



## **TEACHING AS AGAINST LECTURING, IN NIGERIAN UNIVERSITIES FOR TRANSFORMATIONAL GRADUATES: A CASE STUDY OF ENVIRONMENTAL SCIENCES TEACHING**

**ISRAEL OKECHUKWU OGBONNA, PhD.**

### **ABSTRACT**

*With the growing concern over the quality of graduates from Nigerian universities, the universities should re-examine the lecturing method of Learning, Teaching and Assessment (LTA) currently being adopted. This work therefore sought to enquire into whether lecturing, as against actual teaching, is the appropriate method universities in Nigeria should adopt in order to produce transformational graduates. Using teaching of Environmental Sciences as case study and adopting survey method, it obtained data from Lecturers and Students of Department of Estate Management from Nigerian universities. The data obtained was analysed with simple percentages. It was found that majority of the respondents agreed that actual teaching, as against lecturing, is the more effective method of teaching. This work therefore advocates for a change from lecturing to actual teaching, in Nigerian universities so as to produce transformational graduates from the universities. In this regard, suggestion is also made that university lecturers should be made to undergo teacher training.*

**Keywords:** *Teaching, Lecturing, Nigerian Universities, Transformational, Environmental Sciences Teaching*

### **INTRODUCTION**

There is a growing concern that the quality of graduates from Nigerian universities is waning. The import of this is that the said graduates are not in position to bring the needed transformation in Nigeria. This should be a source of worry for the Universities that produce these graduates such that they need to re-examine the method they use in imparting knowledge into their students. Effective teaching is the bedrock of how much students learn (Costin, 2014)

while how much the students learn is a factor for how much they will give to the society upon graduation.

A major factor in the quality of teaching is the method adopted and out of the many teaching methods, lecturing is one. Technically, lecturing is not taken as teaching (Haxton, 2010) but it happens to be the principal method of imparting knowledge in Nigerian universities. As issues of the Environment are now on the front burner globally, we have chosen to make a case study with the field of Environmental Sciences, zeroing in on Estate Management.

The aim of this work therefore, is to advocate for a change from lecturing to teaching in Nigerian universities so as to enable the universities produce graduates that will bring the needed transformation in the nation. The objective therefore is to show, between Lecturing and Actual Teaching, the Learning, Teaching and Assessment (LTA) method that is more appropriate for producing better graduates for Nigeria.

## **LITERATURE REVIEW**

Although technically, lecturing is not taken as Teaching (Haxton, 2010), it is one, out of eight instructional methods, teaching strategies or teaching methods identified by Kizlik (2016) – others are Cooperative Learning, Brainstorming, Direct Teaching, Lecture with Discussion, Multimedia (computer, Internet, CD, DVD, film), Role Playing and Games. Taken from the word, Lecture (“to read” in Latin), it developed in the pre-printing age Europe where somebody with a book will read it out while others will sit down and copy down what was being read out. The early Universities of Europe adopted the method which has endured till today as the principal method of teaching in Universities globally. It involves, primarily, an oral presentation given by an instructor to a body of students. They may be accompanied by some sort of visual aid, such as a slideshow, a word document, an image, or a film while some lecturers even use a whiteboard or a chalkboard to emphasize important points in their lecture. With or without the said accompaniments, so long as there is an authoritative figure at the front of a room, delivering a speech to a crowd of listeners, this is a lecture.

Its advantages, according to Farooq (2012), are that “larger amount of grounds are covered in a single lecture; use of instructional equipment, laboratory and other materials is excluded; students’ listening skills are developed; lecture

material is logically arranged to enable oral presentation; as well as the opportunity it offers for learning language.” Hanford (2011) gave another advantage attributable to lecturing to be that it delivers information to a large number of students at a given time. Paris (2014) saw the advantages as its being convenient, especially with larger classroom sizes where “professors address the most people at once, in the most general manner, while still conveying the information that he or she feels is most important, according to the lesson plan.” Although with advantages, there are several disadvantages with lecturing method of teaching. Farooq (2012) identifies them as the fact “.....that in lectures every student is given the same handling, irrespective of individual differences; information flow is a one-way traffic from teacher to student; language used by lecturers are above the students and so students do not take full advantage of lectures; information gotten from lectures by students are often forgotten soon after the lectures; attention level of the students are not the same during lectures.” Paris (2014), while agreeing with Farooq (2012) on the “one-way traffic” disadvantage, adds that in lectures students are passive participants and the lecturer should have excellent speaking skill.

With these disadvantages, Hanford (2011) showed that a negligible number of the students actually learn from lectures. Bajak (2014) reported on a new study by Scott Freeman of the University of Washington, Seattle, which found that “undergraduate students in classes with traditional stand-and-deliver lectures are 1.5 times more likely to fail than students in classes that use more stimulating, so-called active learning methods.” According to the Report, “Freeman and a group of colleagues analyzed 225 studies of undergraduate science; technology, engineering, and math (STEM) teaching methods. The meta-analysis, published online in the *Proceedings of the National Academy of Sciences*, concluded that teaching approaches that turned students into active participants rather than passive listeners reduced failure rates and boosted scores on exams by almost one-half a standard deviation.”

Harden and Crosby (2000) while advocating for a shift from lecturing to teaching in medical schools, agreed that teaching is better than lecturing in addressing emerging challenges and needs of this changing world. Ajibade, Oloyede, Adeleke and Awopetu (2010) agreed no less when they asserted that: Traditionally, teaching is taken to be the transmission of knowledge by the teacher to ignorant, unknowledgeable learners who passively receive the

information provided. However, the challenges of contemporary society have brought about an acceptance of more constructivist theories in education with emphasis on teaching and learning. A shift in paradigm in learning from 'consumer' to 'producer' has led to a shift in teaching with emphasis on construction of knowledge and negotiation of meaning.

Also, Hanford (2011), reporting on the need to rethink the way College (higher education) students are taught, quotes Joe Redish, a professor of physics at the University of Maryland as saying that "lecturing where students sit and passively absorb information has never been an effective teaching method, and now that information is so easily accessible, lecturing is a waste of time."

The said Redish who taught Physics at the University of Maryland since 1970 using lecture method, according to the report, had to abandon lecture method for the more effective interactive discussion method after encountering with one of his mentors, a famous physicist named Lewis Elton who had carried out research on education.

Hanford (2011) also reported the story of Harvard physicist, Eric Mazur, one of the pioneers in developing a new effective way of teaching large classes. According to the author, Mazur calls his approach "peer instruction." which is about teaching by questioning. It involves making students to read a standard text on the subject ahead of coming to class. In the class, instead of the normal lecture, questions will be answered by students with peer discussions, to help the students understand what the information means.

The result for Mazur was that

*...many more students choose the right answer after they have talked with their peers. And it's not because they're blindly following their neighbor's lead. By the end of the semester, students have a deeper understanding of the fundamental concepts of physics than they did when Mazur was just lecturing. Students end up understanding nearly three times as much now, measured by a widely-used conceptual test.*

Brian Lukoff, an education researcher at Harvard, speaking the mind of all progressive-loving people, is quoted in Hanford (2011) to have said

We want to have a class where everyone can be successful because we need everyone to be successful. We need to educate a population to compete in this

global marketplace; and We need a much larger swath of [the] population to be able to think critically and problem-solve" The same Hanford (nd) posited that these lofty ideals cannot be achieved by relying on lecturing method whereby a few motivated people teach themselves.

In the same vein, Caballero (2013) identified reasons for students ditching class such as Poor Quality/Clarity of Lectures, Lack of Relevant Examples and Lecturer's Inability to Engage/Entertain, submitting that "if MIT (an Online School) wishes to dominate the online education space, it must make sure that her professors TEACH not just LECTURE." It has been equally opined that the continued use of lecturing in the face of the present day realities will only lead to disaster (Ajibade, Oloyede, Adeleke and Awopetu, 2010).

Despite the obvious advantages of teaching over lecturing there is still strong resistance to lecturers becoming real teachers through teacher training certification. According to Gibbs (1981), the resistance is based on some reasons commonly given for lecturing and claims commonly made for the efficiency of lecturers. The author identified, examined and found that "the first nine were considered to have little substance and the last eleven were found to be avoidable." Sotto (2010) made a robust argument against those protesting against the idea that academics in UK be given teacher-training. He first identified four anomalies:

1. Many practices that have their roots in the Middle Ages have embraced great changes but there have been almost no changes in university teaching practices, which are still lecturing method.
2. The generally agreed notion that people whose work affects the wellbeing of others must possess a qualification that attests to their competence to do the work is not made to apply in Universities as people who teach at a university are not required to hold a qualification that attests to their competence to teach.
3. Whereas academics hold that if complex undertakings are to be understood, they must be studied, few of the academics study teaching
4. It is generally agreed that we can learn by experience, observation and reflection but that such learning has limitations which can be cured by attending courses and studying. Unfortunately, lecturers do not want to attend courses or studying teaching.

Some objections to training courses identified by Sotto (2010):

Anyone who has a PhD in crystallography knows how to teach it." But knowing a subject is not the same as knowing how to teach it.

Poor quality of some training courses. However, the fact that some diabolical training courses do exist are irrelevant to whether lecturers should or shouldn't undertake training to teach.

There is objection that most of the teacher training courses are not subject-specific. This objection is flawed on the fact that the principles of teaching are mainly of general application and the objection is centred on the subjects and teachers instead of the students.

Another objection is that training courses impede a lecturer's freedom. This is like arguing that architects are impeded by having to pass exams.

Another objection is that there is no evidence that training improves teaching. This is like claiming that there is no current evidence that surgeons do better than barbers.

Another objection is that training courses should be voluntary. This is like suggesting that training courses for airline pilots should be voluntary.

A last objection holds that the reaction of students provides evidence of competence. But these same lecturers will on other occasions complain that many students want an easy ride.

On the whole, one is convinced by the argument that teaching is a better LTA method for producing higher quality graduates than lecturing.

Also while it is basic for a teacher of a subject to have a good certificate in that subject, it is not enough for him to teach that subject. For him to effectively teach that subject, he ought also to be trained in pedagogy (the art and science of teaching). In this wise, it will not be out of place to demand that those that would teach such important course as Environmental Sciences be people who are not only trained in Environmental Sciences but also be people trained in the art and science of teaching so as to effectively pass on the knowledge to the students in a way that the students will "catch the fire" of the urgency and crucial nature of environmental issues in our world of today.

This view is in line with the argument of Egwuatu (2013) and Haile, Tempra and Sietchping (2013). Ajibade, Oloyede, Adeleke and Awopetu (2010) are also in agreement as in their study of the attitude of Lecturers at the Obafemi

Awolowo University, Ile-Ife, Nigeria, to Lecturers being trained in pedagogy, they found that the Lecturers appreciated the need for the training and, contrary to expectation, were ready to submit themselves to it. One hopes that this applies in other Universities in Nigeria. If all Lecturers are trained in pedagogy, it will also assist in harmonising the way teaching and learning is conducted in disciplines within and across institutions. Presently, every Lecturer is delivering the way he knows best such that there is wide variation in learning outcomes from different Lecturers within same and different institutions (Johnstone and Vignaendra, 2003)

## RESEARCH METHODS

### Research Design

This work adopted the survey method. Questionnaires were administered in Nigeria on Lecturers and Undergraduates from Departments of Estate Management in Nigerian Universities. The data obtained were analysed using simple percentages.

### Research Population and Sampling Design

Two major clusters of population were identified for this research, namely Lecturers and Undergraduates from Departments of Estate Management in Nigerian Universities

Details of the population of the clusters and their samples are shown in Table 1. The sample sizes have been determined from the populations using the Taro Yamane (1967) statistical formula, as follows:

$n = N / (1 + Ne^2)$  ... where  $n$  = sample size,  $N$  = population size, and  $e$  = alpha level of 0.05 (as confidence interval is taken at 95%).

**Table 1: Respondents, Population and Sample Sizes**

Cluster	Population	Sample Size
Lecturers (L)	124	95 (76.61% of population)
Final Year Estate Management Undergraduates (UG)	538	229 (42.57% of population)

The adequacy of sample sizes relative to the populations has been judged by the recommendations of Nwana (1981) which are a minimum 40% for a

population that is in few hundreds and a minimum 20% for a population that is in many hundreds. From Table 1, all the Sample Sizes satisfied the recommendations and are therefore considered to be good enough for this research.

For the Undergraduates and Lecturers in Departments of Estate Management, it was necessary to select the Universities they will come from in an unbiased manner. To do this, a sample was taken out of all the 14 Universities shown by the 2017 Directory of the Nigerian Institution of Estate Surveyors and Valuers (NIESV) to be recognized by the two regulatory bodies, namely, NIESV and the Estate Surveyors and Valuers Registration Board of Nigeria (ESVARBON). Reflecting geographical spread, ownership (private or state-owned) as well as age, the following universities were chosen for the research: University of Uyo (UNIUYO), Rivers State University (RSU), University of Nigeria, Nsukka (UNN); Imo State University (IMSU); University of Lagos (UNILAG); Covenant University, Ota (CU); Federal University of Technology, Minna (FUTMIN); and Abubakar Tafawa Balewa University, Bauchi (ATBU)

Data from Undergraduates of Departments of Estate Management in the chosen Nigerian Universities was obtained from final year undergraduates as they were about completing their studies and so their perceptions on university education can be relied upon.

**Table 2: Breakdown of the Population for Lecturers (L) and Final Year Undergraduates, Departments of Estate Management (UG)**

Selected Universities	Lecturers in Departments of Estate Management (L)								No. of Final Year Est.
	Prof s	Ass. Prof s	Snr Lec	Lec -1	Lec -2	Ass. Le	Grad. Ass.	Total No. of Lectu	
<b>UNIUYO</b>	1	0	3	4	4	1	0	13	30
<b>RSU</b>	1	1	1	3	2	1	1	10	55
<b>UNN</b>	2	1	2	4	0	0	3	12	50
<b>IMSU</b>	0	1	0	2	4	1	0	8	41
<b>UNILAG</b>	2	2	1	2	12	0	3	22	120
<b>CU</b>	2	3	2	0	4	0	0	11	26
<b>FUTMIN</b>	0	2	4	3	6	3	0	18	130



<b>ATBU</b>	0	0	6	3	3	16	2	30	86
<b>Total</b>	8	10	19	21	35	22	9	124	538

To ensure that all the 124 Lecturers from the eight Universities were given equal chance of participating in the Survey, the sample 95 Lecturers were distributed among the eight Universities based on the proportion of number of Lecturers from each University in relation to the total population of the Lecturers. Also, to ensure that all Final Year Students in Departments of Estate Management from the eight Universities were given equal chance of participating in the Survey, we distributed the sample 229 Undergraduates among the eight selected Universities, based on the proportion of the number of Undergraduates of each University in relation to the 229 total population of the Undergraduates.

**Table 3: Rate of Response by the Respondents**

Respondents	Population (PP)	Sample (S)	Questionnaires Returned
<b>Lecturers (L)</b>	124	95 (76.6% of Population)	69 (72.6% of Sample)
<b>Final Year Estate Management Undergraduates (UG)</b>	538	229 (42.5% of Population)	169 (73.7% of Sample)

### **Data Units and Bases of Measurement**

The Primary Data Unit is the Learning, Teaching and Assessment method that is appropriate for teaching environmental sciences in Nigerian Universities to produce better quality graduates and the bases of measurement are (i) the level the lecturers and undergraduates agree that quality of teachers for a particular subject, matters if the students are to effectively learn the subject (ii) the level of agreement that, on the average, lecturers presently teaching would-be valuers in Nigeria need to change from lecturing to actual teaching, considering the qualities of a good teacher; and (iii) the level of agreement that University Lecturers should be required to undergo teacher training courses so as to improve on their teaching skills

**DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS**

**Data Presentation and Analysis**

Table 4: Responses of Lecturers (L) and Undergraduates (UG) on teaching and lecturing in Nigerian Universities

Question	Respondent	Strongly Agree	Agree	Indif	Strongly Disagree	Disagree
To what level do you agree that quality of teachers for a particular subject, matters if the students are to effectively learn the subject?	L	28 (40.6)	30 (43.5%)	6 (8.7%)	4 (5.8%)	1 (1.4%)
	UG	100 (59.2%)	69 (40.8%)	0 (0%)	0 (0%)	0 (0%)
To what level can you agree that, on the average, lecturers presently teaching would-be valuers in Nigeria need to change from lecturing to actual teaching, based on the qualities of a good teacher?	L	25 (36.2%)	25 (36.2%)	12 (17.4%)	4 (5.8%)	3 (4.3%)
	UG	99 (58.6%)	70 (41.4%)	0 (0%)	0 (0%)	0 (0%)
To what level do you agree that University Lecturers should be required to undergo teacher training courses so as to improve on their teaching skills?	L	17 (25.6%)	32 (46.4%)	4 (5.8%)	7 (10.1%)	9 (13.0%)
	UG	120 (71.0%)	49 (29.0%)	0 (0%)	0 (0%)	0 (0%)

From Table 4, majority of the stakeholders are of the opinion that quality of teachers for a particular subject, matters if the students are to effectively learn the subject. Overwhelming majority of the stakeholders – L (about 72%) and

UG (100%) - favour change from the present lecturing to actual teaching. Overwhelming majority of the stakeholders – L (about 72%) and UG (100%) – are of the opinion that University Lecturers should undergo teacher training.

Table 5: Response of Lecturers on their teaching qualifications

Certificate	No	%age
<b>Teachers Grade II certificate</b>	2	2.9
<b>NCE</b>	0	0
<b>PGDE</b>	11	15.9
<b>B.Ed.</b>	0	0
<b>M.Ed</b>	0	0
<b>None</b>	56	81.2

Table 5 shows that currently, only a few of the existing Lecturers have any teaching qualifications as majority (over 80%) are not trained teachers, corroborating the findings of Egwuatu (2013).

### Hypothesis 1

**H<sub>0</sub>:** The Present LTA method being used in Nigerian universities is appropriate for effective teaching of environmental sciences in Nigeria universities.

**H<sub>1</sub>:** The Present LTA method being used in Nigerian universities is not appropriate for effective teaching of environmental sciences in Nigeria universities.

Table 6: Results of Chi-Square Tests – Hypothesis 1

	Observed N	Expected N	Residual
<b>Strongly Agree</b>	100	44.3	55.8
<b>Agree</b>	51	44.3	6.8
<b>Disagree</b>	10	44.3	-34.3
<b>Strongly Disagree</b>	16	44.3	-28.3
<b>Total</b>	177		
<b><math>\chi^2_{Cal} = 115.814 &gt; \chi^2_{tab} = 7.85, df = 3, P &lt; 0.05</math></b>			

### **Decision Rule**

The decision rule for Chi-Square method is to reject  $H_0$  (Null hypotheses) if the calculated value of  $\chi^2$  is greater than the table value at 0.05 level of significance and accept  $H_1$  (Alternative Hypothesis). On the other hand, we reject  $H_1$  if the table value is greater than the calculated value of  $\chi^2$  and accept  $H_0$ .

Table 6 shows the results of the Chi-square analysis of research Hypothesis 1.

It is discovered that the Chi-square calculated  $\chi^2_{cal}$  value of 115.814 is greater than Chi-square tabulated  $\chi^2_{tab}$  value of 7.85 at 3 degree of freedom and significant level of 0.05. Based on this result, the null hypothesis ( $H_0$ ) is rejected while the alternative hypothesis ( $H_1$ ) that “The Present LTA method in Nigerian universities is not appropriate for effective teaching of Environmental Sciences” is hereby accepted.

### **Discussion of Results**

The findings from this work which show that the quality of teachers for a particular subject matters if the students are to effectively learn the subject is an indication that quality of teaching need to be taken seriously if the quality of graduates is to be high enough to bring the needed transformation in Nigeria. That there is overwhelming majority opinion that University Lecturers should undergo teacher training is an indictment on the quality of teaching going on in Nigerian universities. As quality of teaching is predicated, among others, on the method of teaching, one can deduce that the preponderant lecturing method is implicated. Little wonder overwhelming majority favoured change from the present lecturing method of LTA to actual teaching. If that is to be the case, majority of the existing lecturers will need to undergo teacher training as the result of this work showed that many of them are yet to undergo any teacher training.

### **CONCLUSION AND RECOMMENDATIONS**

This work has attempted to show that the lecturing method of LTA currently in use in Nigerian universities should be changed to actual teaching if Nigeria is to have graduates equipped enough to transform the nation. To effect it, it is advocated here that university lecturers should undergo teacher training and if

possible be certificated in line with the Teachers Registration Council of Nigeria Act.

## REFERENCES

- Ajibade, Y. A., Oloyede, E. O., Adeleke, M. A. and Awopetu, E. O. (2010). Lecturers' Views on and Attitudes to Pedagogical Skills Training: Obafemi Awolowo University as a Case Study. *Review of Higher Education in Africa*, 2(1).
- Bajak, A. (2014). Lectures aren't just boring, they're Ineffective, too, study finds. Available at: <http://www.sciencemag.org/news/2014/05/lectures-arent-just-boring-theyre-ineffective-too-study-finds>. Accessed July 1, 2020
- Caballero, E. (2013). Teaching vs Lecturing: A Disruptive Force in Online Education. Available at: <https://www.physics.gmu.edu/category/academics/distance-education/distance-education-articles/>. Accessed July 1, 2020
- Costin, C. (2014). Are Great Teachers Born or Made? Available at: <http://blogs.worldbank.org/education/are-great-teachers-born-or-made>. Accessed July 1, 2020
- Egwuatu, U. S. (2013). The pedagogy and practice of real estate management in Nigeria: entrepreneurial perspectives. Doctoral, Sheffield Hallam University. Available at: [http://shura.shu.ac.uk/7798/1/egwuatu\\_pedgogy\\_and\\_practice\\_of\\_real\\_estate\\_management.pdf](http://shura.shu.ac.uk/7798/1/egwuatu_pedgogy_and_practice_of_real_estate_management.pdf). Accessed July 1, 2020
- Farooq, U. (2012). Lecture Method of teaching, Definition, Advantages & Disadvantages. Available at: <http://www.studylecturenotes.com/social-sciences/education/382-lecture-method-of-teaching-definition-advantages-a-disadvantages-S>. Accessed July 1, 2020
- Gibbs, G. (1981). Twenty terrible reasons for lecturing, SCED Occasional Paper No. 8, Birmingham. Available at: <https://www.brookes.ac.uk/services/ocsl/d/resources/20reasons.html>. Accessed July 1, 2020
- Haile, S., Tempira, O. and Sietchping, R. (2013). Towards a Capacity Development Framework for Land Policy in Africa. *International Federation of Surveyors Article of the Month*. Available at: [https://www.fig.net/resources/monthly\\_articles/2013/july\\_2013/figmonthly\\_articlejuly\\_2013.pdf](https://www.fig.net/resources/monthly_articles/2013/july_2013/figmonthly_articlejuly_2013.pdf). Accessed July 1, 2020
- Hanford, E. (2011). Rethinking the Way College Students Are Taught. Available at: [http://www.columbia.edu/itc/hs/CUMC-Summer-Institute/SI-2012/PrintMaterials/Leah\\_Hooper--Handout2.pdf](http://www.columbia.edu/itc/hs/CUMC-Summer-Institute/SI-2012/PrintMaterials/Leah_Hooper--Handout2.pdf). Accessed July 1, 2020
- Harden, R.M. & Crosby, J.R. (2000) AMEE guide No. 20: the good teacher is more than a lecturer—the twelve roles of the teacher. *Medical Teacher*, 22, pp. 334–347.
- Haxton, K. J. (2010). Lecturer vs teacher. Available at: <http://www.possibilitiesendless.com/201-0/04/lecturer-vs-teacher/>. Accessed July 1, 2020
- Johnstone, R and Vignaendra, S (2003). Learning Outcomes and Curriculum Development in Law. A report commissioned by the Australian Universities Teaching Committee

(AUTC). Available at: [www.cald.asn.au/docs/autc\\_2003\\_johnstone-vignaendra.pdf](http://www.cald.asn.au/docs/autc_2003_johnstone-vignaendra.pdf). Accessed September 1, 2017

Kizlik, B. (2016). *Instructional Methods Information (Part 1)*. Robert Kizlik & Associates, Florida: Boca Raton

Paris, C. (2014). *Lecture Method: Pros, Cons, and Teaching Alternatives*. Available at: <https://blog.udemy.com/lecture-method/>. Accessed July 1, 2020

Sotto, E. (2010). You can lecture, but can you teach? Available at: <https://www.timeshighereducation.com/features/you-can-lecture-but-can-you-teach/410056.article>. Accessed July 1, 2020

Yamane, Taro (1967). *Statistics, An Introductory Analysis*, 2nd Ed., New York: Harper and Row. Pp 886