Data Article

Academic performance data of undergraduate students' in 23 programmes from a private University in Nigeria

Azuubike Ezenwoke a,*, Oluwadamilola Ogunwale b, Opeyemi Matiluko c, Emmanuel Igbekele c, Samuel Dare d, Omotola Ezenwoke e, Adeniyi Olayanju f

a Department of Computer and Information Sciences, Covenant University, Ota, Nigeria
b Department of Economics, Ajayi Crowther University, Oyo, Nigeria
c Centre for Systems and Information Services, Landmark University, Omu-aran, Nigeria
d Academic Office, Landmark University, Omu-aran, Nigeria
e Department of Accounting and Finance, Landmark University, Omu-aran, Nigeria
f Department of Agricultural and Bio-systems Engineering, Landmark University, Omu-aran, Nigeria

A R T I C L E   I N F O

Article history:
Received 30 June 2018
Accepted 23 July 2018
Available online 27 July 2018

A B S T R A C T

The quality of teaching and learning in higher education in many developing countries can be improved as institutions in this region adopt evidence-based practices that emphasize empirical measurements, observations, analysis and reports of learning outcomes. This article presents and analyses data on the academic performances of undergraduate students for duration of three semesters across the three major colleges of Landmark University, a private University in Nigeria. The colleges include the college of Agricultural Sciences (CAS), college of Business and Social Sciences (CBSS), and the college of Science and Engineering (CSE). Furthermore, population samples of 82, 577 and 812 undergraduates were selected randomly from CAS, CBSS and CSE respectively; totaling a population of sample of 1471 undergraduates from all academic levels (200L–500L) with the exception of first year students. The random selection was drawn from three consecutive semesters- the first and second semesters of academic 2016/2017 session and first semester of 2017/2018 academic session. The cumulative GPA of the sample population of students for the semester highlighted was obtained from the Centre for

* Corresponding author.
E-mail address: azu.ezenwoke@covenantuniversity.edu.ng (A. Ezenwoke).

https://doi.org/10.1016/j.dib.2018.07.056
2352-3409/© 2018 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).
Systems and Information Services Units of the University. Motivated by the need to promote evidence-based research in academic excellence, a spread-sheet containing the detailed dataset is attached to this article. The descriptive statistics and frequency distributions of academic performance data are presented in with the use of tables and graphs for easy data interpretations. The data provided in this article supports the goal of a regional policy towards the realization of qualitative sustainable education.

© 2018 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

---

**Specifications Table**

| Subject area                      | Agricultural Sciences, Business and Social Sciences and Sciences and Engineering Education |
|-----------------------------------|------------------------------------------------------------------------------------------|
| Specific area of interest         | Analysis of Academic Performance Data                                                    |
| Data type                         | Tables, graphs and spread-sheet file                                                      |
| Data collection                   | Academic performance data comprising Grade Point Average (GPA) for a three semester period for multi-level undergraduate students studying programmes relating to Agricultural sciences, Sciences and Engineering, and Business and Social Sciences in a private University in Nigeria. The data was obtained from the Centre for Systems and Information Services of the university. |
| Data layout                       | Raw, grouped                                                                              |
| Experimental factors             | First year undergraduate students were excluded                                           |
| Experimental structures           | Descriptive statistics and frequency distributions are performed to show the distribution of the academic performance across the three colleges, various programmes and different levels. |
| Data source location              | The population sample and the information on academic performance provided in this article were obtained at Landmark University, Omu-Aran, Nigeria |
| Accessibility of data             | Detailed datasets in a Microsoft Excel spread-sheet file attached to this article are made publicly available. |

**Value of the data**

- Comprehensive datasets on academic outcomes encourages confidence in evidence-based research to understand factors affecting academic excellence and skills acquisition in developing countries.
- The accessibility of academic outcomes dataset will foster the attainment of sustainable education and formulation of practicable regional policies geared towards improving teaching and learning pedagogies.
- The field of learning analytics, together with advances in data mining, machine learning and data analytics will benefit from the availability of empirical academic performance data for developing predictive models to studying outcomes in undergraduate programmes.
- Statistical analysis such as descriptive statistics and frequency distribution, presented in tabular and graphical-forms simplifies data interpretation in other to draw useful deductions and reasonable conclusions.
1. Data

The quality of teaching and learning in higher education in many developing countries can be improved as institutions in this region adopt evidence-based practices that emphasize empirical measurements, observations, analysis and reports of learning outcomes [1–3]. This article presents and analyses data on the academic performances of undergraduate students of Landmark University, a Nigerian private University. Landmark University is a private faith-based University located in Omu-Aran, Kwara State in Nigeria.

The data comprise academic performance index for the duration of three semesters across the three major colleges of the university. The colleges include the college of Agricultural Sciences (CAS), college of Business and Social Sciences (CBSS), and the college of Science and Engineering (CSE). Furthermore, population samples of 82, 577 and 812 undergraduates were selected randomly from CAS, CBS and CSE respectively; totaling a population of sample of 1471 undergraduates from all academic levels (200L–500L) with the exception of first year students. The random selection was drawn from three consecutive semesters- the first and second semesters of academic 2016/2017 session and first semester of 2017/2018 academic session.

However, the process of selection excluded undergraduates with incomplete academic records. A total of 2, 5 and 222 undergraduates were pooled from CAS, CBSS, and CSE respectively. Tables 1–23 contains the descriptive statistics of the academic performances of undergraduates in the twenty-two programmes offered at Landmark University.

2. Experimental design, materials and methods

The cumulative GPA of the sample population of students for the semester highlighted was obtained from the Centre for Systems and Information Services Units of the University. Motivated by the need to promote evidence-based research in academic excellence, a spread-sheet containing the detailed datasets is attached to this article. The descriptive statistics and frequency distributions of academic performance data are presented in with the use of tables and graphs to ease the description of the data.

Table 1
Descriptive statistics of academic performances of undergraduates studying Agricultural Economics.

| Grade Point Average (GPA) |  |  |  |  |
|---------------------------|---|---|---|---|
| First semester (2017)     | Second semester (2016) | First semester (2016) | Aggregate |
| Mean                      | 3.171828 | 3.857424 | 3.89464 | 3.641297 |
| Standard Error            | 0.250804 | 0.181723 | 0.226964 | 0.199028 |
| Median                    | 3.2857 | 4.1154 | 4.2222 | 3.9925 |
| Mode                      | – | – | 5 | – |
| Standard Deviation        | 1.254018 | 0.908617 | 1.134818 | 0.995138 |
| Sample Variance           | 1.572561 | 0.825585 | 1.287811 | 0.990299 |
| Kurtosis                  | – 0.62466 | – 0.59205 | – 1.31708 | – 0.7888 |
| Skewness                  | – 0.44565 | – 0.74602 | – 0.57434 | – 0.63987 |
| Range                     | 4.3636 | 2.9333 | 3 | 3.345133 |
| Minimum                   | 0.6364 | 2 | 2 | 1.585 |
| Maximum                   | 5 | 4.9333 | 5 | 4.930133 |
| Sum                       | 79.2957 | 96.4356 | 97.366 | 91.03243 |
| Total samples             | 25 | 25 | 25 | 25 |
3. Data exploration

3.1. Overall aggregated Grade Point Average by semesters

Fig. 1 show the highest aggregated GPA was recorded in the 2017 first semester, followed by 2016 second semester and then 2016 first semester.

3.2. Aggregated Grade Point Average by levels in the colleges

The section contains the description of aggregated GPA by colleges. Fig. 2 shows the academic performances of undergraduates in the college of Agricultural Sciences (CAS). More specifically, the figures show that 200 level students in CAS performed best in 2016 second semester than the other semesters, while 300 level students performed best in second semester 2016 compared with their performance in the two other semesters. Furthermore, the 400 level in CAS performed best in 2016 first semester, and the first semester 2016 was the best for the 500L students of the college.
The description of the academic performances of undergraduates by level in the college of Business and Social Sciences (CBSS) are captured in Fig. 3. Fig. 3 revealed that the aggregated GPA of 200 levels was highest in the second semester of 2016. In the same vein, the 300 levels of the CBSS performed best in the first semester of 2017 than in the other two semesters, while the highest aggregated GPA for 400L students was in the second semester of 2016.

Fig. 4 depicts the academic performances of undergraduates in the college of Science and Engineering (CSE). The analysis of the academic performance based on Fig. 4 shows that 200 levels students in CSE performed best in 2016’s semester, while the 300 level students had the highest aggregated GPA in the first semester of 2017. In addition, students in the 400 level and 500 levels performed best in the first semester of 2017.

3.3. Aggregated Grade Point Average by programmes in the colleges

Fig. 5 shows the description of the comprehensive academic performances of the programmes across the three major colleges in the semesters under review. The data show that these programmes-

| Table 4 | Descriptive statistics of academic performances of undergraduates studying Crop Science. |
|---|---|
| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
| Mean | 3.722222 | 3.903444 | 3.887056 | 4.317909 |
| Standard Error | 0.323493 | 0.196498 | 0.223995 | 0.028217 |
| Median | 4.0833 | 3.8462 | 4.2 | 4.274217 |
| Mode | 4.0833 | - | - | - |
| Standard Deviation | 0.970479 | 0.589493 | 0.677985 | 0.084652 |
| Sample Variance | 0.94183 | 0.347502 | 0.459664 | 0.007166 |
| Kurtosis | -0.15111 | -1.10061 | -1.43487 | -0.17437 |
| Skewness | -1.05305 | -0.2114 | -0.59243 | 1.248455 |
| Range | 2.75 | 1.7308 | 1.8 | 0.209331 |
| Minimum | 1.875 | 3 | 2.8 | 4.258465 |
| Maximum | 4.625 | 4.7308 | 4.6 | 4.467796 |
| Sum | 33.5 | 35.131 | 34.9835 | 38.86119 |
| Total samples | 9 | 9 | 9 | 9 |

| Table 5 | Descriptive statistics of academic performances of undergraduates studying Soil Science. |
|---|---|
| Grade Point Average(GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
| Mean | 4.0238 | 4.63335 | 5 | 4.512561 |
| Standard Error | 0.2619 | 0.13335 | 0 | 0.012476 |
| Median | 4.0238 | 4.63335 | 5 | 4.512561 |
| Mode | - | - | 5 | - |
| Standard Deviation | 0.370383 | 0.188585 | 0 | 0.017644 |
| Sample Variance | 0.137183 | 0.035564 | 0 | 0.000311 |
| Kurtosis | - | - | - | - |
| Skewness | - | - | - | - |
| Range | 0.5238 | 0.2667 | 0 | 0.024952 |
| Minimum | 3.7619 | 4.5 | 5 | 4.500085 |
| Maximum | 4.2857 | 4.7667 | 5 | 4.525037 |
| Sum | 8.0476 | 9.2667 | 10 | 9.025122 |
| Total samples | 2 | 2 | 2 | 2 |
Soil Science, Agricultural Extension and Rural Development, International Relations, Computer Science and Political Science, had the least aggregated GPA figures as arranged in descending order.

Moreover, Soil Science, Agricultural Extension & Rural Development and Crop Science programmes recorded the highest aggregated GPA in the second semester of 2016; Industrial Chemistry, Physics and Mathematics programmes in the CSE had the least aggregated GPA. Generally, students in the programmes offered in the College of Agricultural Sciences had the highest aggregated GPA in the semesters under review.

3.4. Aggregated GPA by colleges

As shown in Fig. 6, the colleges of Agricultural Sciences and Business and Social Sciences recorded the highest aggregated GPA in the second semester of 2016. Although the college of Science and Engineering recorded the worst aggregated GPA in the second semester of 2016, it had that the highest aggregated GPA in first semester of 2017.

Table 6
Descriptive statistics of academic performances of undergraduates studying Accounting.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                      | 3.541968              | 3.67936                | 3.570868              | 3.514568  |
| Standard Error            | 0.083408              | 0.074883               | 0.076197              | 0.046316  |
| Median                    | 3.7826                | 3.84105                | 3.625                 | 3.537235  |
| Mode                      | 4.6667                | 4.1579                 | 4.8                   | —         |
| Standard Deviation        | 1.028325              | 0.923223               | 0.939414              | 0.571025  |
| Sample Variance           | 1.057453              | 0.85234                | 0.882498              | 0.326069  |
| Kurtosis                  | 2.006379              | 0.566834               | — 0.93908             | — 1.17566 |
| Skewness                  | - 1.32916             | - 0.76632              | - 0.35171             | - 0.02032 |
| Range                     | 5                     | 5                      | 3.674                 | 2.263446  |
| Minimum                   | 0                     | 0                      | 1.3226                | 2.358789  |
| Maximum                   | 5                     | 5                      | 5                     | 4.622235  |
| Sum                       | 538.3791              | 559.2627               | 542.7726              | 534.2143  |
| Total samples             | 152                   | 152                    | 152                   | 152       |

Table 7
Descriptive statistics of academic performances of undergraduates studying Banking and Finance.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                      | 3.411659              | 3.398917               | 3.062883              | 3.566969  |
| Standard Error            | 0.151408              | 0.155527               | 0.173624              | 0.021297  |
| Median                    | 3.3913                | 3.375                  | 2.8182                | 3.556119  |
| Mode                      | 4.619                 | 3.375                  | -                     | -         |
| Standard Deviation        | 0.815356              | 0.837536               | 0.934994              | 0.11469   |
| Sample Variance           | 0.664806              | 0.701467               | 0.874214              | 0.013154  |
| Kurtosis                  | 0.073257              | - 0.73148              | - 0.68643             | - 0.12852 |
| Skewness                  | - 0.16815             | - 0.122718             | 0.38637               | - 0.02051 |
| Range                     | 3.4048                | 3.0729                 | 3.5584                | 0.477883  |
| Minimum                   | 1.5                   | 1.7692                 | 1.2333                | 3.309419  |
| Maximum                   | 4.9048                | 4.8421                 | 4.7917                | 3.787302  |
| Sum                       | 98.9381               | 98.5686                | 88.8236               | 103.4421  |
| Total samples             | 29                    | 29                     | 29                    | 29        |
3.5. Aggregated GPA for the three semesters combined

The description of the academic performances of the colleges in terms of the overall aggregated GPA that computes the GPA across the three semesters under review shows that the students in the college of Agricultural Sciences considerably performed best academically, followed by the college of Business and Social Sciences. The students of the college of Science and Engineering had the worse academic performances (Fig. 7).

Table 8
Descriptive statistics of academic performances of undergraduates studying Business Administration.

|                          | Mean          | Standard Error | Median        | Mode | Standard Deviation | Sample Variance | Kurtosis | Skewness | Range | Minimum | Maximum | Sum     | Total samples |
|--------------------------|---------------|----------------|---------------|------|--------------------|-----------------|----------|----------|-------|---------|---------|---------|---------------|
| First semester (2017)    | 3.368239      | 0.093754       | 3.7308        | 0.859267 | 0.73834            | 4.1429          | 0.429708 | -0.55211 | 4.129 | 0.8571  | 5       | 282.9321 | 84            |
| Second semester (2016)   | 3.532943      | 0.088038       | 4.125         | 0.806881 | 0.651056           | 3.2857          | -0.7147  | -0.19753 | 3.812 | 1.7143  | 5       | 296.7672 | 84            |
| First semester (2016)    | 3.036686      | 0.109293       | 3.297         | 1.001691 | 1.003385           | 4.3182          | -0.85686 | -0.14478 | 1.7755 | 0.5     | 5       | 255.0816 | 84            |
| Aggregate                | 3.376434      | 0.039928       | 0.365944      | 0.133915 | 0.066188           | 1.97826         |          |          |        |         |         | 283.6204 |               |

Table 9
Descriptive statistics of academic performances of undergraduates studying Economics.

|                          | Mean          | Standard Error | Median        | Mode | Standard Deviation | Sample Variance | Kurtosis | Skewness | Range | Minimum | Maximum | Sum     | Total samples |
|--------------------------|---------------|----------------|---------------|------|--------------------|-----------------|----------|----------|-------|---------|---------|---------|---------------|
| First semester (2017)    | 3.565416      | 0.096568       | 3.67425       | 4.5  | 0.936257           | 0.876578        | 0.381    | 0.5932   | 4     | 1       | 5       | 335.1491 | 94            |
| Second semester (2016)   | 3.531844      | 0.091972       | 3.58335       | 4.1667| 0.891702           | 0.795132        | -0.7088  | -0.23577 | 3.2367 | 1.68    | 1.68    | 331.9933 | 94            |
| First semester (2016)    | 3.346186      | 0.110489       | 3.4792        | 4.52 | 1.071234           | 1.147543        | -0.97002 | -0.34232 | 2.367  | 1       | 1       | 314.5415 | 94            |
| Aggregate                | 3.396855      | 0.048397       | 3.428324      | -    | 0.469223           | 0.22017         | -0.45452 | -0.21792 | 1.97408 |         |         | 319.3044 |               |

3.5. Aggregated GPA for the three semesters combined

The description of the academic performances of the colleges in terms of the overall aggregated GPA that computes the GPA across the three semesters under review shows that the students in the college of Agricultural Sciences considerably performed best academically, followed by the college of Business and Social Sciences. The students of the college of Science and Engineering had the worse academic performances (Fig. 7).
### Table 10
Descriptive statistics of academic performances of undergraduates studying Sociology.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|------------------------|------------------------|-----------------------|-----------|
| Mean                      | 3.350137               | 3.395533               | 3.193853              | 3.309902  |
| Standard Error            | 0.117221               | 0.099187               | 0.110424              | 0.029326  |
| Median                    | 3.4348                 | 3.4783                 | 3.2                   | 3.403728  |
| Mode                      | 3.7331                 | 3.75                   | 4                     |           |
| Standard Deviation        | 0.837129               | 0.708339               | 0.788583              | 0.209426  |
| Sample Variance           | 0.700784               | 0.501744               | 0.621863              | 0.043859  |
| Kurtosis                  | 1.215688               | – 0.28199              | – 0.12678             | – 0.92206 |
| Skewness                  | – 0.74502              | – 0.29371              | – 0.50226             | – 0.59545 |
| Range                     | 4.3286                 | 3.3043                 | 3.5417                | 0.787557  |
| Minimum                   | 0.5714                 | 1.6957                 | 1.2083                | 2.846396  |
| Maximum                   | 4.9                    | 5                      | 4.75                  | 3.633954  |
| Sum                       | 170.857                | 173.1722               | 162.8865              | 168.805   |
| Total samples             | 51                     | 51                     | 51                    | 51        |

### Table 11
Descriptive statistics of academic performances of undergraduates studying International Relations.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|------------------------|------------------------|-----------------------|-----------|
| Mean                      | 3.209772               | 3.243783               | 3.188024              | 3.196433  |
| Standard Error            | 0.092809               | 0.071523               | 0.070455              | 0.030202  |
| Median                    | 3.32665                | 3.31625                | 3.2404                | 3.206606  |
| Mode                      | 4.25                   | 3.7826                 | 4.5                   | #N/A      |
| Standard Deviation        | 0.899817               | 0.693437               | 0.683089              | 0.29282   |
| Sample Variance           | 0.80967                | 0.480855               | 0.466611              | 0.085743  |
| Kurtosis                  | 1.585275               | – 0.20814              | 0.688421              | – 0.54124 |
| Skewness                  | – 1.00579              | – 0.29734              | – 0.37832             | 0.158999  |
| Range                     | 4.7                    | 3.2795                 | 3.6852                | 1.246327  |
| Minimum                   | 0                      | 1.2857                 | 0.8148                | 2.639584  |
| Maximum                   | 4.7                    | 4.5652                 | 4.5                   | 3.885911  |
| Sum                       | 301.7186               | 304.9156               | 299.6743              | 300.4647  |
| Total samples             | 94                     | 94                     | 94                    | 94        |
Table 12
Descriptive statistics of academic performances of undergraduates studying Political Science.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|----------------------|------------------------|----------------------|-----------|
| Mean                      | 3.09921              | 3.079923               | 3.091737             | 3.122432  |
| Standard Error            | 0.102475             | 0.086062               | 0.084182             | 0.039827  |
| Median                    | 3.2609               | 3.0435                 | 2.963                | 3.126778  |
| Mode                      | 3.3913               | 3                      | 3.7083               | –         |
| Standard Deviation        | 0.875545             | 0.735312               | 0.719247             | 0.340283  |
| Sample Variance           | 0.766579             | 0.540684               | 0.517317             | 0.115793  |
| Kurtosis                  | 1.468504             | – 0.54403              | – 0.77399            | – 1.1565  |
| Skewness                  | – 0.67475            | – 0.05645              | 0.311734             | – 0.15438 |
| Range                     | 4.8571               | 3.0957                 | 3                    | 1.210965  |
| Minimum                   | 0                    | 1.6                    | 1.7917               | 2.51653   |
| Maximum                   | 4.8571               | 4.6957                 | 4.7917               | 3.727494  |
| Sum                       | 226.2423             | 224.8344               | 225.6968             | 227.9376  |
| Total samples             | 73                   | 73                     | 73                   | 73        |

Table 13
Descriptive statistics of academic performances of undergraduates studying Agricultural Engineering.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|----------------------|------------------------|----------------------|-----------|
| Mean                      | 3.478852             | 3.473233               | 3.172098             | 3.381699  |
| Standard Error            | 0.14127              | 0.122875               | 0.123122             | 0.035197  |
| Median                    | 3.58125              | 3.58335                | 3.4                  | 3.375671  |
| Mode                      | 4.44                 | 4.0833                 | 3.4                  | –         |
| Standard Deviation        | 0.978745             | 0.851305               | 0.853014             | 0.24385   |
| Sample Variance           | 0.957941             | 0.72472                | 0.727634             | 0.059463  |
| Kurtosis                  | 1.082866             | – 0.56261              | – 1.02563            | 0.124383  |
| Skewness                  | – 0.81934            | – 0.47954              | – 0.37219            | 0.56286   |
| Range                     | 4.64                 | 3.2584                 | 2.9917               | 1.051886  |
| Minimum                   | 0.2                  | 1.5333                 | 1.56                 | 2.993714  |
| Maximum                   | 4.84                 | 4.7917                 | 4.5517               | 4.0456    |
| Sum                       | 166.9849             | 166.7152               | 152.2607             | 162.3215  |
| Total samples             | 48                   | 48                     | 48                   | 48        |
### Table 14
Descriptive statistics of academic performances of undergraduates studying Chemical Engineering.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                      | 3.517811              | 3.421146               | 3.27336               | 3.233792  |
| Standard Error            | 0.113916              | 0.106236               | 0.102236              | 0.050809  |
| Median                    | 3.64275               | 3.4375                 | 3.1574                | 3.295881  |
| Mode                      | 4.6087                | 3.25                   | 3                     | –         |
| Standard Deviation        | 0.953093              | 0.888836               | 0.855369              | 0.425101  |
| Sample Variance           | 0.908387              | 0.790029               | 0.731657              | 0.180711  |
| Kurtosis                  | – 0.11782             | – 0.5939               | – 0.78012             | – 1.21276 |
| Skewness                  | – 0.5707              | – 0.4071               | – 0.06581             | – 0.2729  |
| Range                     | 4.3846                | 3.5333                 | 3.5083                | 1.410907  |
| Minimum                   | 0.6154                | 1.4667                 | 1.2                   | 2.444588  |
| Maximum                   | 5                     | 5                      | 4.7083                | 3.855494  |
| Sum                       | 246.2468              | 239.4802               | 229.1352              | 226.3655  |
| Total samples             | 70                    | 70                     | 70                    | 70        |

### Table 15
Descriptive statistics of academic performances of undergraduates studying Civil Engineering.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                      | 3.521384              | 3.302868               | 3.181576              | 3.292949  |
| Standard Error            | 0.083006              | 0.081553               | 0.073192              | 0.04283   |
| Median                    | 3.68                  | 3.30515                | 3.19675               | 3.29454   |
| Mode                      | 4.76                  | 3                      | 3                     | –         |
| Standard Deviation        | 0.989135              | 0.971813               | 0.872189              | 0.510381  |
| Sample Variance           | 0.978389              | 0.944421               | 0.760714              | 0.260489  |
| Kurtosis                  | – 0.824365            | – 0.35277              | – 0.30143             | – 1.17186 |
| Skewness                  | – 0.81698             | – 0.41172              | – 0.14492             | – 0.02171 |
| Range                     | 5                     | 4.3357                 | 4.1877                | 1.804352  |
| Minimum                   | 0                     | 0.4643                 | 0.6923                | 2.424246  |
| Maximum                   | 5                     | 5                      | 4.88                  | 4.228598  |
| Sum                       | 500.0365              | 469.0072               | 451.7838              | 467.5988  |
| Total samples             | 142                   | 142                    | 142                   | 142       |
Table 16
Descriptive statistics of academic performances of undergraduates studying Electrical and Information Engineering.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|--------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                     | 3.234168              | 3.134438               | 3.348105              | 3.190894  |
| Standard Error           | 0.093358              | 0.07606                | 0.068441              | 0.048762  |
| Median                   | 3.3704                | 3.1786                 | 3.2667                | 3.169778  |
| Mode                     | 4                     | 3.5                    | 3                     | –         |
| Standard Deviation       | 1.227933              | 1.00041                | 0.9002                | 0.641366  |
| Sample Variance          | 1.50782               | 1.00082                | 0.81036               | 0.41135   |
| Kurtosis                 | 0.386574              | – 0.50304              | – 0.50456             | – 0.29363 |
| Skewness                 | – 0.85019             | – 0.24748              | – 0.13679             | – 0.23311 |
| Range                    | 5                     | 4.3688                 | 4.1667                | 3.288419  |
| Minimum                  | 0                     | 0.6                    | 0.8333                | 1.1212    |
| Maximum                  | 5                     | 4.9688                 | 5                     | 4.409619  |
| Sum                      | 559.5111              | 542.2578               | 579.2221              | 552.0247  |
| Total samples            | 173                   | 173                    | 173                   | 173       |

Table 17
Descriptive statistics of academic performances of undergraduates studying Mechanical Engineering.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|--------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                     | 3.464989              | 3.325181               | 3.297984              | 3.258349  |
| Standard Error           | 0.0711                | 0.071058               | 0.059607              | 0.042862  |
| Median                   | 3.52                  | 3.2667                 | 3.32                  | 3.293257  |
| Mode                     | 4                     | 3.1667                 | 3                     | –         |
| Standard Deviation       | 0.907746              | 0.907213               | 0.761006              | 0.547231  |
| Sample Variance          | 0.824003              | 0.823036               | 0.57913               | 0.299461  |
| Kurtosis                 | 0.487968              | – 0.41704              | – 0.11727             | – 0.36929 |
| Skewness                 | – 0.70829             | – 0.31852              | – 0.27276             | – 0.40715 |
| Range                    | 4.76                  | 4.0769                 | 3.3572                | 2.631019  |
| Minimum                  | 0.24                  | 0.9231                 | 1.4828                | 1.651789  |
| Maximum                  | 5                     | 5                      | 4.84                  | 4.282807  |
| Sum                      | 564.7932              | 542.0045               | 537.5714              | 531.1109  |
| Total samples            | 163                   | 163                    | 163                   | 163       |
### Table 18
Descriptive statistics of academic performances of undergraduates studying Biochemistry.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                      | 3.415608              | 3.454415               | 3.38042               | 3.392544  |
| Standard Error            | 0.140644              | 0.102213               | 0.109619              | 0.062291  |
| Median                    | 3.4375                | 3.4286                 | 3.47915               | 3.511844  |
| Mode                      | 5                     | 4                      | 3.5833                | –         |
| Standard Deviation        | 1.08942               | 0.791735               | 0.849102              | 0.482507  |
| Sample Variance           | 1.186836              | 0.626845               | 0.720975              | 0.232813  |
| Kurtosis                  | 0.006557              | – 0.43395              | – 0.88885             | – 0.22328 |
| Skewness                  | – 0.55988             | – 0.16745              | 0.069715              | – 0.68658 |
| Range                     | 4.7917                | 3.4028                 | 3.0278                | 1.862878  |
| Minimum                   | 0.2083                | 1.5172                 | 1.9722                | 2.341733  |
| Maximum                   | 5                     | 4.92                   | 5                     | 4.204612  |
| Sum                       | 204.9365              | 207.2649               | 202.8252              | 203.5526  |
| Total samples             | 60                    | 60                     | 60                    | 60        |

### Table 19
Descriptive statistics of academic performances of undergraduates studying Microbiology.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                      | 3.105357              | 3.133487               | 3.319841              | 3.186228  |
| Standard Error            | 0.189018              | 0.148619               | 0.13522               | 0.148879  |
| Median                    | 3.3003                | 3.27715                | 3.27085               | 3.1532    |
| Mode                      | 0                     | 3.6071                 | 4.1667                | –         |
| Standard Deviation        | 1.281985              | 1.007984               | 0.917109              | 1.009744  |
| Sample Variance           | 1.643487              | 1.016032               | 0.841089              | 1.019583  |
| Kurtosis                  | 0.503793              | – 0.21781              | – 0.79087             | – 0.02491 |
| Skewness                  | – 0.93608             | – 0.46646              | – 0.17788             | – 0.5002  |
| Range                     | 5                     | 4.1111                 | 3.35                  | 3.9784    |
| Minimum                   | 0                     | 0.7037                 | 1.5667                | 0.827167  |
| Maximum                   | 5                     | 4.8148                 | 4.9167                | 4.805567  |
| Sum                       | 142.8464              | 144.1404               | 152.7127              | 146.5665  |
| Total samples             | 46                    | 46                     | 46                    | 46        |
Table 20
Descriptive statistics of academic performances of undergraduates studying Industrial Chemistry.

|                      | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate     |
|----------------------|-----------------------|------------------------|-----------------------|---------------|
| Mean                 | 3.306633              | 2.914775               | 2.602633              | 3.081596      |
| Standard Error       | 0.239512              | 0.226467               | 0.220035              | 0.022954      |
| Median               | 3.24715               | 3.03675                | 2.51485               | 3.112263      |
| Mode                 | –                     | 2                      | –                     | –             |
| Standard Deviation   | 0.829693              | 0.784505               | 0.762223              | 0.079515      |
| Sample Variance      | 0.68839               | 0.615447               | 0.580983              | 0.006323      |
| Kurtosis             | – 0.49905             | – 1.45085              | – 1.3482              | 3.121076      |
| Skewness             | – 0.175735            | 0.022201               | 0.231653              | – 2.06314     |
| Range                | 2.72                  | 2.2067                 | 2.07                  | 0.251976      |
| Minimum              | 2                     | 1.8333                 | 1.65                  | 2.887897      |
| Maximum              | 4.72                  | 4.04                   | 3.72                  | 3.139873      |
| Sum                  | 39.6796               | 34.9773                | 31.2316               | 36.97915      |
| Total samples        | 12                    | 12                     | 12                    | 12            |

Table 21
Descriptive statistics of academic performances of undergraduates studying Computer Science.

|                      | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate     |
|----------------------|-----------------------|------------------------|-----------------------|---------------|
| Mean                 | 3.013887              | 2.948965               | 2.952319              | 2.862743      |
| Standard Error       | 0.128438              | 0.110269               | 0.090685              | 0.04083       |
| Median               | 3.08545               | 2.9565                 | 2.9                    | 2.838766      |
| Mode                 | 3.0526                | 2.9565                 | 2.125                 | –             |
| Standard Deviation   | 1.177157              | 1.010635               | 0.831137              | 0.374215      |
| Sample Variance      | 1.385698              | 1.021382               | 0.690789              | 0.140037      |
| Kurtosis             | – 0.00489             | – 0.0371               | – 0.21249             | – 0.44557     |
| Skewness             | – 0.56733             | – 0.32649              | 0.093098              | 0.183183      |
| Range                | 5                     | 4.591                  | 3.9028                | 1.592913      |
| Minimum              | 0                     | 0.1481                 | 0.8889                | 2.083531      |
| Maximum              | 5                     | 4.7391                 | 4.7917                | 3.676444      |
| Sum                  | 253.1665              | 247.7131               | 247.9948              | 240.4704      |
| Total samples        | 84                    | 84                     | 84                    | 84            |
### Table 22
Descriptive statistics of academic performances of undergraduates studying Mathematics.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                      | 2.50275               | 2.3908                 | 2.04795               | 2.58869   |
| Standard Error            | 0.621084              | 0.438643               | 0.446336              | 0.068625  |
| Median                    | 2.4472                | 2.1868                 | 2.24165               | 2.654247  |
| Mode                      | –                     | –                      | –                     | –         |
| Standard Deviation        | 1.242167              | 0.877286               | 0.892671              | 0.137251  |
| Sample Variance           | 1.542979              | 0.769631               | 0.796862              | 0.018838  |
| Kurtosis                  | 1.206473              | 2.454761               | – 2.3235             | 3.976493  |
| Skewness                  | 0.261558              | 1.293645               | – 0.65725             | 1.9928    |
| Range                     | 3.0214                | 2.0696                 | 1.8567                | 0.28075   |
| Minimum                   | 1.0476                | 1.56                   | 0.9259                | 2.383117  |
| Maximum                   | 4.069                 | 3.6296                 | 2.7826                | 2.663867  |
| Sum                       | 10.011                | 9.5632                 | 8.1918                | 10.35548  |
| Total samples             | 4                     | 4                      | 4                     | 4         |

### Table 23
Descriptive statistics of academic performances of undergraduates studying Physics.

| Grade Point Average (GPA) | First semester (2017) | Second semester (2016) | First semester (2016) | Aggregate |
|---------------------------|-----------------------|------------------------|-----------------------|-----------|
| Mean                      | 3.38375               | 2.59433                | 2.42551               | 2.873113  |
| Standard Error            | 0.160386              | 0.199168               | 0.249894              | 0.043127  |
| Median                    | 3.21895               | 2.58105                | 2.1777                | 2.851922  |
| Mode                      | –                     | –                      | 2.3704                | –         |
| Standard Deviation        | 0.507186              | 0.629823               | 0.790233              | 0.136378  |
| Sample Variance           | 0.257237              | 0.396678               | 0.624468              | 0.018599  |
| Kurtosis                  | 1.069219              | 0.977881               | – 0.40948             | 2.213211  |
| Skewness                  | 1.472281              | – 0.0355               | 0.76557               | 1.018483  |
| Range                     | 1.4643                | 2.3269                 | 2.3334                | 0.503328  |
| Minimum                   | 2.9643                | 1.4231                 | 1.619                 | 2.673289  |
| Maximum                   | 4.4286                | 3.75                   | 3.9524                | 3.176617  |
| Sum                       | 33.8375               | 25.9433                | 24.2551               | 28.73113  |
| Total samples             | 10                    | 10                     | 10                    | 10        |

![Fig. 1](image-url)  
**Fig. 1.** Variation of GPA in the three semesters considered of undergraduates in all colleges.
Fig. 2. Summary of all aggregated GPA across levels in the college of Agricultural Sciences.

Fig. 3. Summary of all aggregated GPA across levels in the college of Business and Social Sciences.

Fig. 4. Summary of all aggregated GPA across levels in the college of Science and Engineering.
Fig. 5. Semester academic performances in programmes in the Colleges.

Fig. 6. The students' performances by college per semester.
Acknowledgements

This research is fully sponsored by the Landmark University Centre for Research and Development, Landmark University, Omu-aran, Nigeria.

Transparency document. Supporting information

Transparency data associated with this article can be found in the online version at https://doi.org/10.1016/j.dib.2018.07.056.

References

[1] O. Oyeyipo, H. Odeyinka, J. Owolabi, A. Afolabi, R. Ojelabi, Survey dataset on the impact of stakeholder’s relationship on the academic performance of engineering students, Data Brief (2018), https://doi.org/10.1016/j.dib.2018.02.059.
[2] S.I. Popoola, A.A. Atayero, J.A. Badejo, T.M. John, J.A. Odukoya, D.O. Omole, Learning analytics for smart campus: data on academic performances of engineering undergraduates in Nigerian private university, Data Brief 17 (2018) 76–94. https://doi.org/10.1016/j.dib.2017.12.059.
[3] S. Rovira, E. Puertas, L. Igual, Data-driven system to predict academic grades and dropout, PLoS One (2017), https://doi.org/10.1371/journal.pone.0171207.

Fig. 7. The overall students’ performance by college across the three semesters (aggregated GPA).