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EVALUATING THE DIGITAL LITERACY OF E-GOVERNMENT SERVICES USAGE IN URBAN MALAYSIAN COMMUNITIES

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ABSTRACT

This journal article presents a comprehensive assessment of digital literacy levels in metropolitan Malaysian populations as they engage with e-government services. In an increasingly digitalized world, e-government services play a critical role in providing key public services to residents, making it critical to measure end-user digital literacy. This study adopts a quantitative survey to examine the digital literacy of urban Malaysians and its influence on their use of e-government services. The findings of the study demonstrate diverse levels of digital literacy within Malaysian urban groups, which are impacted by characteristics such as age, education, and socioeconomic position. The study reveals the unique digital skills and knowledge gaps that impede successful participation in e-government services, giving insight into the difficulties that users encounter. Furthermore, the study discusses the significance of these findings for government policies and programs targeted at boosting digital literacy and e-government service accessibility. The study's findings are significant for policymakers and e-government service providers seeking to bridge the digital gap and provide fair access to public services. This research leads to the development of more user-friendly and inclusive e-government services, eventually enhancing public engagement, trust, and involvement in Malaysia's digital governance environment by solving the identified digital literacy difficulties.

ARTICLE INFO

Keywords:

e-Government, Malaysian Urban, Technology Model Acceptance, Digital Literacy, ICT adoption

1.0 INTRODUCTION

The introduction of digital technology and the growth of e-government services in recent years have transformed the way governments communicate with their constituents. The integration of digital platforms and electronic services into the public sector in Malaysia, like in many other countries, has tried to improve the efficiency, accessibility, and transparency of

government services. Malaysia's metropolitan regions, in particular, have seen a considerable increase in the provision of e-government services. These services provide a wide variety of public utilities, from utility bill payments to getting official papers, and are becoming increasingly important in the lives of city dwellers.

Despite the increased availability of e-government services, a major knowledge gap exists, casting a cloud over their successful utilization in Malaysian urban populations. This knowledge gap is centred on local citizens' opinions and actual usage patterns of e-Government Services. It is a serious problem since bridging this informational deficit is critical for enhancing the deployment and upgrading of e-government services in Malaysian urban areas. It limits the government's capacity to customize these digital services to the needs and expectations of the urban population, restricting the realization of e-government's full potential. The problem statement emphasizes the importance of this research project. While the availability of e-Government Services in metropolitan Malaysia is increasing, there is an urgent need to comprehend how these services are viewed and utilized by local populations. Without such comprehension, the digital divide between those who can access and use e-government Services successfully and those who cannot exist, restricting the fair delivery of public services in the digital era.

As a result, the major research goal of this study is to determine the level of digital literacy among local communities in terms of using e-government services. This research seeks to shed light on the challenges faced by urban residents and provide insights that can inform government policies and initiatives aimed at enhancing digital literacy and improving e-Government service accessibility by evaluating the digital literacy of urban Malaysian communities and its impact on the utilization of e-Government Services. Finally, the study's findings are intended to lead to the creation of more user-friendly and inclusive e-government Services, hence increasing public engagement, trust, and involvement in Malaysia's digital governance environment.

2.0 LITERATURE REVIEW

2.1 E-Government Services

MyGovernment Portal is the backbone of Malaysia's e-government. It acts as a centralized government Single Gateway, where citizens can access a vast array of online services and information from various government departments. According to the MyGovernment website, "MyGovernment uses a life event & citizen-centered approach to make government more responsive to people's information and services that are relevant to specific life events and their specific needs". In 1996, the launch of the Multimedia Super Corridor (MSC) marked the start of the government's digitalization of service delivery systems – a process known as e-government. At the time, the federal, state and municipal governments and the agencies reporting to them were all involved in this pioneering endeavor. The trial projects and services that were implemented during this period were:

Use the Electronic Document Management System (GOE-EDMS) of the Government Office Environment (GOE-EDMS) for electronic document management:

- e-Khidmat for Frontline Agencies, like the Royal Malaysian Police (PDRM) and the Road Transport Department (JPJ);
- The Project Management System II (SPPII) for management project;
- Human Resource Management Information System (HRMIS) for managing human resources;
- e-Perolehan system is utilised for government acquisitions.
- e-Kehakiman and e-Syariah for Syariah courts and Civil courts, respectively; and
- e-PBT for services provided by the Local Authorities.

A variety of comprehensive strategies and action plans have been established to support and maintain the present digitalized service delivery system. These are as follows:

1. Public Sector Digitization Strategic Plan: This plan provides a high-level roadmap for the deployment of digital technology and explains the overall public-sector digitization strategy.

2. Agency Strategic Plan: To achieve alignment with the broader digitalization aims, each government agency develops a strategy plan tailored to its own needs and objectives.

3. Digital Service Design based on Enterprise Architecture: This strategy blends business architectural concepts with digital service design to provide digital services that are both rapid and effective.

4. Agency ICT Strategic Plan: Government agencies create ICT (Information and Communication Technology) strategic plans to guide their technology-related investments and actions.

5. MyGovernment Portal: This portal provides individuals with access to a wide range of services and data by serving as a single, easily accessible site for all digital government services.

6. Gallery of Malaysian Government Mobile Applications (GAMMA): This collection of smartphone applications developed by various government agencies provides individuals with convenient access to government services via their mobile devices.

All of these comprehensive strategies and action plans work together to improve the digitization of government services, making them more user-friendly, effective, and focused on the requirements of residents.

2.2 Digital Literacy

Digital literacy is the ability to use technology effectively and the knowledge and abilities needed to do so. It is secure and correct. When we talk about technology, we're talking about electronic devices and software such as smartphones, smart home systems, airport check-in kiosks, and more. We also talked about computers and the Internet. Literacy is the ability to use technology efficiently and proficiently (Lcom Team, 2023).

The public sector has gradually increased its use of and acceptance of e-government in recent years. Realizing the advantages, almost every nation in the world has adopted electronic means of providing services to its diverse stakeholders. Because of this, experts and scholars are increasingly worried about the pressing need to evaluate the efficacy of various e-government initiatives and programs (Deng, 2008). Even though e-government services are meant to be accessible to all, the government's attempts to make its electronic services helpful and equitable are hampered by uneven access to ICT.

In developing countries, e-government initiatives frequently fail to produce the expected outcomes (Gartner, 2007; Heeks, 2008). It has recently been claimed that citizens' ability to use ICT is essential to the success of e-government. The pace and extent of ICT usage can occasionally be slowed down by the digital divide that exists between those who have access to ICT and those who do not because of socioeconomic constraints, especially in developing countries. If citizens are to gain from the appropriate implementation of e-government, their ability and knowledge to use ICT must be taken into account at the preparedness stage. People without access to ICT will still rely on conventional methods of receiving services and disseminating information. Since access to a computer and the internet is now necessary, they might eventually be cut off from society. Consequently, accessibility becomes a crucial factor in determining the effectiveness of e-government programs (Abdulrazaq Kayode Abdulkareem, 2021).

2.3 Theory Acceptance Model (TAM)

The TAM served two purposes. The first was to explain how technology adoption works. By predicting user behavior, the TAM provided a theoretical framework for successful technology adoption. The second practical use of the TAM was to help practitioners understand what they needed to do before using the TAM. As Davis wrote in 1989 and 1993 respectively, several important steps were taken to achieve these goals. Davis explained the framework for the technology acceptance model as follows: “The TAM was based on the theory of Reasoned Action. It offered a psychological view of human behavior that was missing from the information systems literature. It explained how external components, such as information system (IS) features, interacted with each other and how they were used in the real world.”

Through this study, we will gain a better understanding of how digital literacy correlates to e-government usage.

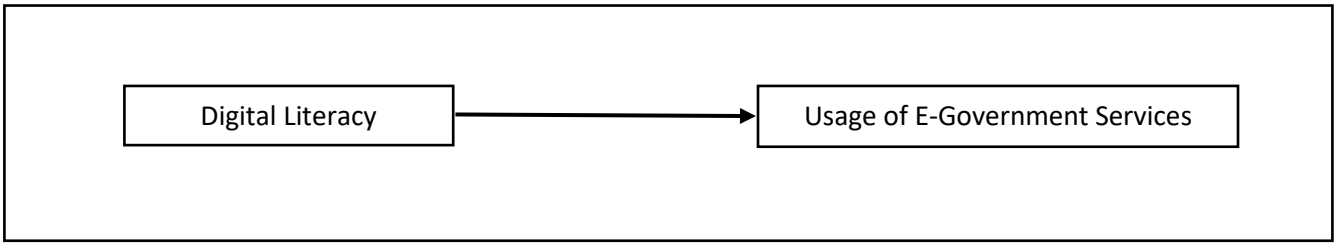


Figure 1: Conceptual Framework

3.0 METHODOLOGY

The methodology of the study was to measure the digital literacy levels in 100 urban areas in Malaysia about e-government services use. The study used a 23-question questionnaire with Likert scales and background information in quantitative form to collect data. The main focus of the questionnaire was to gain insight into how urban Malay respondents assess e-government services usage. The questionnaire is divided into 7 sections. To randomly select samples and collect a given volume, the study employed non-probability convenience sampling.

The study was carried out online and disseminated through various social media channels. The main objective of the study is to explore the relationship between user experience and e-Government services digital literacy in Malaysia's urban areas. The findings accurately portray the reality in these particular Malaysian urban areas. The SPSS techniques used in the thesis included one-way ANOVA and independent t-tests as well as reliability tests. The reliability tests were used to analyze the reliability of data. Cronbach's alpha was used in the reliability testing to check the consistency of a questionnaire, which is usually represented by Lickert scale questions.

4.0 FINDINGS AND DISCUSSION

4.1 Descriptive Analysis

Table 1: Demographic Analysis

ITEM	LIST OF ITEMS	PERCENTAGE
Gender	Male	49%
	Female	51%
Level of education	PhD Degree	1%
	Master Degree	6%
	Bachelor Degree	62%
	Diploma	20%
	SPM	9%
	Others	2%
Age	Less than 20 years old	6%
	20 -30- years old	74%
	30 - 40 years old	9%
	40 - 50 years old	8%
	Above 50 years old	3%
Occupation	Government	10%
	Non-Profit Sector	1%
	Student	52%
	Private	29%
	Others	8%
Race	Malay	97%
	Chinese	1%
	Indian	2%
Years of Use Internet	1 - 2 years	2%
	3 - 5 years	7%
	More than 5 years	91%

The demographic question section A, as indicated in the above table, examined the gender perspective of Malaysian urban inhabitants on e-government usage. According to Table 1, 51% of Malaysian urban users are women, while the minority audience is made up of men (49%). The most common educational levels among the urban e-government users are Bachelor's degree (62%), certificate (20%) and Sijil Pelajaran Malaysia (SPM) (9%). More than 50% of those polled chose all of these options. The table above evaluates the age of the e-Government impression of the urban residents in the demographic question. According to the data, 74% of the urban users in Malaysia are between 20 and 30 years old, 9% are between 30 and 40 years old, 8% are between 40 and 50 years old, 6% are below 20 years of age, and the balance is above 50 years of age. Students account for 52% of the Malaysian urban respondents, followed by the private sector (20%), Government (10%), Others (8%), and Non-Governmental Organization (NGO) (8%). More than half of the respondents chose all of these options. The above table discusses the race of Malaysian urban respondents' views on e-government service use in demographic questions. The result is that 97% of Malaysia's urban users are Malay, with the remaining being Indian and Chinese. Most

Malaysians (91%) have used the internet, followed by those aged 3 to 5 years (7%) and those aged 1 to 2 years (the remainder).

4.2 Reliability

In the next section, we tested the reliability of a scale or collection of items in SPSS (Statistical Package for the Social Sciences) using multiple approaches, such as Cronbach's alpha, a generally used measure of internal consistency dependability. The consistency with which a series of items or questions in a survey or scale examines a certain construct or notion is measured by reliability.

Table 2: Reliability Analysis

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	100	100.0
	Excluded[a]	0	.0
	Total	100	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.320	3

Item Statistics

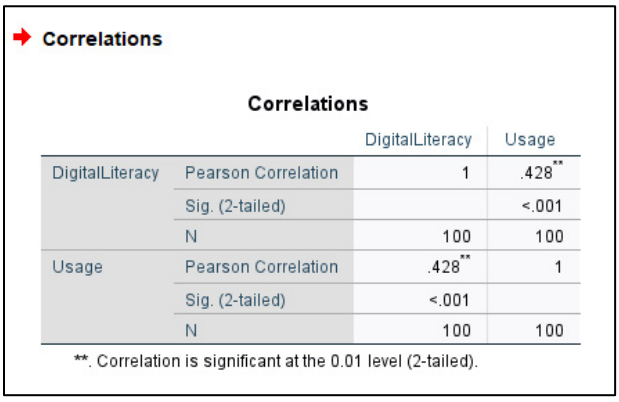
	Mean	Std. Deviation	N
If there was no one around to tell me what to do as I go	3.5500	.94682	100
If I could call someone for help if I got stuck	3.7700	.95193	100
I had a lot of time to complete my task/affair/business for which the website is user friendly	3.9800	3.08787	100

Table 2 on digital literacy has a Cronbach's alpha of 0.320. Not only does this mean that the demographic we surveyed has a low level of digital literacy, but it also means that they may not understand or agree with your question, based on your assumption. Cronbach's Alpha is a measure of how closely the scale's elements are related. A higher alpha indicates that the items have higher internal consistency, meaning that they consistently evaluate the same question. For this question, anything above 0.5 is considered good.

4.3 Correlation

In the next section, we utilized the "Correlation" technique in SPSS (Statistical Package for the Social Sciences) to compute various sorts of correlations between variables in your dataset. Correlation is a statistical method for determining the degree

and direction of a link between two or more variables. It explains how changes in one variable are related to changes in another one.



Correlations

Correlations

		DigitalLiteracy	Usage
DigitalLiteracy	Pearson Correlation	1	.428**
	Sig. (2-tailed)		<.001
	N	100	100
Usage	Pearson Correlation	.428**	1
	Sig. (2-tailed)	<.001	
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 3: Correlation Analysis

Table 3 shows a relationship between digital literacy and e-government usage. It also shows a correlation at the level of 0.01. The final result is a correlation matrix showing the correlation and p-values between the variables. The correlation coefficient ranges from -1 (total negative correlation) to -1 (no correlation).

As more and more e-government options become available, there is growing concern about why some people opt for certain e-government options while others opt for others (2014). For instance, citizens who lack basic skills are prohibited from accessing information through e-government (Luisa Fernando Rodriguez-HVA, 2020). “Digital literacy” is a term used to describe inequalities in access to information and communication technologies (ICT) as well as inequalities in the acquisition of the skills and knowledge needed to participate in e-government (Peralta Peralta, 2020).

Inequal access and usage of e-government across demographics is a cause for concern and a problem for governments (Perez-Morotea 2020). New e-government technology may only benefit a small segment of the population (Perez Morotea 2020). Akman et al. (Akman et al., 2020) found that e-government usage is widespread and strongly influenced by gender and education. Age also plays a role in e-government usage. The tendency to access e-government services varied with age. A digital literacy research found that elderly people have significant disadvantages compared to younger generations when it comes to e-government access (Geana, 2011; Greiner, 2014).

In a study conducted by Szopi’nski (2006), Staniewski and Zajac (2007) found a statistically significant relationship between respondents’ residence status and their propensity to use particular types of e-governments. The diffusion of innovations theory proposed by Rogers, (2003) offers a reliable theoretical framework for determining the causal relationship between socio-demographics and e-government use. The hypothesis is that early adopters of a technological discovery share similar characteristics, such as being younger, more highly educated, and having higher incomes. These characteristics are those of users of electronic government services. A study of digital literacy has revealed that internet usage is linked to higher levels of education. Additionally, individuals with higher incomes and educational attainment levels are more confident in their ability to comprehend and participate in government operations (Zheng et al., 2017).

Table 3 : Finding Malaysian Urbanites on Using e-Government Services

Item	Question	Percentage of Agree
Usage of e-Government Services	I have a positive attitude towards using e-government services	53%
	I use/intent to use e-government services	53%
	I often use/intent e-government services	44%

From research results in Table 4, as many as 53% of Malaysian Urbanites agree to have a positive attitude towards using e-government services. Next, as many as 53% of Malaysian Urbanites agree to use/intend to use e-government services. Lastly, as many as 44% of Malaysian Urbanites agree toward often use/intent e-government services.

5.0 CONCLUSION

The examination of digital literacy as an independent variable in the constantly expanding landscape of e-government Services in urban Malaysian communities has shed light on the important role it plays in defining the use of these services. Our research has offered vital insights into the level of digital literacy among urban people, identifying obstacles and, most importantly, giving solutions to improve digital literacy and, thus, e-Government Service accessibility. As we discovered, digital literacy is a complicated attribute impacted by a complex interaction of circumstances. Significant characteristics discovered were age, education, and socioeconomic level, emphasizing the need for tailored interventions. These findings highlight the need to recognize the variety of Malaysia's urban population and design digital literacy activities appropriately.

The recommendations made in this study are critical in tackling the digital literacy problem. We advocate for the introduction of comprehensive digital literacy programs and educational activities aimed at providing individuals with the skills and information required to efficiently navigate the digital environment. These programs should be available to people of all ages and educational backgrounds, removing the obstacles to equal participation in e-Government Services. Furthermore, it is vital to improve e-Government Service platforms with user-friendly designs and intuitive interfaces. User-centric design can help to bridge the digital gap by ensuring that even people with less digital literacy can access and use these services effectively. e-Government Services become more inclusive, accessible, and citizen-centric as a result, keeping with the government's objective of providing equitable and efficient public services.

Finally, the assessment of digital literacy in the context of e-Government Services in Malaysian urban populations has shed light on both the difficulties and potential inherent in this quickly evolving digital era. Government officials and service providers may empower urban citizens, create digital inclusion, and improve the basis of a more robust e-Government ecosystem by following the suggestions stated in this paper. As we move forward, these initiatives will be critical in establishing a society in which all residents, regardless of digital literacy level, can reap the advantages of digital governance, eventually encouraging a more equitable and participative urban community.

REFERENCES

Abdulrazaq Kayode Abdulkareem, R. M. (2021). Evaluating the Performance of e-government: Does Citizens'. *PERTANIKA JOURNALS*, 1507-1534.

Lim Seng Boon, J. A. (2020). Participation in E-Government Services. *Journal of the Malaysian Institute of Planners*, 300-312.

Luisa Fernanda Rodriguez-Hevía, J. N.-M.-G. (2020). Citizens' Involvement in E-Government in the European Union: The Rising Importance of the Digital Skills. *Sustainability*, 1-19

Muhammad Hafiz Hariz Zubir, M. S. (2022). Behavioural Intention to use E-government Services in Malaysia:. *Journal of Administrative Science*, 119-139

Rosario Pérez-Morotea, C. P.-R.-C. (2020). The effects of e-government evaluation, trust and the digital divide in the levels of e-government use in European countries. *Technological Forecasting & Social Change*, 1-14.

Team, L. (2023, January 26). *What is Digital Literacy: definition and Uses in Daily Life*. Retrieved from Learning.com: https://www.learning.com/blog/what-is-digital-literacy-definition-and-uses-in-daily-life/

U.P.A. Withanage, L. G. (2022). Why the Utilization of E-Government Services is Poor? – A study with the Citizens in Colombo Municipal Council Area in Sri Lanka. *Integrated Journal for Research in Arts and Humanities*, 7-13.