

CHAPTER 3
TABULATION AND PRESENTATION OF DATA

Data Tabulation

Area of IT Security Assurance	Mean	Standard Deviation	Skewness
Cyber Security Policies			
Data Transmission Protection			
Firewall Protection			
Cyber-security Personnel			
User Education Program			
External Audits			
Anti-Malware Software			
Unique Usernames and Passwords			
Access Control			
Vulnerability Scanning			
Vulnerability Remediation			
Ports and Services Control			
Patch Deployment			
Laptop Encryption			
Mobile Device Management			
Mobile Device Access Control			
Incident Response Team			
Information Sharing Policies			
2-Factor Authentication			

Logging and Monitoring			
Web Access Control			
Email Protection			
Cyber-intel Sharing			
Phishing Testing			

Tabulation and presentation of data for IT security assurance at AMA Computer Learning Center (ACLC) are essential for summarizing the findings of the study. A tabular form of data will be used to organize the mean, standard deviation, and skewness for each area of assessment. This format allows for a clear and concise presentation of the results, facilitating easy comparison and interpretation by stakeholders and decision-makers. The tabulated data will be presented in a structured manner, highlighting key findings and trends in IT security practices at ACLC.

Data Gathering

The data collection has initially started through an interview with Mr. Manuel T. Abarques Jr., The MIS Supervisor of AMA Computer Learning Center (ACLC). The interview was conducted to provide a qualitative understanding of the institution's present IT security practices and challenges. The interview was conducted to allow the researchers to collect necessary information that is critical for understanding the nuances of IT Security within the framework of ACLC.

Statistical Analysis

In the data processing stage, the collected data will undergo quantification and cleaning as needed to ensure its accuracy and reliability for analysis. Quantification involves converting qualitative data, such as responses from interviews or surveys, into quantitative data that can be analyzed statistically. This process may include assigning numerical values to qualitative responses or categorizing responses into predefined categories.

The statistical analysis of the data will involve calculating descriptive statistics such as the mean, standard deviation, and skewness for each area of IT security assurance. These measures provide valuable insights into the central tendency, variability, and distribution of responses, respectively. The analysis will help identify areas of strength and weakness in IT security practices at ACLC, guiding future improvements and initiatives. The statistical analysis will be conducted using Excel.

Descriptive Statistics

Descriptive statistics such as mean, standard deviation, and skewness will be used to summarize and describe the data. The mean represents the average response for each area of IT security assurance, the standard deviation indicates the spread of responses around the mean, and skewness measures the asymmetry of the data distribution.

Computation

The mean will be calculated as the sum of all responses divided by the number of responses. The standard deviation will be calculated using the formula:

$$\bar{x} = \frac{\sum x}{n}$$

Where,

x = ith observation,

$\sum x$ = Sum of observations

n = Number of observations

The Standard Deviation will be calculated as the square root of the sum of the squared differences between each response (x_i) and the average response, divided by the number of responses minus one. This measure will help the researchers understand the average variability or spread of the responses from the average response. The standard deviation will be calculated using the formula:

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (X_i - \mu)^2}$$

Where,

σ = Population standard deviation symbol

μ = Population mean

N = total number of observations

The skewness will be calculated as the sum of three times the difference between the average and the middle value divided by the standard deviation. The skewness will be calculated using the formula:

$$\text{Skewness} = \frac{\sum_i^N (X_i - \bar{X})^3}{(N - 1) * \sigma^3}$$

where;

N = number of variables in the distribution

X_i = random variable

\bar{X} = mean of the distribution

σ = standard deviation

Data Visualization

Using excel, the data will be organized into spreadsheets format, with each row representing a respondent and each column representing a specific area of IT security assurance. The mean, standard deviation, and skewness for each area will be calculated using Excel's built-in functions. Descriptive statistics will be computed to summarize the data and identify patterns on security practices at ACLC. Additionally, Excel's charting capabilities will be utilized to create graphs that visually display the data to further analyze and interpret the findings.