the facilities. To ensure usage faculty members will need to attend regularly training schedules on usage of facilities when organised. Flexibility of time of training may be explored by trainers for faculty who might have other competing university engagements or whose lecturer hours clash with the training hours.

To enable the university succeed in the area of teaching in its Vision of 10:2022, every faculty must engage ineffective teaching using the variety of teaching facilities made available.

REFERENCES

- [1] Abioye, T. (2014) Effective Internal and External Communication in Our Drive Towards Vision 10:2022 Paper presented at the Executive Advance, held at The African Leadership Development Centre, (ALDC) Covenant University, Ota, Ogun State, Nigeria.
- [2] Adeyemi, E.A.(2004)Capacity Building And Academic Leadership, Paper presented at the executive advance, at the African Leadership Centre.
- [3] Alao, A. A. (2014) Teaching Pedagogy. Paper presented at the Workshop on Equipping Faculty for Effective Instructional Delivery, held at The African Leadership Development Centre, (ALDC), Covenant University, Ota, Ogun State, Nigeria.
- [4] Atayero, A. A. A. (2012). Maximizing ICT Provisions for Efficient Management. Paper presented at the Induction Programme for Academic & Non Academic Staff held at The African Leadership Development Centre, (ALDC), Covenant University, Ota, Ogun State, Nigeria.
- [5] Atayero, A. A. A. (2014).E-Learning Imperatives for Capacity Building . Paper presented at the Executive Advance, held at The African Leadership Development Centre, (ALDC) Covenant University, Ota, Ogun State, Nigeria.
- [6] Ayo, C.K.. (2014).Institutional Accreditation: Signposts for one of ten in ten. Paper presented at the Executive Advance, held at The African Leadership Development Centre, (ALDC) Covenant University, Ota, Ogun State, Nigeria.
- [7] Dalton, S.S. (2012) Effective Teaching and Pedagogy. John Wiley and Sons. Inc Education.com <http://www.education.com/reference/article/effective-teaching-pedagogy/>

- [8] Mandate (2012). Operational Manual, Living Faith Church, World Wide, Dominion Publishing House.
- [9] National Economic Summit (2014). NES #20 Summary Report. Abuja, Nigeria: Federal Government of Nigeria. www.nesgroup.org
- [10] Ogbulogo, C. (2014). Enhancing Teaching Effectiveness with Teaching Aids. Paper presented at the Workshop on Equipping Faculty for Effective Instructional Delivery, held at The African Leadership Development Centre, (ALDC), Covenant University, Ota, Ogun State, Nigeria.
- [11] Oludayo, O. (2014). Driving Administrative Quality for Vision 10:2022. Paper presented at the Executive Advance, held at The African Leadership Development Centre, (ALDC) Covenant University, Ota, Ogun State, Nigeria.
- [12] Okebukola, P. (2012). Re-Intervening the African University, Paradigms for innovations and change In Obayan Aize (ed). The Idea of A University. Covenant University Ota Nigeria.
- [13] The National Board for Professional Teaching Standards (1998). Washington D.C (<http://www.nbpts.org>)