

TITLE : DATA ANALYTICS USING MICROSOFT POWER BI

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TRENDS OF DATA ANALYTICS IN DIFFERENT SECTORS

- RETAIL
- SPORTS
- HEALTHCARE
- HOSPITALITY
- ENTERTAINMENT, COMMUNICATIONS AND THE MEDIA

REFLECTION

It has been a widely acknowledged fact that big data has become a big game changer in most of the modern industries over the last few years. As big data continues to permeate our day-to-day lives the number of different industries that are adopting big data continues to increase. It is well said that when new technologies become cheaper and easier to use, they have the potential to transform industries.

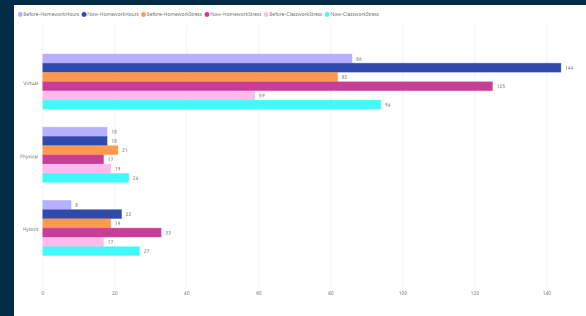
DATA VISUALIZATION USING MICROSOFT POWER BI

Narrative of data analytics

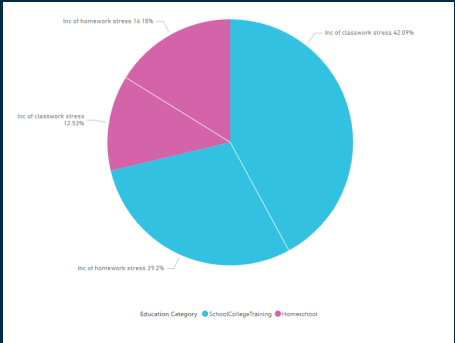
Introduction

Since the world has been hit by a global pandemic that has been going on since 2019, most educational institutions have been temporarily closed owing to ongoing health issues. Students all over the world have been having their classes virtually through online learning to substitute their physical classes. The dataset we have chosen for our data analytic is a survey on the impact of covid-19 on students' educational stress. Our goal is to analyze the data and create data visualization in which we will be using Microsoft Power BI to study how the changes of learning method after Covid-19 pandemic affects students' stress.

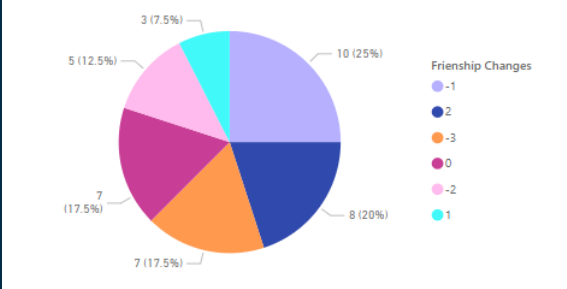
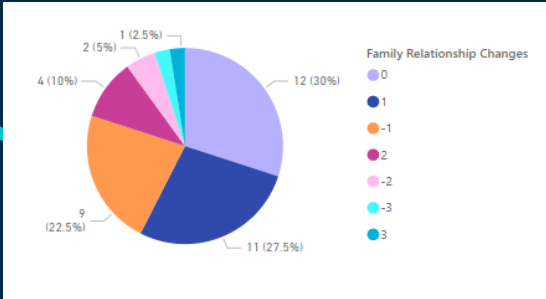
1. Does the global pandemic affect the students mental health in terms of education?
2. Do the students that are being homeschooled rather than normal school experience lower stress levels?
3. Does having the teaching and learning session virtually increase the homework hours of the students?
4. Does the global pandemic that leads to the virtual learning process have any impact on student's friendships?
5. Does the global pandemic that leads to the virtual learning process have any impact on student's family relationships?



- Based on the graph of the relationship between after covid 19 learning methods with before homework hours and now homework hours, it is clearly shown that the total number of now homework hours for virtual learning methods have increased from 88 to 144 hours. The total homework hours for the physical learning method remain the same for before covid-19 and after covid-19 happened. The total homework hours for hybrids has increased from 8 hours to 27 hours.
- Students' homework hours are substantially increased by having the teaching and learning sessions virtually.
- The increase in homeworks during global pandemic is far too great and this will result in worsening student's mental health. This issue might be caused by the reason that the teachers want to ensure that the students understand lessons that are being taught. Therefore, they were provided with more homework since they cannot consult the teachers face-to-face if they have a problem in their studies.



- The pie chart shows the relationship between the count of after Covid-19 learning method with family relationship changes.
- Based on the total number of students, it is shown that the highest change of family relationship between the students is 0 in which it means that there are no changes in their family relationship for 12 students (30%).
- There are 11 students with 1 change in their family relationship (27.5%), 9 students with -1 changes (22.5%), 4 students with 2 changes (10%), 2 students with -2 changes(5%), 1 student with 3 change (2.5%) and 1 student with -3 change(2.5%).
- Interpretation of Analytic : From the analytic, we can see that the family relationship between the students are not affected negatively for the majority. Majority of the students' family relationships stay the same or increase. This may be because since the classes are held virtually where the students can take their classes from home, students get to spend more time with their family, therefore increasing the family bond. As a result, they become closer with their family and increase their family relationships.



Conclusion

In a nutshell, the global pandemic does have an impact on students' mental health in terms of educational stress. Due to virtual classes, students are under more stress in terms of classwork and assignments. Students also spend more time completing homework now than they did before the pandemic. This is because by having online classes, there are no limits on students' schedules where students are given homework and classwork at any time. Students are assumed to have more free time when their classes are held remotely. However, some of the students also have other responsibilities.. For instance, if a student takes their class from home, they are expected to assist their parents with housework. As a result, they get more stressed, and they even have only a little time for themselves which brings a negative impact to their mental health. However, from the analytic, we can see that students that are being homeschooled experience lower stress levels than students who attend normal schools. This possibly a result of the students that are being homeschooled are used to the environment. Therefore, having to change their learning method after the covid-19 outbreak does not affect them as much. Based on the outputs, we can also conclude that the students' homework hours are greatly increased by having their classes remotely. The students also have some changes in their family relationships and friendship since having virtual classes. Majority of the students have either 0 or increased family relationships as they get to spend more time with their family. However, the students have a negative change in their friendships as they could not spend time with their friends as before. It has been observed that students' mental health has worsened as a result of taking online classes. Not to mention, there is educational stress from academic burnout. On that account, in this new norm, students are advised to take good care of their mental health as it is important. They must make certain that their schedule is in order and have time for themselves to take care of their health.

INDUSTRIAL TALK 7 Introduction to Data Visualization (iCEO)

WHERE?

Power BI service is a secure Microsoft hosted cloud service that lets users view dashboards, reports, and Power BI apps; a type of content that combines related dashboards, and reports; using a web browser or via mobile apps for Windows, iOS, and Android.

REFLECTION

From the talk, we learn on how to use and summarize the steps into 4 parts when visualizing the data when using Microsoft Power BI. First, every data has story that they want to tell. It can sometimes be in form of trends, correlations or outliers. After finding out the story, we can know what type and relationship our data is. This process will help a lot in the final steps where we will be presenting and visualizing our data into suitable chart or visualization.

Variable transformation

- There are some variables that are being transformed by changing the numbers to percentage and combining categories.
1. The first variable that is being combined is "Before-ClassworkStress" with "Now-ClassworkStress" in which we combine to count the increment of classwork stress before the pandemic and after pandemic happened named "Inc of classwork stress".
 2. The second variable that are being combined is "Before-HomeworkStress" with "Now-HomeworkStress" in which we combine to count the increment of homework stress before the pandemic and after the pandemic happened named "Inc of homework stress".
 3. The third variable that are being combined is "Before-HomeworkHours" with "Now-HomeworkHours" in which we combine to count the increment of student's homework hours before the pandemic happened and after the pandemic named "Inc of homework hours".

