

MENYEMAI MINAT, MENUAI KEJAYAAN Perjalanan Seorang Pendidik

Ts. Wan Anisha Wan Mohammad



ISTIMEWA ANAK SULUNG

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Sidang Redaksi:

Ketua Editor

Dr. Siti Nurleena Abu Mansor

Editor

Ts. Jamal Othman

Pn. Siti Mariam Saad

Pn. Zuraira Libasin

En. Ahmad Rashidi Azudin

Terbitan:



Unit Penerbitan e-Buletin Jabatan Sains Komputer dan Matematik UiTM Cawangan Pulau Pinang 13500 Permatang Pauh Pulau Pinang



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Isi Kandungan e-Buletin





PERKONCSIAN

The Usage of Power BI Tools

In today's data-driven world, organizations increasingly rely on business analytics tools to transform raw data into actionable insights. One of the most popular and powerful tools in this domain is Power BI, a business intelligence service by Microsoft. Designed to provide interactive visualizations and business intelligence capabilities, Power BI enables users to create reports and dashboards with ease. Power BI explores the usage, benefits, challenges, and practical applications of Power BI tools, with a focus on how they empower users to make informed decisions

Power BI is renowned for its extensive data connectivity options, allowing users to import data from various sources such as Excel, SQL Server, and cloud-based platforms like Google Analytics and Salesforce. The Power Query Editor in Microsoft Excel is a notable feature that simplifies data transformation through an intuitive, code-free interface. Users can clean, shape, and combine data efficiently before analyzing it. Additionally, Power BI's ability to handle real-time data streaming makes it an invaluable tool for businesses that need to monitor key metrics continuously.





The Data Analysis Expressions (DAX) language is another powerful aspect of Power Bl. DAX enables users to create custom calculations, perform time-based analysis, and extract deeper insights from datasets. While the learning curve for DAX can be steep for beginners, its flexibility and power make it an essential tool for advanced users. Moreover, Power Bl's integration with other Microsoft 365 applications and Azure services enhances its utility, making it possible to embed reports in SharePoint, Microsoft Teams, and even external websites.

The usage of Power BI has grown rapidly across various industries. In finance, it is used for budget analysis, financial forecasting, and risk management. Retailers leverage Power BI to track sales performance, manage inventory, and understand customer preferences. In the healthcare sector, it helps in analyzing patient data, managing resources, and improving service efficiency. Educational institutions also benefit from Power BI by analyzing student performance, attendance, and resource allocation, enabling data-driven decision-making for educators and administrators.



Despite its numerous advantages, Power BI does have some limitations. The data size limitation in the free version, which caps datasets at 1 GB, can be restrictive for organizations with large volumes of data. Additionally, the learning curve for DAX can pose challenges for new users. Some advanced features, such as incremental refresh and AI capabilities, are only available in the Premium version, which can be costly for small businesses. Nevertheless, the tool's affordability, especially in its Pro version, and its robust community support help mitigate these challenges.

A practical example of Power BI's effectiveness was demonstrated during the Bengkel Data Literasi Power BI held on 10 Mei, 24 Mei, dan 21 Jun 2024 at Smart Classroom, UiTM Cawangan Pulau Pinang Kampus Permatang Pauh. This workshop, led by Dr. Azhar Ahmad and Dr. Hanis Safirah, provided participants with hands-on experience in using Power BI for data cleaning, DAX basics, and dashboard creation. The focus was on real-world applications, such as analyzing academic performance and operational efficiency. Participants learned how to convert raw data into meaningful insights and present them effectively through interactive dashboards.

In conclusion, Power BI has proven to be a versatile and user-friendly tool that empowers users to harness the power of data for better decision-making. Its integration capabilities, real-time analytics, and powerful DAX language make it a preferred choice for organizations across industries. Although there are some challenges related to data limits and advanced features, the benefits of Power BI far outweigh its limitations. As more organizations adopt data-driven strategies, the role of Power BI is expected to expand, further solidifying its position as a leading business intelligence tool.

