Jurnal Komunikasi: Malaysian Journal of Communication
https://ejournal.ukm.my/mjc
Volume 42(1) 2026: 361-377

Exploring Digital Media Literacy, Information Use, and Socioeconomic Constraints among Urban Marginalised Communities in Malaysia

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ABSTRACT

Malaysia is transitioning from digital citizenship to digital competitiveness to build a more resilient society. The shift from Web 3.0 to Web 5.0 is accelerating both cognitive and economic development in the digital sphere. However, this transition has reignited discussions surrounding the digital divide, particularly in relation to digital inclusion. Despite high internet penetration rates, low-income households in urban areas encounter barriers in accessing reliable digital infrastructure and devices, as well as necessary digital literacy. This study examines the adoption of digital technology among the urban poor in Malaysia, highlighting the urgent need for digital inclusion within the context of Malaysia's digital economy strategies, particularly the Shared Prosperity Vision 2030. Data were collected through six focus group discussions involving 42 informants, followed by thematic analysis using NVivo software. The findings reveal that public internet facilities, broadband services, and free Wi-Fi play a crucial role in supporting these communities. Digital media literacy is often developed informally through peer learning, yet significant gaps remain in leveraging information for economic and educational growth. Furthermore, government-led communication initiatives are frequently misaligned with the actual needs of the urban poor. The results underscore the need for a multi-stakeholder framework that addresses digital disparities, incorporating infrastructural improvements, policy reforms, and grassroots digital literacy training. By incorporating the perspectives of underserved communities into the national digital inclusion agenda, this research offers valuable insights and policy recommendations to foster inclusive technological adoption among marginalised urban populations, not only in Malaysia but also in other countries.

Keywords: *Urban poor, digital literacy, communication technology, government, social media.*

INTRODUCTION

In the fast-changing world, the transition from Web 3.0 to 5.0 has accelerated the need for society to equip itself with the necessary technology know-how, making it a necessity. This is so because Web 5.0 encompasses not only intelligence but also emotion, where artificial intelligence (AI), the integration of virtual reality (VR) or augmented reality (AR), has made it possible for machine learning to foster deeper human-computer interaction that initially started with Web 3.0. With it, society is presented with a way of life that is instinctively relevant in managing daily activities from personal to professional. Digital transformation may

*Corresponding author: salehhuddin@upm.edu.my
E-ISSN: 2289-1528
https://doi.org/10.17576/JKMJC-2026-4201-20
Received: 14 October 2025 | Accepted: 29 March 2026 | Published: 31 March 2026

begin with the use of technology, but it ultimately endures through societal response (IEEE Digital Reality, n.d.). Such responses essentially mean the inevitable disruption of societal norms that people have become accustomed to in daily lives when digitally enhanced programmes and tools such as e-commerce, online applications, and video conference take centre stage in people's lives regardless of status and income.

The digital revolution has profoundly impacted daily life, including access to information, employment opportunities, and social services (Li & Huang, 2025). With Malaysia becoming one of the leading ASEAN countries to reinvent itself as a high-income nation, the need to integrate digital technology into the fabric of its society is more apparent than ever. This is where the rapid movement from mere digital citizenship to digital competitiveness, encompassing entrepreneurship, growth, and impact, will significantly contribute to poverty eradication, thereby fostering a more resilient society as a whole.

This further pushed the urban poor into the context of a digitising society, where any socio-demographic group must advance. A study by Wang and Wu (2022) on digital technology in China reveals that it has been increasingly integrated into public services and economic activities. Meanwhile, a 2019 survey by the Department of Statistics Malaysia (DoSM) on Household Income and Basic Amenities reported that more than 400,000 households fell below the poverty line in urban areas.

While the government mobilises information digitally, people's ability to access information using the Internet is crucial to improving a society's status and well-being. As the country progresses into the endemic phase, it has become particularly significant for the urban poor to equip themselves with the technical know-how. In addition, national agendas such as Industrial Revolution 4.0 and the transition from 4G to 5G also reinforce that the urban poor must be included in the equation.

As the Malaysian government increasingly mobilises information through digital platforms, it becomes evident that access to the Internet is crucial for individuals seeking to improve their socio-economic status. In a society claiming the status of an information-oriented society, information should play a leading role, as well as technologies that facilitate continuous access to it, in particular, the World Wide Web (the Internet) (Voitsikhovskyi et al., 2021). Digital literacy and the ability to navigate online resources are vital skills that can significantly impact the well-being of the urban poor, enabling them to access information about economic opportunities, educational resources, and social services more easily.

Therefore, enhancing internet accessibility and digital competencies within this demographic is paramount for fostering upward mobility. Moreover, the increasing reliance on technology in various sectors necessitates a workforce that is equipped with relevant competencies. Failure to do so risks perpetuating cycles of poverty and exclusion, particularly as the nation transitions towards economies driven by innovation and technology. Lack of technological adoption is a significant factor influencing agricultural performance and minimises the income of the poor rural community in many developing countries (Herath et al., 2021).

Technology plays a crucial role in various fields as a catalyst for socio-economic development (Herath et al., 2021; Ugochukwu & Phillips, 2018). The disparities in access to technology have the potential to exacerbate existing inequalities unless proactive measures are taken. Policymakers must rethink and realign the Urban Poverty Eradication Programme with the broader objectives of the Shared Prosperity Vision 2030. Implementing strategies

that bolster digital literacy, enhance access to information, and integrate technical skill development will empower the urban poor, thereby facilitating their participation in a rapidly evolving socio-economic landscape.

Only through such inclusive approaches can Malaysia hope to address the challenges of urban poverty and move towards a more equitable society. A study in Sri Lanka on the use of digital technology and the importance of digital literacy reveals that the availability of ICT-related infrastructure is not the only issue, but other factors, such as caste, religion, gender, income, education, and age, also contribute to the access and use of ICTs (Kottegoda et al., 2012).

This study aims to investigate the roles that various factors play in mitigating the digital divide that exists within this demographic. The study also aims to identify challenges and barriers faced by the urban poor so that relevant ministries and agencies can develop effective strategies to enhance digital access and competency. Consequently, this study contributed to the academic discourse on digital inclusivity with practical recommendations that could potentially facilitate the integration of technology into the lives of the urban poor, thereby narrowing the digital divide in Malaysia.

LITERATURE REVIEW

According to the Digital 2024 Global Overview Report released by Kemp (2024), by early 2024, there were 5.35 billion Internet users and 5.61 billion mobile phone users globally, accounting for 66.6% and 69.4% of the world's population, and 5.04 billion active social media users across the world, 62.3% of the global population, with people spending an average of 2 hours and 23 minutes a day on social media platforms (Sun et al., 2023). The arrival of the digital age has had a profound impact on humans' way of production and life (He et al., 2025). The rapid socioeconomic development in Malaysia can be attributed to the fact that the government has gone into massive expansion and digital development since the launch of the National Information Technology Agenda (NITA) in 1996 (Pawelczyk, Singh & Nadchatram, 2014).

In 2019, a comprehensive survey conducted by the Department of Statistics Malaysia explored the themes of household income and basic amenities, revealing a staggering statistic: over 400 thousand households in urban areas were living below the poverty line. This finding brings to light critical challenges faced by urban poverty, particularly in the context of Malaysia's socio-economic landscape. Interestingly, the Urban Poverty Eradication Programme spearheaded by the Ministry of Housing and Local Government appears misaligned with the objectives outlined in the Shared Prosperity Vision 2030. Specifically, under Guiding Principle 6, which advocates for a learning society, this vision underscores the pivotal role of knowledge as a means of empowerment. The disconnection between these two frameworks suggests a need for more cohesive strategies that integrate educational initiatives with poverty alleviation efforts.

Additionally, the advancement of digital technology has positioned Malaysia as a highly interconnected society, with approximately 90% of households now accessing the internet through broadband services and mobile devices. Therefore, the ultimate aim of economic and social development is to increase residents' happiness, and achieving happiness is a major goal for most social residents. With the rapid development of information technology and the accelerated popularisation of Internet applications, unprecedented and profound changes have taken place in human production and lifestyle

(He et al., 2025). This significant penetration of internet usage reflects a remarkable achievement in bridging the digital divide, fostering greater inclusivity and access to information resources.

However, despite the overwhelming connectivity facilitated by the government, a critical analysis reveals that the full potential of this connectivity remains largely unattained when certain household income groups are facing financial difficulties. It made the shift of priorities which lead to the subscription to the internet via broadband or mobile data place last in the expenditure. A study by He et al. (2025) on China's effort in improving digital literacy among its rural residents reveals that it has vigorously endeavoured to bridge the digital divide by providing equal access to digital technology for disadvantaged groups and facilitating their integration into digital society. This would then reduce of its people's sense of relative deprivation and promote social equity.

When applied in the right way with the right tools, the promotion of digital technology would be possible to permeate every aspect of society, thus serving as a pivotal catalyst and inherent driving force for economic and social advancement (Aldashev & Batkeyev, 2021; Czernich et al., 2011). Broadband or mobile data not only enables access to the internet but also serves as the gateway to knowledge acquisition. In fact, it has become a necessity in today's landscape and no longer seen as a luxury or pastime activity across the population, where tasks and duties, and in most schools, assignments are also made into the cloud. With the increasing role of the Internet in daily life, it is vital to understand its impact on individual well-being (Lissitsa & Chachashvili-Bolotin, 2016). Individuals and households in urban poor residential areas relying solely on mobile data may encounter limitations when engaging in bandwidth-intensive activities such as online education, telecommuting, or streaming services.

Moreover, the differences in internet access highlight disparities in user experience (UX) and engagement with information. While mobile technology provides many people with access to the internet, it is the combination of mobile connectivity and broadband access that truly empowers users to take full advantage of the vast array of information, educational opportunities, and economic resources available in the digital landscape. Broadband access can be further expanded by leveraging existing community infrastructure and social programmes (Eruchalu et al., 2021).

Many individuals, particularly those from low-income urban backgrounds, continue to struggle with digital adoption. Kateb et al. (2022) state that the challenges faced by end users are where digital technologies likely interact with, or potentially challenge, existing organisational practices, structures, and identities. In contrast, those with more financial resources can access and utilise these technologies more effectively, often at higher costs. Such issues reopened the debate on the digital divide in Malaysia as the increasing need for connectivity in urban areas, where digital adoption is dependent on user expense and security concerns (Mohammed, 2020).

Even in urban communities, access and affordability may have influenced fixed broadband subscription rates that were found to be very poor at 9.0% compared to the easily obtainable mobile data subscription through various distribution channels at 130% (Hassink & Gong, 2020). The Bottom 40% (B40) segment that the Eleventh Malaysia Plan identified in these urban areas, where families with a collective household income of about RM2,537 a

month and below would concentrate their monthly expenditure on necessities such as food, shelter, as well as prepaid mobile data (Jayasooria, 2016).

In Malaysia, households are classified into income groups - low, middle, or high based on their position within the income distribution percentile of the population. These categories are commonly referred to as B40, representing the bottom 40% of earners, M40, which covers the middle 40% or "middle class," and T20, which consists of the top 20% of income earners (StashAway, 2024). The B40 is now needing to partake in working from home, attend online classes and use cashless transactions through mobile applications (Mohammed, 2020).

Poverty is described as economic or income poverty and is determined using Poverty Line Income (PLI) to distinguish between poor and non-poor households (Siwar et al., 2016). Urban poverty is becoming more evident, especially in cities like Kuala Lumpur and Johor Baharu (Alias & Che Sulaiman, 2023). Meanwhile, Jayasooria (2016) stated that Kuala Lumpur and Selangor are the top two states with the highest cost of living. As such, the "new poor", or the urban poor, need to be revisited to ascertain that no one is left behind with a bleak future as the country's economy strives.

Similarly, the urban poor have a certain standard of consumption which ascertains that the household income goes below "decency", where, despite being employed, their expenses plunge below the poverty line. This is where digital literacy comes into question, as does the adoption of digital technologies that have now brought together communities to shift towards greater and inclusive digitalisation.

Malaysian Communication and Multimedia Commissions (MCMC) (2020) in its report on the Internet User Survey notes that the comfort of the home is the most preferred location to become connected, especially during the Movement Control Order (MCO). Using community access Wi-Fi in public places is seen to be inconvenient (4.2%), and even Free Wi-Fi offered by business premises, where both have seen single digits in terms of use (6%), as they are redundant at a time when users need to stay home to pursue daily work routines (MCMC, 2020).

Despite the seemingly growing access to the Internet in Malaysia, there are varying levels of literacy and conformity to the new norm for both the young and the elderly (Chamhuri et al., 2015). Following these inadequacies, the adoption of digital technologies saw a need to prepare not only users from rural areas but also urban communities. Information and communication technology (ICT) are a way to bridge the equality gap, improve the quality of life, and alleviate poverty (Oshota, 2019). As a low-income group, the exogenous socio-economic shocks of the pandemic lockdowns grow with rising costs of living in the city and financial commitments due to limited job opportunities, hence connectivity becomes secondary (Leng, Samsurijan, Gopal, Malek & Hamat, 2018).

A study by Goodspeed (2017) on community and urban place in a digital world concludes that information communication technology (ICT) has allowed the community to not only engage within geographical boundaries, but further anchored it in multiple places, and the concept of physical environment is secondary in nature in today's society. Echoing that, the government of Malaysia introduces the digitising society concept, which focuses on the advancement of socio-demographic groups in every income category to ensure smooth integration of the ICT into all aspects of professional and social life of its people, regardless of home or workplaces, education or leisure.

The study employed uses and gratification theory (UGT) to understand the motivation and the driver behind the usage of communication technology among urban poor. While facing financial constraints and hardships, this community thrive in ensuring uninterrupted use of the Internet and social media for various purposes in their daily activities. Based on the Uses and Gratifications theory, the audience is active, media use is goal-oriented, media consumption meets certain needs, people are sufficiently aware of why they use media, and media content and social context play a role in gratification (Kaye & Johnson, 2002).

METHODOLOGY

This study employed qualitative research designs. The relevance of using the qualitative method is to obtain the real experiences of the informants, the urban poor. This is crucial to developing a comprehensive understanding of digital technology competency adaptation in the context of the urban poor. Thus, the qualitative approach was designed to map all three objectives of the study; namely (i) to understand how the urban poor cope with the digital development offered by the government with limited technology, (ii) to recommend effective communication strategies be formulated to aid the government in educating the urban poor, and (iii) to examine the digital infrastructure initiative fit into the digital intelligence ecosystem of the urban poor.

The first part of the qualitative enquiry centred around a focus group discussion (FGD). FGDs were conducted with a target group of the study, which comprised the B40 and M40 households that made up the urban poor in the selected cities. An approximate number of 6 - 10 individuals ranging from aged 18 and above was one of the criteria for the FGD session. The composition of gender in each group was not part of the criteria, but each group was balanced with gender mix for each session.

Focus Group Discussions (FGDs) facilitate a comprehensive examination of individual perspectives, allowing researchers to gather rich, detailed narratives that capture the complexity of participants' experiences and viewpoints. This method not only enhances engagement with the subject matter but also enables adaptive dialogue, where researchers can delve deeper into areas of interest that arise during the conversation. FGDs are a valuable technique within qualitative research, fostering a collaborative environment where participants can freely share their thoughts and opinions.

All data collection was conducted systematically, and the responses were analysed empirically through a careful process using Computer Assisted Qualitative Data Analysis Software (CAQDAS), specifically NVivo. By systematically applying this software, a strong foundation for a new conceptual model would be established that significantly contributes to the existing theoretical framework. The data collection process for this study employed specific coding techniques that incorporated pre-determined themes before the analysis phase. By adopting a systematic approach, thematic analysis within the framework of FGDs facilitates the establishment of themes before the coding process.

Furthermore, this approach underscores the importance of thorough theoretical grounding in the development of themes, drawing upon existing literature and conceptual frameworks to guide the analysis. By situating the research within established theoretical paradigms, the study can contribute meaningfully to the existing body of knowledge while also ensuring that the analysis remains rigorous and systematic.

Ultimately, the use of pre-determined themes in thematic analysis for QCA not only streamlines the analytical process but also enriches the interpretation of qualitative data, facilitating deeper insights into the phenomena being studied.

According to Schreier (2012), themes that are established in advance, referred to as the main categories of coding, are based on the study's objectives, research questions, theoretical framework, and literature review. Conducting thematic analysis before coding is beneficial as it enables the researcher to clearly define the analytical scope and organise each identifiable code into the appropriate themes.

While the pre-determined themes helped to navigate the study, the instruments utilised UGT to underpin the discussions within the context of the study and prescribed objectives. As such, the study focused on the concept of active to explore how the urban poor community drives their motivation categorically within the UGT systems – ease of use, entertainment, social interaction, self-presentation, information seeking, or withdrawal. Each of this was embedded into the open-ended questions that are inherently flexible during the course of the discussions.

Unit of Analysis for Theme and Data Coding

The unit of analysis for FGD of digital technology adoption among the urban poor was guided by the research objectives, which encompass the coping mechanisms, digital media literacy, technical assistance and finally the UI-UX experiences. The data coding has systematically analysed the elements in the transcriptions of the interviews, as well as the contextual meaning that it provides for the receiver and their interpretation.

Table 1: Unit of analysis for theme and data coding

Unit of Analysis		Themes	Coded Source	Number of Units Analyse
Focus Group Discussion	Individuals age 18-60 years old Reside in Kuala Lumpur and/or Klang Valley Income group of M40 and B40	Coping mechanisms	● Broadband service ● Devices usage ● Public facilities ● Telco services ● WIFI availability	42
		Digital media literacy	● Ability to define ● Digital content creation ● Rating on digital content ● Source of acquiring knowledge ● Use of information	
		Technical assistance	● Government information dissemination ● Recommendation for improvement	
		UI-UX experiences	● Challenges ● Collaboration opportunity ● Government roles ● Visibility	

Data Collection and Interview Protocols

The data collection process spanned a duration of 12 months, with each session requiring approximately two months to complete the cycles of fieldwork, transcription, and preliminary analysis around Klang Valley. These sites were selected due to their geographical accessibility.

The participants' demographics for all six FGDs comprised individuals aged between 18 and 60 years. A study by Hennink et al. (2019) on saturation and sample size for focus groups reveals the confirmatory factors that saturation in FGD could be achieved between three to six focus groups (Guest et al., 2016), whereby code saturation would be achieved at five FGD (Coenen et al., 2012).

The study received ethical approval from the Universiti Teknologi MARA (UiTM) Research Ethics Committee in March 2024 with reference REC032024 (STMR55) prior to the data collection. Meanwhile, during the commencement of the FGDs, the researcher sought informed consent from the participants to record the discussions utilising a digital audio recorder. In addition, the researcher also placed two digital audio recording devices throughout all FGD sessions, allowing for simultaneous recording of the discussions. This step is essential to ensure data integrity and mitigate potential technical issues.

RESULTS AND DISCUSSION

Transcripts from six FGDs on digital technology adoption among the urban poor in Kuala Lumpur provided a comprehensive thematic analysis, which reveals recurring concerns and opinions regarding digital literacy, infrastructure, and government initiatives. The collected and analysed data to understand the informants' experiences and perspectives were explored and further revealed several key themes related to digital technology adoption.

A total of 624 quotations emerged from six focus group discussions held with informants whose household incomes fall within the M40 and B40 categories, residing in the Kuala Lumpur and Klang Valley areas. Four pre-determined themes were identified for further analysis: namely, Coping Mechanism (five codes), Digital Literacy (five codes), Technical Assistance (2 codes), and UI-UX Experiences (4 codes). Analysis using NVIVO manifested Coping Mechanism with 284 quotations, Digital Literacy producing 194 quotations, Technical Assistance generating 67 quotations, and UI-UX Experiences contributed 79 quotations. Table 2 below illustrates the thematic analysis abstraction process across six focus groups.

Table 2: Abstraction Process of Thematic Analysis

THEMES	**INFORMANTS**						
	FGD 1	**FGD 2**	**FGD 3**	**FGD 4**	**FGD 5**	**FGD 6**	**Total Coding References**
THEME 1: COPING MECHANISM	48	0	0	0	0	0	284
Code 1	21	6	10	6	3	9	
Code 2	10	7	4	9	6	4	
Code 3	15	7	9	12	10	7	
Code 4	12	11	0	5	10	0	
Code 5	22	4	6	6	4	1	
THEME 2: DIGITAL MEDIA LITERACY	3	0	0	0	0	0	194
Code 6	9	5	4	6	4	4	
Code 7	5	9	7	1	17	5	
Code 8	5	4	4	0	0	1	
Code 9	19	11	7	1	16	6	
Code 10	3	13	3	5	5	12	

THEME 3: TECHNICAL ASSISTANCE	0	0	0	0	1	0	67
Code 11	7	8	4	4	2	3	
Code 12	12	6	5	0	4	11	
THEME 4: UI-UX EXPERIENCES	0	0	0	0	0	0	79
Code 13	0	5	6	3	2	6	
Code 14	3	0	0	0	0	4	
Code 15	1	7	4	1	4	22	
Code 16	1	7	1	0	1	1	
GRAND TOTAL	196	110	74	59	89	96	624

Concerns about unreliable Wi-Fi on university campuses were often linked to discussions about the need for improved digital infrastructure and the limitations of relying solely on personal mobile data. Similarly, conversations about digital literacy were closely tied to concerns about misinformation, scams, and the need for government intervention. The discussions on content creation and consumption were often intertwined with debates about government regulation and the balance between freedom of speech and the need to protect vulnerable groups from harmful content.

Theme One: Coping Mechanism

A total of 284 quotations were recorded in the abstraction of thematic analysis on the first theme, Coping Mechanism, which were gathered across the six FGDs transcriptions with 42 individuals during the six FGD sessions. 128 quotations were obtained from FGD1, followed by FGD2 with 35 quotations, FGD3 with 29 quotations, FGD4 (38 quotations), FGD5 with 33 quotations, and finally FGD6 had the least number with 21 quotations. Table 3 illustrates the co-occurrences of the quotations for theme 1: Coping Mechanism.

In understanding the digital technology adoption employed by the urban poor residing in Kuala Lumpur and Klang Valley at large and how the community copes with it, five components were discovered to be prerequisites: broadband services (19%), device usage (14%), public facilities (21%), telco services (13%), and Wi-Fi availability (15%). These five elements specifically look into the services rendered by the private sector from and among telco and broadband companies regulated by government agencies such as the Ministry of Digital and the MCMC. A study by Jin and Deng (2024) highlight the impact of digital technology development on the relative poverty of urban households in China, discussing how disparities in digital adoption can exacerbate income inequality. It highlighted the role that the government and private sectors play in ensuring the digital gap is reduced through shared prosperity initiatives that allow people from all economic backgrounds to equally enjoy digital technology facilities.

To deconstruct the finding on Theme 1, where the coping mechanism is concerned with digital adoption among the urban poor, the top three codes exemplify its importance in a conclusive manner, where public internet facilities (21%), broadband services (19%), and free Wi-Fi facilities (15%) are essentials in aiding the urban poor through their daily activities. These codes underscore the critical role that various forms of internet access play in supporting the daily lives and activities of individuals within this demographic.

> The wifi here is useless haha I'm so sorry, honestly speaking, when talking about the facilities here in University like the cafe and all, if I'm not mistaken, we all use the university wifi, they don't have like their own personal wifi… (Informant 3 - 0.35% Coverage)

> The internet in our area is actually pretty good, especially lately there's been an issue, but most of the time the wifi is good, even when there are a lot of people using the wifi, the wifi is still usable. Yeah, reliable, but whenever the wifi is getting slower, I would go to a café or mamak... (Informant 6 - 0.47% Coverage)

> Computer lab and room with access to an internet device is still relevant because we are living in Malaysia where does a lot of income specifications, income group identity (such as) T20, M40 and B40… (Informant 1 - 0.37% Coverage)

Information and communication technologies have proven to be important tools for social and economic development (Cullen, 2011). Informants discussed the quality and reliability of broadband and Wi-Fi services in their areas, noting inconsistencies in coverage and speed, particularly in public places. Many reported using mobile data as a backup, often sharing family plans to manage costs. The affordability and value of different telco plans were also discussed. The relevance of public computer labs and free Wi-Fi in the context of widespread personal device ownership was debated.

Theme Two: Digital Media Literacy

There were 194 quotations recorded in the abstraction of thematic analysis on the second theme, Digital Media Literacy, which was gathered across the six FGD transcriptions with 42 individuals during the six FGD sessions. The 194 quotations were obtained from FGD1, which yielded the highest number with 44 quotations. It was then followed by FGD2 with 42 quotations and FGD3 with 25 quotations. Meanwhile, FGD4 had the lowest number with 13 quotations, FGD5 had 42 quotations, and finally, FGD6 had 28 quotations.

To explore the digital technology adoption among the urban poor, the thematic analysis has sufficiently manifested the significance of digital media literacy as the second theme. For the urban poor, who may face barriers such as limited access to technology, lack of education, and socioeconomic constraints, digital media literacy serves as a vital tool for enhancing their communication capabilities and fostering community engagement. By developing these skills, individuals can better discern credible information from misinformation, participate in civic discourse, and leverage digital platforms for economic opportunities. To this, the study has been able to discover five components that are prerequisites to the development of theme two: ability to define (16%), digital content creation (23%), rating on digital content (7%), source of acquiring knowledge (31%), and use of information (21%).

Theme two focuses on digital media literacy, revealing that the urban poor have a clear understanding of what it means through explanations and descriptions of their daily activities. A study by Rahman and Lee (2022), which investigated the comparative analysis

across Jakarta, Manila, and Kuala Lumpur, demonstrates that urban poor communities share common barriers to digital competency development, including infrastructure limitations, cost barriers, and inadequate digital skills training programs, though Malaysian communities show relatively stronger basic digital literacy.

> …I also think there are only a few government campaigns that I've seen that are promoting awareness about digital media or digital literacy, so that's from me… (Reference 9 - 0.26% Coverage)

> …but I'm also thinking that perhaps the digital literacy also applies to the people who actually produce this content, I think I think as we travel to social media, look to YouTube… (Reference 11 - 0.36% Coverage)

> …I agree with informant 2, I just want to add that it also includes the capability to use devices and applications like social media, if you know how to do it, it's okay, but if you don't use it in real life, it has no use/function, knowledge is useless if it's not used in real life… (Informant 13 - 0.32% Coverage)

Informants defined digital literacy as the ability to use digital technologies effectively, critically, and responsibly. They discussed how they learned about the internet and social media, often through informal means like family members or friends. The perceived lack of government initiatives to promote digital literacy was a recurring concern, with suggestions for improved awareness campaigns and educational programs targeting various age groups, including the elderly.

Theme Three: Technical Assistance

There were 67 quotations collected during the thematic analysis of the third theme, Technical Assistance. This data was gathered from six focus group discussions (FGDs) involving 42 participants. The highest number of quotations, 19, came from FGD1, followed by FGD2 with 14 quotations, and FGD3 with nine quotations. FGD4 had the lowest number, with only four quotations, while FGD5 had seven quotations, and FGD6 also had 14 quotations.

Theme three focuses on the most important stakeholders that have a direct impact on the urban poor population and its digital technology adoption. The term "technical assistance" refers primarily to government agencies and the private sector that operate within the digital ecosystem. Understandably, both stakeholders must collaborate in addressing the challenges that hamper the attainment of digital society status in Malaysia.

Government agencies are vital as they create policies, provide funding, and establish infrastructure that facilitates access to technology. Their role includes ensuring that digital initiatives are inclusive and reach marginalised communities, especially the urban poor, who may face barriers to accessing digital tools and resources. A study conducted by Yu et al. (2024) highlights the challenges and strategies for federal agencies in disseminating information online, emphasising the need for accuracy, accessibility, and responsiveness to public inquiries.

On the other hand, the private sector contributes through innovation, investment, and the development of digital solutions that can effectively meet the needs of these

communities. Their involvement is crucial in creating affordable and accessible technology, as well as offering training and support to help individuals navigate the digital landscape. To this, the study has been able to discover two components pre-requisite to the development of the third theme: recommendation for improvement (57%), and government information dissemination (42%).

> …about the infographic on the government on digital literacy. Honestly, I cannot remember if I have seen any infographic released by the government, and I think maybe there are some, but I haven't encountered them, maybe it has not appeared on social media and such... (Reference 10 - 0.38% Coverage)

> The Malaysian government make sure that our society is receiving the much-needed awareness and education… so that when exposed to content by social media influencers or digital creators Content… they will be able to understand quality content that is beneficial to them and also other viewers…" (Reference 29 - 0.69% Coverage)

> …the government's effort about this kind of thing… about how to make sure that the news on the info that we received is authentic, transparent, is very, very low… (Reference 7 - 0.24% Coverage)

Informants discussed their creation and sharing of content on social media, with motivations ranging from self-expression and knowledge sharing to financial gain. Concerns were raised about the potential for misuse of social media, including cyberbullying, scams, and the spread of misinformation. The role of content creators in shaping public opinion and the need for responsible content creation were highlighted. Participants also discussed strategies for evaluating the credibility of online information, often relying on mainstream media sources but acknowledging their limitations.

Theme Four: UI/UX Experiences

A total of 79 quotations were collected during the thematic analysis of the fourth theme, UI-UX Experiences. This data was gathered from six focus group discussions (FGDs) involving 42 participants. The highest number of quotations, 33, came from FGD6, followed by FGD2 with 19 quotations, and FGD3 with 11 quotations. FGD4 had the lowest number, with only four quotations, while FGD5 had seven quotations, and FGD1 also had five quotations.

> Maybe MCMC can collaborate with schools and universities; they need students to volunteer. How about through the CSR Sulam volunteer program, etc., so we can reach even further to spread digital literacy… (Reference 4 - 0.78% Coverage)

> Based on my experience, when I use the internet, there will be immoral advertisements such as self-promotional advertisements on the web… (Reference 20 - 0.55% Coverage)

> … (the government should) encourage content creators to make good content, government can reward them by not imposing ridiculous tax for example, for the content creator for the someone who do online business on the platform for example so don't impose ridiculous tax for the one who obey the rules and regulations so this would also allow them and encourage them to do more beneficial content for the society… (Reference 36 - 1.19% Coverage)

The informants discussed the government's role in regulating online content and promoting digital literacy. The MCMC was frequently mentioned, but concerns were raised about the effectiveness of current regulations and the need for increased transparency and collaboration between the government and content creators. Suggestions included targeted awareness campaigns, improved enforcement of existing laws, and incentives for responsible content creation.

While governance and ethics were discussed, the crux of the issue revolved around how the user interface (UI) and user experience (UX) were extrinsically related. This is so because UI/UX is the window to the digital landscape, regardless of the content. As such, it is vital to ensure the community is able to independently navigate the digital application with ease. Kondratyuk (2025), in the study on UX design for digital inclusion, states that the user experience should cover the full range of human capabilities, guaranteeing full interaction for people with visual, hearing, motor, speech, and cognitive disabilities.

CONCLUSION

This study comprehensively explores both the challenges and opportunities associated with the adoption of digital technology, specifically focusing on its potential to enhance the livelihoods of individuals living in urban poverty. It highlights the importance of not just adopting digital tools but doing so thoughtfully and strategically, which aligns with the unique needs and circumstances of the urban poor. While there are significant obstacles to overcome—such as access to reliable internet, affordability of devices, and digital literacy—these challenges can be addressed through targeted initiatives and community engagement.

The findings of this study further propose a viable model that could be utilised by relevant stakeholders in the formulation of effective strategies aimed at enhancing the socio-economic conditions of the urban poor population. The proposed model emphasises the importance of increasing digital skills, recognising that such advancements can catalyse broader economic improvement and social mobility within marginalised communities. Chart 1 provides a visualisation of the model based on the thematic analysis derived from this study.

E-ISSN: 2289-1528
https://doi.org/10.17576/JKMJC-2026-4201-20

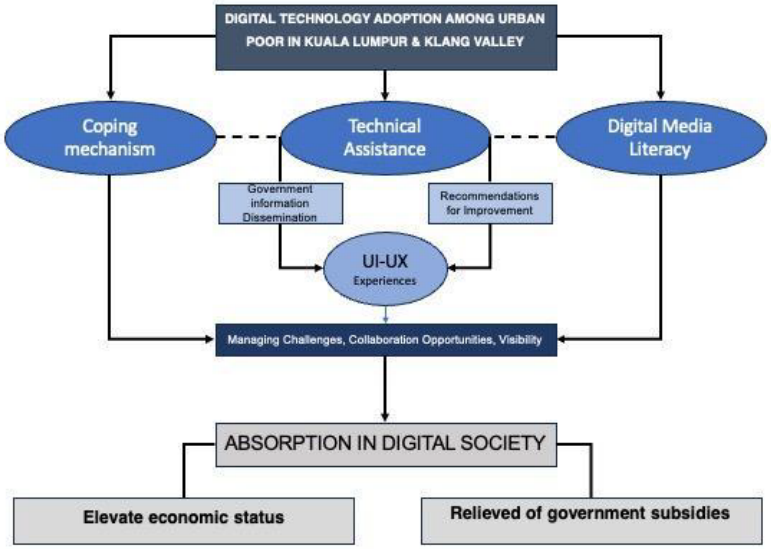

Chart 1: Proposed model for digital technology adoption among urban poor

The opportunities that arise from the successful integration of digital technologies into daily life were central in the thematic analysis. Improved access to information, job opportunities, and essential services can significantly transform the lives of those in urban poverty. Ultimately, this research underscores the critical need for policymakers, NGOs, and community leaders to collaborate in developing a framework that supports the strategic implementation of digital technology. When approached thoughtfully, this initiative can create a pathway toward sustainable development and improved quality of life for urban poor communities, making it a vital area for ongoing exploration and investment.

Mulyaningsih, Wahyunengseh and Hastjarjo (2020) state that the digital divide in poor urban neighbourhoods in Indonesia highlights how limited education and skills restrict access to digital technology and perpetuate poverty. To address this issue, targeted educational programs and training initiatives can be implemented to enhance digital literacy among residents. By providing access to affordable technology and resources, these communities can bridge the digital divide and empower individuals to improve their economic opportunities.

Summarily, it has been consistently highlighted that the importance of digital literacy extends beyond basic technological skills to encompass critical evaluation of online content and responsible online behaviour. Access to reliable internet service was a major concern, with reports of inconsistent Wi-Fi in public places and varying experiences with different telcos. While government initiatives like computer labs were acknowledged, their relevance in the context of widespread personal device ownership was debated.

There were mixed views on the effectiveness of government efforts to promote digital literacy and regulate online content, with some suggesting a need for increased transparency and targeted campaigns, while others felt current regulations were insufficient. The impact of social media on vulnerable groups, particularly children and the elderly, was a recurring concern. In its entirety, a comprehensive approach to digital equity must address both infrastructural access and the diverse abilities of users to engage with digital technologies. This dual focus is crucial to ensure that everyone can fully harness the potential of digital networks for personal, educational, and professional growth.

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REFERENCES

Aldashev, A., & Batkeyev, B. (2021). Broadband infrastructure and economic growth in rural areas. *Information Economics and Policy*, *57,* 100936.

Alias, N. F., & Che Sulaiman, N. F. (2023). The social resilience of urban poverty toward quality of life in Kuala Lumpur. *Journal of Economics and Sustainability* (JES), *5*(2), 43-57.

Chamhuri, N. H., Hamdan, H., Ahmah, P., & Ismail, F. (2015). Conceptual framework of public participation in ensuring quality of life of the urban poor in Malaysia. *Procedia-Social and Behavioral Sciences*, *168*, 349-356.

Coenen, M., Coenen, T., Stamm, A., Stucki, G., & Cieza, A. (2012). Individual interviews and focus groups with patients with rheumatoid arthritis: A comparison of two qualitative methods. *Quality of Life Research*, *21*, 359-370. https://doi.org/fm4dg6

Cullen, R. (2011). Handbook of research on overcoming digital divides: Constructing an equitable and competitive information society. *Online Information Review, 35*(1), 163–165. https://doi.org/10.1108/14684521111113669

Czernich, N., Falck, O., Kretschmer, T., & Woessmann, L. (2011). Broadband infrastructure and economic growth. *The Economic Journal*, *121*(552), 505-532.

Eruchalu, C. N., Pichardo, M. S., Bharadwaj, M., Rodriguez, C. B., Rodriguez, J. A., Bergmark, R. W., ... & Ortega, G. (2021). The expanding digital divide: Digital health access inequities during the COVID-19 pandemic in New York City. *Journal of Urban Health*, *98*(2), 183-186.

Goodspeed, R. (2017). Community and urban places in a digital world. *City & Community*, *16*(1), 9-15. https://doi.org/10.1111/cico.12218

Guest, G., Namey, E., & McKenna, K. (2016). How many focus groups are enough? Building an evidence base for nonprobability sample sizes. *Field Methods, 29*(1)*,* 3–22. https://doi.org/10.1177/1525822X16639015

Hassink, R., & Gong, H. (2020). Regional resilience. In A. Kobayashi (Ed.), *International encyclopedia of human geography* (2nd ed., pp. 351-355). Elsevier Ltd. https://doi.org/10.1016/B978-0-08-102295-5.10126-X

He, C., Shi, R., Wen, H., & Chu, J. (2025). Impact of digital literacy on rural residents' subjective well-being: An empirical study in China. *Agriculture*, 15(6), 586.

Hennink, M. M., Kaiser, B. N., & Weber, M. B. (2019). What influences saturation? Estimating sample sizes in focus group research. *Qualitative Health Research*, *29*(10), 1483-1496.

Herath, M. M., Ahmad, N., Hassan, M. M., & Jaafar, W. M. W. (2021). A review on empowering farmers through technology adoption towards poverty alleviation in developing countries. *International Journal of Academic Research in Business and Social Sciences*, *11*(11), 1785-1805.

IEEE Digital Reality. (n.d.). The impacts that digital transformation has on society. https://digitalreality.ieee.org/publications/impacts-of-digital%20transformation/#:~:text=Disruption%20of%20Industry,losses%20in%20the%20print%20secto

Jayasooria, D. (2016). *Inclusive development for urban poor and the Bottom 40% of communities in Malaysia*. Institut Kajian Etnik UKM.

Jin, S., & Deng, F. (2024). Impact of public environmental concern on urban-rural economic income inequality. *Economic Analysis and Policy*, *82*, 1131-1143.

Kateb, S., Ruehle, R. C., Kroon, D. P., van Burg, E., & Huber, M. (2022). Innovating under pressure: Adopting digital technologies in social care organizations during the COVID-19 crisis. *Technovation, 115,* 102536.

Kaye, B. K., & Johnson, T. J. (2002). Online and in the know: Uses and gratifications of the web for political information. *Journal of Broadcasting & Electronic Media*, *46*(1), 54-71.

Kemp, S. (2024, Jan 31). *Digital 2024: Global overview report*. Meltwater; We Are Social https://datareportal.com/reports/digital-2024-global-overview-report

Kondratyuk, A. (2025). UX-design for digital inclusion: How to ensure accessibility for all users. *European Journal of Interdisciplinary Issues*, *2*(2), 17-22.

Kottegoda, S. Perera, S. Emmanuel, S (2012). *ICT access for women from the margins: Lessons from Sri Lanka*. India: IT for Change. http://hdl.handle.net/10625/51474

Leng, K. S., Samsurijan, M. S., Gopal, P. S., Malek, N. M., & Hamat, Z. (2018). Urban poverty alleviation strategies from multidimensional and multi-ethnic perspectives: Evidences from Malaysia. *Kajian Malaysia*, *36*(2), 43-68.

Li, Y., & Huang, Y. (2025). Social security, digital literacy, and relative poverty in China. *Finance Research Letters, 71*, 106446.

Lissitsa, S., & Chachashvili-Bolotin, S. (2016). Life satisfaction in the internet age–Changes in the past decade. *Computers in Human Behavior*, 54, 197-206.

Mulyaningsih, T., Wahyunengseh, R., & Hastjarjo, S. (2020). Poverty and Digital Divide: A Study in Urban Poor Neighborhoods. Jurnal Ilmu Sosial dan Ilmu Politik, 24(2), 193-208.

Oshota, S. O. (2019). Technology access, inclusive growth and poverty reduction in Nigeria: Evidence from error correction modeling approach. *Zagreb International Review of Economics & Business*, 22(2), 1-22. http://doi.org/10.2478/zireb-2019-0017

Pawelczyk, K., Singh, K., & Nadchatram, I. (2014). *Exploring the digital landscape in Malaysia: Access and use of digital technologies by children and adolescents.* United Nations Children's Fund (UNICEF).

Schreier, M. (2012). *Qualitative content analysis in practice.* SAGE Publications.

Siwar, C., Ahmed, F., Bashawir, A., & Mia, M. S. (2016). Urbanization and urban poverty in Malaysia: consequences and vulnerability. Journal of Applied Sciences, 16(4), 154-160.

StashAway. (2024, November 16). B40, M40, T20. and T15 in 2024: A deep dive into Malaysia's income groups. https://www.stashaway.my/r/b40-m40-t20-t15-malaysia

Sun, Y., Gao, J., Zhang, X., & Cheng, Y. (2023). The impact of internet use on residents' happiness in China. *Frontiers in Public Health*, 11, 1188259.

Ugochukwu, A., & Phillips, P. (2018). Technology adoption by agricultural producers: A review of the literature. In Kalaitzandonakes, N., Carayannis, E., Grigoroudis, E., & Rozakis, S. (Eds.), *From agriscience to agribusiness. Innovation, Technology, and Knowledge Management* (pp 361–377). Springer. https://doi.org/10.1007/978-3-319-67958-7_17

Voitsikhovskyi, A. V., Bakumov, O. S., Ustymenko, O. S., & Syroid, T. (2021). The right of access to the internet as fundamental human right given the development of global information society. *The Law, State and Telecommunications Review, 13*(1), p. 1-19.

Wang, C. H., & Wu, C. L. (2022). Bridging the digital divide: The smart TV as a platform for digital literacy among the elderly. *Behaviour & Information Technology*, *41*(12), 2546-2559. https://doi.org/10.1080/0144929X.2021.1934732

Yu, J., Bekerian, D. A., & Osback, C. (2024). Navigating the digital landscape: challenges and barriers to effective information use on the internet. *Encyclopedia*, *4*(4), 1665-1680. https://doi.org/10.3390/encyclopedia4040109