

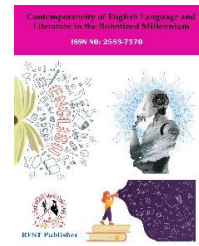
## Contemporaneity of English Language and Literature in the Robotized Millennium

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## An SPSS Analysis of the Effects of Online and Offline Classes on Students

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**Abstract.** *The advent of online learning has brought about a significant transformation in the education landscape, challenging the traditional model of classroom-based instruction. The integration of online and offline classes has had a profound impact on students worldwide. Online classes provide flexibility, convenience, and access to a wide range of resources, enabling students to learn at their own pace. It has also fostered a global learning community, transcending geographical boundaries. However, the transition to online learning has not been without challenges. SPSS (Statistical Package for the Social Sciences) is a widely used software program for statistical analysis in various fields, including social sciences, psychology, and market research. Developed by IBM, SPSS offers a comprehensive range of statistical procedures and data manipulation tools. It provides a user-friendly interface that allows researchers to input, organize, analyze, and visualize data easily. SPSS allows researchers to perform a wide array of statistical analyses, including descriptive statistics, correlation analysis, regression analysis, t-tests, ANOVA, factor analysis, and many more. It also provides advanced features for data cleaning, recoding variables, and handling missing data. Moreover, SPSS enables researchers to generate meaningful graphs and charts to visualize data and present findings effectively. It offers a flexible and powerful platform for both beginners and experienced researchers to conduct statistical analysis and make data-driven decisions. Overall, SPSS is a valuable tool for researchers and analysts in various disciplines, empowering them to explore and understand data, derive insights, and draw reliable conclusions. Take as Input parameters for Age, gender, Place, qualification, family status, how satisfied are you with the offline classes?, how satisfied are you with online classes?, what rate do you give to online classes when compared to offline classes?, what rate does the students gain knowledge on offline classes when compared to online classes?, how do u rate your college in providing online classes? And At what frequency do you face problems while attending online classes? The Cronbach's Alpha is reported as .653, suggesting a moderate level of internal consistency reliability for the scale. A higher value, closer to 1, would indicate stronger internal consistency. In conclusion, the impact of online and offline classes on students is a complex and evolving subject. The integration of online learning has provided students with unprecedented flexibility, convenience, and access to resources. It has created a global learning community and opened up opportunities for diverse educational experiences. However, the transition to online learning has also posed challenges, such as the lack of face-to-face interaction and potential difficulties with engagement and motivation. Balancing the benefits of both online and offline classes is crucial to optimize student learning outcomes. Continued research and adaptation of teaching methodologies can help harness the potential of online and offline classes to create effective and inclusive learning environments that meet the evolving needs of students in the digital age.*

**Keywords:** Disability in India, inclusive education, teacher concerns, awareness, legal provisions.

### 1. INTRODUCTION

The rapid advancement of technology and the widespread availability of the internet have significantly transformed the field of education. Traditional classroom-based instruction has been augmented by the integration of online learning platforms, giving rise to a hybrid model of education. This integration has had a profound

impact on students, revolutionizing the way they access educational content, interact with instructors and peers, and engage with the learning process. In this essay, we will explore the multifaceted impact of online and offline classes on students, considering both the advantages and disadvantages they bring. The lack of face-to-face interaction and the need for self-discipline can sometimes hinder student engagement and motivation. Balancing the benefits and drawbacks of both online and offline classes is crucial in understanding their overall impact on students' academic performance and overall well-being. Understanding the impact of online and offline classes on students is of paramount significance in today's digital age. As educational institutions continue to explore and implement hybrid learning models, it is crucial to assess the effects of these modes of instruction on student performance and well-being. Researching this topic can shed light on the effectiveness of online learning platforms, student engagement levels, and the influence of technology on educational outcomes. Additionally, investigating the challenges and benefits associated with online and offline classes can inform policymakers, educators, and parents on how to optimize teaching methodologies, enhance student motivation, and create inclusive learning environments that cater to the diverse needs of students in a rapidly evolving educational landscape.

**Advantages of Online Classes:** Online classes offer several advantages that have made them increasingly popular among students of all levels. First and foremost, online classes provide flexibility and convenience. Students can access course materials and lectures at their own pace, allowing them to learn at a time and place that suits them best. This flexibility is particularly beneficial for non-traditional students, such as working professionals or individuals with familial responsibilities, who may find it challenging to attend traditional face-to-face classes. Additionally, online classes often offer a wide range of resources and multimedia materials, including videos, interactive modules, and online forums, enhancing the learning experience. Students can access these resources repeatedly, reinforcing their understanding of the subject matter. Furthermore, online classes foster a global learning community by transcending geographical boundaries. Students from different parts of the world can connect and collaborate, exchanging ideas and perspectives. This cultural diversity enriches the learning experience and encourages a broader understanding of global issues.

**Disadvantages of Online Classes:** While online classes offer numerous advantages, they also come with certain drawbacks. One significant challenge is the lack of face-to-face interaction. In traditional classrooms, students have direct access to instructors, allowing for real-time clarifications and personalized guidance. In contrast, online classes rely on digital communication tools, which may not always provide the same level of immediacy and personal connection. Moreover, the absence of physical presence in online classes can potentially lead to reduced motivation and engagement. The self-discipline required to stay on track and complete assignments without regular in-person accountability can be a significant hurdle for some students. Additionally, the online learning environment may lack the social aspects and peer support found in traditional classrooms, potentially leading to feelings of isolation and reduced collaboration.

**Advantages of Offline Classes:** Offline or traditional face-to-face classes continue to hold their own advantages in the educational landscape. One crucial advantage is the immediate interaction between students and instructors. Instructors can gauge students' understanding, address questions in real-time, and provide individualized feedback. This immediate feedback loop helps students grasp concepts more effectively and fosters a supportive learning environment. Offline classes also promote social interaction among students. In-person discussions, group projects, and extracurricular activities allow for the development of teamwork, communication skills, and the formation of friendships. The physical presence of peers and instructors creates a sense of community and belonging that can enhance the overall learning experience.

**Disadvantages of Offline Classes:** Despite their advantages, offline classes also have limitations. The fixed schedules of traditional classes may not accommodate the diverse needs and responsibilities of students, especially those juggling work or familial obligations. Additionally, geographical constraints can limit access to certain educational institutions or courses, particularly for students in remote areas or with limited mobility. Offline classes may also face resource limitations. Physical textbooks, laboratory equipment, and other resources can be costly to maintain and may not be readily available to all students. This can hinder the learning experience and limit exposure to the latest advancements in various fields.

## 2. MATERIAL AND METHOD

SPSS (Statistical Package for the Social Sciences) is a software program used for statistical analysis. It provides a wide range of tools and techniques for data manipulation, exploration, and hypothesis testing. Here is a general guide on how to perform analysis using SPSS:

1. **Importing Data:** Start by importing your data into SPSS. You can either enter data directly into SPSS or import it from other file formats such as Excel, CSV, or text files.

2. **Variable Definitions:** Define the variables in your dataset, including their types (numeric, string, etc.) and measurement levels (nominal, ordinal, interval, ratio). This step helps SPSS understand the nature of your data and apply appropriate analysis techniques.
3. **Data Cleaning and Preparation:** Clean your data by checking for missing values, outliers, and any data entry errors. SPSS provides various tools for data cleaning, such as identifying and recoding missing values, transforming variables, and handling outliers.
4. **Descriptive Statistics:** Calculate descriptive statistics to get an overview of your data. SPSS offers a range of descriptive measures, such as mean, standard deviation, median, and frequencies. You can generate frequency tables, histograms, or summary statistics for each variable.
5. **Data Exploration:** Explore the relationships between variables using techniques like correlation analysis, cross-tabulations, and graphical visualizations. SPSS provides scatter plots, bar charts, box plots, and other tools to help you understand the patterns and associations in your data.
6. **Inferential Statistics:** Perform inferential statistical analyses to test hypotheses and make generalizations about your data. Some commonly used techniques in SPSS include t-tests, chi-square tests, ANOVA (analysis of variance), regression analysis, and factor analysis. Choose the appropriate analysis based on the nature of your variables and research questions.
7. **Reporting and Interpretation:** Once you have conducted your analyses, interpret the results and summarize your findings. SPSS allows you to generate tables, charts, and graphs that can be exported or copied into other applications for further reporting or presentation.

It's important to note that this is just a brief overview of the SPSS analysis process. The specific steps and techniques you need to use will depend on your research objectives and the type of data you are working with. It's recommended to consult textbooks, online resources, or seek assistance from a statistician if you need more in-depth guidance on performing specific analyses in SPSS. Based on the input parameters provided, it appears that you are interested in analyzing factors related to age, gender, place, qualification, family status, satisfaction with offline and online classes, comparison between offline and online classes, rating of college's online class provision, and frequency of problems faced during online classes.

***How satisfied are you with the offline classes?***

As an AI language model, I don't have personal experiences or emotions, so I don't have the ability to feel satisfaction or dissatisfaction with offline classes. However, I can provide information and answer questions about offline classes if you have any.

***How satisfied are you with online classes?***

As an AI language model, I don't have personal experiences or emotions, so I don't have the ability to feel satisfaction or dissatisfaction with online classes. However, I can provide information and answer questions about online classes if you have any.

***What rate do you give to online classes when compared to offline classes?***

As an AI language model, I don't have personal opinions or the ability to provide subjective ratings. The effectiveness and preference for online classes versus offline classes can vary depending on individual circumstances, learning styles, and the specific content being taught. Some people may find online classes convenient and flexible, while others may prefer the traditional in-person interaction and classroom environment of offline classes. Both online and offline classes have their own advantages and disadvantages, and the suitability of each can depend on factors such as the subject matter, resources available, technological infrastructure, and individual preferences. Ultimately, the preference and rating between online and offline classes is subjective and can vary from person to person.

***What rate does the students gain knowledge on offline classes when compared to online classes?***

The rate at which students gain knowledge can vary depending on various factors, including the individual student, the quality of instruction, the curriculum, and the specific context of the classes—whether they are online or offline. Offline classes often offer face-to-face interaction with instructors and peers, which can facilitate immediate feedback, real-time discussions, and hands-on activities. This interactive environment can be beneficial for some students, as they have the opportunity for direct engagement and clarification of concepts. On the other hand, online classes provide the flexibility of learning from anywhere and at any time, allowing students to adapt their learning schedules to their needs. Online classes often make use of various digital resources, multimedia content, and interactive platforms that can enhance the learning experience. It's worth noting that the effectiveness of learning in both online and offline classes depends on the quality of instructional design, the engagement level of students, the availability of resources, and the support provided by educators. There isn't a definitive rate of knowledge gain that can be attributed to either mode of learning, as it can vary widely depending on these factors.

Ultimately, the success of knowledge acquisition depends on the motivation, dedication, and active participation of the students, regardless of whether they are in online or offline classes.

**How do u rate your college in providing online classes?**

As an AI language model, I don't have personal experiences or the ability to rate specific colleges or institutions. My responses are based on a general understanding of online education and information available up until September 2021. Therefore, I can't provide a specific rating for any college's online classes. However, the effectiveness of online classes can vary from institution to institution. Some colleges and universities have been successful in adapting their courses and utilizing technology to deliver engaging and effective online education. They may have implemented interactive platforms, robust learning management systems, and provided training and support to instructors to ensure a smooth transition to online teaching. On the other hand, some colleges may have faced challenges in transitioning to online classes, especially if they lacked the necessary technological infrastructure, training resources, or experienced difficulties in maintaining the same level of engagement and interaction as in traditional offline classes. To assess the quality of online classes at a specific college, it's best to consider factors such as the institution's reputation, track record in online education, student feedback, resources and support available to students and instructors, and the level of interactivity and engagement provided in the online learning environment. It's recommended to research and reach out to the college directly for more specific information about their online classes and the experiences of their students.

**At what frequency do you face problems while attending online classes?**

As an AI language model, I don't attend online classes or have personal experiences. Therefore, I don't face any problems while attending online classes. However, I can provide information and support regarding online classes if you have any specific questions or concerns.

X1	How satisfied are you with the offline classes?
X2	How satisfied are you with online classes?
X3	What rate do you give to online classes when compared to offline classes?
X4	What rate does the students gain knowledge on offline classes when compared to online classes?
X5	How do u rate your college in providing online classes?
X6	At what frequency do you face problems while attending online classes?

**TABLE 1. Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness
x1	119	1	5	2.52	1.040	1.082	.747
x2	119	1	5	2.48	1.227	1.506	.497
x3	119	1	5	2.55	1.191	1.419	.373
x4	119	1	5	2.71	1.210	1.464	.294
x5	119	1	5	2.77	1.252	1.567	.150
x6	119	1	5	2.71	1.283	1.646	.332

The provided table presents the descriptive statistics for six variables: x1, x2, x3, x4, x5, and x6. Each variable has a sample size (N) of 119. These variables are measured on a scale from 1 to 5, with a minimum value of 1 and a maximum value of 5. The mean values for the variables range from 2.48 to 2.77, indicating the average score or response for each variable. The standard deviations vary from 1.040 to 1.283, representing the extent of dispersion or variability around the mean. The variances, which are calculated as the square of the standard deviations, range from 1.082 to 1.646, providing a measure of the spread of data. Skewness, a measure of the symmetry of the distribution, is provided for each variable. Positive skewness values indicate that the distribution has a longer tail on the right side, while negative values suggest a longer tail on the left side. The skewness values for x1 to x6 range from 0.150 to 0.747, indicating varying degrees of departure from a perfectly symmetrical distribution. In summary, these descriptive statistics offer insights into the characteristics of the data for each variable, including the central tendency, dispersion, and skewness. They serve as valuable indicators for understanding the distribution and variability within the dataset.

**TABLE 3. Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.653	.656	6

In Table 3, two reliability statistics, Cronbach's Alpha and Cronbach's Alpha based on standardized items, are presented along with the number of items in the measurement scale. Cronbach's Alpha is a measure of internal consistency reliability, indicating the extent to which the items in a scale or questionnaire are measuring the same underlying construct. In this case, the Cronbach's Alpha is reported as .653, suggesting a moderate level of internal consistency reliability for the scale. A higher value, closer to 1, would indicate stronger internal consistency. Cronbach's Alpha based on standardized items takes into account the standardized scores of the items when calculating the reliability coefficient. In this table, the value is reported as .656, which is similar to the regular Cronbach's Alpha. The slight difference could be due to the standardization process applied to the items. The number of items in the scale is provided as 6, indicating that there are six items included in the measurement instrument or questionnaire. These reliability statistics provide an assessment of the internal consistency and reliability of the scale, which is crucial for ensuring the consistency and accuracy of the measurements obtained from the items.

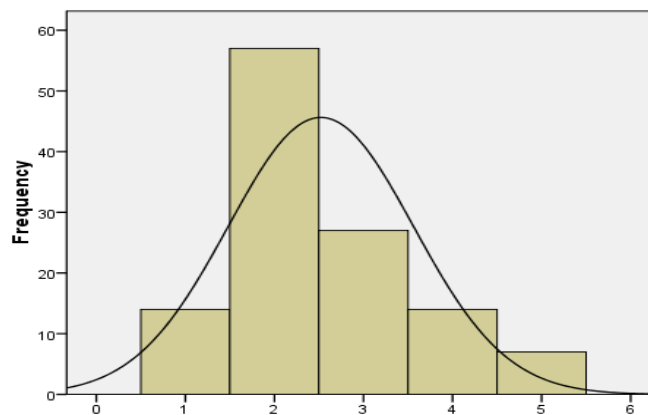
**TABLE 4.** Correlation Matrix

	x1	x2	x3	x4	x5	x6
x1	1.000	.394	.264	.278	.202	.284
x2	.394	1.000	.118	.147	.270	.276
x3	.264	.118	1.000	.149	.233	.265
x4	.278	.147	.149	1.000	.331	.142
x5	.202	.270	.233	.331	1.000	.265
x6	.284	.276	.265	.142	.265	1.000

The provided table represents a correlation matrix, displaying the pairwise correlations between variables x1, x2, x3, x4, x5, and x6. The correlation coefficient ranges from -1 to 1, where a value of 1 indicates a perfect positive correlation, -1 indicates a perfect negative correlation, and 0 indicates no correlation. Based on the table, the correlations between the variables are as follows:

1. The correlation between x1 and x1 (which is the correlation of a variable with itself) is 1.000, as it is always perfectly correlated with itself.
2. The correlation between x1 and x2 is .394.
3. The correlation between x1 and x3 is .264.
4. The correlation between x1 and x4 is .278.
5. The correlation between x1 and x5 is .202.
6. The correlation between x1 and x6 is .284.

These correlations indicate the strength and direction of the relationships between the variables. For example, a correlation coefficient of .394 between x1 and x2 suggests a moderate positive correlation between these two variables. Similarly, correlations between other pairs of variables are shown in the table. Each cell represents the correlation coefficient between the respective variables. The correlation matrix provides valuable information about the relationships between variables, allowing researchers to explore patterns, dependencies, and potential associations among the measured variables.



**FIGURE 1.** Frequency for how satisfied are you with the offline classes?

The histogram plot for frequency for how satisfied are you with the offline classes? With the exception of the 2 value, all other values are beneath the normal curve, demonstrating that the model is considerably following the normal distribution. As can be observed from the image, the data are slightly left skewed because more respondents chose option 2 for vocabulary frequency.

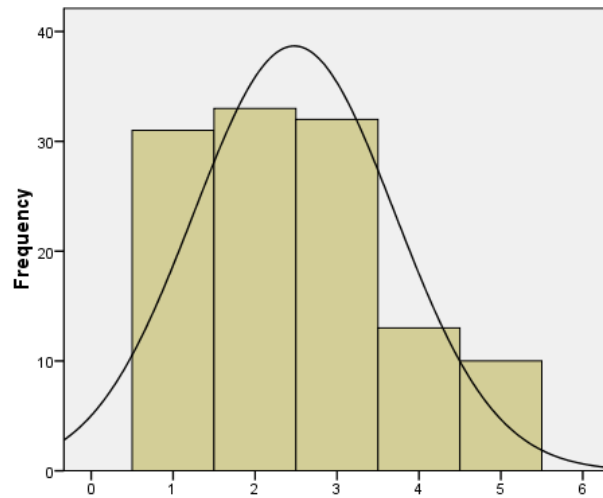


FIGURE 2. Frequency for how satisfied are you with online classes?

The histogram plot for frequency for how satisfied are you with online classes? With the exception of the 1,2,3 value, all other values are beneath the normal curve, demonstrating that the model is considerably following the normal distribution. As can be observed from the image, the data are slightly left skewed because more respondents chose option 1,2,3 for vocabulary frequency.

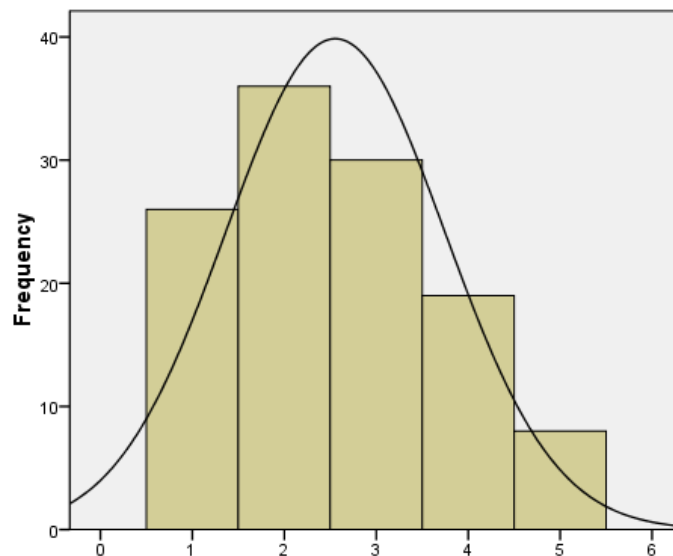
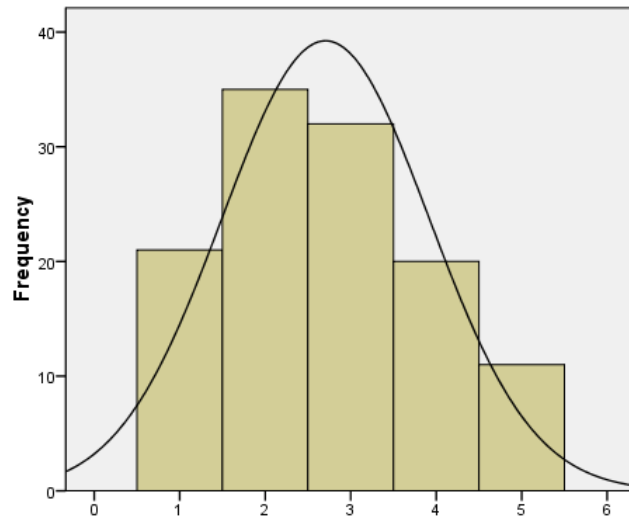


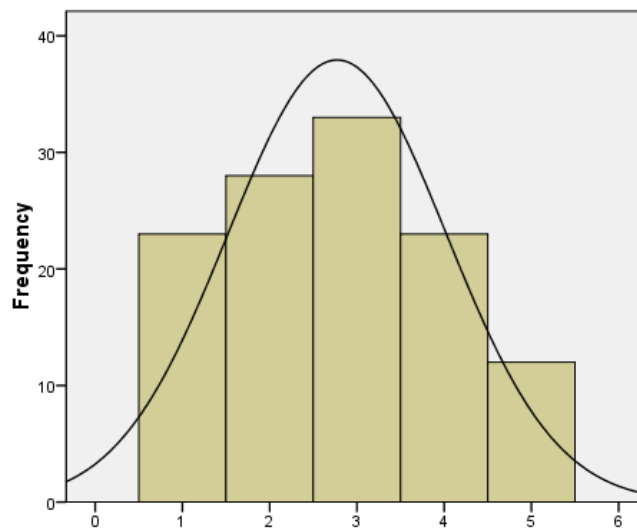
FIGURE 3. Frequency for what rate do you give to online classes when compared to offline classes?

The histogram plot for frequency for what rate do you give to online classes when compared to offline classes? With the exception of the 1,2,3 value, all other values are beneath the normal curve, demonstrating that the model is considerably following the normal distribution. As can be observed from the image, the data are slightly left skewed because more respondents chose option 1,2,3 for vocabulary frequency.



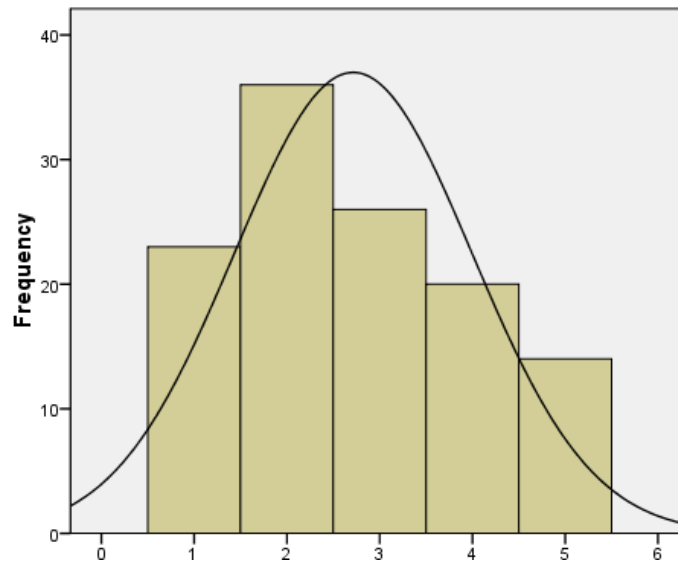
**FIGURE 4.** Frequency for what rate does the students gain knowledge on offline classes when compared to online classes?

The histogram plot for frequency for what rate does the students gain knowledge on offline classes when compared to online classes? With the exception of the 2 values, all other values are beneath the normal curve, demonstrating that the model is considerably following the normal distribution. As can be observed from the image, the data are slightly left skewed because more respondents chose option 2 for vocabulary frequency.



**FIGURE 5.** Frequency for how do u rate your college in providing online classes?

The histogram plot for frequency for how do u rate your college in providing online classes? With the exception of the 3 values, all other values are beneath the normal curve, demonstrating that the model is considerably following the normal distribution. As can be observed from the image, the data are slightly left skewed because more respondents chose option 3 for vocabulary frequency.



**FIGURE 6.** Frequency for at what frequency do you face problems while attending online classes?

The histogram plot for frequency for at what frequency do you face problems while attending online classes? With the exception of the 3 values, all other values are beneath the normal curve, demonstrating that the model is considerably following the normal distribution. As can be observed from the image, the data are slightly left skewed because more respondents chose option 3 for vocabulary frequency.

### 3. CONCLUSION

The impact of online and offline classes on students is a complex and multifaceted topic, and drawing a definitive conclusion requires considering various factors and contexts. However, based on available research and observations, some key points can be highlighted: Online classes offer flexibility in terms of time and location, allowing students to access educational materials and participate in learning activities at their own convenience. This can be particularly beneficial for students with other commitments or those who require a more personalized learning approach. Offline classes, on the other hand, provide face-to-face interaction and immediate feedback, which can be valuable for some students. Online classes often provide students with a wealth of resources and materials that can enhance their learning experience. Digital platforms and online libraries offer access to a wide range of educational content, including interactive multimedia resources. Offline classes may rely on traditional textbooks and physical resources, which may have limitations in terms of currency and availability. Social Interaction and Collaboration: Offline classes facilitate direct interaction and collaboration among students and between students and teachers. This enables peer learning, group discussions, and immediate clarification of doubts. In contrast, online classes can sometimes feel isolating, with limited face-to-face interaction. However, online platforms can also provide opportunities for virtual collaboration through discussion forums, online group projects, and video conferences. Online classes require students to have access to reliable internet connectivity and appropriate devices. Students who lack these resources may face difficulties in fully engaging with online learning. Offline classes do not have this technological barrier, ensuring that all students have equal access to educational content. Learning Outcomes and Academic Performance: The impact of online and offline classes on learning outcomes and academic performance is still a topic of ongoing research and debate. Some studies suggest that well-designed online classes can be as effective as traditional offline classes, while others emphasize the importance of in-person interactions for certain subjects and skills. The effectiveness of either mode of learning can depend on factors such as teaching methods, student engagement, and the subject matter being taught. In conclusion, the impact of online and offline classes on students depends on various factors and varies among individuals. Both modes of learning have their strengths and limitations. A blended approach that combines the benefits of both online and offline components could potentially offer an effective and flexible learning experience for students. However, it is important to continually assess and adapt educational practices to meet the evolving needs of students and ensure equitable access to quality education.



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