

2

CAPACITY BUILDING FOR THE TRAINING OF UNDERGRADUATE ARCHITECTURE STUDENTS IN THE 21ST CENTURY: A CASE OF FUT MINNA

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ABSTRACT: *The role of facilities in any institution cannot be overemphasised. This is because they constitute one of the critical tools for its development. The training of architecture students and the quality of graduates produced are dependent on, among other factors, the level of facilities (structural and technical) in place. However, strategic to this training are the staff and buildings. This paper examines the need for capacity building for the training of architecture students in the Federal University of Technology, Minna. The paper traces the root for this need on the periodic admission policy of the university which has increased student population making facilities on ground insufficient for staff and students respectively. The paper asserts that the School system (where facilities are shared among departments) in the university also plays a contributory role on the inadequacy of space. The paper proffers an upgrade of the facilities on the one hand and academic staff development, on the other, to meet up with the existing gap.*

Key words: *building, capacity, facilities, skills, students.*

INTRODUCTION The Nigeria's educational sector is witnessing unprecedented developments. Exciting trends and challenges are emerging which require a systematic, organised and well-thought out approach in addressing the issues. The training of architecture students especially in contemporary times is becoming an increasingly complex task. To effectively tackle this complexity requires a high degree of competence and proven scholarship from the architect-educators. The discipline of architecture is confronted with evermounting challenges, manifesting in confusion and depression (Nkwogu, 2002). There are challenges of shortage of facilities, advances in information technology, curriculum inadequacy to respond to new trends and developments, high student population, shortage of qualified architect-educators and under funding of education.

Prominent among all these challenges is the issue of shortage of facilities. Provisions of facilities have become of critical importance because of their strategic importance in the training of students. This paper discusses capacity building for the training of undergraduate architecture students in the 21st century

using Federal University of Technology, Minna, Nigeria, as a case study.

RELEVANT MEANINGS AND CONCEPTS

The concept of capacity building is used to describe a situation in which there is marked absence of required capacity and effectiveness in any organisation. It is about developing strategies toward meeting the organisation's effectiveness. Philbin (1996) defines capacity building as the "process of developing and strengthening the skills, instincts, abilities, processes and resources that organisations and communities need to survive, adapt, and thrive in the fast changing world".

As contend by Floden et al (1995), capacity is a general term, describing "the power or ability to do some particular thing in order to reach the goals of systemic reform" arguing further that to build capacity, there is need to develop a 'road map of possibilities' which would form the basis for deciding what would be needed and how to apply strategies to meet them.

Linnell (2003) notes the distinction between capacity building, capacity and organisational effectiveness. Capacity is defined an organisation's ability to achieve

its set mission and to sustain it over a long period of time. Capacity is the skills and capabilities of individuals to accomplish the given tasks. Organisational effectiveness relates to "the capacity of an organization to sustain the people, strategies, learning, infrastructure and resources it requires to continue to achieve its goals" (Linnell, 2003).

The issue of capacity is critical and the scale of need is enormous, it demands a complete change of culture and altitude. The needs for capacity building are always changing which is why any programme must be appreciative of the local situation and the need of the organisation. The capacity building concern of this paper focuses on building the capacity of individual teacher, while realising the importance of organisational capacity, especially the capacity of school which is also critical to supporting and sustaining the effort of any reform.

STRATEGIES FOR CAPACITY BUILDING

Over the years, the phenomenal scale of increase in student population coupled with shortage of facilities underscore the need for capacity building. It must be recognised that at the heart of the development effort is the human resource development (HRD), which in the context of this paper are the academic staff (architect educators). It is based on the concept that education and training occupy a strategic portion of development effort and without HRD most development interventions will be ineffective. In seeking to achieve this, efforts should be shifted to both the dimension of teachers' capacities and strategies for building the capacity.

The dimensions of teachers' capacity include knowledge, skill, disposition and sense of self. Strategies include offering courses and workshops, providing vision and leadership, providing guidance on curriculum content and instruction, establishing evaluation or accountability mechanisms, providing resources and facilitating access to outside sources of support.

The dimension of capacity should

focus on what the teachers need to know and what they can be able to do. Bruce and Showers (1982) stress that the knowledge base for teaching should focus on both propositional knowledge and procedural knowledge or skills

METHODOLOGY

The main instruments for the study include selected oral interviews, use of questionnaires, obtaining data on students enrolment figures from the academic planning unit of Federal University of Technology, Minna, from 2001/2002 to 2005/2006 academic sessions. A questionnaire was administered to the students to elicit response on the provision of structural facilities in the department of architecture and also within the School of Environmental Technology (SET). This was done by asking simple questions involving yes or no answers. The study also investigated academic staff structure in the department, nature of staff offices and facilities available in them, access to information technology and staff motivation.

Sample Size

The research was carried out in the department of architecture, Federal University Technology, Minna. The population of students as at the 2005/2006 is five hundred and twelve (512) and comprised students in their first year to students in their fifth year of study. Two hundred and fifty students (250) were initially targeted. Sixty students were randomly selected each from third year to fifth year of study which gave (180) because these categories had more than one hundred students in a class; the remaining (70) were drawn by taking thirty five (35) students each from first year and second year of study respectively using simple random method. Out of a total of 250 questionnaires administered, 220 were returned and found useable for the study. The sample size of 220 represents about 44% of the total population of the students in the department

DATA PRESENTATION AND ANALYSIS

Responses by the Students on Structural Facilities

The responses of the students on some of the questions in the questionnaire on structural facilities are shown in table 1 below.

Table 1: Response of Students to Structural Facilities

	YES	NO
Is there any space standard for drawing studios?	13.6%	86.4%
Is space adequate?	12%	88%
Is studio allocated according to size of the students?	3%	97%
Is lack of space affects working in the studios?	85.5%	14.5%
Any provision for computers?	-	100%
Is provision of locker adequate in the studios?	28%	72%

Source: Fieldwork, (2006)

Table 1 shows that out of a total of 220 students sampled, 86.4% indicated that the space in the studios was not adequate. Studios represent an essential part in the teaching of architecture because this is where the architectural design studio is taught and often-times students spend greater part of their time either working on design studio projects or receiving lectures in the studios. The findings also showed that 85.5% of the students indicated that due to lack of adequate space in the studios, it prevented them from working in the studios. The findings have shown that the age-long traditional practice whereby every student worked in the studios is gradually eroding and thus urgent steps should be taken to nip it in the bud.

However, the physical observations of the researchers on the state of the drawing boards in most of the studios revealed their obsolescence; many of them were competing for space in the studios. Despite advances in information and communication technology, majority of the students responded that they had no computers in their studios. The major reason that could be advanced for this is the high student population that is at variance with the few

existing facilities provided in the department. There should be a policy whereby student population is matched with corresponding and commensurate facilities.

ROLE OF THE SCHOOL SYSTEM ON AVAILABILITY OF FACILITIES

Unlike the conventional universities that are faculty based, Federal University of Technology, Minna, operates a school based system which implies that facilities in the school are shared by all the departments. To that extent, all departments have equal stakes in the way the facilities are distributed and utilised. The School of Environmental Technology (SET) has six departments namely; Architecture, Building, Estate Management, Quantity Surveying, Land Surveying and Urban & Regional Planning. Table 2 below shows the Students Enrolment Figures from 2001/2002 to 2005/2006 academic sessions.

Table 2: Students Population Figure (100-500levels) for the School of Environmental Technology (SET)

Department	Academic Sessions				Total
	2001/2002	2003/2004	2004/2005	2005/2006	
Architecture*	489	543	548	512	2092
Building	284	385	439	425	1533
Estate Mgt.	550	702	746	724	2722
Quantity Svc.	404	179	504	530	1617
Land Survg.	82	452	231	227	992
URP	228	379	490	490	1587

Source: Academic Planning Unit, FUT Minna (2006)

(* Department under study)

The students were asked whether they knew that facilities were shared in the school and to what extent has it affected their learning process. Sixty-five percent (65%) stated that they were aware and that it affected their learning activities. 35% of the students said they had no knowledge that facilities were shared. 90% of students also indicated they had no functional library. This response could be so because the university had just relocated to its permanent site, the main library was located at the temporary site of the university.

The library, important as it is, provides avenue to further learning and acquisition of knowledge which explains why its development usually comes in the first phase of a university's master plan.

As can be observed from Table 2, a total of two thousand nine hundred and eight students, (2908) as at the 2005/2006

academic session, are competing for the facilities in the School of Environmental Technology. This has made teaching to be very difficult and also affects students from having the right environment for learning to take place effectively. As contend by Ike et al (2002) that large student population results in ineffectiveness, reduces teacher's communication and low efficiency.

Besides, findings revealed that architecture department did not have a computer studio as students gave 100% response here. Computers have finally made in-road into architecture profession thus, the concern is to embrace the trend and impart necessary skills and knowledge to students in Computer Aided Design (CAD) using various application softwares that abound in the market. Olotuah and Adesiji (2005) affirm that architectural education has to embrace computing and information

Table 3: Academic Staff Structure in the Department of Architecture, FUT Minna

RANK/DESIGNATION	NUMBER OF PERSON	PERCENTAGE
Professor	2	8.7
Associate Professor	2	8.7
Senior Lecturer	1	4.3
Lecturer	18	78.3
TOTAL	23	100

Source: Fieldwork, (2006)

technology for it to be relevant in corporate architectural practice.

EXAMINING TEACHERS CAPACITY

One of the aims of education is to train and develop individual to fit into classes of society and for national development. The attainment of goals of architectural education to a great extent, depend on the academic staff (architect educators) who by their number, quality and effectiveness can make the difference in producing highly skilled manpower to bring about a good humane and orderly built environment. Recognising the strategic role of the academic staff (architect-educators) in this regard, the research examined the qualifications of the academic staff and their rank respectively. Table 3 indicates the structure of the academic staff in the department of architecture.

As shown in Table 3, the academic staff in the rank of lecturer is 78.3%, the remaining 21.7% represents staff in the ranks of professor, associate professor and senior lecturer. In concrete terms, the department would need no less than 15 PhD holders for it to rank *pari passu* with other counterpart schools of architecture in the country and indeed the world at large. The essential issue thus, is to expose academics to opportunities to further training. It is also important to note that to attain efficiency, intelligent scholars, architect-educators, as well as experienced lecturers need to be attracted to academia and measures put in place towards ensuring they remain on the job for a long period. This is aside from the need to increase staff strength through a continual process of recruitment of qualified architect-educators for the department of architecture.

CONDITIONS OF WORKING AND PROVISION OF BASIC FACILITIES

The second question examined the conditions of working and basic facilities in the department. The findings showed that 17% of the staff did not share offices with any member of staff, while 83% of the staff shared offices in the department. Findings also revealed that out of a total of nine (9)

offices allocated to architecture department, 66% of the offices had functional computers while 34% of the offices had no computers. Akpotu and Nwadiani (2002) affirm that "the university teacher, more than any one else requires a peaceful and conducive working environment to attain a healthy and efficient mind as the beacon of enlightenment".

The provision of computer and internet facilities are necessary to keep in pace with global advancement in Information and Communication Technology (ICT) which will also assist staff to effectively access and exchange information with the rest of the world. This will engender more commitment and interest in scientific research and development and helps to develop individual's capacity of academic staff towards research.

The working environment as it is now is a misnomer. For example, the offices were grossly inadequate given the number of offices allocated to the department. This, the researchers observed, was due to staff recruitment as at the time. There should be in place a proactive mechanism whereby new staff would be allocated offices as they come into the system for them to effectively carry out their duties and responsibilities. Akpotu and Nwadiani (2002) contend, that the "university system and all agents of society required for university management are unable to provide the Nigerian academic with a conducive working environment and basic facilities" and unable to attract "sufficient manpower to resource its teaching responsibilities due to the relatively poorer remuneration it offers" (Olotuah, 2006).

POLICY IMPLICATIONS AND RECOMMENDATIONS

The following measures are recommended as the way forward toward capacity building in the department of architecture, Federal university of Technology, Minna and tertiary institutions in Nigeria.

Building New Facilities and Infrastructure

The increasing dimension of student population in tertiary institutions in Nigeria makes it mandatory for the universities authorities to build new facilities in order to cope with the exploding population of students in schools. The new facilities should make provision for more lecture halls, lecture theatres, library and information centre to guarantee effective teaching and learning processes. It goes without saying that provision of infrastructure and equipment in these facilities is a sine qua non for efficiency and qualitative teaching without which the effort will be defeated. Specifically, the custodian of architectural education in Nigeria should emphasise and advance reasons for architecture to be run on a faculty level just as Medicine, Law and Pharmacy.

Staff Development and Training

The drive recently has been a campaign to launch Nigeria into the twenty world best economies by the year 2020. The driver that will take Nigeria to this destination is education. The university lecturers are repository of knowledge in which the nation hopes to tap into in order to realise its goal of being ranked among the twenty best economies in the world. It therefore goes without saying that investing in knowledge, skills and learning should be a top priority. This can be achieved by building capacity in the human resource through the process of equipping academic staff with the understanding, skills, knowledge and training that enable them to perform effectively and which in turn would be imparted to students by producing the set of individuals who will be articulate, flexible problem solvers that would make Nigeria to realise its vision.

There should also be committed injection of resources to enable academic staff, (architect-educators) without doctoral (PhD) degree to have access to resources and opportunities and be committed to research and training which would help in expanding the frontiers of knowledge.

Partnership

Partnership gives access to knowledge and skills, innovative and proven methodologies and outside support. The current trend now is that institutions, large organisations and even countries collaborate with one another in areas of knowledge and development. The schools of architecture in Nigeria should not be an exception to partner with research institutions, international schools of architecture, technology firms in providing technical assistance and support in areas where they lack capacity to achieve their goals.

Improved Working and Learning Environments

No learning can take place in an environment that is hostile and acrimonious. Architecture by its unique nature requires an environment that is harmonious and friendly. There is the need for an environment that fosters student interaction and exchange of views about their studies, life and world view. The absence of conducive learning environment in institutions of learning has been responsible for student unrests and cultism on campuses. In the same token, the conditions of working of the academic staff have to be improved considerably too. A greater commitment should be devoted to good remuneration of staff and provisions of basic facilities to enable them effectively discharge their responsibilities.

CONCLUSION

This paper has examined capacity building for the training of the undergraduate architecture students in Federal University of Technology, Minna. It highlights the importance of facilities as critical tools for effective training of architecture students in the 21st century. The paper emphasised that central to capacity building are the academic staff - architect-educators who are the beacons for any development without which any effort towards capacity building would be meaningless; thus, it advocated training and development for them to effectively meet the challenges of training the future generation of architects. It identified also the

role of School system which is practiced in FUT Minna as contributory factor to the shortage of facilities in the department and in the School of Environmental Technology (SET) to both academic staff and students. The paper proffered recommendations for capacity building in tertiary institutions in Nigeria.

REFERENCES

- Akpotu, N.E & Nwadiani, M. (2002): "Academic Staff Turnover In Nigeria Universities' Education, 123(2), 305+
- Bruce, J. & Showers, B. (1982): "The Coaching of Teaching" Educational Leadership, October, 4-10
- Floden, R.E; Goertz, M.E; & O'Day J. (1995): "Capacity Building in Systemic Reform" Phi Delta Kappan 77(1), 19. Phi Delta, Inc.
- Ike, G.A, Chimezie, O.S & Iwu, A.O. (2002): New Educational Technology Owerri, Onii, Publishing House.
- Linnell, D. (2003): "Evaluation of Capacity Building; Lessons from the Field" <http://www.allianceonline.org/publications/evaluationofcapacity>. Page

Accessed on 12 October 2006.

- Nkwogu, U. O. (2002): Editorial on "Future of Architectural Education in Nigeria" AARCHES J, 2(1), ii
- Olotuah, A. O. & Adesiji, O.S. (2005): "An Appraisal of Architectural Education in Nigeria" Proceedings of the Built Environment Education Conference, CEBE, London, UK, 5-6 September, URL: <http://www.cebe.leacademy.ac.uk/news/pastevents/bee/files/C2.doc>
- Olotuah, A.O. (2006): "At the Crossroads of Architectural Education in Nigeria" CEBE Transactions, 3(2), 80-88 <http://www.cebe.heacademy.ac.uk/news/pastevents/bee/programme.php> <http://www.cebe.leacademy.ac.uk/news/pastevents/bee/files/C2.doc>
- Philbin, A. (1996): "Capacity Building in Social Justice Organisations" Ford Foundation. <http://www.allianceonline.org/publications>
- Accessed on 12 October, 2006.