USING MOODLE 2.5 FOR E-EVALUATION AND ASSIGNMENTS FOR STUDENTS LEARNING AT COVENANT UNIVERSITY

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Abstract

Recent studies indicate that researchers and teachers are divided on the benefits and problems associated with the introduction of technological and pedagogical methods for education in schools and tertiary institution of learning. While some believe that the introduction of these new technologies to the field of education can increase students learning through easy access and sharing of information and data via most social networks or the e-learning platform, a whole lot more are of the opinions that these social networks such as Face book, Google, Twitter and Yahoo has little of educational or academic value to students. Another study associates the prevalence of Information Communication Technology (ICT) gadgets and Modern Education Aids Systems (MEA) in schools with the current dilemma educators and students now face when it comes to grappling with any piece of knowledge targeted at adding the much desired values to the minds of those seeking knowledge.

A pilot study conducted in 2013 at Covenant University, using the Moodle platform, was directed at identifying the impact of ICT on teaching, learning and evaluating students. Selected students from ten different programmes, representing 267 students in the University were earmarked for the study. The study lasted a period of four months after which test and examinations where conducted.

Results obtained indicated that a whole lot of faculty and students still have phobias for teaching or writing any kind of test or examination online. There is however little or no phobia when other types of activities were conducted on these systems and devises. Students and researchers however, have to make concerted efforts to concentrate on a single subject matter at one point in time, since these learning platforms and ICT gadgets continuously increase the temptations of wanting to process more than one information or piece of knowledge at a given time. These distractions were noted to influence the degree of passes or failures which were recorded at the end of the semester. Unsupervised online tests and examinations were noted to have encouraged cheating and exam misconducts. A general improvement on learning outcomes were however noted as a result of the new technologies introduced, when compared with the old methods of teaching, learning and evaluating students at Covenant University (CU).

The study recommends Moodle 2.5 as one of the platforms which has efficient apps designed to aid students with assignments and tests of all kinds. Frequent exposures of students to online studies and assignments on the Moodle platform by faculty will help reduce the phobia experienced among students during learning, tests or assignments. Management needs to make more concerted efforts in bringing members of faculty up to date with innovations in ICT and MEAS.

Keywords: Dilemma, Educators, Innovations in Technologies, Moodle, Social Network.

1 GENERAL INTRODUCTION

This project was initially the preoccupation of the research cluster on ICT and MEAS which had the objectives of determining the impact of ICT and MEAS on learning outcomes at CU. The acceptance of abstract of a pilot study conducted with the above theme in mind by EDULEARN14 Conference technical team, birthed the need for another wider study commissioned and sponsored by the Research and Development Centre of Covenant University, to ascertain the impact of ICT and MEAS on learning and evaluation outcomes since its adoption as official mode for academic activities.

While adopting simple survey methods of research and analysis, the study considered series of materials which includes: policy papers, published literature in the area of the study in focus, individual and group research reports ranging from professional journal articles, conference papers, standard academic texts on ICT and MEAS as shall be listed in the reference page after this study.

The study has the following objectives in focus: firstly, to highlight the quality of infrastructure put in place by the management of CU since the official flagging off of the use of ICT and MEAS at CU - in supporting its aspirations of boosting education and academic standards on campus. This move is directed at making the University attain world class status and subsequently, achieve vision 2022, which is to become one of the ten world class leading Universities by the end of her 2nd decade of its existence. Secondly, the study is set to determine or assess the impact of the introduction of these innovative methods for teaching, learning and evaluating both students and faculty at CU. Thirdly, against the prevailing notion of the effect of ICT and MEAS on education, the study will critically assess and identify the extent to which ICT and MEAS supports education at CU. Fourthly, the study shall conclude by analysing the results of all the studies conducted for this presentation with a view to highlighting several other issues for feature considerations as it concerns the use of ICT and other MEAS at Covenant University. These findings shall form the basis from where the study will make her recommendations to CU management.

2   ICT & MODERN EDUCATION AIDS SYSTEMS AT COVENANT UNIVERSITY.

Covenant University is a Christian Mission University licensed in 2002 by the Nigerian University Commission (NUC) to run as a private University. The vision of the University is "To be a World Class University, committed to raising a new generation of leaders in all fields of human endeavour" **[1]**. Its mission is to "train students who will be mentally resourceful, intellectually equipped, entrepreneurially self-dependent, futuristically visionary, responsibility sensitive and emotionally stable through a human, development based curriculum with emphasis on developing the Total Man" **[1]**. With the above vision and mission clearly stated, the University was set out to run with the 'mandate' outlined below:

> Raising a new generation of leaders through a qualitative and life applicable, and life training system that focuses on value and skill development. It also has the mandate to "Raising a new generation of leaders through a broad base qualitative education built on sound biblical principles culminating in the birth of pathfinders, pace-setters and trail blazers"….**[1]**

At the end of their tenth year of existence as a private University, the University had advanced remarkably in the path and vision she had set for herself.

> On the 21st of October 2012, Covenant University turned ten years. Our experiences over the last ten years strongly indicate the great potential we have as a University in instituting a learning context that is rich in educational opportunities, research and scholarship. Our aim is to build a world-class University that will be a pride of Africa as well as take its place among the Ivory league Universities on the global platform. **[2]**

2.1   ICT & MEAS in Covenant University Before 2013

Between 2002 to 2012, studies carried out on Covenant University by Wogu, **[3]** indicated that the University, from inception, had not adopted any MEAS for her academic activities, instead, she dwelt heavily on the traditional face to face methods of teaching and learning. The use of some ICT gadgets was however gradually introduced into the system to facilitate the teaching and learning processes. For example, special arrangements were put in place by the University management to ensure members of faculty and students could buy laptops and other electronic devices for learning. Overhead projectors were installed in most class rooms to facilitate the teaching and learning experience. Internet services were made available to all halls of residence, academic areas and staff quarters.

A few faculty members in the College of Development Studies and quite a few in the College of Science and Technology had - due to the nature of their courses and the need to further reach out to students in the light of rising influence of ICT gadgets and services such as social networks like face book, Google+ and Yahoo Messenger - began to experiment on ways to engage the students meaningfully during and after class session.

> … the introduction of e-learning (Moodle) as one of the methods of teaching and handling courses at CU, by some lectures in charge of the university wide courses, had drastically changed the seeming complexity and difficulty often associated with teaching these courses… a general improvement in class participation between students and members of faculty, both during class and off class hours was noted. This is as a result of some of

the facilities and privileges which the e-learning system offers both lecturers and students. **[3]**

EIE's 2nd International Conference on Computing, Energy, Networking, Robotics and Telecommunications tagged "eieCon2012", created a forum where a technical paper titled: 'Google+: A Boost To E-Learning Education & Training @ Covenant University by Wogu Power" **[4]** and sponsored by Google was presented. The paper among other things highlighted the essence of adopting and using Modern Education Aid Systems (MEAS) such as those provided by Google+, and Moodle2.0 for teaching and learning outcomes. The paper noted how the use of such modern education aid systems - in a study of some selected students and programs - boosted the academic performances of students selected for the study. The ICT knowledge-base of the students also improved. **[3]**

2.2   The Benefits of Moodle 2.5 at Covenant University

Covenant University in the 2013 /2014 academic session, flagged off the use of MEAS and ICT as the official mode for learning, teaching and evaluating students in the University. Of the various systems proposed, Moodle2.5 was adopted for official use in the University because of the unique features it offers both members of faculty and the entire student community. Brown **[5]** gives a clear presentation of what these benefits are:

> Moodle now has a 'Responsive Design' theme now in the core of Moodle, called "clean." Responsive design optimizes your website for different device types, adapting to the dimensions and orientation of any screen. Learners, teachers, and administrators now keep full functionality, regardless if they are using an iPad, their phone, or their computer. Students can access resources and assignments...teachers can create learning activities...and administrators can get at all site and course settings. …Teachers and administrators can set goals and monitor progress in Moodle 2.5 and award a badge when a series of activities are demonstrated by the learner….**[5]**

These are some of the reasons why CU preferred the use of Moodle 2.5 to others.

2.3   ICT & MEAS s Strategic in Attaining Vision 2022 at CU

Though the first ten years of the CU focused on consolidating on the attainment of a formidable structure for academic activities on campus, the University's focus for the next ten years was to attain the first top ten positions among the leading Universities of the world. Following this new vision, CU invested a huge fortune into acquiring state of the art high tech ICT equipment's and sophisticated computer hardware ranging from Interactive Electronic White Boards, audio visual equipment's, Main servers, Increased Bandwidths and a whole lot of other MEAS'. The faculty base of qualitative academics had also been increased to enhance the staff students' ratio in line with international standards. Besides the understanding that using ICT, MEAS and online learning goes a long way to boosting activities which increases web presence and *webometric* ranking of leading Universities around the world, the move by the university to make using ICT, MEAS and online learning strategic to the attainment of vision 2022, is in keeping with the a report by Allen & Seaman, **[6][7]** which noted that "the proportion of institutions that see the use of ICT and online education as a critical component of their long-term strategy had reached a plateau".

> …63 % of all reporting institutions said that online learning was a critical part of their institution's long term strategy, a small increase from 59% in 2009. The year-to-year change was greatest among the for-profit institutions, which increased from 51% in 2009 to 61% in 2010. For-profit institutions also were the most likely to have included online learning as part of their strategic plan. **[6]**

Covenant University, in view of the above became set to take all necessary actions towards actualising this vision.

3   USING ICT & MEAS FOR EVALUATION AND ASSIGNMENTS AT CU.

In the month of August, 2013; when the University began academic activities for a new session (2013 / 2014 academic session), some lecturers quickly lunched into the full use of Moodle for their lectures and assignments, haven already gotten acquainted with using MEAS. A group of faculty assigned to PSY111 (Introduction to Psychology), decided to carry out a study geared towards comparing the

general class attitude and behaviour of students disposed to the use of MEAS with those who were not. The study would also ascertain the degree of influence and impact, the new mode of study would have on both members of faculty and the students of the University. After the expiration of three weeks into the new semester, it was observed that some students who had initially registered for PSY111 - a required course for over 10 programmes in the College of Development Studies - resolved to opt out of the class for other electives courses. When asked why they were making these changes by their colleagues, they explained that they had found other elective courses where the lecturers had not adopted the use of Moodle for general academic activities. From this behaviour, it was obvious that some students had strong phobia for using MEAS for any kind of learning. A couple of weeks later when the management of the University had compelled every other member of faculty to adopt MEAS for their work on campus, student could no longer jump from our course to the other. However, during the second semester, when the pressure from management for the adoption of MEAS for academic activities had subsided, most lectures reverted to using the face-to-face mode of teaching, while some students sort out elective courses which did not make use of MEAS to register. It was also noted that irrespective of the noncompliance with the University's directives on the use of MEAS for academic activities by some faculty, the degree of students' and faculty's activity on the various social networks continued to increase on campus.

Towards the end of the first semester in the 2013/2014 session, it was however observed that – as a result of certain commendable approaches used by the faculty involved with the course PSY111, a greater number of student's attitude towards class work: submitting assignments, looking up and down loading lecture notes, attempting short quizzes, participating in forum discursions, posting of complaints and general comments and observations to course lecturers, on the Moodle platform had generally increased. Matter of fact, their activities on the Moodle platform was seen to be comparable to the time spent on the internet and on their favourite social networks, thereby reducing the phobia earlier noticed in the beginning of the semester. This new behaviour modification is similar to the observation made by Wogu, **[13]** when the same kind of study was first carried out with a limited number of students.

The chart below indicates the initial adverse impact of ICT on the grades of students amidst increasing influence of ICT and the various social networks which competed for the time and attention of the students between 2006 and 2008, The unofficial use of Google+ and Moodle2.2 for the courses mention above between 2010 and 2012 indicates that where MEAS and ICT were properly harnessed by faculty, it had the capacity to reduce the labour on the part of the faculty and at the same time, increase both the interests and the grades of the students, irrespective of the prevalence of MEAS & ICT gadgets.
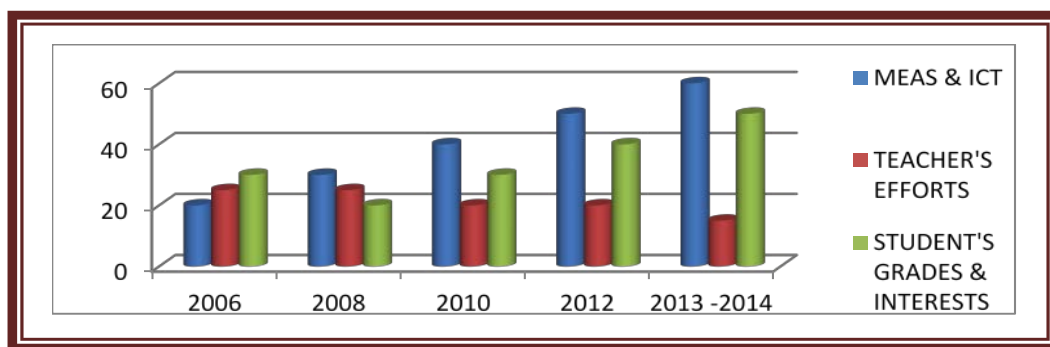

Fig. 1. Change in attitude & Interests of students as a result of the effective use of Moodle.
Part of the data here was adopted from Wogu, [3]

In the month of October, 2013, during the 2013/2014 academic session, the PSY111class had their first e-evaluation test on the platform of Moodle 2.5. A total number of 225 students, representing 11 programmes where accredited for the e-test. The students were expected to respond to a total of 40 questions, set to cover the entire work done in the semester so far. The questions were drawn from a pool of 60 questions bearing the same weight and score. On each attempt, every student was given 40 questions randomly selected but adequately and evenly distributed among the topics covered in class during the period of study. The time for the e-test was set at 20 minutes. The overall weighted score for the e-test was fixed at 10 Marks. Fig. 2. Below is a chart showing students' performances and the average score gotten in the entire e-test.
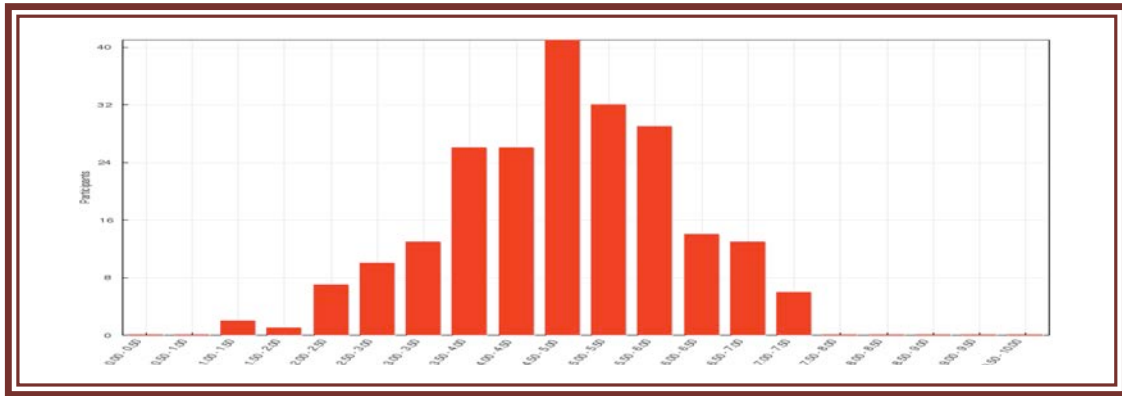
Fig. 2. Chart showing the grades obtained during the first class test for PSY111
This chart was adopted from Moodle Grade Book / Score Sheet for PSY111 class test Oct 2013. [18]

At the end of the semester, another examination was conducted, but this time, it was the conventional types of evaluation where the students were required to write their e-tests on paper and not online. A total of 276 people sat for the examination and the grades acquired are as presented in the chart below

The analysis of result for PSY111 (2013 / 2014) below, indicates that 222 student scored well above 50% in the over-all examination with 68 students scoring "B's" and 99 students scoring "A's". This result represents a total of 80.43% pass in the session. The analysis of result for PSY111 (2012 / 2013) indicates that only 204 student scored above the 50% Mark in the over-all examination. 70 students got "B" grades while only 69 students made "A" grades. This result represents 83 % pass in the 2012 session. A critical comparison of both results indicates that mores students (30) were able to make more "A" grades than the grades recorded in the previous PSY111 examination. This paper therefore has strong reasons to argue that this remarkable increase in performance is as a result of the effective use of the MEAS applied for the course PSY111 by the course lectures.
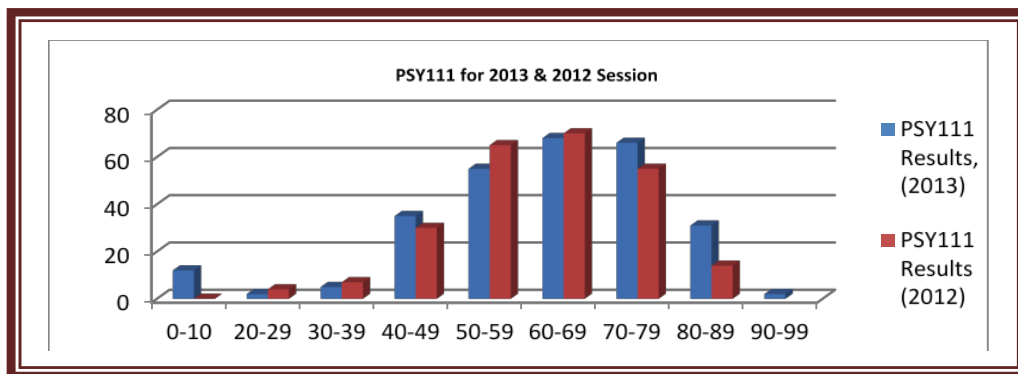

Fig. 3. Final Results Distribution for PSY111 Examinations, (2013) & (2012) Session
Dater adopted from CSIS Records,, Alpha 2012 & 2013 [9]

4   FURTHER DISCUSSION AND ANALYSIS OF STUDY ON THE IMPACT OF ICT & FOR EVALUATION MEAS AT COVENANT UNIVERSITY

Towards the end of the omega semester of the 2013 / 2014 session - one year after flagged off the official use of MEAS and ICT as the modes for academic activities on campus - It became pertinent to assess how well the whole idea of the use of Moodle and other MEAS had gone down with the entire University community. To this end, two different questionnaires were designed to capture the opinion of the students and the other, to capture the opinion of the members of staff and faculty on campus. A link to the site where the questionnaire can be found has been written on the reference section of this study. [10] [11]

4.1 Results Analysis For The Student's Questionnaire at CU

Due to some unavoidable circumstances, the study could not get all the students directly involved in the various programme to partake in the study, however, a fair representation of the opinions of students on campus was captures in this study. A total number of 115 responses were captured for this last part of the study. 61% of them where Males while 39% were Females. 58% of the students were from College of Science and Technology (CST) while the remaining 42% came from the College of Development Studies (CDS). Of the 6 schools in the University, students from the School of Business Studies (SSBS) topped the chart with 24% responses. Of the five different levels of study on campus, 200 level students' responses topped the chart at 58%.

4.1.1 Efficiency and Usability of the Moodle system among students& Phobia for using Moodle

Fig. 4 below captures the questions designed to identify the degree of acceptance of the Moodle system for general academic activities on campus (Q1 &2), only 4% of the general population had responses tilting to the negative, the remaining 96 % had positive responses as regards the efficiency and suitability of the use of Moodle since its adoption as the official mode for conducting all academic activities on campus.

Fig. 5 below captures the three questions (Q 6, 7 & 8) designed to identify the opinions of students on the efficiency and suitability of the Moodle platform for doing assignments, short essays, quiz, and e-tests on campus, not minding the fact that the Moodle platform was still at its early stage (within one year of implementation). The chart shows that only 52% of the students' responses argued that the use of ICT gadgets and MEAS for evaluation, etc.; should be the University's priority, if she still desire to make her mark among the leading Universities of the world. About 48% of the students, for reasons of technicality, efficiency and accuracy of results, have in one way or the other, argued in the negative. This study largely infers that 48 % of these students represented in the study, are those who still expressed some degree of phobia for the use of ICT and MEAS for academic purposes.
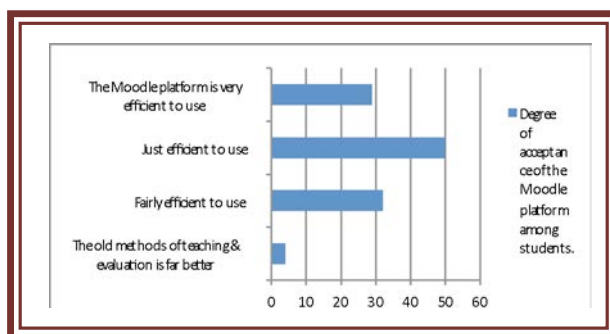

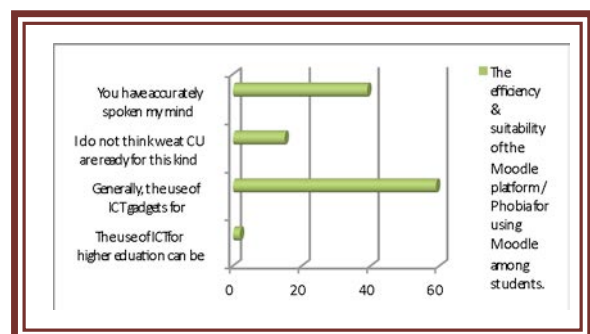**Fig. 4. Efficiency and usability of Moodle among students**

Fig. 5. Phobia for Using Moodle for Evaluations at CU

4.2 Results Analysis for Staff & Faculty Questionnaire at CU

Some interaction with members of staff and faculty revealed that most people chose not to partake in the study for fear of revealing their identity. Others felt the research had nothing to do with them. Majority of other faculty members felt they could not just spear 5 minutes of their time to respond to the online study. These reasons to some extent, explains the small population that participated in the study. The results gotten from the study is as follows: Of the entire number of participants, 94% of the respondents represent 60 members of academic staff of the University. The other 6% comprise of nonteaching staff members of the University. 65% of the respondents were males while 35% were females. 45% of the respondents where form CDS while 52% of the respondents where from CST. The remaining 4% were evenly distributed between the staff of CSIS and those from the registry department. Members of faculty from the school of applied and natural science (SANS) topped the chart with 20 persons, representing 31% of the entire population.
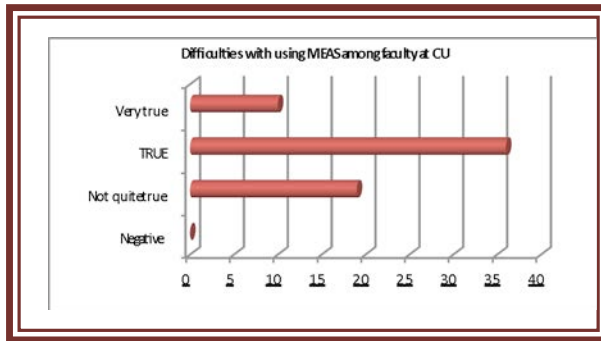
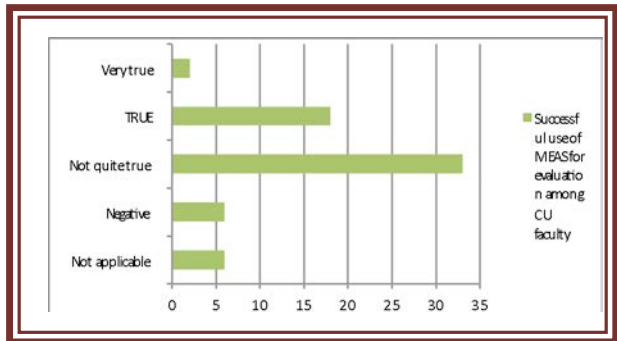**Fig. 6. Difficulties with using MEAS among faculty**

Fig. 7. Successful use of MEAS for evaluation among faculty.

4.2.1 Challenges associated with assessing and testing students on the Moodle Platform.

On like the students, Fig. 6. Captures responses for faculty in questions 1 on the efficiency, suitability and workability of Moodle for doing assignments, tests etc. Their responses indicated that 89% of the population responded in the affirmative, No response was capture in the negative.

4.2.2 Responses showing successful use of the Moodle platform for evaluation among faculty

Fig 7, above captures the responses of faculty in questions (4 & 5). The responses of faculty whose opinions were in the negative as regards those who had successfully used the platform for evaluating students, stood at 9% of the entire responses. The number of faculty who accepted to have successfully done such test and assignments on line stands at over 82%. By implication, between (Q 4 & 5), it is obvious that teachers seem to be making full use of the platform for evaluating students' performances. Other subsequent results will however prove their response to be wrong.

4.2.3 The degree of phobia suspected to exists among Members of Faculty

Fig.8. below captures the responses to tactical questions (Q 10 & 12) designed to identify the degree of phobia inherent among faculty concerning their willingness to use the Moodle platform for evaluation as initially indicated in fig. 7 above. However, from the data collected, it is evident that though 82% of faculty initially gave the impression that they had put into effective use, all the apps on the Moodle platform for teaching and evaluation, about 88-94 % of the entire population –without knowing it- confirmed their degree of phobia for the use of MEAS and ICT for teaching and evaluation. This occurred when they argued that, "it is the students who do not like being evaluated online, the economic reason adduced for their positions notwithstanding" **[20]**
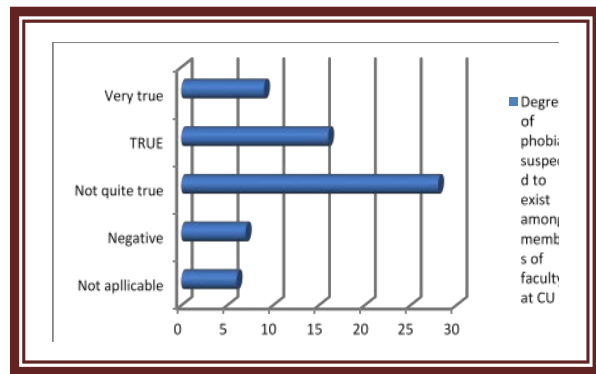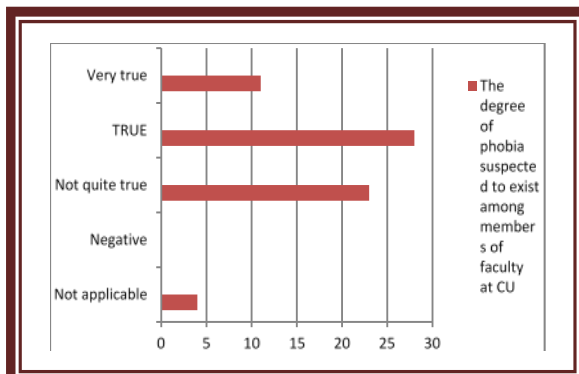

Fig. 8 & 9 above captures the degree of phobia suspected to exists among members of faculty

On the other hand, an analysis of the 14th question which allows members of faculty to infer the existence of phobia among student's behaviour - another tactical way of identifying the degree of phobia inherent among faculty- it was discovered that 80% of the total population agree that students had phobia for using MEAS and ICT for learning or evaluation as indicated in Fig. 9. above. In

question 15, while allowing members of faculty to speak freely of the subject of phobia, with regards to using MEAS and ICT for evaluating students, 85% of faculty members were disposed to point accusing fingers at other members of faculty as being guilty of phobia. Only about 9% of faculty chose not to point fingers. This new discovery therefore counters the initial claims made by faculty which presumes they have fully embraced the MEAS made available by management for academic purposes.

5   CONCLUSION AND RECOMMENDATIONS

The study so far highlighted the quality of infrastructures put in place by the management of CU since the official flagging off of the use of ICT and MEAS on campus. While these efforts were directed towards boosting the Universities aspirations of actualizing vision 2022, the study notes that there have not been a commensurate and effective utilization of these facilities due to some lapses on the part of management and most faculty members. lapses notwithstanding, the study notes that the introduction and adequate use of MEAS and ICT facilities on campus by all concerned officers of the University, has the capacity to boost academic performance and also increase web presence and *webometric* ranking of the University as indicated in some of the studies conducted for this paper. (See Fig. 1, 2, and 3). In addition, the study acknowledges the relevance of Moodle 2.5 as a good example of MEAS which when in simplifies and enhances the quality of education within a university.

Though the full use of ICT and MEAS as official modes of teaching, learning and evaluation in CU has just gone one full circle, this study believes it will take two or three more years of concerted efforts of using these MEAS and facilities to the fullest, before desired results in both academic performance and higher *webometric* ranking will begin to emerge.

5.1   Recommendations

The results of the studies conducted for this presentation strongly identified a reasonable but critical level of phobia among both faculty and students of Covenant University. Where this phobia for the use of MEAS and ICT is left unabated, its consequence may further prolong the attainment of vision 2022. This study therefore recommends the following:

1. That the management of CU make concerted efforts at training members of faculty on the basic and advanced operations of these MEAS since its use have now become "the next level" for engaging meaningfully and profitably in the business of education.

2. Where members of faculty have gotten a basic and advanced understanding of the operations of these systems, they in turn are expected to continuously expose their students to the constant use of these MEAS through weekly assignments, short quiz sessions, and discussion forums etc, as this is the one major ways of reducing the phobia surrounding the use of ICT and MEAS.

3. Management will need to clearly state the policies and regulations guiding the use of these MEAS on campus as this will reduce the strong sense of fear which was noted to hinder most faculties from responding to the questionnaires designed for this study.

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[11]   The Questionnaire for Students of Covenant University: https://docs.google.com/a/covenantuniversity.edu.ng/forms/d/1EcTvypOH-lgAm0UOWVHY9QF_JckYNr1WshifUaeNLXo/edit,