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COINDAG: A DATABASE INTEGRATION WITH APPLICATION ENGINE TO IMPROVE ACCESSIBILITY TO INFORMATION DURING INFODEMIC AND PANDEMIC COVID-19 IN ENHANCING DATA-DRIVEN DECISION-MAKING

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1. INTRODUCTION

Infodemic can be defined as too much information, including false or misleading information in the digital and physical environment during a disease outbreak (World Health Organization, 2020). Almost every minute, people receive too much information related to COVID-19, yet people are not sure of the truth and accuracy of the news or information. Hence, the false news that is becoming more prevalent nowadays must be addressed immediately (Sualman, 2020). Furthermore, Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization (WHO) mentioned, that in their efforts to fight the COVID-19 infodemic, WHO have partnered with the United Kingdom government to run *Stop the Spread*, an awareness campaign on the risks of incorrect and false information about the pandemic. In addition, Antonio Guterres, Secretary-General of the United Nations (UN) mentioned, other than COVID-19 as a common enemy; the "infodemic" of misinformation is another challenge; to overcome the coronavirus; hence, urged to promote facts and science urgently.

Infodemic and pandemic COVID-19 have impacted all the world's organizations, including higher education institutions. As a mega university in Malaysia, Universiti Teknologi MARA also faces a similar situation whereby during the outbreak of the pandemic, the university faced various challenges in making decisions for the organization stakeholders' wellbeing. For this reason, this paper presents a database integration with the application engine called CoiNDAG, designed to improve the accessibility of important information during infodemic and pandemic COVID-19. The discussion of this paper aims to achieve two main objectives: (1) to examine the effectiveness of database integration with application engine during infodemic and pandemic COVID-19 and (2) to identify the effectiveness and efficiency of COVID-19 Integrated Data Governance on users.

Data-driven decision-making (DDDM) can be defined as a process of using data to inform decision management and validate a course of action before committing to it (Stobierski, 2019). Due to globalization, modernization, and technological advancement, data-driven decision-making is an approach to business governance that values decisions that can be backed up with data and verified (Wigmore & Rouse, 2013). Based on the previous study, data-driven decision management is usually undertaken to gain a competitive advantage. A study from the MIT Center for Digital Business found that organizations driven most by data-

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based decision-making had 4% higher productivity rates and 6% higher profits (Wigmore & Rouse, 2013).

An Application Engine can be defined as a cloud computing platform that, allows developers to develop and deploy web-based applications. It comprises hundreds of thousands of commodity servers, distributed globally (Khan & Jan, 2011). Furthermore, Dr. Sree Lakshmi from EnvyTee InfoSoutins defined an application engine as a batch or online processing tool in which people have extensive data that need to be processed without user intervention (Lakshmi, 2016). CoiNDAG or COVID-19 Integrated Data Governance is database integration with an application engine and purposely designed to provide quick access via smartphone, specifically for upper and middle management to refer and obtain specific Vice-Chancellor Circulars regarding COVID-19 and CoiNDAG that can enhance the impact of the decision-making process on operation in the new norm during a pandemic COVID-19. Finally, the Malaysian Communications and Multimedia Commission (MCMC), in conjunction with the World Telecommunications and Information Society Day, mentioned that when COVID-19 hit the world, technology and communication became a platform to strengthen the economy and people's lives despite the current difficult situation. According to MCMC, this connectivity will continue to affect the lives of the people, especially with the implementation of 5G technology that is being implemented (Kamarudin, 2020). Therefore, the use of Information Technology (IT) has been emphasized in organizations because it can meet the needs of the work by ensuring that the work can be done quickly, timely which is relevant (Sulaiman et al., 2017).

Information Technology (IT) is suitable for use in jobs involving computing technology to facilitate their work in the organization, such as networks, hardware, software, the internet, and its website (Kimani, 2015). As a result, organizations require creative employees and have knowledge or skills in using technology as a tool to perform tasks (Menjeni, 2002). This technology can also help organizations compete with one another by improving operational efficiency and the effectiveness of innovation management in providing products and services that meet market demand (Menjeni, 2002). Based on the previous study and definition about application engines and data-driven decision-making, it has proven that data integration with application engines creating via smartphones are now like mini-computers with various productivity capabilities available at fingertips.

2. METHODOLOGY

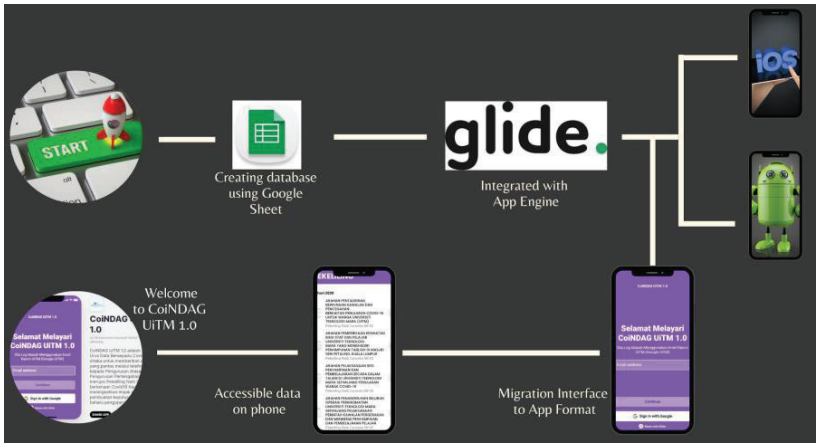

Figure 1: CoiNDAG Integration Process

Figure 1 shows the integration process of CoiNDAG or COVID-19 Integrated Data Governance. CoiNDAG started with the database via Microsoft Excel whereby the administrators of CoiNDAG will upload data (Vice-Chancellor Circular) and creating integration with glideapps.com as an application's engine to make sure that the data can be visualized and uploaded on users' smartphones. To maintain the security of the data, CoiNDAG used Google Mail for login credentials (access to the application), and users must use official Google Mail UiTM with username and password. Google Mail UiTM is integrated via Google API Integration (Application Programming Interface). All users who are UiTM Staff can access the CoiNDAG information extranet at any time from any location by installing the CoiNDAG application on a smartphone. However, to ensure that CoiNDAG or COVID-19 Integrated Data Governance can respond to the objectives of this study, one pilot project and survey have been conducted among 26 respondents with the aims, to understand the nature of data integration. Thus, an online survey via Google form has been distributed among UiTM personnel. The survey was distributed to 26 respondents, however, only 16 respondents responded to the pilot project and survey. Among the respondents were Head/Person in Charge of Administration and Human Resource Department/Unit from all departments under the Office of Deputy Vice-Chancellor (Research and Innovation), UiTM. The respondents were categorized into three groups which are: (1) Management and Professional (Grades 41 - 56), (2) Support I (Grades 29 - 40), and (3) Support II 8 (Grades 19 - 28).

3. RESULTS AND DISCUSSION

Technology has numerous positive implications in connecting people with others and information, particularly during COVID-19. This paper sought feedback from administrators following the development of CoiNDAG. Out of 16 respondents, 8 or 50% of respondents were from the Support I (Grade 29 - 40) group; and 8 or 50% of respondents were from the Management and Professional category (Grades 41 - 56). The findings revealed that most respondents (56.3%) indicated ‘neutral’ feedback. Meanwhile, 18.8% of the respondents stated that the traditional method aided in searching and acquiring the Vice Chancellor's Circular for COVID-19. In comparison, the other 25% of respondents, stated that the traditional method did not aid in the search for and acquisition of the Vice Chancellor's Circular for COVID-19.

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Furthermore, most of the respondents have a different opinion about the traditional method, as evidenced by the fact that most of them, or 62.5%, provided neutral feedback.

Table 1: The Most Effective Method of Searching and Obtaining the Vice Chancellor's Circular related to COVID-19

Item	No.	Percentage (%)
Conventional (Manual)	0	0
CoiNDAG	16	100

Table 1 shows that all respondents, choose CoiNDAG as the most effective method to search and obtain the Vice Chancellor's Circular regarding COVID-19 compared to the conventional method (letter, website, hard-copy).

Table 2: Most Efficient Method of Searching and Obtaining the Vice Chancellor's Circular related to COVID-19

Item	No.	Percentage (%)
Conventional (Manual)	0	0
CoiNDAG	16	100

Table 2 shows that all respondents, preferred CoiNDAG compared to the traditional method (letter, website, hard-copy) for searching and obtaining the Vice Chancellor's Circular for COVID-19. Finally, the survey shows that 31.3% of respondents are satisfied with CoiNDAG 1.0 UiTM, while the remaining 68.7% (11 respondents) were delighted with CoiNDAG 1.0 UiTM.

4. CONTRIBUTION AND USEFULNESS

Digital devices enhance communication between the organization and employees by sending reports, meetings directly from outside the office, email access, and remote application programming. Indeed, it is not just limited to an office environment that is less conducive to a sector of employment, among the advantages offered in this data technology is the opportunity to get optimal work results with new and enabling norms employees to perform tasks more quickly and systematically. CoiNDAG managed to meet the needs of a UiTM; this is in line with the new norm. Based on the findings of this study, is beneficial in enhancing the quality of work during the COVID-19. Further, CoiNDAG also emphasizes security features on the integration and migration process, whereby application administrators can control and identify the authorized user on the application to prevent any manipulation or scamming action.

5. CONCLUSION

Database integration with the application engine is a tool that affects life today, especially in the employment sector. Thus, the use of technology and smartphone in the workplace/home can help improve employees' performance and effectiveness. Moreover, increased productivity and acceptance in using this application will help to improve the production of quality work products. Clearly, in terms of communication and decision-making, data-driven enhances employee integration, increases productivity and information delivery to create better decision-making during infodemic and pandemic COVID-19.

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