

Where:

X = Mid values

F = frequency

A = assume mean

d = deviation

f = class interval

N = sum of frequency

l = lower limit of the median class

h = class interval

f = frequency of the median class

N/2 = median location

C = cumulative frequency of class before the median class

Mean calculation

$$\text{Mean} = A + \frac{h \sum Fd}{N} \dots\dots\dots(1)$$

$$= 48 + \frac{4(111.25)}{N245}$$

$$= 48 + 1.816$$

$$\text{Mean} = 49.82$$

Median (Md) of the Distribution is given by equation

$$\text{Md} = l + \frac{h}{f} \left(\frac{N}{2} - C \right) \dots\dots\dots(2)$$

To get the location of the median in the distribution (MI)

$$\text{MI} = N/2 \dots\dots\dots(3)$$

$$\frac{N}{2} = \frac{245}{2} = 122.5$$

The value 122.5 in cumulative frequency column of table 3 above is indicative that the median of the distribution is between 51-55 class intervals

Substituting into median equation (2) we have

$$\text{Md} = l + \frac{h}{f} \left(\frac{N}{2} - C \right)$$

$$\text{Md} = 51 + \frac{4}{18} \left(\frac{245}{2} - 121 \right)$$

$$\text{Md} = 51.33$$

The mean and median values are properties of statistical data of random variables. Calculating the means and medians are often a robust way to reduce your many data (numbers) into a single number, one that still capture the essence of your entire set of measurements. An important relation between mean and median can be distinguished from the skewness of data. For a set of data, if mean = median, then it is a symmetric distribution. If mean > median, it is a positively skewed distribution. And, if mean < median, it is negatively skewed (Quora.com).

Negative skew: The left tail is longer; the mass of the distribution is concentrated on the right of the figure. The distribution is said to be left-skewed, left-tailed, or skewed to the left (Dean and Illowsky, openstax cnx).

The mean value is 49.82 percent which is informative that on the average the data analyzed has an almost 50 percent of plagiarism content and an originality of 50 percent also. The distribution is negatively skewed due to the fact that the median (51.33) is greater than the mean which means that the concentration of the distribution is to the right.

CALCULATING DISPERSION

Applying a measure of dispersion, the reliability of the average being used can be assessed.

A small measure of dispersion indicates that the data are clustered closely i.e. around the mean. It indicates that the measure of central tendency used is quite representative of the data and reliable (Shaibu, 2009). The standard deviation is the method adopted to calculate the variability of the distribution.

The standard deviation is one of the measures used to quantify the amount variation or dispersion of a set of data. Standard deviation values is low it indicate that the data tend to be close to the mean and a high standard deviation indicate that the data are spread over a wider range of values.

Standard Deviation (σ) of the Data

Standard deviation (σ) is the most important measure of dispersion or
 $\sigma = 17.88$

variability of the data. For a homogeneous set of data, the standard deviation will be small (Gupta, 2013).

From table 4

$$\sigma = h \sqrt{\frac{\sum Fd^2}{N} - \left(\frac{\sum Fd}{N}\right)^2} \dots\dots\dots(4)$$

$$\sigma = 4 \sqrt{\frac{4945.31}{245} - \left(\frac{111.25}{245}\right)^2}$$

$$\sigma = 4 \sqrt{20.18 - (0.45)^2}$$

$$\sigma = 4 \sqrt{19.98}$$

$$\sigma = 4 \times 4.47$$

Table 4: showing table for standard deviation calculation

| Class interval | Mid value (X) | Frequency (F) | d | Fd | Fd ² |
|----------------|---------------|---------------|-------|--------|-----------------|
| 16-20 | 18 | 5 | -7.5 | -37.5 | 281.25 |
| 21-25 | 23 | 20 | -6.25 | -125 | 781.25 |
| 26-30 | 28 | 22 | -5 | -110 | 550.00 |
| 31-35 | 33 | 23 | -3.75 | -86.25 | 323.44 |
| 36-40 | 38 | 20 | -2.5 | -50 | 125.00 |
| 41-45 | 43 | 14 | -1.25 | -17.5 | 21.88 |
| 46-50 | 48 | 17 | 0 | 0 | 0.00 |
| 51-55 | 53 | 18 | 1.25 | 22.5 | 28.13 |
| 56-60 | 58 | 25 | 2.5 | 62.5 | 156.25 |
| 61-65 | 63 | 20 | 3.75 | 75 | 281.25 |
| 66-70 | 68 | 21 | 5 | 105 | 525.00 |
| 71-75 | 73 | 22 | 6.25 | 137.5 | 859.38 |
| 76-80 | 78 | 18 | 7.5 | 135 | 1012.50 |
| | | 245 | 0 | 111.25 | 4945.31 |

The standard deviation of the distribution is 17.88 and since it is low it shows that the mean is a good representation of the data value.

CONCLUSION

Plagiarism is an issue of major concern in all academic and research institutions across the globe and Nigeria is not an exception with several views and ideas.

This research is basically to ascertain the percentage level of plagiarized content in students' project in Edo State Polytechnic Usen.

A total of 245 students' project was collected from the Polytechnic library for plagiarism test. The plagiarism test upon analysis showed that the mean of the data collected was 49.82 which suggest

that the average score for the test was almost 50 percent and inversely the originality of the project was also 50 percent. In line with global practice as it regards to writing and publishing a work of 50 percent plagiarized content is rated poor.

Furthermore, it is observed that class interval group of 16-20 have the least plagiarized content with an originality of 82 percent, followed by class interval group of 21-25 with originality of 77 percent and the class interval group with the least originality content is 76-80 with just 22 percent and this group has the highest level of plagiarized content with an average of 78 percent.

ACKNOWLEDGEMENT

We wish to express our profound gratitude to the Tertiary Education Trust Fund (TETFund) Nigeria for providing the grant for this research under the Institute Based Research (IBR) and also the Edo State Institute of Technology & Management Usen for the providing the necessary platform for this work.

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