Role of Data Visualization in Storytelling by Curating Data into an Easier form

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Abstract

Data visualization is an effective method to enhance the efficiency of the storytelling process through clearly delivering the message to the audience. This research study is based on the role of data visualization in storytelling through curetting data into an easier form. In order to demonstrate the importance of data visualization, the research study has provided a concept about the data visualization and its benefits on the organization. In addition, the research study has critically evaluated the impact of data visualization on the process of storytelling. However, the research has implicated the positivism research philosophy, descriptive research design and deductive research approach to justify the research purpose. On the other hand, the data has been collected through a secondary method of data collection to collect the valuable data regarding the research topic.

Keywords

Data Visualization, Information, Organization, Storytelling.

INTRODUCTION

Storytelling through data visualization creates a positive impact on the efficiency level and it helps the audience to understand the message in a clear manner. Data visualization can enhance the presentation of the storytelling by attracting the audience through insights, graphs and recognizable trends regarding the storyline. An excellent view conveys a storey, removes the sound from the data and highlights the important facts. A careful balancing act between form and feature is effective data display. In addition, data visualization is the process of combining factual data with human communication to present an attractive visual of the story that will support the organization to deliver their message in a succinct way. Moreover, the process of data visualization can support the governance and any other professional industry to minimize the data that will support the organization to understand the important data in a succinct way.

In addition, data visualization also supports an organization to analyse their financial statement that supports the organization to prepare the budget. As per the words of Waskom (2021), professional industries that are connected with the **data visualization,** they are performing **93%** better than the organizations that are not connected with data visualization. On the other hand, according to the words of Qin *et al.* (2020), **68%** of the enterprise believe that the data provided through data visualization are accurate and that support them to get the essential information regarding the project. Moreover, if the utilization of data visualization can be presented in **graphs** then the project outcome can be enhanced up to **97%**. According to Perin *et al.* (2018), management with an effective data visualization technique can recover their data or identify any data **47%** faster than the

management who is depending on the reporting dashboards process. Here, in this research article a brief overview will be provided on the importance of **data visualization in storytelling by crating data into an easier form.** *The aim of this research study is to evaluate the importance of data visualization in storytelling by crating data into an easier form.*[5][7][10]

The concept of Data visualization and its benefits

Data visualization is a process of transforming data into a visual presentation in a succinct manner that supports the organization to convey their audience through data visualization. As per the words of Po *et al.* (2020), visualization of data is a method of presenting a graphical presentation through the utilization of graphs, charts based on the information. As a result, it supports an organization to deliver a clear message about the company's goals and future activities. On the other hand, the concept of data visualization also supports an organization to minimize the big data and summarize the valuable information in a succinct manner from the big data. In addition, data visualization also provides a clear image about the information that the organization is passing through their presentation. In recent times, the usage of advanced technology has generated more data that is quite hard for an organization to maintain in a succinct way. In that context data visualization creates a massive impact by compressing the data into graphical images that can be understood in an easy way.

As per the words of Engebretsen and Kennedy (2020), the utilization of data visualization can also enhance the financial performance or efficiency of an organization through analysing the financial statement of the organization. In the competitive world, 73% of the international organization is

utilizing the data visualization technique to critically analyse the financial statement for the organization, which creates a positive impact on the preparation of the budget. On the other hand, data visualization also takes an essential step in the intelligence process of an organization by providing an appropriate conclusion of the raw data. In addition, data visualization also supports the advanced analytics of data science by presenting the machine language and any other algorithm analytics to visual context to illustrate the concept of that data in an easy way.

Figure 1: Concept of Data Visualization [2]

Impact of data visualization in storytelling

Data visualization is one of the most essential and crucial components in the process of storytelling. Since the utilization of data visualization supports an organization to present the insights of a data through visual representation that can be easily understood by the viewer. As a result, that supports the organization to deliver their message in a better way however, there are two types of data visualization method presented in the data visualization process such as, exploratory visuals and explanatory visuals. In order to enhance the efficiency level of the storytelling process an organization must adapt an effective data visualization technique based on their storytelling data. Moreover, also in the financial management of an organization data visualization can create a massive impact by analysing the budget and financial statement of an organization. As a result, that will support the organization to prepare an effective budget to mitigate the company's goal. On the other hand, data visualization also creates a positive impact on the context of attracting the attention of the audience towards the story telling.

Figure 3: Storytelling process with visualization [11]

As per the word of Watson (2017), the utilization of data visualization can support an organization to gain more customers through the process of storytelling. Moreover, data visualization also enhances the efficiency of an organization by providing clear messages to the employees as well as the stakeholders. As a result, that supports the employees and the stakeholders to work accordingly with the goal of an organization that creates a positive impact on the performance of an organization. As per the words of Weber (2020), organizations that are presenting their storytelling activity through the data visualization process are 73% more effective than the organizations that are utilizing the normal reporting and dashboard system. Therefore, through the findings it can be easily stated that the utilization of data visualization can create a positive impact on the performance of the storytelling process.[11][12]

METHODS AND MATERIALS

In order to evaluate the ideology and identify the factual evidence of information, this research study has adopted a *positivism research philosophy.* As per the words of Ryan (2018), the utilization of positivism research philosophy can support an organization to gain valuable information by elaborating the hypothesis and factual data. On the other hand, to mitigate the research objectives the research study has adopted a *descriptive research design* to give justification to the purpose and objectives of the research study. In addition, instead of focusing on logical induction to establish an innovative assumption based on current conceptions and practices, the research study has implicated a *deductive research approach*. As per the words of Pearse (2019), the usage of deductive approach can support the researcher to examine the relationship among the research components such as data visualization and storytelling. On the other hand, in this research study the researcher used a deductive research approach to generate and evaluate a recommended hypothesis that supports the researcher to describe the research subject. Moreover, the research study has implicated a *secondary quantitative method* of data collection that supports the researcher to gain the valuable data from graphs and tables from reliable verified websites and scholarly articles. In addition, journals, scholar, and peer reviewed articles from 2017 to 2021 have been used in this research study to collect the secondary source of data regarding the research topic.[4][8]

RESULT AND DISCUSSION

Data visualization in the process of storytelling has created a positive impact on performance as well as the efficiency level of the storytelling. Here in this part of the research study a brief overview will be provided on the impact of data visualization in order to enhance the efficiency level storytelling process. In order to critically analyse the importance of data visualization on story telling a graph chart has been created on the basis of the number of age groups in India affected by the spread of Covid 19 pandemic [9]. In

addition, many news channels are also utilizing this digital visualization to provide information about the rise of Covid 19 cases in India through demographic charts. As a result of this, the audience is getting a better image of the message that the news channel is trying to deliver to the audience.
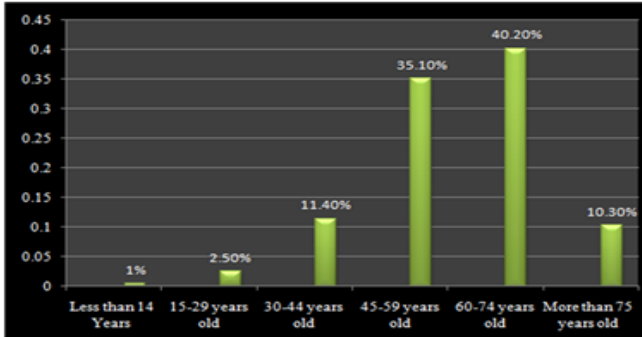

Figure 3: Impact of Covid 19 on the various age groups of people[9]

The impact of Covid 19 on the different age group has been demonstrated in the figure number 3.

According to figure number 3, researchers can easily gain a sustainable overview about the impact of Covid 19 on the various age groups. By following the figure number 3, it can be easily stated that the visualization process does not need to be elaborated to the audience, the audience can easily grasp the necessary information through the demographic charts.

Table 1: Growth of the International data visualization market from 2020 to 2026 [3].

Years	Growth (Billion USD)
2020	2.99 billion USD
2021	3.10 billion USD
2022	3.65 billion USD
2023	3.98 billion USD
2024	4.53 billion USD
2025	4.98 billion USD
2026	5.17 billion USD

In recent years the market of data visualization has reached up to 18%, the international market of the visualization of data was 2.99 Billion USD by the end of 2020. However, according to the global market of data visualization, they estimated that the market of data visualization will rise up to 5.17 Billion USD by the end of 2026, and it will also grow at a rate of 9.69% CAGR [3]. Therefore, it can be easily stated that the future of data visualization is really bright, therefore, in order to enhance the level of efficiency of the storytelling activity an organization must need to adapt the data visualization process that will support the organization to grow internally as well as externally by mitigating the demand of stakeholders. As per the words of Bogucka *et al.* (2021), through the implication of storytelling process and data visualization process an organization can enhance their stakeholder's loyalty by conveying the clear message about the achievable goal of the company. As a result, that supports the organization to gain customer loyalty, and through the customer engagement organization can easily identify the customer demand that will support them to mitigate the client demand.[1]

CONCLUSION

According to the previous description it can be easily stated that the utilization of data visualization in the process of storytelling is helpful to clearly describe any content to the audience. This research study has provided a sustainable viewpoint about the way an organization can utilise the data visualization process to enhance the storytelling process by summarizing the needed content into a demographic chart or graph. Moreover, the research study also highlighted the concept of data visualization and its benefits on the performance of an organization. On the other hand, the research study has elaborated the importance of data visualization in order to enhance the performance of the storytelling process through demographic graph in the result and discussion part of the research.

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