

STAFF-STUDENTS' RATIO AND EDUCATION QUALITY OF UNDERGRADUATE PROGRAMME IN THE UNIVERSITY OF IBADAN

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Abstract

This study, which was anchored on the UNESCO quality education framework and quantity-quality trade-off theory, considered the Staff-Students' Ratio (SSR) in undergraduate programme in the University of Ibadan (UI) as it relates to and explains quality education. The descriptive research design was adopted for this study. The multi-stage procedure was used to sample participants 703 of the 15,157 undergraduate students. The two validated instruments used for data collection were: the Life Skills Acquisition Scale ($r = 0.76$), which measured the education quality of undergraduates students and the Undergraduate Enrolment and Staff Strength Template, to collect secondary data on SSR from the Academic Planning Unit. Four research questions were answered using descriptive statistics and four hypotheses were tested at $P < 0.05$ level of significance using inferential statistics. Findings revealed that education quality received by undergraduate students of the University of Ibadan was very good with overall average performance of 70. Also, There was no significant difference ($P > 0.05$; $t_{cal} = 1.27 < t_{crit} = 1.96$) between male and female undergraduate students in UI as regards the education quality received. In the same vein, there was no significant difference ($P > 0.05$; $t_{cal} = 0.06 < t_{crit} = 1.96$) between 300 and 400 levels students in UI as regards the education quality received. Furthermore, findings showed that there was a significant difference ($P < 0.05$; $t_{cal} = |3.66| > t_{crit} = 1.96$) between NUC recommended SSR for undergraduate programmes and current SSR in undergraduate programme in UI. The SSR in UI was far lesser than the NUC recommended SSR. ($\bar{X}_{UI} = 10.38$ and $\bar{X}_{NUC} = 21.56$). Finally, the SSR in undergraduate programme in UI had no significant influence ($F_{(1, 14)} = 2.24$, $P > 0.05$) on quality education. It was concluded that, students-teacher ratio in University of Ibadan, despite being lower than the NUC benchmark and having a negative relationship with education quality in the institution, was not an explanation for the high education quality in the institution – a situation, which may be peculiar to UI and therefore raising the need for a nationwide study. Therefore, it was recommended that, UI should sustain and consolidate on its current efforts in

maintaining a low SSR as well as revise its curriculum to improve the inculcation of life skills such as communication and problem solving. Also, more effort is needed to improve education quality in the institution, as an average performance of 70 indicates that there is more work to be done. Finally, there is need for a further study to ascertain the actual proportion of graduates that are of low quality and their institutional distribution across the country as well as factors that could explain this low quality.

Keywords: Staff-Students Ratio, Quality Education, teacher-students' ratio.

Introduction

Education is a legacy cherished by all nations due to its likelihood of adding values to growth and development. Its importance in the survival of individuals and nation at large makes it to be given necessary attention globally. Thus, in May 2015, the Republic of Korea hosted the World Education Forum in Incheon, which had in attendance over 1,600 participants from 160 countries, including over 120 ministers, heads of delegations, heads of agencies and officials of multilateral and bilateral organizations, and representatives of civil society, the teaching profession, youth, and the private sector. The Forum was organized by UNESCO together with UNICEF, the World Bank, UNFPA, UNDP, UN Women and UNHCR. This Forum saw the adoption of the Incheon Declaration for Education 2030, which is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all for the next fifteen years beginning from 2016 (UNESCO, 2016). The concern of stakeholders at the forum was not limited to quantitative education but quality education that would justify investment in providing such education.

Meanwhile, in its 2002 EFA Global Education Monitoring Report, UNESCO had provided a framework for understanding quality education based on the Input-Process-Output (IPO) model (UNESCO, 2002). This framework was modified in its 2005 EFA Global Education Monitoring Report as shown on Figure 1 (UNESCO, 2005).

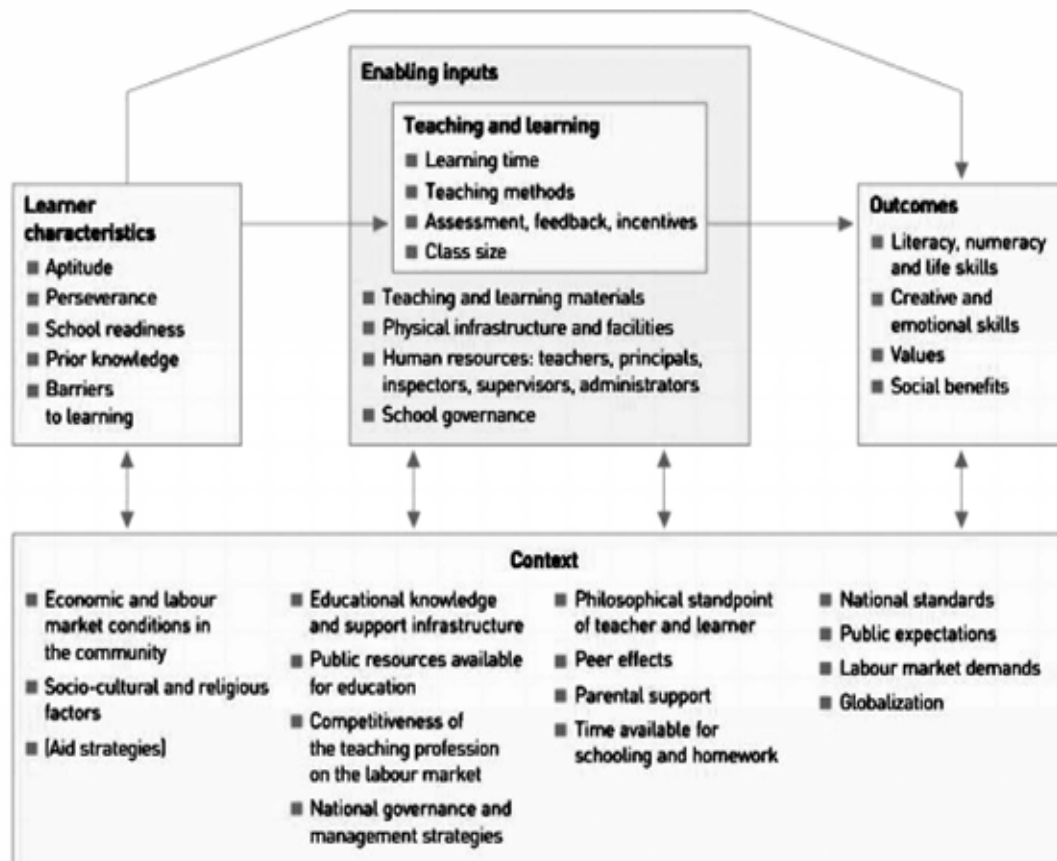


Figure 1: A framework for understanding education quality
Source: UNESCO (2005).

From the perspective of production, this UNESCO model demonstrates that students are the major input in the production process of the education system. Students are processed with the help of other enabling inputs such as teaching and learning materials, infrastructure and facilities, staff, leadership, teaching methods, incentives, among others. The outcome of this process is the graduate who is the embodiment of values, emotional skills, life skills, literacy, numeracy, and several others. It is important to note that this framework demonstrates that the quality of the output of the education system is a direct reflection of the quality of inputs and processes as well as contextual factors such as national education policy, economic stability, religion, globalization, etc. Therefore, by measuring the outcome, the quality of other components can be inferred with a high probability.

Despite the global call for quality education, there has been a deviation of the outcome of the Nigerian education system from societal expectations, which

raises concerns about the quality of education in the country. The products from higher institution, especially, universities are expected to contribute to economic growth (Jaiyeoba and Atanda, 2008). However, the quality of graduates produced by institutions of higher learning determines extent of their contribution to economic growth. Jaiyeoba and Atanda (2007) explained that quality of graduates implies the extent to which they align or fit national priorities, goals, objectives and aspirations as obtained in the National Policy on Education’

Employers of labour expect graduates of tertiary institutions to possess the requisite skills for the workplace but some do not and as a result, employers of labour have continuously express their displeasure over what is termed as skills mismatch (Pitan and Adedeji, 2012). In other words, they argue that some graduates of Nigerian tertiary institutions do not possess the skills required in the labour market. And, this has contributed to the high rate of graduate unemployment in Nigeria as illustrated in Figure 2.

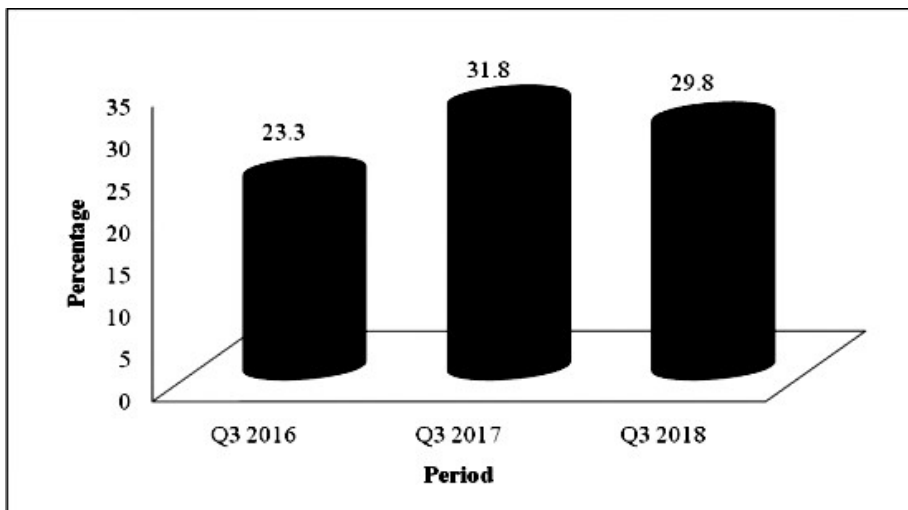


Figure 2: Graduate Unemployment in Nigeria for 3rd Quarters of 2016 - 2018
Source: NBS (2018).

Figure 2 shows that 23.3% of graduates of tertiary institutions in Nigeria were unemployed in 3rd quarter of 2016, 31.8% in 3rd quarter of 2017, and 29.8% in 3rd quarter of 2018. One question that will readily come to mind as a result of this situation is, why is the Nigerian education system producing low quality products?

Empirical works of scholars and corporate authorities have offered insights, which can explain in part the reason for the low quality. For instance, Arong

and Ogbadu (2010) identified inadequacy of qualified teachers, students' attitude to study, poor library facilities, poor parental support, misplaced government priorities and corruption or lack of integrity as the major reasons for the low quality. Similarly, Otokunfor (2011) pointed to poor quality inputs like illegal admission concession, low number of dedicated teachers, defective learning environment, inadequate physical facilities, and examination malpractice as reasons why Nigerian universities produce low quality graduates. Poor maintenance of lecture rooms and halls of residence, and admitting students beyond carrying capacities in some department are among factors responsible for poor quality graduates (Atanda, 2013).

Among the likely factors influencing the quality of graduates in the Nigeria education system is teacher-students ratio (staff-students' ratio: these two shall be used interchangeably in this work). According to the 2005 EFA Global Education Monitoring Report, pupil-teacher ratio may contribute to low quality graduates as it "remains higher than is desirable in many countries of sub-Saharan Africa (regional median: 44:1)" including Nigeria (UNESCO 2005:16). Meanwhile, "pupil-teacher ratio provides a good headcount benchmark as an enabling condition of quality education" (UNESCO and UNICEF, 2012:33). Therefore, it can be inferred that, the higher the pupil-teacher ratio the lower the education quality.

A number of scholars have worked on the relationship between student-teacher ratio and quality education (measured in terms of quality of inputs, processes, and outcome). For example, Waita, Mulei, Mueni, Mutune, and Kalai (2015) discovered a negative relationship between student-teacher ratio and academic performance of students in public primary schools in Kenya. Also, Ajani and Akinyele (2014) discovered a significant relationship between student's perception of students-teacher ratio and achievement in mathematics of secondary school students in Port Harcourt, Nigeria. In another study in Kenya, Nguyo Wachiuri, Kirimi, and Kimathi (2016) found that primary schools with higher pupil-teacher ratio recorded low performance of pupils while those with lower pupil-teacher ratio recorded high pupils' performance, therefore suggesting a negative relationship between the two variables. Similarly, Bello, Aderanti, Adewole, Adeoye, and Bankole (2019) revealed a significant negative relationship between student-teacher ratio and academic performance of primary schools students in Ogun State, Nigeria. While Evarist (2018) found that 80.8% of the respondents agreed that teacher-student ratio affects the morale and commitment of

secondary school teachers. In Temeke and Kinondoni districts of Tanzania, Kambuga (2013) discovered that due to high teacher-pupil ratio, primary schools pupils were not getting enough attention from teachers, and were afraid to ask questions in class, and teachers had difficulties assessing pupils' advancement and capabilities. The study further showed that high teacher-pupils ratio resulted in a teacher-centred learning experience, little teacher-to-pupils' feedback, and low pupil-pupil interaction. Furthermore, the study showed that discipline during classroom teaching and learning process has deteriorated due to high teacher-pupil ratio. Also, with high teacher-pupil ratio came the rise in deviant behaviours like lateness, chatting, noise, teasing, fighting, etc., which contribute to wasting learning time as a result of teachers trying to enforce discipline. Pitan (2012), found a significant relationship between student-teacher ratio and wastage ratio in public secondary schools in Oyo State, Nigeria. In his submission, Atanda (2013) discovered that enrolment of some faculties in the University of Ibadan outweighed their carrying capacities but the overall total enrolment (19,416) of all faculties was below carrying capacity (of 19,566) of the University. This implies that the student-teacher-ratio of some department would be higher than expected.

The primary and secondary levels of education have enjoyed great attention from scholars with respect to students-teacher ratio and quality education. However, little or no attention seems to be paid to the tertiary level of education. Could the same direction of relationship between student-teacher ratio in primary and secondary be obtained in the university? And, can students-teacher ratio explain the low quality of some graduates of tertiary institutions? An attempt to answer these questions forms the rationale for this study, which investigated the relationship between Staff-students' ratio in the undergraduate programme in the University of Ibadan and quality education. It is necessary to clarify that this study will measure quality education by the assessment of life skills, which is one of the components of outcomes according to the UNESCO framework. Specifically, the life skills to be assessed include problem-solving; critical thinking; communication, and empathy. These were adopted from the World Health Organization (WHO) Department of Mental Health framework for life skills as follows:

- i. Decision-making and problem-solving;
- ii. Creative thinking and critical thinking;
- iii. Communication and interpersonal skills;
- iv. Self-awareness and empathy;
- v. Coping with emotions and coping with stress (WHO, 2000).

The skills covered in this framework encompass the 4Cs super skills of the 21st century: Creativity, Communication, Critical Thinking, Collaboration (Kivunja, 2015), and “are in great demand in today’s job markets” (WHO, 2000). Therefore, their acquisition by students (especially undergraduates) is expected to prepare them for success in the workplace, which is one objective of quality education (Slade 2017).

Aim and Objectives of Study

This study was aimed at examining the staff-students’ ratio in the University of Ibadan and how it relates to and explains the level of education quality received by undergraduate students in the institution. Specifically, this study had the following objectives:

1. Describe the current staff-students’ ratio in the undergraduate programme in the university of Ibadan.
2. Describe the NUC recommended staff-students’ ratio for undergraduate programmes.
3. Describe the level of education quality received by undergraduate students of the University of Ibadan as measured by life skills assessment.
4. Examine the significant difference between the current lecturer-students’ ratio in the undergraduate programme in the University of Ibadan, and the NUC recommended lecturer-students’ ratio for undergraduate programmes.
5. Examine the significant relationship between the lecturer-students’ ratio in undergraduate programme by faculties in the University of Ibadan and life skills poses by undergraduate students.

Research Questions

The following research questions guided the study

1. What are the demographic characteristics (gender, level, and age) of undergraduate students in the University of Ibadan?
2. What is the NUC recommended teacher-students’ ratio for undergraduate programmes?
3. What is the Staff-students’ ratio in undergraduate programme by faculties in the University of Ibadan?
4. What is the level of education quality received by undergraduate students of the University of Ibadan as measured by life skills assessment?

Research Hypotheses

The following hypotheses guided the study.

H₀₁: There is no significant difference between the NUC recommended teacher-students' ratio for undergraduate programmes and teacher-students' ratio in undergraduate programme in the University of Ibadan

H₀₂: There is no significant gender difference in the level of education quality received by undergraduate students in the University of Ibadan.

H₀₃: There is no significant level difference in the level of education quality received by undergraduate students in the University of Ibadan.

H₀₄: Staff-students' ratio in undergraduate programme in the University of Ibadan has no significant influence on quality education in the University of Ibadan.

Methodology

Research Design

The descriptive survey research design was adopted for this study since the researchers sought to explain already existing events.

Population and Sample

The population of this study comprise undergraduate students of all faculties (16 in number) in the University of Ibadan, which stood at 15,157 in the 2018/2019 academic session.

Multi-stage procedure was adopted to select a sample size of 758. At the first stage, six faculties, representing 38% of all faculties were selected using simple random sampling. Purposive sampling technique was used in the second stage to select 300 and 400 level students in each of the selected faculties, from which 10% was randomly sampled. The choice of level was because this set of students were believed to have been imparted substantially by the institution's teaching and learning process, and therefore their level of skill acquisition should reflect the education quality in the institution.

Research instruments

This study made use of two instruments. The first was the Life Skills Acquisition Scale (LSAS), which was divided into two sections. Section A of the instrument was designed to elicit demographic information such as gender, age, and level of study. Section B was designed to assess the level of life skills possessed by the respondents as a measure of quality education. The second instrument was the Undergraduate Enrolment and Staff Strength Template (UESST), which was used to collect secondary data on SSR in UI.

Validity and Reliability of instrument

The face, content, and construct validity of the research instruments were carried out by experts in Educational Management as well as Test Instrument Construction. The reliability of LSAS was established using the Cronbach Alpha Coefficient. A reliability coefficient of 0.76 was obtained, which is higher than the 0.7 benchmark.

Data Collection Procedure

The LSAS was self-administered with the help of two research assistants who were trained for that purpose. 800 questionnaires were administered, out of which 703 were returned (88% response rate), representing 93% of the sample size. The UESST was submitted at the Academic Planning Unit of UI for collection of secondary data on SSR in UI.

Data analysis method

Descriptive statistics of Tables, Graphs, frequencies and percentages were used to answer research questions. Inferential statistics of Independent t-test and simple regression analysis were used to test hypotheses at $P < 0.05$ level of significance.

Results

Research Question 1: What are the demographic characteristics (gender, level, and age) of undergraduate students in the University of Ibadan?

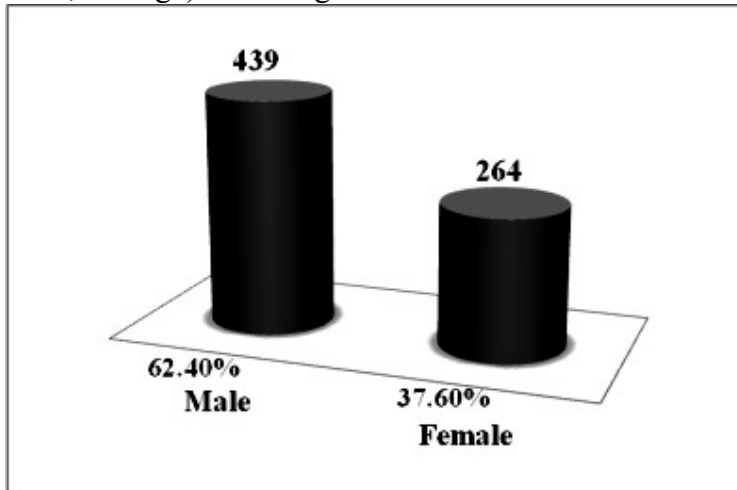


Figure 3: Distribution of Respondents by Gender

Figure 3 indicates that male respondents were 439 representing 62.40%, while female respondents were 264 representing 37.60%. Therefore, the respondents were predominantly male.

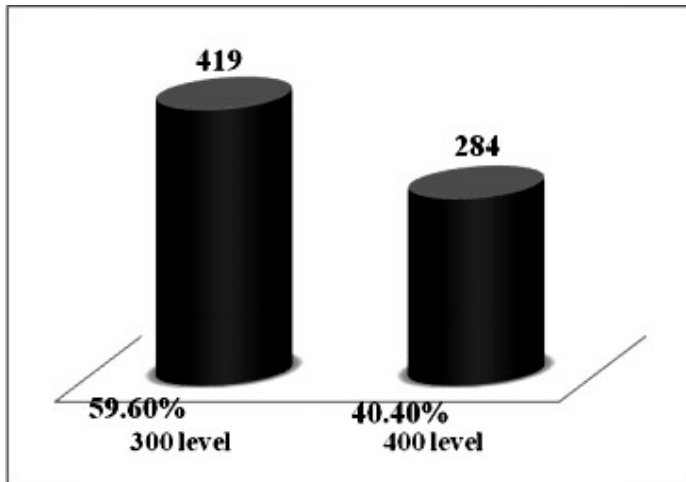


Figure 4: Distribution of Respondents by Level of Study

Figure 4 shows that 419 of the respondents representing 59.60% were in 300 level, while 284 of the respondents representing 40.40% were in 400 level.

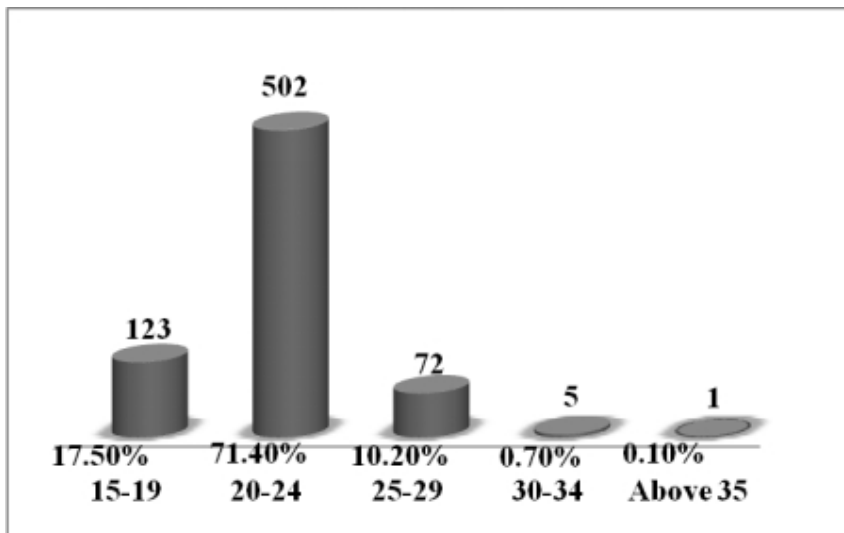


Figure 5: Distribution of Respondents by Age Group

Figure 5 reveals that 71.40% of the respondents were between age 20 and 24, 17.50% were between age 15 and 19, 10.20% were between age 25 and 29, 0.70% were between age 30 and 34, while 0.10% were aged 35 and above.

Research Question 2: What is the NUC recommended teacher-students' ratio for undergraduate programmes?

Table 1: Showing NUC recommended Staff-Student ratio for undergraduate programme

S/N	Faculties	Teacher-Student Ratio
1	Administration; Management and Management Technology	1:30
2	Agriculture, Forestry, Fisheries and Home Economics	1:15
3	Arts	1:30
4	Basic Medical and Health Science	1:15.
5	Education	1:30
6	Engineering and Technology	1:15
7	Environmental Sciences	1:15
8	Law	1:30
9	Pharmaceutical Sciences	1:15
10	Science	1:20
11	Social Sciences	1:30
12	Veterinary Medicine	1:10

Source: NUC (2014)

Table 1 shows that for most faculties in the Applied Sciences, the SSR is 1:15, whereas for Humanities, Arts, And Social Sciences, the SSR is 1:30. As indicated on the Table, Veterinary Medicine has the smallest SSR of 1:10

Research Question 3

What is the Staff-students' ratio in undergraduate programme by faculties in the University of Ibadan?

Table 2: Showing Staff-Students’ ratio in the University of Ibadan

S/N	Faculties	Number of undergraduate Students	Number of Academic Staff	Staffs-Students’ Ratio
1	Agriculture	1318	97	1:14
2	Arts	2141	150	1:14
3	Basic Medical Sciences	673	107	1:6
4	Clinical Sciences	1268	-	-
5	Dentistry	203	34	1:6
6	Economics	301	26	1:12
7	Education	2337	127	1:18
8	Environmental Design and Management	21	19	1:1
9	Law	797	28	1:28
10	Pharmacy	339	48	1:7
11	Public Health	242	51	1:5
12	Renewable Natural Resources	409	42	1:10
13	Science	2072	212	1:10
14	Technology	1523	93	1:16
15	Social Sciences	1034	78	1:13
16	Veterinary Medicine	479	81	1:6

Source: UI (2019)

Table 2 shows the derivation of Staff-students’ ratio (SSR) in undergraduate programme in the University of Ibadan. The Staff-Students’ Ratios as shown on the last column were obtained by dividing the number of undergraduate students by the number of academic staff for each faculty. For example, the SSR for the Faculty of Agriculture is 1:14. This means that each lecturer handles a maximum of 14 undergraduate students in that faculty. As shown on the Table, Faculty of Environmental Design and Management has the smallest SSR (1:1), followed by Public Health (1:5), Dentistry (1:6), Veterinary Medicine (1:6) and Pharmacy (1:7). Faculty of Law has the highest SSR (1:28), followed by Education (1:18), and Technology (1:16).

Research Question 4

What is the level of education quality received by undergraduate students of the University of Ibadan as measured by life skills assessment?

Table 3: Showing the Assessment of Students on Life Skills Acquisition

Grade s	Definitio n	Interpretatio n	PS		Comm		CT		Emp		ATP	
			F	P	F	P	F	P	F	P	F	P
A	Excellent	90 – 100 %	77	11	77	11	130	18	167	24	30	4
B	Very Good	70 – 89%	262	37	308	44	281	40	300	43	357	51
C	Good	60 – 69 %	176	25	166	24	151	22	108	15	193	28
D	Fair	50 – 59 %	116	17	90	12	72	10	59	8	87	12
E	Poor	40 – 49 %	55	8	35	5	37	5	39	6	21	3
F	Very Poor	0 – 39%	17	2	27	4	32	5	30	4	15	2
Total			703	100	703	100	703	100	703	100	703	100

Overall Average performance: 70

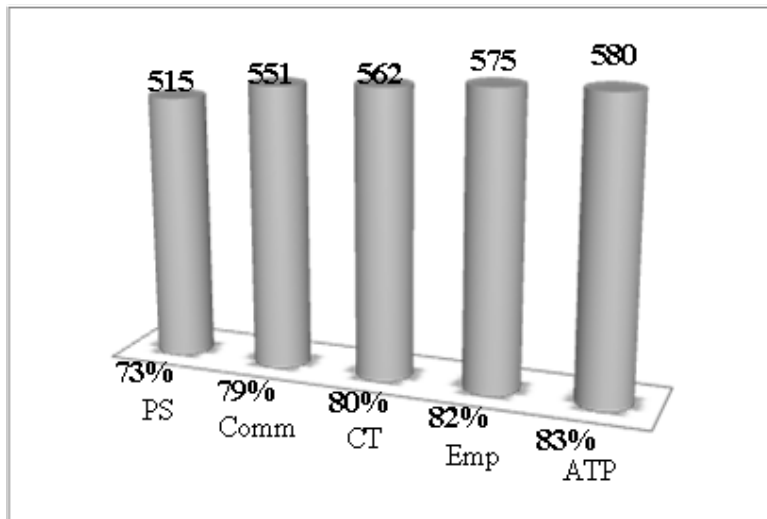


Figure 6: Showing Students with Performance of 60% and above

Table 3 and Figure 6 indicate that the education quality received by undergraduate students in the University of Ibadan as measured by Life Skills Assessment is very good. As shown on Table 3, the overall average performance is 70%. From Figure 6, the Average Total Performance column shows that 83% of the undergraduate students achieved 60% and above, 95%

achieved 50% and above, and only 5% had a score below 50%. Although more than 70% of the students achieved 60% and above for each of the life skills, Figure 6 reveals that undergraduate students in the University of Ibadan are more empathic and critical thinkers than they are communicators and problem solvers.

Hypothesis 1

There is no significant difference between the NUC recommended teacher-students’ ratio for undergraduate programmes and teacher-students’ ratio in undergraduate programme in the University of Ibadan (UI).

Table 4: T-Test of Difference between NUC Recommended SSR for Undergraduate Programmes and Current SSR in University of Ibadan Undergraduate Programme

Variable	Institution	N	Mean	SD	df	p value	t _{cal}	t _{crit}	Decision
SSR	UI	16	10.38	6.97	30	0.00	-3.66	1.96	Rejected
	NUC	16	19.69	7.41					

Table 4 reveals |3.66| as the calculated test statistic, which is greater than the table value of 1.96. Therefore, the null hypothesis is rejected at [P = 0.00 < 0.05; t_{cal} = |3.66| > t_{crit} = 1.96]. This implies that there is a significant difference between NUC recommended SSR for undergraduate programmes and current SSR in undergraduate programme in UI. Judging from the mean of 10.38 and 19.69, the nature of this difference is clear - the SSR in UI is far lesser than the NUC recommended SSR. Table 5 and Figure 7 illustrate further.

Table 5: Showing NUC Recommended Staff-Students' Ratio (SSR) for Undergraduate Programmes and Current SSR in University of Ibadan Undergraduate Programme

S/N	Faculty	SSR in University of Ibadan undergraduate programme	NUC Recommended SSR
1	Agriculture	14	15
2	Arts	14	30
3	Basic Medical Sciences	6	15
4	Clinical Sciences *	0	15
5	Dentistry *	6	15
6	Economics	12	30
7	Education	18	30
8	Environmental Design and Management	1	15
9	Law	28	30
10	Pharmacy	7	15
11	Public Health *	5	15
12	Renewable Natural Resources *	10	15
13	Science	10	20
14	Technology	16	15
15	Social Sciences	13	30
16	Veterinary Medicine	6	10

* Values for NUC assigned based on similar faculties.

Source: Generated by these researchers from NUC (2014) and UI (2019).

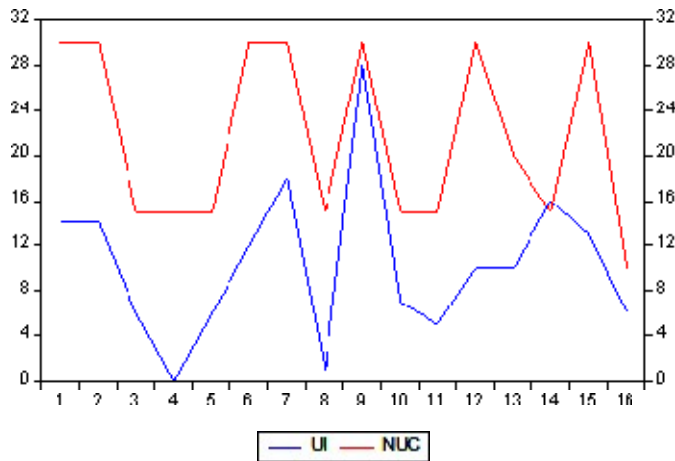


Figure 7: Comparison of UI SSR and NUC recommended SSR

As shown on Table 5 and visualized on Figure 7, the SSR in undergraduate programme in U I is lesser than the NUC recommended SSR for all faculties except Technology where SSR in UI exceed NUC recommendation by just one. This implies that UI is within the limit set by NUC as regard SSR for achieving quality education in Universities. This may also explains the very good education quality received by undergraduate students as shown on Table 3 and Figure 6.

Hypothesis 2

There is no significant gender difference in the level of education quality received by undergraduate students in the University of Ibadan

Table 6: T-Test Analysis Showing Gender Difference in the Level of Education Quality Received by Undergraduate Students in the University of Ibadan

Variable	Gender	N	Mean	SD	df	p value	t _{cal}	t _{crit}	Decision
Education Quality	Female	264	70.58	12.42	701	0.20	1.27	1.96	Not rejected
	Male	439	69.38	11.97					

Table 6 reveals 1.27 as the calculated test statistic, which is less than the table value of 1.96. Therefore, the null hypothesis is not rejected at [P = 0.20 > 0.05; t_{cal} = 1.27 < t_{crit} = 1.96]. This implies that there is no significant difference between male and female undergraduate students in UI as regards the education quality received. This submission is also validated by the

insignificant difference between the mean values of male and female performance as shown on Table 6.

Hypothesis 3

There is no significant level difference in the level of education quality received by undergraduate students in the University of Ibadan

Table 7: T-Test Analysis Showing Level Difference in the Level of Education Quality Received by Undergraduate Students in the University of Ibadan

Variable	Level	N	Mean	SD	df	p value	t _{cal}	t _{crit}	Decision
Education Quality	400	284	69.83	11.40	701	1.00	0.06	1.96	Not rejected
	300	419	69.83	12.64					

Table 7 reveals 0.06 as the calculated test statistic, which is less than the table value of 1.96. Therefore, the null hypothesis is not rejected at [P = 1.00 > 0.05; t_{cal} = 0.06 < t_{crit} = 1.96]. This implies that there is no significant difference between 300 and 400 levels students in UI as regards the education quality received. This submission is also validated by the equality in the mean values of 300 and 400 levels students' performance as shown on Table 7.

Hypothesis 4

Staff-students' ratio in undergraduate programme in the University of Ibadan has no significant influence on quality education.

Table 8: Simple regression of Staff-students' ratio in undergraduate programme in the University of Ibadan on quality education

Model	Sum of Squares	df	Mean Square	F	p value	Decision
Regression	353.29	1	353.29	2.24	0.16	Not rejected
Residual	2212.47	14	158.03			
Total	2565.75	15				
R = 0.37 R Square = 0.14			Adjusted R Square = 0.08 Std, Error of the Estimate = 12.57			

Table 8 presents a p-value of 0.16, which is greater than 0.05. Therefore, the null hypothesis is not rejected ($F_{(1, 14)} = 2.24, P > 0.05$). This implies that

Staff-students' ratio in undergraduate programme in the University of Ibadan has no significant influence on quality education. In other words, quality education in UI cannot be predicted based on SSR.

Discussion of Findings

The demographic characteristics of undergraduate students in the University of Ibadan are depicted on Figures 3-5. As shown on Figure 3, the respondents were predominantly male. It is important to note that although male population (7954) exceed female population (7203) in undergraduate programme in the University of Ibadan (UI, 2019), the gap is not as wide as suggested by this result. Figure 4 showed that majority of the respondents were in 300 level, while Figure 5 revealed that majority were between age 20 and 24.

As shown on Table 3 and Figure 6, the level of education quality received by undergraduate students of the University of Ibadan is very good with overall average performance of 70, and only 5% having a score below 50%. This education quality, as shown on Tables 6 and 7 was neither gender nor level bias. This result is not surprising as the University of Ibadan, established 1948 is not just the first university in Nigeria but has consistently maintained the 1st position among best universities in Nigeria according to Webometrics (Ranking Web of Universities, 2020). Also, the University of Ibadan ranks 501-600 in the world and 8 in Africa according to the 2020 Times Higher Education world university rankings (THE, 2020). Therefore, given her position locally and globally, delivering quality education should be expected. This result also shows that majority of the undergraduate students of the University of Ibadan do not belong to the set of Nigerian undergraduate students, who upon graduation will lack the requisite skills for the labour market..

The NUC recommended staff-students' ratio for undergraduate programmes is depicted on Table 1, while the staff-students' ratio in undergraduate programme by faculties in the University of Ibadan is shown on Table 2. As contrasted on Figure 7 and Table 5, the SSR in UI is lower than the NUC recommended SSR and as illustrated on Table 4, this difference is significant. Contrasting this with the findings of Atanda (2013) which showed student-teacher-ratio to be higher in some faculties than the NUC benchmark, it means that between 2013 and 2020, the University of Ibadan has recorded substantial improvement in its students-teacher ratio.

According to the quantity-quality trade-off theory (Becker and Lewis, 1973), other things being equal, the lower the quantity, the higher the quality. Applying this to the SSR in UI, it means that it is within the boundary of achieving education quality and as such, education quality in UI is expected to be high given the relatively low SSR. And truly, as indicated by the overall performance of 70, education quality is high. Despite this reality, Table 8 revealed that quality education in UI could not be predicted based on SSR. As suggested by NguyoWachiuriet' al (2016), lower SSR is supposed to influence education quality but the result of this study demonstrated otherwise. This outcome is also contrary to the findings of Koca and Celika (2015), Waita, et'al (2015), Ajani and Akinyele (2014), and Bello et' al (2019). Their findings showed a significant negative relationship between the two variables. This contrary finding can be justified with the following explanation: very good education quality depends on several other things aside SSR. Therefore, it could be the case that the influence that other factors have on education quality is so large that the contribution of SSR becomes insignificant. For example, the University of Ibadan is known for her top-notch admission process, which ensures that the best of the best are enrolled in the institution. Therefore, this high quality of students may be a strong factor influencing education quality. Also, the institution is recognised for her pool of high quality academic staff with international recognitions. This also, may be another strong factor influencing education quality.

Conclusion

Some graduates of tertiary institutions in Nigeria are of low quality and this calls for concern as regard education quality in Nigerian tertiary institutions in general and in University of Ibadan in particular. So many factors accounts for low quality graduates as identified by scholars. However, among these factors, students-teacher' ratio has been seen as one of the major determinants. So, this study investigated the students-teacher ratio in the University of Ibadan and how it relates to and possibly explains the level of education quality in the institution. Previous positions of scholars who discovered a negative relationship between students-teacher ratio and education quality in the primary and secondary levels were affirmed by the discovery of a negative relationship between the two variables in the University of Ibadan. However, statistically, students-teacher ratio could not explain education quality in the institution. This implies that the low students-teacher ratio in the institution was not an explanation for the high education quality. It also implies that in a converse case, high students-teacher ratio would probably not be an

explanation for poor education quality. It is important however, to understand that this is the case in the University of Ibadan and may not necessarily apply in other institutions of higher learning due to several differences. Therefore, this study points to the possible need for a nationwide study to ascertain the actual proportion of graduates that are of low quality and their institutional distribution across the country as well as factors that could explain this low quality. For emphasis, it is important to reiterate that students-teacher ratio in University of Ibadan, despite being lower than NUC benchmark and having a negative relationship with education quality in the institution, was not an explanation for the high education quality in the institution. This, however, may be peculiar to the University of Ibadan and therefore raising the need for a nationwide study.

Recommendations

Based on the findings and conclusion the following recommendations were made:

1. The University of Ibadan should sustain and consolidate on its current efforts in maintaining a low students-teacher ratio in the undergraduate programme.
2. The curriculum should be revised to improve the inculcation of life skills such as communication and problem solving.
3. More effort must be put in place to improve education quality in the institution, as an average performance of 70 indicates that there is more work to be done.
4. There is need for a further study to ascertain the actual proportion of graduates that are of low quality and their institutional distribution across the country as well as factors that could explain this low quality.

References

- Ajani, I. R., Akinyele, O. B. (2014). Effects of Student-Teacher Ratio on Academic Achievement of Selected Secondary School Students in Port Harcourt Metropolis, Nigeria. *Journal of Education and Practice*. 5(24): 100-106. Available at www.iiste.org
- Arong, F. E., Ogbadu M. A. (2010). Major Causes of Declining Quality of Education in Nigeria from Administrative Perspective: A Case Study of Dekina Local Government Area. *Canadian Social Science*. 6(3):183-198.

- Atanda, A.I. (2013). Analysis of the University of Ibadan carrying capacities vis-à-vis enrolment and facilities maintenance: implications on administration and curriculum implementation. *African Higher Education Review*. 7(2): 6-14.
- Becker, G. S., & Lewis, H. G. (1973). On the interaction between the quantity and quality of children. *Journal of Political Economy*. 81: 279–288. Assessed at <https://www.journals.uchicago.edu/doi/abs/10.1086/260166?journalCode=jpe>
- Bello, A. A., Aderanti, R. A., Rosemary, A. A., Adeoye, A. O., Bankole, F. (2019). Influence of Student-Teacher Ratio on the Academic Performance of Public Primary School Pupils in Odeda Local Government Area, Ogun State. *European Journal of Scientific Research*. 152(2):161-166. Available at <http://www.europeanjournalofscientificresearch.com>
- Evarist, A. (2018) Teacher-Student Ratio on Classroom Practices in Universal Secondary Schools in Wakiso District-Uganda. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*. 9(4):167-177
- Jaiyeoba, A.O. and Atanda, A.I. (2007). Enhancing the Quality of Graduates of Colleges of Education: A Means to Achieve Effective Nation Building in Nigeria. In Babalola, J.B, Akpa, G.O, Ayeni, A.O and Adedeji, S.O (Eds). *Access Equity and Quality in Higher Education. Nigerian Association for Educational Administration and Planning Publication. (NAEAP): 431-442*
- Jaiyeoba, A.O. and Atanda, A.I. (2008). Re-engineering University Education for Sustainable Development in Nigeria. *Perspectives in Education*, 24(3):180-188.
- Kambuga, Y. (2013). The Impact of Teacher-Pupil Ratio on Teaching-Learning Process in Primary Schools: Experiences from Tanzania. *International Journal of Education and Practice*. 1(2):14-25

- Kivunja, C. (2015). *Exploring the Pedagogical Meaning and Implications of the 4Cs "Super Skills" for the 21st Century through Bruner's 5E Lenses of Knowledge Construction to Improve Pedagogies of the New Learning Paradigm*. *Creative Education*, 6: 224-239. <http://dx.doi.org/10.4236/ce.2015.62021>
- Koca, N., Celika, B. (2015). The Impact of Number of Students per Teacher on Student Achievement. *Procedia - Social and Behavioral Sciences*. 177: 65-70. Available online at www.sciencedirect.com
- National Bureau of Statistics (NBS, 2018). *Labour Force Statistics*. Retrieved on 28/04/2020 from <http://nigerianstat.gov.ng/elibrary>
- National Universities Commission (NUC, 2014). *Benchmark Minimum Academic Standards for Undergraduate Programmes in Nigerian Universities*.
- NguyoWachiuri, R., Kirimi, J., Kimathi, J. (2016). To establish the effect of Teacher pupil Ratio on learners' performance in Kenya Certificate of primary Education in Kenya. *Journal for Studies in Management and Planning*. 2(10):96-108. Available at <http://edupediapublications.org/journals/index.php/JSMaP/>
- Otokunfor, T. (2011). *Quality of Graduates from Nigerian Universities: Why Nigerian Universities Produce Poor Quality Graduates*. Alpha Education Foundation Monograph Series. 3:1-22.
- Pitan, O. S. (2012). Analysis of Internal Efficiency in the Utilization of Human Resources in Selected Secondary Schools of Oyo State, Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)* 3(5): 748-752.
- Pitan, O. S., Adedeji S. O. (2012). Skills Mismatch Among University Graduates in the Nigeria Labor Market. *US-China Education Review*, A(1):90-98.
- Ranking web of univerties (2020). <https://www.webometrics.info/en/africa/nigeria>
- Slade, S. (2017). *What Do We Mean by a Quality Education?* Assessed at https://www.huffpost.com/entry/what-do-we-mean-by-a-qual_b_9284130

- Stutern (2017). *The Nigerian Graduate Report*. Retrieved on 08/02/2020 from <http://eprints.covenantuniversity.edu.ng/8124/1/Nigeria%2BGraduate%2BReport.pdf>
- Times Higher Education (THE) (2020). World University Rankings 2020. https://www.timeshighereducation.com/world-university-rankings/2020/world-ranking#!/page/10/length/50/sort_by/rank/sort_order/asc/cols/scores
- UNESCO (2002). *Global Monitoring Report. Education for All: Is the world on track?* Retrieved on 04/02/2020 from <https://unesdoc.unesco.org/ark:/48223/pf0000129053>
- UNESCO (2005). *Global Monitoring Report, Education for all: the quality imperative..* Retrieved on 01/02/2020 from <https://unesdoc.unesco.org/ark:/48223/pf0000137333>
- UNESCO (2016). *Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4*. Retrieved on 07/02/2020 from <https://unesdoc.unesco.org/ark:/48223/pf0000245656>
- UNESCO and UNICEF (2012). *Asia-Pacific End of Decade Notes on Education for All*. Retrieved on 09/01/2020 from <https://unesdoc.unesco.org/ark:/48223/pf0000219186?posInSet=34&queryId=3e153c0e-af4c-405a-8369-b141bea629c2>
- University of Ibadan (UI) (2019). *2019 Annual Report*. Office of the Vice-Chancellor, University of Ibadan: 97-116.
- Waita, K. J., Mulei, K. O., Mueni, K. B., Mutune, M. J., Kalai, J. (2015). Pupil-Teacher Ratio and its Impact on Academic Performance in Public Primary Schools in Central Division, Machakos County, Kenya. *European Journal of Education Studies*. Special Issue: African Education – Contemporary and Future Challenges. Available on-line at: www.oapub.org/edu
- WHO (2000). *Partners in Life Skills Education - Conclusions from a United Nations Inter-Agency Meeting*. Retrieved on 05/02/2020 from https://www.unicef.org/lifeskills/index_7308.html