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Comparative Study of Architecture Students' Performance in Building Structures Courses in Public Universities in Nigeria

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Abstract

Architecture as a course is complex combining the arts and sciences of design, construction and services together and there is no single form of knowledge which aptly described it. With this complexity, the study of Architecture encompasses many courses among which are Building structures courses. As important as these courses are, the performance of the students was very low. Teachers of the courses have employed various methods to improve on this such as test quiz, case study and practical examples to teach the courses. Despite all these, research still acknowledges low performance in the courses. Therefore, this study compared the performances of Architecture students in Building structures courses across public universities in Southwestern Nigeria with a view to examining the students' performances in the courses in order to improve on their performances.

The study employed descriptive survey. Five public universities approved by the National Universities Commission (NUC) and Architects Registration Council of Nigeria (ARCON) namely: FUTA, LAUTECH, OAU, UNILAG and OOU were purposively sampled. A total of 702 questionnaires were administered to all the pre-final and final year students in the Department of Architecture of the sampled universities, while only 541 questionnaires were adequately completed and considered fit for analysis. Cross tabulation with chi-square was used to summarize the data.

The study revealed that performances of the students in the courses across the selected universities were very low and the pattern at which students from the sampled universities scored in different questions was disparate. Majority (58.6%) of the students scored below 40 percent in the aptitude test. LAUTECH did relatively better, compared to other universities with a total overall score of 2,810.8 and

was followed by OAU (2,558.6); FUTA (2,441.6); OOU (2,392.2) and UNILAG (2,381.9). However, OOU had the highest average score (33.2%), followed by LAUTECH (28.1%), OAU (26.9%), UNILAG (23.4%) and FUTA (14.2%).

The study concluded that the students' performances in Building structures courses across the selected universities were very low and the reason for the relatively low performance include lack of interest in the courses coupled with calculations the courses involved. This lack of interest is occasioned by no in-depth understanding of the courses believing that it is the duty of professionals (Structural Engineers). The study recommended that students should show more interest in the courses and should not view Building structures courses as just something they need to fulfill a requirement but something they need to know to excel in the field of Architecture.

Keywords: Performances, Architecture students, Building structures, public universities, Nigeria.

1.0 Introduction

Performance according to Stefan (2001) is the result of activities over a given period of time. Opoko. *et al* (2014) defined performance as a manifestation of knowledge, skills, concept and understanding of ideas. Within the academic environment, it is expected that students should be able to demonstrate mastery of what they have been taught and not only to study and remember facts, but also to be able to communicate such knowledge when required especially under examination conditions. Thus, performance appears generally to be the fundamental goal behind every life struggle (Festus, 2007) that is, the way educators, government, parents and society in general have constantly been interested in the academic performance of students (Lydia and Nasongo, 2009; Yusuf and Adigun, 2010).

Performance at the end of a course determines quality of teaching and learning (Zezekwa, 2011) so, the students' performance play an important role in producing the best quality graduates (Ali *et al*, 2009; Mushtaq and Khan, 2012). It has a standardised measure which is examination score (Aregbeyen, 2011), though, there are other ways of evaluating what students have learned throughout the course such as homework, assignments, class participation papers and tests (open book). All these are traditional methods for assessment.

Portfolios, projects and presentations are also ways that students can demonstrate their understandings and mastery of a course.

Mushtaq and Khan (2012) submitted that grades in various tests are the well – known measure of academic performance. Thus, scoring certain grades in examinations indicate students' ability and mastery of the course contents in which they are examined. Kerman, Bogart and Wheat (2011) stated that academic success and performance of students will be enhanced if the optimal health related barriers are low. A good match between student learning preference and teacher's teaching style has been demonstrated to have positive effects on students' performance.

Building Structure courses, on the other hand, are required courses, key courses that must be taken by the students in the study of Architecture (Adetunji, 2014). The understanding of the courses is very important and vital to the success of Architecture students. However, a cursory observation of the performance of Architecture students in Building Structure suggests that there are problems (Opoko *et al.*, 2014), because the courses seem to be the most difficult courses for Architecture students who mostly believe that the courses are not students friendly.

Most students seem to be extremely weak in the understanding of the basic principles of the courses as well as integrating the same in Architectural designs. They seem not to be applying the knowledge of the courses to solve problems arising in the Architectural designs believing that it is the duty of professionals (Structural Engineers) which in the past has led to collapse of buildings. Furthermore, the seemingly lack of interest of students in the courses mostly in the area of theories (calculations) and application of knowledge are evidence that there are problems in Building structures. Problem of Architecture students in Building structures courses is not limited to universities in Nigeria alone, but also, to all schools of Architecture worldwide (Aniza, Maha, & Lim, 2010).

The performance of Architecture students in the courses should be a concern not only to the lecturers, educators and administrators, but also to researchers in the field of Architecture. Therefore, this study compared the performances of Architecture students in Building structures courses across public universities in Southwestern Nigeria with a view to examining the students' performances in order to improve on their performances in the courses.

2.0 Literature Review

Various broad approaches have been used in previous related researches. The quantitative approach to studies on performance, learning and teaching styles are the most common. In this quantitative paradigm, the two methods used were the experimental method and the survey method. Examples of Authors who used the experimental method is Vassigh (2005) and his team of Researchers from various Schools of Architecture in United States of American (USA).

Another author who used the experimental method was Sylvain *et al* (2013). Students were taught three times using 4D modeling and simulation during the semesters. The experimental method was also used by Allen and Craig (2014). They used software called K'nex to teach Structure to both Architecture and Engineering students. They used experimental method of survey in which the thirty – two students on the course were divided into five teams namely; the document team, facilities team, cost estimating team (2 groups), engineering team (2 groups) and the construction team (2 groups).

Authors that also used the survey method included Aniza *et al* (2010) and Aregbeyen (2011) who used quantitative method of survey with questionnaire to measure how students of Architecture integrate structural knowledge into their designs with the current teaching method and performance. Opoko *et al* (2014) used quantitative method of survey and analysed the data using SPSS (Version 17), while content analysis was used for qualitative data to find out the correlation between admission qualification and academic performance of Architecture students in Building structures. Analysis included frequencies and correlation analysis (including cross – tabulations). To retain anonymity of students concerned, a coding system was adopted.

Students' academic performance was measured in different ways which include Cumulative Grade Point Average (CGPA), Grade Point Average (GPA), tests, examinations and others (Ali *et al*, 2009). CGPA shows the overall students' academic performance where it considered the average of all examinations grade for all semesters during the tenure in the institution. Most of the researchers used GPA as a measurement of students' performance. Galiher (2006) and Darling (2005) used GPA because they were studying the students' performance for a particular semester. Other researchers used the CGPA and test results to measure the students' performance. They

used test results since they studied students' performance for the specific subject or the previous year result (Hijazi and Naqvi, 2006).

3.0 Methodology of the Study

This study employed descriptive survey. It focused on the data obtained from Architecture students of all the five public universities (accredited universities by NUC and ARCON) in Southwestern Nigeria where Architecture is offered. The research approach adopted for this study was quantitative approach which was survey method. The principal survey techniques used was questionnaire in which aptitude test was included.

Seven hundred and two (702) students formed the population of the study, that is, one hundred and two (102) students from LAUTECH, eighty-nine (89) from OOU, two hundred and forty five (245) from FUTA, one hundred and seventeen (117) from OAU and two hundred and forty five (245) from UNILAG. The distribution is depicted in the Table 1 shown below:

Table 1: Population of the Study

S/ N	Name of University	Durati on	Level	Number of students sampled	Total number of students sampled
1	Federal University of Technology, Akure (FUTA)	5yrs	400 500	125 120	245
2	Ladoke Akintola University of Technology (LAUTECH), Ogbomoso.	5 yrs	400 500	47 55	102
3	Obafemi Awolowo University (O.A.U), Ile Ife.	4yrs	300 400	62 55	117
4	University of Lagos (UNILAG), Lagos.	4yrs	300 400	72 77	149
5	Olabisi Onabanjo University (O.O.U), Ago - Iwoye.	5yrs	300 400	45 44	89
	Total				702

Source: Authors' Compilation, 2022

The study utilised the total population of the students (702 students) since it was not too large and was more representative than a sample; therefore, the survey was a total or a 100% sample survey. The first two universities were Universities of Technology which run five-year programme leading to Bachelor of Technology (B. Tech. Architecture) whereas; the two other universities are conventional universities with four years programme leading to Bachelor of Science (B. Sc. Architecture). OOU also runs five years programme like Universities of Technology.

The reason for focusing on only public universities was because public universities are similar in their learning environment. Thus, the sample comprises of all students who were in 500 level and 400 level (finalists and semi-finalists) in selected universities of Technology and OOU and all 400 level and 300 level students (finalists and semi-finalists) of conventional universities. Purposive sampling method was used in selecting the students at these levels as they have passed through the basics of Building structures courses for at least two semesters. They were thus in the best position to give the necessary information needed for the study.

The questionnaire was used to solicit response from the respondents concerning the academic performance of Architecture students in the courses. The total number of questionnaires distributed was seven hundred and two (702) and the total feedback was five hundred and forty-one (541) representing 77.1% as shown below

Table 2: Questionnaire Distributed and Retrieved

S / N	Name of University	Duration	Level	Questionnaire Distributed	Questionnaire Received	Total Distributed	total Received
1	Federal University of Technology, Akure (FUTA)	5yrs	400 500	125 120	80 92	245	172
2	Ladoke Akintola University of Technology (LAUTECH), Ogbomoso.	5 yrs	400 500	47 55	45 55	102	100
3	Obafemi Awolowo University (O.A.U), Ile Ife.	4yrs	300 400	62 55	45 50	117	95
4	University of Lagos (UNILAG), Lagos.	4yrs	300 400	72 77	52 50	149	102
5	Olabisi Onabanjo University (O.O.U), Ago - Iwoye.	5yrs	300 400	45 44	33 39	89	72
Total						702	541

Source: Authors' Compilation, 2022

The study also conducted aptitude test for the students; who, by the dictates of the curriculum must have undergone levels of teaching and training in the courses regardless of the universities. The students in each of the sampled universities were tested on the basic theory of Building Structure (definitions and simple calculations). The tested questions were included in the questionnaire to be filled and answered by the students. This allowed full participation of all the students. It was also easier and produced the optimum result of success for the test. The curriculum used for the purpose of setting the questions was a harmonized version of the curricula of all the sampled universities approved by the NUC and ARCON. In other words, parts of Building structures courses that were common to all the sampled universities as at the time of data collection and had been taught to the students

formed the area of concentration for setting of the questions. This allowed for fairness and equal treatment for the ground of objective assessment of the students in the courses across the sampled universities.

Data collected were analysed based on the information obtained from completed questionnaire. The data included the number of students with distinctions (A – grade), number of students with good grades (B – grade), number of students with credits (C – grade), number of students with passes (D – grade) and number of students with failure (F – grade) with score scale (Table 3).

Table 3: The Classification of Grades

Performance Classification	Level of Performance	Score Scale
Distinction (A)	70% and above	5
Good (B)	60% - 69%	4
Credit ©	50% - 59%	3
Pass (D)	40% - 49%	2
Failure (F)	Below 39%	1

Source: Authors' Compilation, 2022

The data was analysed using descriptive statistics such as frequency counts, percentages, Likert scaling and Chi-square.

4.0 Findings and Discussions

For each and every university in the study, the scripts of the aptitude test were graded objectively, using a unified marking scheme. As may be expected, the pass mark begins from 40%. However, students whose scores were within this range were classified as poor students. This is because they were considered to have scored lower than the average or half the maximum point. On the other hand, students scoring above 70% were considered to be outstanding in knowledge and so, had performed very well in the aptitude test.

Table 4: Aptitude Test in Building structures Courses

Ques tion	Scores (%)	OOU (%)	LAUTE CH (%)	UNILAG (%)	FUTA (%)	OAU (%)
1.	<40	19 (24.4)	11 (11.2)	18 (19.6)	23 (16.8)	16 (16.3)
	41-50	19 (24.4)	17 (17.3)	27 (29.3)	41 (29.9)	13 (13.3)
	51-60	27 (34.6)	39 (39.8)	32 (34.8)	59 (43.1)	38 (38.8)
	>60	13 (16.7)	31 (31.6)	15 (16.3)	14 (10.2)	29 (29.6)
2.	<40	17 (21.8)	08 (8.2)	12 (13.0)	23 (16.8)	07 (7.1)
	41-50	20 (25.6)	17 (17.3)	26 (28.3)	46 (33.6)	09 (9.2)
	51-60	26 (33.3)	39 (39.8)	31 (33.7)	34 (24.8)	41 (41.8)
	>60	15 (19.2)	34 (34.7)	23 (25.0)	34 (24.8)	39 (39.8)
3.	<40	24 (30.8)	06 (6.1)	11 (12.0)	12 (8.8)	09 (9.2)
	41-50	09 (11.5)	11 (11.2)	19 (20.7)	41 (29.9)	10 (10.2)
	51-60	34 (43.6)	45 (45.9)	39 (42.4)	69 (50.4)	38 (38.8)
	>60	11 (14.1)	36 (36.7)	23 (25.0)	15 (10.9)	39 (39.8)
4.	<40	11 (14.1)	06 (6.1)	13 (14.1)	09 (6.7)	10 (10.2)
	41-50	22 (28.2)	07 (7.1)	24 (26.1)	22 (16.1)	09 (9.2)
	51-60	27 (34.6)	39 (39.6)	32 (34.8)	63 (46.0)	33 (33.7)
	>60	18 (23.1)	46 (46.9)	23 (25.0)	38 (27.7)	42 (42.9)
5.	<40	14 (17.9)	11 (11.2)	14 (15.2)	13 (9.5)	09 (9.2)
	41-50	19 (24.4)	11 (11.2)	28 (30.4)	41 (29.9)	21 (21.4)
	51-60	32 (41.0)	39 (39.8)	29 (31.5)	56 (40.9)	38 (38.8)
	>60	13 (16.7)	37 (37.8)	21 (22.8)	27 (19.7)	33 (33.7)
6.	<40	13 (16.7)	11 (11.2)	18 (19.6)	03 (2.2)	12 (12.2)
	41-50	19 (24.4)	17 (17.3)	29 (31.5)	31 (22.6)	11 (11.2)
	51-60	20 (25.6)	38 (38.8)	32 (34.8)	69 (50.4)	38 (38.8)
	>60	26 (33.3)	31 (31.6)	13 (14.1)	34 (24.8)	35 (35.7)
7.	<40	12 (15.4)	11 (11.2)	14 (15.2)	13 (9.5)	10 (10.2)
	41-50	18 (23.1)	19 (19.4)	23 (25.0)	41 (29.9)	12 (12.2)
	51-60	26 (33.3)	41 (41.8)	41 (44.6)	57 (41.6)	38 (38.8)
	>60	22 (28.2)	27 (27.6)	14 (15.2)	26 (19.0)	36 (36.7)
8.	<40	08 (10.3)	11 (11.2)	18 (19.6)	23 (16.8)	14 (14.3)
	41-50	19 (24.4)	17 (17.3)	29 (31.5)	41 (29.9)	12 (12.2)
	51-60	27 (34.6)	39 (39.8)	32 (34.8)	41 (29.9)	36 (36.7)
	>60	24 (30.8)	31 (31.6)	13 (14.1)	32 (23.4)	34 (34.7)
9.	<40	10 (12.8)	11 (11.2)	10 (10.1)	11 (8.0)	11 (11.2)
	41-50	17 (21.8)	15 (15.3)	13 (14.1)	39 (28.5)	18 (18.4)
	51-60	27 (34.6)	38 (38.8)	32 (34.8)	43 (31.4)	29 (29.6)
	>60	27 (34.6)	41 (41.9)	37 (40.2)	44 (32.1)	38 (38.8)

Source: Authors' field survey, 2022

The first question of the aptitude test centered on Building structures as a course and cut across all categories of students in the sampled universities. The distribution of the grades across the schools is presented. In the aptitude test, there were nine test questions, all of

which were graded on percentage basis. In Table 4 above, the number of students who scored a category of grade was reported. The proportion of such students relative to the total number of students sampled in the universities was also computed (these are the ones in bracket).

This is for objective comparison among the schools. For instance, considering the first question, more students (23) in the absolute sense scored less than 40% in FUTA but the population accounts for only 16.8% of the FUTA population sampled; whereas, fewer students (19) from OOU scored below 40% accounting for a whopping 24.4% of the university's sampled population, and accounting for the university as having the relatively highest number of students scoring the lowest category of marks in question one.

The pattern at which students from the sampled universities scored in different questions was disparate. While a university had the highest number of students scoring the lowest category of mark in a question, the same university accounted for the highest number of students scoring the highest category of scores for the same question with the fewest number of students in the average score categories. Some other schools had most of its students scoring above average and only very few at the lower and the upper extremes. The pattern was not fixed. To this end, it may be difficult to rate the schools on this aptitude test except a method reminiscent of Likert scaling is adopted.

Table 5: Scaled Aptitude Test in Building Structures Courses

Question	OOU	LAUTECH	UNILAG	FUTA	OAU
1	243.8	291.6	247.8	246.7	277.7
2	249.7	301	270.7	257.6	310.1
3	241	313	280.6	263.4	305.2
4	266.7	327.3	270.7	287.7	301.3
5	256.5	304.2	261.7	270.8	303.2
6	275.5	288.6	243.4	297.8	293.8
7	274.3	368.1	259.8	270.1	187.7
8	286.1	291.6	243.7	259.9	287.6
9	298.6	325.4	303.5	287.6	292
Total	2,392.2	2,810.8	2,381.9	2,441.6	2,558.6

Source: Authors' field survey, 2022

For interpretative clarity therefore, weights were subjectively, but rationally attached to the score categories. For instance, one (1) was attached to scores below 40, two (2) to scores between 40 and 50, three (3) to scores between 51 and 60, four (4) to scores between 61 and 70 and five (5) to scores above 70. These points were used to multiply the proportion of students relative to the total scoring of the corresponding category of marks from each sampled university. These were the weights for each score category. The weights of the five score categories for each university were summed together and thus, the scores for the nine questions were scaled for the universities.

It was observed that when all the questions were summed in one, the performance of the students were very low in the test. Majority (69.4%) of the students scored below 50 marks out of 100 marks although, students from LAUTECH did relatively better compare to their counterparts from other universities with the total point of 2,810.8. It was closely followed by OAU with the score of 2,558.6; FUTA (2,441.6); OOU (2,392.2) and UNILAG (2,381.9). This does not mean that LAUTECH students did better in all the questions; however, OOU (33.2%) performed better in the test. This was followed by LAUTECH (28.1%), OAU (26.9%), UNILAG (23.4%) and lastly FUTA (14.2%) (Table 6).

Table 6: Average Score of Selected Universities in Percentage (%)

School	Number of students	Total marks	Marks scored	%
OOU	72	7,200	2,392.2	33.2
LAUTECH	100	10,000	2,810.8	28.1
UNILAG	102	10,200	2,381.9	23.4
FUTA	172	17,200	2,441.6	14.2
OAU	95	9,500	2,558.6	26.9

Source: Authors' Fieldwork, 2022

5.0 Conclusion

The study concluded that the performances of students in all selected universities were very low though LAUTECH and OOU students were better compared to other universities. The reason adduced for the relatively low performance was lack of interest in the courses coupled with calculations involved. The students had no in-depth understanding of the courses and are not ready to face structural challenges believing that it is the duty of professionals (Structural Engineers). All these had

negative effects on their performances in the courses to the extent that a graduate student from Architecture cannot produce a structural detail of a simple building from foundation to the roof.

The performance of Architecture students in Building structures courses should be a serious concern to the stakeholders (Researchers (Lecturers), practicing Architects and Building industries) in order to improve on students' performances in the courses. The importance of Building structures in the field of Architecture cannot be over emphasised and a good understanding, sound theoretical and intuitive knowledge are the keys to becoming a good Architect. A student of Architecture should be able to analyse structural system; otherwise, the Department of Architecture will just be turning out graduates with poor results, half-baked graduates, incompetent and unqualified Architects. Moreover, the students' performances play an important role in producing the best quality graduates.

The success of Architecture students is measured in the quality of student performance. Sound knowledge of Building structures and integration of Building structures into Architectural designs make a good Architect both in Architectural designs and Building construction. Better understanding of the courses and its application in Architectural designs are the main factors considered by employers recruiting Architects especially fresh graduates into Architectural firms. Therefore, there is the need for improvement so that the students will have required knowledge to fulfill employers' demand and to excel in the field of Architecture because the courses play an active push to develop greater and future Architects and best quality graduates who will later become great leaders and manpower for the country.

The study therefore, recommended that students should show more interest and better in-depth understanding of the courses. They should not view Building structures courses as just something they need to fulfill a requirement but something they need to know to excel in the field of Architecture because better understanding of the courses is essential to the production of competent, skilled and versatile Architects that are capable of understanding the need for functional and stable buildings to house the teeming population of Nigerians.

References

- Afolami, A.J., Olotuah, O.A., Fakere, A.A. and Omale, R.P. (2013). Comparative analysis of student performance in Architecture Department of a Nigerian university. *International Journal of Education and Research*, 1(6). [http://www.ijerns.com/jornal/June-2013/30.pdf.\(1-2\)10/2.pdf](http://www.ijerns.com/jornal/June-2013/30.pdf.(1-2)10/2.pdf). 2015.06.010
- Akinsolu, A.O. (2010). Teachers and Students' Academic Performance in Nigerian Secondary Schools: Implications for Planning. *Florida Journal of Education Administration and Policy*, 3(2): 86-103.
- Ali, N., Josoff, K., Ali, S., Mokhtan, N., Salamat, A.S.A. (2009). The factors influencing students' performance at universiti teknologi Mara Kedah, Malaysia. *Management science and Engineering Journal*, 3(4): 81 – 90.
- Allen, C. E. and Craig, Baltimore (2014). Using K'nex to teach large scale structures to Architects and construction students. 121st American Society for Engineering Education (ASEE), annual conference and exposition, 122 – 135. 2014.06.015 – 018.
- Architecture and Structures. www.ita.arch.ethz.ch>building-structure. 2015.05.027.
- Aregbeyen, O. (2011). Quality of Teachers and Students Performance: Evidence from Schools in Ibadan Metropolis in Nigeria. *Ozean Journal of Social Sciences*, 4(3): 163 – 175.
- Beilock, S.L. (2008). Mathematics Performance in Stressful Situations. *Current Direction in Psychological Science*, 17: 339 – 343.
- Ervina, A. and Md Nor, Othman (2005). Undergraduate students' performance: The case of university of Malaya. *Quality Assurance in Education*, 13(4): 329 – 343.
- Ilkovic, J., Ilkovicova, E. and Spacek, R. (2014). To think in Architecture to feel in structure: Teaching structural design in the Faculty of Architecture. *Global Journal of Engineering Education*, 16(2): 59-65.
- Musau, L.M., Abere, M.J. (2015). Teacher qualification and students' academic performance in science Mathematics and Technology subject in Kenya. *International Journal of Education Administration and Policy Studies*, 7(3): 83-89.

- Opoko, A., Alagbe, O., Aderonmu, P., Ezema, I. and Oluwatayo, A. (2014). Entry qualifications and academic performance of Architecture students in Building structures. *Proceeding of EDULEARN 14 conference*, Barcelona, Spain. 1635 – 1641.
- Williams, E. and Media D. (2013). What is the meaning of academic performance? <http://work.chron.com/meaning-academic-performanc-17332.html>. 2015.06.024.

APPENDIX A

List of Approved Architecture by NIA and ARCON in Public Universities in Nigeria

1. University of Jos, Jos, Plateau State
 2. Federal University of Technology, Yola, Adamawa State
 3. University of Lagos, Akoka, Lagos (S/W Nigeria)
 4. Obafemi Awolowo University, Ile – Ife, Osun State (S/W Nigeria)
 5. Olabisi Onabanjo University, Ogun State (S/W Nigeria)
 6. Federal University of Technology, Akure, Ondo State (S/W Nigeria)
 7. Federal University of Technology, Minna, Niger State
 8. Abubakar Tafawa Balewa University – Bauchi
 9. Ambrose Ali University, Ekpoma, Edo State
 10. Ahmadu Bello University, Zaria
 11. Kano University of Science and Technology, Kano
 12. Ladoke Akintola University of Technology, Oyo State (S/W Nigeria)
 13. Abia State University, Uturu, Abia State
 14. University of Nigeria, Nsukka, Enugu State
 15. Cross River University of Technology, Calabar, Cross River State
 16. Rivers State University of Science and Technology, Port – Harcourt
 17. Imo state University, Owerri, Imo State
 18. Enugu State University of Science and Technology, Enugu State
 19. University of Uyo, Akwa Ibom state
 20. Anambra State University of Science and Technology Anambra
- Source:** Interactiv.com/architects/list – of – schools, 2020.