FACTORS SHAPING UNDERGRADUATE STUDENTS' ACCEPTANCE OF E-GOVERNMENT SERVICES IN UTAR KAMPAR : A UTAUT PERSPECTIVE

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PREFACE

This research project aims to examine the factors that influence Malaysian students' adoption of digital government services. Understanding undergraduate university students' perspectives is crucial to improving e-government platforms as they become increasingly important to public administration and citizen participation. The study uses the Unified Theory of Adoption and Use of Technology (UTAUT) to evaluate how performance, effort, social impact, and facilitating factors shape students' e-government service acceptance. This research examines Malaysia's digital governance challenges and prospects through a quantitative survey of 368 undergraduates from six faculties at UTAR Kampar.

This study aims to help policymakers, government agencies, and educational institutions create more inclusive, user-centric e-government services. This study recommends strategic actions to increase student participation with digital public services by addressing usability, infrastructure, and digital literacy challenges. Thus, this report aims to contribute to the discourse on e-government acceptance and encourage more research to bridge the gap between technology innovation and citizen acceptance in Malaysia.

ABSTRACT

This study explores the key determinants affecting undergraduate students' acceptance of e-government services at UTAR, Kampar Campus, Malaysia. Understanding how university students, who are both current customers and future leaders, embrace e-government services is crucial as governments speed their digital transformation projects. The Unified Theory of Acceptance and Use of Technology (UTAUT) is used to examine how performance expectancy, effort expectancy, social impact, and facilitating factors affect students' e-government platform adoption. The quantitative study surveyed 368 undergraduates from six UTAR Kampar faculties using a standardized questionnaire. SPSS was used for descriptive statistics, reliability testing, and multiple linear regression to analyze variable correlations. The results show that all four UTAUT constructs explain 87.5% of the variance in student acceptance of e-government services. The study adds several significant entries to the literature. These findings imply that students prioritize trustworthy technical support and resources when embracing e-government services, followed by peer and societal influences, simplicity of use, and perceived benefits. Enhancing technical infrastructure and support systems, building more user-friendly interfaces and simpler processes, promoting e-government services through peer networks and social media, and clearly articulating their benefits and features. The study gives useful information, but it has some flaws, like only looking at data from who worked there themselves. Future studies could look at a larger group of students from more than one school and use qualitative methods to learn more.

Keywords : e-government; private university students; students’ acceptance; technology acceptance; UTAUT model

Subject Area: JQ21-6651 Political institutions and public administration

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LIST OF ABBREVIATIONS

AI	Artificial Intelligence
AWS	Amazon Web Services
CSPs	Cloud Service Providers
DPO	Data Protection Officer
DQL	Digital Quality of Life Index
EDMS	Electronic Document Management Systems
EE	Effort Expectancy
EGDI	E-Government Development Index
FAS	Faculty of Arts and Social Science
FBF	Faculty of Business and Finance
FC	Facilitating Conditions
FEGT	Faculty of Engineering, Green and Technology
FICT	Faculty of Information and Communication Technology
FSc	Faculty of Science
G7	The Group of Seven
GOE-EDMS	Government Office Environment-Electronic Document Management System
HRMIS	Human Resource Management Information System

ICS	Institute of Chinese Studies
ICT	Information Communication and Technology
ISO	International Organization for Standardization
JPJ	Road Transport Department
MAMPU	Malaysian Administrative Modernisation and Management Planning Unit
MSMEs	Micro, Small and Medium Enterprises
MSPs	Managed Service Providers
MyDigital	Malaysia Digital Economy Blueprint
NIST	National Institute of Standard and Technology
OECD	Organization for Economic Co-operation and Development
PENJANA	Short-Term Economic Recovery Plan
PDPA	Personal Data Protection Act
PDRM	Royal Malaysian Police
PDSA	Public Sector Data Centre
PE	Performance Expectancy
POEU	Perceived Ease of Use
PTPTN	National Higher Education Fund Corporation
PU	Perceived Usefulness
Q1	Quarter One
SI	Social Influence
SMEs	Small and Medium Enterprises

SPP II	Project Monitoring System II
SPSS	Statistical Package for Social Science
TAM	Technology Acceptance Model
TM	Telekom Malaysia
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UNESCO	United Nations Educational, Scientific and Cultural Organization
UTAR	University of Tunku Abdul Rahman
UTAUT	Unified Theory of Acceptance and Use of Technology

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CHAPTER 1: INTRODUCTION

1.0 Introduction

This research purpose tends to examine the factors that influence the acceptance of university students towards the e-government services. This study could potentially provide insights for government sectors regarding the factors of acceptance among university students as they relate to the service quality delivered by them. Information could be instrumental in making strategic decisions. This chapter includes a research background, problem statement, objectives of research, study objectives, hypotheses for research, research significance, chapter layout, and lastly chapter summary.

1.1 Research Background

1.1.1 Definition of E-Government Services and Their Importance for Public Service Delivery

The digitalization of government structures through advanced Information and Communications Technology (ICT) enhances e-government services which improve efficiency, accessibility, and engagement with citizens, businesses, and organizations (Kurniati et al., 2021). E-government services refer to government initiatives that use ICT to automate public services electronically like secure data transmission, e-procurement, and tax returns, replacing paper-based methods with real-time internet access for transparency and efficiency (Lykidis et al., 2021; Tremblay et al., 2023). In Malaysia, during the COVID-19 pandemic, e-government services became critical owing to

government employees working remotely, which reduced direct engagement with citizens and increased reliance on the services (Azri et al., 2023). Based on Petrosyan (2024a) and Kemp (2024), Global internet usage reached 5.4 billion, with Malaysia at 97.4% in 2024. Teenagers and university students, aged 18-24, accounted for 11.2% of the population, with 33.59 million internet users. Internet accessibility is crucial for individuals to access e-government services, as it allows them to connect to these services without any other necessary resources (Tahiru et al., 2020). As a result of Malaysia's high internet usage and technology-dependent population can lead to an increased number of e-government services users. Malaysia's successful implementation of e-government services is largely facilitated by the active participation of all Malaysians in digital governance (Zubir & Latip, 2022).

Moreover, the importance of e-government services for public delivery services. E-government services exhibit strong political commitments to advance administrative reforms, develop government equipment, deliver high-quality public services to all citizens, and foster citizen participation (Pham et al., 2023). E-government services also improve public service delivery by making it more accessible, ignoring geographical barriers and simplifying procedures, yet limited infrastructure and human resource availability prevent widespread utilization (Zhang & Bhattacharjee, 2024). E-government services also assist the government in improving transparency and accountability in public service delivery systems, building confidence and strengthening society by providing competent, efficient, and cost-effective social services (Lawan et al., 2020). Digital transformation in government services improves decision-making through data-driven techniques, allowing for enhanced resource allocation, trend prediction, and focused policy design that resolve social and economic challenges (Setyawan, 2024). As a result, with significant political commitments, high accessibility, improved decision-making, and transparency and accountability in service delivery, the e-government services gained good relationships with citizens in public trust and participation.

1.1.2 The Growing Trends of Digital Transformation in Government Services in Global and Malaysia.

The main digital transformation in government services trends included Artificial Intelligence (AI) implementation in e-government services, cybersecurity and smart city. Firstly, AI integration in public administration enhances efficiency by automating processes, identifying irregularities and safeguarding data, but it also raises concerns about unregulated development, drawing global attention to the "AI regulation race" (United Nations, 2024). From 2022 to 2023, global AI discussions grew because of legislative efforts such as China's generative AI measures and increasing interactions with the OECD, NIST, UNESCO, ISO, and G7 (Domin, 2024). For Malaysia, the Minister of Digital has highlighted the necessity of incorporating AI into government services, highlighting its numerous benefits (Ministry of Digital, 2024). For example, adopting AI in government services can improve efficiency, service delivery, and inclusivity, revolutionizing industries and driving economic growth; meanwhile, Malaysia can lead in the global digital economy by fostering collaboration across sectors.

Secondly, cybersecurity as for global cyberattacks on e-government services can disrupt critical functions, affecting millions of individuals thus it is critical to maintain service continuity (Alshehri et al., 2021). Government organizations require increased cybersecurity measures to protect their data on less secure platforms and understand their supply chains, including those of third-party vendors, customers, and service providers (Zagyi, 2021). Malaysia has followed up the trends to focus on cybersecurity improvement. Malaysia experienced 57.8 million virus attacks in Q1 2022, accounting for 1.1% of global cyberattacks; hence, the government invested $434 million in the Malaysia Cyber Security Strategy (MCSS) 2020–2024 (International Trade Administration, 2024). However, despite rising cybersecurity budgets and 69% of Malaysian executives prioritizing tech modernization, progress remains slow as hybrid threats,

generative AI risks, and regulatory demands challenge organizations, with 67% citing "hack-and-leak" attacks as a top concern and 83% planning to adopt AI defences (Ng et al., 2023).

Thirdly, smart cities which is driven by technology, and globally enhances growth, quality of life, efficiency, safety, engagement, and services through information and communication technology, fostering e-learning, urban development, e-democracy, and connected infrastructure (Aditya et al., 2023; Nath et al., 2023). It relies on e-government services to facilitate citizen involvement and decision-making, while also incorporating ICT for smart transportation, building management, energy inspection, security, public safety, and e-commerce (Zagyi, 2021). According to Science, Technology, and Innovation Minister Datuk Seri Dr Adham Baba, Malaysia is concentrating on developing smart cities to resolve urbanization issues, strengthen residents' quality of life, stimulate economic development, provide a safe environment, and encourage the application of efficient urban management technology (BERNAMA, 2022). For example, Malaysia's capital, Kuala Lumpur, is spearheading smart city programs such as SMART Selangor which improves e-governance and digital infrastructure, and River of Life, which improves river quality and public areas (Leong et al., 2023).

1.1.3 The Efforts of Malaysian Government in Implementing E-Government Services

Moreover, the COVID-19 pandemic had a devastating impact on Malaysia's Small and Medium Enterprises (SMEs), resulting in the closure of approximately 32,000 operations (Hasin et al., 2021). In 2019, SMEs faced serious COVID-19 issues, with 34% reporting 20% sales drops, 21% expecting a poor performance, 25% optimistic, and 30% unsure about retrenchments (Vaghefi & Yap, 2021). Based on Saidie et al. (2020), The Malaysian government launched an RM35.0 billion Short-Term Economic Recovery Plan (PENJANA) to speed economic recovery on 5 June 2020,

along with RM2.4 billion for financial stress support for micro-enterprises and SMEs through tax relief measures and an additional financing facility. It is the fourth step in a six-stage plan to address the health, economic, and social consequences of the COVID-19 pandemic, which are 6R includes Resolve, Resilience, Restart, Recover, Revitalize, and Reform. The government has also allocated RM100 million for the Digitalisation Matching Grant, RM500 million for the SME Technology Transformation Fund, and RM100 million for the Smart Automation Grant to enhance SMEs digitalization (Liew, 2020).

Besides that, the Personal Data Protection Act (PDPA) which protects personal privacy in commercial transactions by regulating data from collection to deletion, impacting e-government services by enabling user control over data access, agreement, processing, and utilization, fostering digital transformation (Alibeigi & Munir, 2020; Suhaidi, 2023). Thus, implementing transparency and accountable privacy protection policies is crucial for protecting personal information privacy and enhancing citizens' trust in government systems. According to Tham et al. (2024), Malaysia's government has delivered an amendment with 8 key changes to the PDPA in 2024. For instance, replacing "data user" with "data controller", mandatory data breach notification, requires a Data Protection Officer (DPO) appointment, strengthening cross-border data transfer rules, increased data processors regulation, data portability rights, expanded definition of sensitive personal data, and increased penalties for non-compliance. Consequently, e-government services can improve public trust and acceptance, by securing personal data, providing data protection from breaching, allowing user data transfer, leveraging biometric authentication for identity verification, and securely processing data to prevent leaks and misconduct.

Furthermore, MyGovCloud which is a hybrid cloud system that combines private and public cloud services from the Public Sector Data Centre (PDSA) and Cloud Service Providers (CSPs), providing group savings, value-added services, and employee training through the Cloud Framework Agreement (Mahalingam, 2024). It offers cloud hosting services to 730 Malaysian public sector entities, including network, storage, server, and operating systems, including 250 applications MyMTC, MyMesyuarat, and MAMPU websites for federal central and operational agencies, and state agencies (Sallehudin et al., 2020). MyGovCloud also collaborated with Microsoft, Google, TM, and AWS to establish a strategic infrastructure (Kessler, 2021). CSPs and Managed Service Providers (MSPs) engagement in MyGovCloud is expected to create RM12 billion to RM15 billion in investment potential by 2025, laying the groundwork for an effective digital environment and encouraging long-term economic development (Sharon, 2022). Cloud services allow e-government services to fasten projects, reduce upfront expenses, remove hardware maintenance, and profit from effective service delivery through rapid and accurate data processing controlled by cloud providers (Jusop et al., 2021). However, MyGovCloud from MAMPU can only handle about 25% of the cloud requirements of the public sector (Amin, 2024).

1.1.4 Key Milestones or Government Initiatives in Digital Service Promotions

Malaysia Digital Economy Blueprint (MyDigital), released in 2021 provides precise instructions and targets for the growth of the digital economy (Lee, 2023). It establishes ambitious digitalization ambitions, supporting collaboration among businesses, societies, and government through six strategic thrusts with 22 strategies, 48 national initiatives, and 28 sectoral initiatives, intending to drive digital change throughout society (Sharon, 2024; Rasiah et al., 2024). With MyDigital's efforts, digital

customers accounted for 88% of the population, 216 e-payment transactions per capita were achieved, and 235,327 new MSMEs have joined e-commerce, bringing the total to 83% of the 2025 target (Aman, 2022). Additionally, MyDigital ID has registered over one million users, marking a significant milestone in the country's digital transformation efforts (Rozlan, 2024). Malaysia has also exceeded the RM70 billion digital investment objective under MyDigital, attracting more than RM110 billion, owing to Singapore's data centre investments shifted from the country between 2020 and 2022 (Jamil, 2023). However, by year's end, Malaysian Prime Minister Datuk Seri Anwar Ibrahim expressed concern about the delays in implementing MyDigital ID and 5G initiatives, pushing for faster development (Nizam, 2024). For example, the MyDigital ID is still a long way from meeting the government's goal of 10 million users by the first quarter of 2024, due to the delayed introduction of online registration (Opiah, 2024).

Thus, Malaysia's Modernisation and Management Planning Unit (MAMPU) established MyGovernment portal as the official gateway to consolidate government departments under the 'Digital Services' banner and provide a unified platform for online government information and services (Sivaji et al., 2019; Man & Manaf, 2023). It was introduced in 2017 and allows for the delivery of 90% of government services online, to improve consumer satisfaction, transparency, competitiveness, and global service delivery, and transform government services (Choi & Xavier, 2021). It has already collected data on nine types of life events: formal education, facilities and welfare, healthcare, careers and retirement, family institutions, tourism, business, personal identification, finance and taxation, and IT and digital information (Kessler, 2020). Furthermore, it developed in partnership with 28 ministries and 57 public sector entities which allows consumers to access material and e-government services without requiring them to visit government offices (Malay Mail, 2021). It serves as a consolidated platform for integrated information and online services, drawing 20.5 million visits as of February 2023 and combining 889 e-government services by the end of 2022 (Sharon, 2023).

The EGDI in e-government services uses ICT for communication and organization, including devices, maps, and key measurements, to accelerate regional and global development (Sukarno & Nurmandi, 2023). The EGDI evaluates e-government services, particularly smartphone apps, and social media is the most popular digital avenue for information exchange and communication (Petrosyan, 2024b). Moreover, the E-Government Development Index (EGDI) allows Malaysia's government to benchmark best practices in the areas of digital services, infrastructure, and human capital development. Malaysia's e-government services initiative placed 53rd in the EGDI in 2022 based on services, infrastructure, and capital (Ministry of Economy Malaysia, 2023). Malaysia has a strategic plan for e-government services to enhance EGDI rankings by 2030 through ongoing development. Thus, Malaysia's high acceptability and rank in e-government services strengthens public knowledge and trust in service delivery through the acceptance of modern digital technologies with EGDI.

1.1.5 Types of E-Government Services in Malaysia

In an ideal world, e-government seeks to reduce expenses for transportation, waiting periods, administrative time, corruption, operational accessibility, and openness (Al-Abdallat, 2020). According to Hariz Zubir and Abdul Latip (2024), e-government is an effort that seeks to revamp the functioning of government agencies and raise the level of communication between citizens and organizations. This can be done by creating stronger connections, enhancing convenience, offering high-quality services, and setting up more efficient procedures and systems (Mees et al., 2019). The key objective of the deployment of e-government is to restructure both the inner and outer connections between government agencies to streamline and mitigate the burdensome and convoluted bureaucratic system (Almutairi et al., 2020). As a result, the conversion that follows enhances the government's ability to provide public services

by increasing its accountability and effectiveness (Li & Shang, 2024). These factors make the idea of e-government valuable since it is progressive, revolutionary, effective, and accessible.

The government of Malaysia has provided six types of e-government services. Firstly, Government Office Environment - Electronic Document Management System (GOE-EDMS) is a system for managing electronic documents. In general understanding, the EDMS is an ICT system that is used by the government that save, organize, and manage electronic files for an organization, particularly documentation that does not change frequently, such as legal documents, financial reports, promotional materials, and scanned communications (Gamido et al., 2023). Secondly, e-Khidmat for Frontline Agencies. In general acknowledgement, it is a service that provides opportunities for the public to have access to transactions, reporting situations, applications and assistance from responsive public agencies which stand from the Royal Malaysian Police (PDRM) and the Road Transport Department (JPJ) with timeliness, convenience and effectiveness with just a few clicks.

Thirdly, the Project Monitoring System II (SPP II) is used for the management of projects. In general, project monitoring is the process of keeping an eye on the task's statistics, outcomes, and occupations to make sure it's achieved on time, on budgetary constraints, and corresponding to the project's requirements (Marie Vianney et al., 2020).Fourthly, the Human Resource Management Information System (HRMIS) is used to manage human resources. It is a technology-driven system that helps organizations successfully gather, store, manipulate, analyze, retrieve, and distribute important information about their human resources, allowing them to perform their human resource obligations more efficiently (Vilani Sachitra & Tharini Wimalasena, 2024). Fifthly, the e-Perolehan system for government procurement. The electronic procurement method enables companies to provide services and products to the government via online platforms, resulting in cost, time, and reduced energy consumption via electronic government applications, tender proposal submission,

application acceptance, status checks, and online payment transactions (Malaysian Government eProcurement, 2024). Lastly, e-local government (e-PBT) allows the local authorities to use e-PBT for their services. As a digital transformation tool, it helps local governments manage their resources more effectively by providing faster data integration, specific business modules for different tasks, and benefits related to performance, productivity, and reporting (Hazam et al., 2019).

E-government services are crucial for bridging government, public, and private sectors, particularly for Malaysian university students, thereby reducing political barriers and promoting economic growth. The university students heavily depend on and require internet and electronic technology for their academic and everyday activities (Zhao & Cheah, 2023). Therefore, e-government services can effectively meet their requirements, motivating them to use dependable, transparent, and accountable e-government services (Nookhao & Kiattisin, 2023). This will eventually enhance their participation in public services through convenient access. As e-government services in higher education evolve, acceptability is crucial for improving public and private administration and service standards (Shaban & Alabboodi, 2019). Other than normal public services, the government may also provide educational services. It will enable the university students technology and digital skills, while reliable and stable internet access helps students switch to digital learning, improve education quality, and close the skills gap (Nimer et al., 2022). Hence, as e-government services become more advanced, the university students will be more likely to accept the e-government services. The potential of e-government learning services to improve university students' access to government resources and information in developing countries' higher education has been demonstrated by earlier research (Al-Omairi et al., 2020).

Additionally, the e-government services also provide information services that educate students about government operations, budgets, and spending,

allowing them to seek more transparency from the government (Mensah, 2019a). University students make important contributions to the acceptance of e-government, making it critical to understand their motives for using these resources in their careers (Méndez-Rivera et al., 2023). This is because they were more likely and frequently to use the internet and advanced technology in their lives for mainly educational, public services, and transaction areas. It is usually said that public and private university students represent the country's future, with the insight and judgment to influence, challenge, and change its path (Tamimi et al., 2023). Adolescents' participation in politics is critical for the survival of democratic government because it increases engagement, legitimacy, and accountability, which encourages civic engagement, public advocacy and social improvement (Ibrahim et al., 2023). Digital technology in e-government services can be used to increase university students' involvement in volunteering, resolving problems, community events, and political protests as well as to improve methods of learning, critical thinking, and civic involvement (Mohino et al., 2023).

Thereby, the university students' acceptance of the e-government services depends on their perception of the e-government services, as well as their experiences of the services provided. They are critical in the digital age and can respond to unique situations, exhibiting their potential as beneficial, important, and thoughtful citizens, making them a key component of civilization (Moustaghfir & Brigui, 2024). Back to the point, an assumption, Malaysian university students' favorable ratings and acceptance of the government are not ideal. Based on the Merdeka Center for Opinion Research (2021), 70% of young adolescents of the average age are not interested in politics, 46% and 21% of them get their information from social media and people around them, while 66% believe that politicians don’t care about them and 78% believe that the complicated situation of politics. Hence, there is enough evidence to prove the assumption that it needs time to achieve high acceptance of e-government which also leads to low political awareness among university students (Tajudeen, 2023).

1.2 Problem Statement

According to Fransisca and Ningsih (2023), today's society has been greatly impacted by the advancement of internet technology as it provides a new mode of communication for individuals, corporations, and government organizations. E-government differs from the public sector in management and new management paradigms. (Ndou, 2021). It has created previously unheard-of communication and information access options. Government information and services are now available in ways inconceivable two decades ago. However, the effectiveness of e-government execution largely depends on citizens' intents and readiness to embrace this revolutionary idea (Khatib et al., 2019). In an ideal world, Malaysia's public sector would use digital technologies to optimize resource allocation, making data-driven choices that boost operational efficiency. According to Malodia et al. (2021), this will reduce redundancy and streamline government operations, allowing resources to be reallocated to essential sectors like education, healthcare, and social welfare. For instance, the easy-to-use smartphone apps such as MyJPJ and MyPay will make e-government services extremely accessible as it enables residents to obtain vital services from the comfort of their homes (Suhaidi, 2023). According to Fam (2024), these apps would be designed to deliver a seamless user experience, eliminating the need for in-person visits to government offices and saving citizens time and effort. The implementation of e-government would result in greater openness in government activities as digitalisation would allow for better tracking and accountability (Santani, 2024). As a result, it could reduce potential for corruption while increasing public faith in government services. Ideally, private university students in Malaysia would accept e-government services because it ensures secure and transparent transactions without intermediaries (Zubir & Latip, 2022).

Despite this advancement, Malaysia has encountered difficulties in enhancing the quality of its electronic government services and increasing public usage in e-government. Malaysia's position dropped from 29th in 2020 to 47th in 2022 on the E-Participation Index, indicating a sharp loss in the nation's e-government usage and capacity to provide efficient online government services (Man & Manaf, 2023). According to UN E-Government Knowledgebase (2024), this drop was accompanied by a decline in Malaysia's E-Participation Index score, which fell from 0.8571 in 2020 to 0.6818 in 2022. Despite earlier developments, these figures point to a challenge in keeping up with worldwide trends in e-government services. Malaysia saw a further slide in its global standing in 2024 which fell from 47th to 53rd out of 193 nations (UN E-Government Knowledgebase, 2024). Although Malaysia's E-Participation Index score improved from 0.6818 in 2022 to 0.6986 in 2024 which shows that other countries have made more progress in e-government acceptance and public digital participation. These persistent difficulties show how important it is for Malaysia to improve its e-government efforts. Thereby, Malaysia needs to keep addressing problems like user accessibility, digital infrastructure, and public confidence in e-government platforms if it wants to reclaim its competitive edge.

One particular instance that emphasizes the need of assessing the acceptance of e-government is Malaysia's performance in Surfshark's 2023 Digital Quality of Life Index (DQL), where the nation dropped from 31st place in 2021 to 37th place worldwide (Surfshark, 2024). This reduction is indicative of deeper problems in Malaysia's digital environment, where notable gaps continue to exist even with modest development. For example, although Malaysia's average fixed Internet speed of 133 Mbps is 38% faster than the global average, it still falls well behind Singapore, which tops the global rankings with an astounding average speed of 300 Mbps (Ismail, 2023; Low, 2022). The glaring difference between the two countries' digital infrastructures is highlighted by this contrast, underscoring Malaysia's need for additional improvement to be competitive (Marion & Augtania, 2023). However, the difficulties extend beyond infrastructure. Since these elements are essential for winning over citizens' trust and involvement, serious shortcomings in digital engagement and operational inefficiencies inside Malaysia's e-government services also play a big influence (Shuib et al., 2019).

Improving the effectiveness and acceptability of e-government services in Malaysia requires addressing several problems (Saleh & Alyaseen, 2022).

The low use of e-government services is mostly caused by the digital gap among B40 students in Malaysian higher education institutions (Muhamad Ali et al., 2024). Limited internet connection is a major issue, with 39.5% of these students living in rural locations where connectivity is frequently inconsistent or unavailable (Devisakti et al., 2023). A lack of digital understanding and abilities is another consequence of this digital divide, which deters students from using e-government platforms. According to Devisakti et al. (2023), perceived utility influences digital technology usage, suggesting that students who struggle with digital learning may find e-government services difficult or unneeded. There are still obstacles to overcome before the Malaysian government's efforts to upgrade internet infrastructure and distribute laptops are consistently reflected in the use of digital public services.

There is strong evidence of substantial usage of the e-government application among the university students in Malaysia such as the myPTPTN as approximately 1.2 million loan repayment transactions were completed online in January and February (Ramli, 2022). During that time, this amounted to 51.66% of all loan repayments and around 1.04 million Simpan SSPN deposits were made online which made up 49% of all deposits (Gan & Solhi, 2022). These numbers make it very evident that the myPTPTN app is widely utilised by PTPTN borrowers, who are primarily university students in Malaysia. The application is widely used and convenient for the university students because of its numerous payment methods and improved security features like push notifications and electronic identification verification (Ramli, 2022).

Nevertheless, the actual situation regarding the acceptance of e-government services by university students in Malaysia is laden with difficulties (Shuib et al., 2019). According to the research by El-Ebiary et al. (2019), these include a weak government response to online inquiries and ineffective interactive mechanisms on government websites, scarcity of government officials interested in utilizing the internet and Malaysia's governance inconsistent approach towards public dialogue adds to the complexity which makes it difficult to foster meaningful engagement between the government and citizens. According to Malodia et al. (2021), these challenges seriously hinder private university students' acceptance and usage on services of e-government, indeed preventing the realization of the ideal situation where digital governance could enhance efficiency and transparency.

E-government provides university students quick access to government services and information, improving current public administration procedures (Al-Omairi et al., 2020). It also provides an opportunity to have more interactions with the students by providing information, services and communication (Malodia et al., 2021). However, the major issue regarding the individual's acceptance to e-government in Malaysia is the inadequate digital engagement and operational inefficiencies (Man & Manaf, 2023). Hyytinen et al. (2022) revealed that the online services provided by the government often suffer from poor usability and technological problems, such as inefficient interactive features and slow response times. It can irritate consumers and reduce their willingness to participate with these platforms (Basar et al., 2021). Additionally, some government servants and agencies are not making the most of digital capabilities, which leads to antiquated or ineffective online services that fall short of successfully serving the demands of citizens (Dwivedi et al., 2021). The legitimacy and usefulness of e-government services are compromised by this lack of thorough digital involvement (Zeebaree et al., 2022).

Furthermore, the problem is made worse by irregularities in public participation and governance (Hazam et al., 2019). A major obstacle to meaningful exchanges between the state and its citizens is the government's frequently inconsistent attitude to public discourse (Hannon, 2023). According to Terrance (2023), this discrepancy may cause residents to feel that their opinions and concerns are not taken seriously or sufficiently handled. It would further deter people from acceptance of e-government services. The technical issues such as server breakdowns and extended maintenance websites are a major contributing cause to the frequent inaccessibility of e-government websites (Zubir & Latip, 2022). These problems cause annoyance and time loss for individuals, which irritates them and makes them less inclined to accept e-government services (Li, 2021).

University students are a vital segment of the population since they constitute future leaders and contributors (Wild et al., 2022). According to Amoah et al. (2023), government officials and policy makers would have the opportunity to incorporate their perspectives and ideas into the formation of public policy if they could comprehend issues from the viewpoint of university students. The creation and implementation of e-government services involve students significantly since they are essential collaborators and citizens (Samsor, 2020). The government offers e-government services that students can use to get things like birth documentation, national identity cards, passports, registration for households cards, driving licenses, medical insurance cards, digital learning facilities, and national and local e-library subscriptions (Zubir & Latip, 2022). Education and information services about the government's activities, especially its budget and spending, can be provided by e-government (Wardana et al., 2022). This puts university students in a better position to hold the government more accountable to its people. Along with that, it will help the government to improve their e-government system and could lead to more people using and accessing e-government services (Chohan & Hu, 2020).

According to World Bank Group (2024), Malaysia apparently had 40.27 % of tertiary education enrolment in universities and colleges. The primary objective of this study is to investigate the factors that influence Kampar Campus students' acceptance of e-government services. Consequently, all undergraduate students at the UTAR Kampar Campus comprise the study's target group. UTAR undergraduate students are chosen as the target respondents for studying e-government acceptance for several reasons. First, they belong to a tech-savvy generation familiar with digital technology which is well-acquainted with e-government services such as e-payment and digital registration (Assegaff et al., 2021). According to Prime Minister Tan Sri Muhyiddin Yassin, Malaysian youths aged 18-25 frequently use digital platforms for communication, education, and accessing business and job opportunities (Ministry of Finance Malaysia, 2021).

Second, UTAR's students come from a wide range of ethnic and socioeconomic backgrounds. This makes them a good sample for looking at how e-government is accepted by different groups of people. This corresponds with the findings from the Merdeka Centre (2021), which emphasize differing opinions of digital government services contingent upon area and economic level.Furthermore, undergraduate students represent future professionals poised to influence the labor and economy. Zulkifli and Zainal Abidin (2024) indicated that 70% of young Malaysians deem digital technologies, such as e-government services, vital for their personal and professional lives. Examining their current acceptance offers insight into the long-term acceptance patterns of these services. Additionally, Zainavy et al. (2023) found that UTAR students are more receptive to surveys due to their rich academic background and experience with research activities.

According to the Department of Statistics Malaysia (2023), the young demographic in Malaysia is significant as 26.6% of the population is aged between 18 and 30 years. This demographic is a crucial catalyst for the digital economy as Mohd Johan et al. (2022) study indicates that Generation Z and Millennials in Malaysia have a greater propensity for technology use than earlier generations. Ultimately, concentrating on UTAR undergraduates corresponds with the objectives of Malaysia’s Digital Economy Blueprint which emphasizes enhancing the utilization of digital government services, particularly among

younger populations (Zalani, 2025). UTAR students, characterized by their technological proficiency, diversity, and forward-thinking mindset, offer significant perspectives on enhancing the use of e-government services among private university students (Universiti Tunku Abdul Rahman, 2019). With the inclusion of UTAR, this study guarantees that the perspectives of learners with diverse educational backgrounds are advancing a more thorough and sophisticated comprehension of how students engage with e-government systems. Therefore, they are going to be representative of the younger generation as a whole in Malaysia's private universities.

Despite the expanding role of e-government services in improving public service delivery, research on university students' acceptance of these services has primarily focused on public university students (Sampa et al., 2020). Eventually, it creates a gap in understanding the viewpoints of private university students (Singh, 2023). Private universities play an important part in Malaysian higher education, with a large number of students enrolled in these institutions (Shaban & Alabboodi, 2019). Although students at private universities have the potential to influence digital governance as future professionals and leaders, little study has been done on how they see and use e-government services (Tajudeen, 2023). Examining private university students' acceptance of e-government services is essential because they may differ from their public university counterparts in terms of their socioeconomic origins, degree of digital accessibility, and institutional support (Graham et al., 2020).

The Unified Theory of Acceptance and Use of Technology (UTAUT) framework is a well-established paradigm used to analyze the factors influencing undergraduate students' acceptance of new technologies (Ayaz & Yanartaş, 2020). It comprises four important variables. The first element is performance expectancy which refers to the extent to which users believe that using a technology such as e-government services will improve their efficiency and productivity. Secondly, effort expectancy which measures the perceived ease of using the technology. Thirdly, social influence which assesses the impact of peers, instructors, or societal expectations on students' decisions to adopt the technology. Lastly, facilitating conditions which evaluates whether adequate

technical infrastructure, support, and resources are available to ensure smooth usage.

While previous studies like Maznorbalia and Awalluddin's (2021) research on e-government acceptance in Malaysia have applied the Unified Theory of Acceptance and Use of Technology model to the general population as there is a lack of focus on how these factors influence private university students. This study fills that gap by using the Unified Theory of Acceptance and Use of Technology theory to analyze how performance expectancy, effort expectancy, social influence and facilitating conditions impact undergraduate students' acceptance of e-government services. By doing so, it provides vital insights into the primary motivators and barriers in technology acceptance within an academic setting. Hence, it ultimately contributes to a better knowledge of how to optimize e-government service delivery for university students in Malaysia.

The acceptance of e-government services by private university students is crucial, considering the important role they play as future leaders and digital natives (Méndez Rivera et al., 2023). Hence, it is imperative to ascertain the factors that influence the students' acceptance of e-government. Dagnoush and Khalifa (2021) have highlighted the performance expectancy positively correlated between individual's acceptance. Nevertheless, some researchers presented differing findings, with Morchid (2019) suggesting there is no correlation between performance expectancy with the individual's acceptances. In addition, Jevsikova et al. (2021) have demonstrated a positive association with the effort expectancy and the individual's acceptances. Yet, Pan and Gao (2021) found different findings that proved there is no association between effort expectancy and the individual's acceptances.

Regarding the factor of social influence, Junnonyang (2021) showed that social influence has a strong association on the individual's acceptances. However, Tang et al. (2021) research has proven that there is no significant influence of social influence on the individual's acceptances. Besides, Ma et al. (2019) asserted that there exists a direct correlation between facilitating conditions and individual's acceptances. Nevertheless, Abd Rahman et al. (2021) revealed that facilitating

conditions did not affect the individual's acceptance. Thereby, the correlation between factors of the Unified Theory of Acceptance and Use of Technology model that impact an individual's acceptance is unclear due to the research on students' acceptance has found mixed results, no significant, with significant, positive, no relationships or negative. It is essential to research how the UTAUT model could influence the students' acceptance among private universities' students. Research from the standpoint of private university students regarding these factors is scarce as previous studies focus only on undergraduates at public universities. Therefore, the present study seeks to fill this gap in knowledge. In summary, research on the variables that influence private university students' acceptance and uptake of e-government services in Malaysia are very limited. A specialized target group is needed to grasp private university students' viewpoints, especially since the younger generation is viewed as the nation's growth and development driver.

1.3 Research Objectives

1.3.1 General Objectives

- To examine the factors influencing undergraduate students' acceptance of e-government services in UTAR Kampar.

1.3.2 Specific Objectives

- To examine whether there is a significant relationship between performance expectancy and undergraduate students' acceptance of e-government services in UTAR Kampar.
- To examine whether there is a significant relationship between effort expectancy and undergraduate students' acceptance of e-government services in UTAR Kampar.
- To examine whether there is a significant relationship between social influence and undergraduate students' acceptance of e-government services in UTAR Kampar.
- To examine whether there is a significant relationship between facilitating conditions and undergraduate students' acceptance of e-government services in UTAR Kampar.

1.4 Research Questions

1.4.1 General Research Questions

- What are the factors that affect undergraduate students' acceptance of e-government services in UTAR Kampar ?

1.4.2 Specific Research Question

- Is there a significant relationship between performance expectancy and undergraduate students' acceptance of e-government services in UTAR Kampar ?

- Is there a significant relationship between effort expectancy and undergraduate students' acceptance of e-government services in UTAR Kampar ?

- Is there a significant relationship between social influence and undergraduate students' acceptance of e-government services in UTAR Kampar?

- Is there a significant relationship between facilitating conditions and undergraduate students' acceptance of e-government services in UTAR Kampar ?

1.5 Hypotheses of the Study

The research purpose is to look into the factors affecting undergraduate students' acceptance of e-government services in UTAR Kampar from a UTAUT view. To that end, we have established hypotheses based on the study question.

H1: There is a significant relationship between performance expectancy and undergraduate students' acceptance of e-government services in UTAR Kampar.

H2: There is a significant relationship between effort expectancy and undergraduate students' acceptance of e-government services in UTAR Kampar.

H3: There is a significant relationship between social influence and undergraduate students' acceptance of e-government services in UTAR Kampar.

H4: There is a significant relationship between facilitating conditions and undergraduate students' acceptance of e-government services in UTAR Kampar.

1.6 Significance of Study

Insights from this study can help government agencies like National Digital Department of Malaysia design strategies to enhance e-government service acceptance among private university students. This includes improving service design, communication strategies, and technological infrastructure to better meet the expectations and preferences of this demographic. Recognizing the elements that influence acceptance can help e-government service providers in Malaysia customize their offerings to align with the preferences and behaviors of university students. This can lead to increased usage, satisfaction, and ultimately, improved effectiveness of e-government initiatives (Chohan & Hu, 2020).

This study can assist private institutions like UTAR to close the digital divide and promote acceptance by revealing how their students view and interact with e-government services. Institutions can provide focused assistance through workshops, awareness campaigns, and improved access to online government systems by identifying obstacles such as usability problems and low levels of digital literacy. Undergraduate students can acquire critical digital skills by incorporating e-government-related knowledge into their courses, particularly in business, IT, and public administration. Accessibility can be further improved by working with government organisations to set up training sessions and service hubs. In addition to increasing student satisfaction, bolstering digital engagement guarantees that undergraduate students are more equipped to advocate for and navigate enhanced e-government services, supporting Malaysia's digital transition.

Moreover, this study holds significant value for academics and researchers by expanding the application of the UTAUT framework in the understudied context of undergraduate students' acceptance of e-government services, in Malaysia.This study was testing the model's core constructs like performance expectancy, effort expectancy, social influence, and facilitating conditions. This bridges critical research gaps by focusing on a distinct demographic such as private university undergraduates which was often overlooked in existing literature, employing quantitative methods that provide a replicable framework for future studies, and contributing to theoretical advancements in technology acceptance models particularly regarding generational (Gen Z) and cultural influences. The findings offer foundational insights for cross-disciplinary research in information systems, public administration, and behavioral science, while establishing a benchmark for subsequent studies on digital governance in ASEAN and similar developing regions. Hence, this study ultimately enriches both academic discourse and practical policy formulation in e-government acceptance.

Lastly, this study was significant for undergraduate students as this study will raise student understanding of accessible e-government services and their benefits. This will potentially enhance involvement with digital governance platforms. Undergraduate students can gain crucial digital skills by incorporating e-government-related knowledge into their coursework. Accessibility can be further increased by engaging with government entities to set up training sessions and service hubs. In addition to enhancing student satisfaction, bolstering digital engagement guarantees that undergraduate students are more ready to advocate for and understand increased e-government services, helping Malaysia's digital shift. The findings may also encourage students to submit input for service improvements, creating a more user-centric e-government environment.

1.7 Chapter Layout

This research study has included three chapters which are:

Chapter 1: Introduction

This research study offers a comprehensive examination of the existing body of research and presents the problem definition in Chapter 1. In this chapter, the research purpose, research question, study hypothesis, and significance of the research will be examined.

Chapter 2: Literature Review

The key variables of the study will be examined and analyzed. Additionally, this section will lay out the theoretical framework for future research and hypothesis testing.

Chapter 3: Research Methodology

The chapter will cover the planning of research, gathering and analyzing data methods, measurement scale, operational construct definitions, sample design, and data processing procedures.

1.8 Chapter Summary

The primary objective of Chapter 1 is to provide the reader with a foundational understanding of the research topic. The present chapter serves as a foundational framework for doing research by clearly defining the objective of the investigation, the contextual context of the study, and the problem statement. Chapter 2 will provide a more comprehensive analysis of this research.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

The previous chapter discussed the research context and problem statement for the factors that influence the acceptance of university students on e-government services. We will discuss the factors that influence the acceptance of private university students towards the e-government service which is performance expectancy, effort expectancy, social influence and facilitating conditions. After that, the conceptual framework will be shown and the hypotheses will be developed.

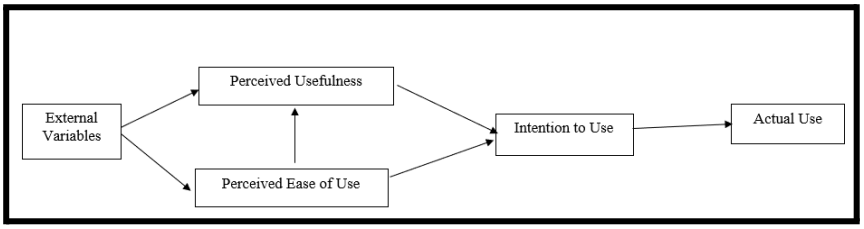
2.1 Theoretical Framework

The following theories have been developed by past studies to explain the relationship between students' acceptance of e-government and its determinants which are performance expectancy, social influence and facilitating conditions. They include the Technology Acceptance Model, Theory of Planned Behaviour and Unified Theory of Acceptance and Use of Technology.

2.1.1 Technology Acceptance Model

Figure 2.1 :

Technology Acceptance Model



Source: (Davis, 1989)

The Unified Theory of Acceptance and Use of Technology (UTAUT) is based on Davis's (1989) Technology Acceptance Model (TAM). Its main idea is that people adopt technology based on how useful they think it is and how easy they think it is to use (Venkatesh et al., 2003). According to this framework, perceived usefulness and perceived ease of use directly affect the behavior and intention of an individual to accept a new technology (Tamimi et al., 2023). The framework is very important for studying how UTAR Kampar undergraduates use e-government services. The students' acceptances to use these services depends on how useful they think they are for making administrative tasks like transcript requests easier and how easy they think they are to use the MyGovernment portal (Junnonyang, 2021). Previous studies on e-government in Technology Acceptance Model show that perceived usefulness and perceived ease of use are still important (Zubir & Latip, 2022; Al-Hadid et al., 2022) . This supports including them in UTAUT as indicators of how well Malaysia's tech-savvy but institutionally unique private university group will accept digital services.

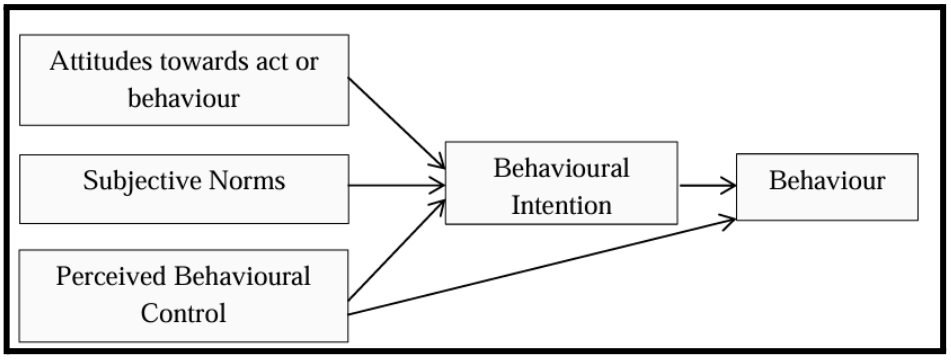
Research has investigated the acceptance of new e-technology or e-services using the Technology Acceptance Model (TAM) (Davis, 1989; Venkatesh & Davis, 1996). Among Ajzen and Fishbein's Theory of Reasoned Action (TRA) , the most useful contribution is TAM. Davis's technology acceptance model (Davis, 1989; Davis et al., 1989) is one of the most widely utilised theories for user acceptance and application of modern technology. It has been discovered that consumers' attitudes and intentions to employ a technology are related to their perceptions about its usefulness (Venkatesh & Davis, 1996). According to this framework, technology acceptance occurs in three stages. Firstly, the external factors such as system design features trigger cognitive responses which include perceived ease of use and perceived usefulness (LaCaille, 2013).

Ultimately these shape an affective response such as attitude toward technology or intention to use it which will influence user behavior (Lai, 2017) . Technology Acceptance Model predicts that behavior is driven by perceived ease of use, perceived usefulness, and behavioral intention (Davis, 1989; Davis, 1993). The association between perceived usefulness and application is more agreeable than those of other model variables (Davis, 1993). In order to create a novel research model, the researcher chooses to employ PU and PEOU (Davis et al., 1989). This theory was used by Al-Hadid et al. (2022), Hariz Zubir and Abdul Latip (2024),Tamimi et al. (2023), Lee et al. (2025) and Zubir and Latip (2022) to study the factor that affecting the individual's acceptance.

2.1.2 Theory of Planned Behaviour

Figure 2.2 :

Theory of Planned Behaviour



Source: (Ajzen, 1991)

The Unified Theory of Acceptance and Use of Technology was formulated by expanding upon the theoretical underpinnings of the Theory of Planned Behavior (Davis, 1989). This model is an extension of the preceding Theory of Reasoned Action The Theory of Planned action introduced the significant concept of perceived behavioral control as an additional determinant of action, supplementing the fundamental attitudinal and normative components found in the Theory of Reasoned Action (Karakoyun and Başaran, 2024). Within the Unified Theory of Acceptance and Use of Technology framework, the components were modified and enhanced, with subjective norms from previous theories evolving into social influence, and perceived behavioral control being redefined as enabling conditions (Shaban and Alabboodi , 2019). This study investigates the acceptance of e-government services among undergraduate students at UTAR Kampar which highlights the considerable impact of social influence. Social influence originates from the subjective norms aspect of the Theory of Planned Behavior denoting how students' decisions regarding technology acceptance are influenced by the views and actions of significant reference groups within their surroundings (Davis, 1989). For Malaysian university students, these significant groups generally comprise peers, faculty members, and institutional authorities.

The social influence of technology acceptance is particularly significant in Malaysia's collectivistic culture where group norms and social expectations heavily impact individual decision-making (Marion & Augtania, 2023). The integration of social influence from these known theoretical frameworks offers a solid basis for comprehending how interpersonal and normative aspects impact e-government acceptance trends within the student population under investigation (Chen et al., 2021). In 1991, social scientist Icek Ajzen created the Theory of Planned Behaviour (Ajzen, 1991). Based on the Theory of Reasoned Action (TRA), the Theory of Planned Behaviour (TPB) expanded TRA to increase its predictive power (Ajzen, 1991). According to Madden et al.

(1992), the perceived behavioural control is one more variable added to this theory than the Theory of Reasoned Action (Madden et al., 1992).

In addition to influencing behavioural intention, this variable will also affect actual behaviour (Sadiq et al., 2025). Since perceived behavioural control is a non-volitional component, it can improve the theory's predictability (Ajzen, 1991). Intention can be strong, medium, or weak, positive or negative, depending on how these factors show up (Al-Hadid et al., 2022). The possibility of engaging in the behaviour increases with the strength and positivity of the intention (Conner & Norman, 2022). On the other hand, engagement is less likely when the intention is weak or undesirable (Fishbein & Ajzen, 1975). This theory has been utilized in various studies examining individual's acceptance behaviour (Huang, 2023, Lai, 2017). According to Yusoff et al. (2022), this theory indicates how university students intend to use technology, how they behave when using it, and how comfortable they are using and accepting new technology. Hence, it is an empirically tested theory as this theory has validated its ability to predict human behavior across various contexts (Ajzen, 2020).

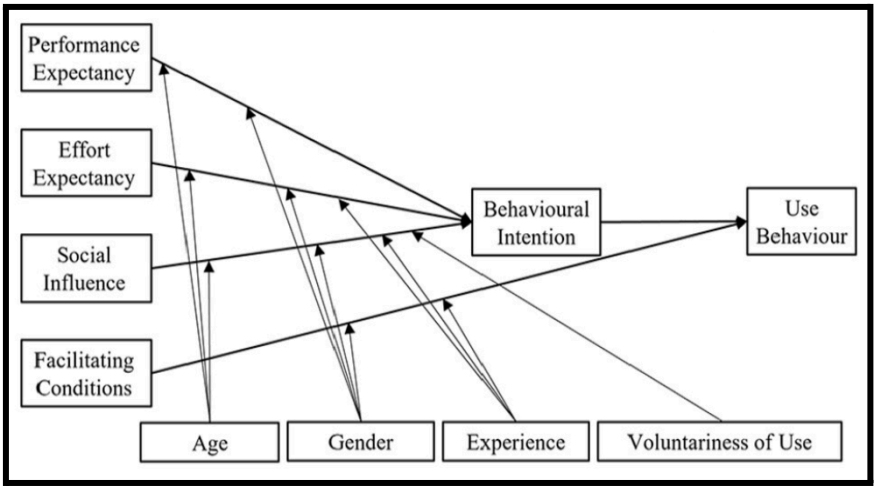
2.1.3 Unified Theory of Acceptance and Use of Technology

Venkatesh et al. discovered the initial version of this framework in 2003. This key internet commerce study by Venkatesh et al. (2003) combined the technology acceptance model (TAM), theory of reasoned action (TRA), and theory of planned behavior (TPB) to create the UTAUT model. Subsequently, the models presented an extensive and detailed framework in Figure 2.3 that is known as the Unified Theory of Acceptance and Use of Technology (UTAUT). Performance expectancy, effort expectancy , social influence, and facilitating conditions are the four importance structures identified by the theory. These four constructs have been revised based on competing models. Performance expectancy is particular to a

person's belief in the system's capability to help them achieve improvements in job performance. Effort expectancy represents the system's level of user-friendliness. Social influence quantifies the degree to which an individual perceives that important individuals in their life want them to adopt the new system. Facilitating conditions measures a person's view of the existence of the operational and technical framework necessary to allow system utilization.

Figure 2.3:

Unified Theory of Acceptance and Use of Technology Model



Source : (Venkatesh et al., 2003).

According to Blaise et al. (2018), this framework incorporates four moderators, namely experience, gender, age, and voluntariness. The moderating components of the four main variables have been determined to be age, gender, experience, and voluntariness of use (Ayaz & Yanartaş, 2020). The original UTAUT model was created to assess the installation and utilization of technologies within a business context, and these factors were not incorporated into the model concerning client acceptance processes (Mensah & Khan, 2024). Thus, its moderators are linked to the prediction of technology usage intentions and actual usage, mostly in

enterprise situations. Yet, these four moderate factors won't be employed or examined in the research. Figure 2.3 shows a visual depiction of the UTAUT model. Researchers and practitioners are able to evaluate a person's willingness to use a particular system by assessing these conceptions' existence in an actual setting. The ongoing management challenge of ensuring user acceptance of technology has occupied researchers in information technology (IT) to the degree to which research on technology acceptance and diffusion is currently regarded as one of the more developed fields of study (Schwarz & Chin, 2007).

When comparing UTAUT with TAM,TRA and TPB, UTAUT demonstrated the ability to describe technological acceptance behavior which is 70%. This is a significant enhancement compared to previous models, which often only describe acceptance of just more than 40% (Venkatesh et al., 2003). Abd Rahman et al. (2021) indicate that this model has an impact on the endogenous variable, behavioral intention (BI), which ultimately results in use behavior (UB). The study by Bagozzi (2007) argued that the UTAUT framework is too complicated with 41 independent variables for intents and at least 8 for conduct. Technology acceptance is chaotic due to complexity. A coherent theory of decision-making is developed through merging divergent knowledge. Van Raaij and Schepers (2008) disagreed with the UTAUT for exhibiting less austerity than the prior Technology Acceptance Model since its high R^2. Li (2021) only applies to crucial correlations with up to four variables. The labeling and grouping of items and constructs was also seen as troublesome because different items were put together to show a single psychometric construct.

Thus, Li (2021) argued that using moderators like experience, gender, age, and voluntariness to deliberately achieve high in UTAUT is unnecessary and unsuitable when analyzing organizational technology acceptances. He revealed that simple models can have good predictive power with proper initial screening. Sykes et al. (2009) introduced the Model of Acceptance with Peer Support (MAPS), a novel paradigm that combines theories of individual acceptance with studies on organizational

social networks. It revealed that analyzing social network structures can provide insights into the acceptance of new information technologies (Tugiman et al., 2023). Later, Chao (2019) created and examined a model to forecast the characteristics that influence students' inclination to utilize mobile learning (m-learning). The research expanded upon the UTAUT paradigm by incorporating other factors such as perceived satisfaction, mobile self-confidence, happiness, confidence and deemed risk. There was a cross-sectional study carried out collecting data from 1,562 respondents, utilizing several technological acceptance theories.

Numerous recent research have utilized the Unified Theory of Acceptance and Use of Technology (UTAUT) framework to analyze technology acceptance behaviors pertinent to this inquiry into e-government acceptance among undergraduate students. Ayaz and Yanartaş (2020) validated the UTAUT model for evaluating e-government system acceptance and illustrating that performance expectancy and effort expectancy significantly affect behavioral intentions. Thus, it reinforces the framework's relevance to digital service acceptance in educational contexts. Xue et al. (2024) expanded UTAUT to examine the significant influence of social influence in educational settings which aligns with this study's emphasis on undergraduate students's acceptance of e-government service. Al-Hadid et al. (2022) utilized UTAUT to analyze the acceptance of e-health systems that offer direct empirical and theoretical insights into the influence of facilitating conditions and social factors on technology adoption in public service settings. Collectively, these studies validate the robustness of UTAUT in forecasting technology acceptance across many domains, while confirming its appropriateness for examining the unique aspects influencing undergraduate students' uptake of e-government services.

2.2 Review of the Literature

2.2.1 Dependent Variable- Students' Acceptance of E-Government Services

The term "*students' acceptance*" describes the way in which users respond to the services they receive (Martin, 2022). It displays the general level of satisfaction both before and after utilizing the offered services. The longevity of the service provider is one of the most crucial indicators of public acceptance (Abbad, 2021). The period of time that service providers are able to remain in business is known as sustainability. Since it will demonstrate that the individuals are embracing the service provider, the time frame is measured. According to Leary and Gabriel (2022), one of them is the recognition of the people's future requirements. Technologies that can adapt to the many shifts in people's demands are needed as their needs continue to alter. Additionally, the viewpoints on service quality generated by service providers are also used to calculate students' acceptance (Ayaz & Yanartaş, 2020).

The effectiveness and user retention of e-government services are intrinsically linked to the foundational tenets of the Technology Acceptance Model (TAM) introduced by Davis (1989). According to Surahman (2023), the TAM construct of perceived usefulness is directly related to how well a service meets set standards, which is a measure of its efficiency. When e-government services regularly fulfill users' requirements and expectations, students regard them as useful resources, resulting in increased acceptance and adoption. The relationship is well illustrated in the findings of Kong and Yuen (2022) which indicate that active usage patterns and favorable user attitudes are definitive markers of services being properly aligned with student needs. Perceived ease of use is demonstrated in practice by user retention, as investigated by Rane et al.

(2023). Over time, undergraduate students' continued use of e-government platforms indicates that the systems are user-friendly and require little work.

Thi et al. (2024) identified individual acceptability as a critical factor in determining the effectiveness of e-government, and this ongoing usage behavior is essential for evaluating the genuine acceptance levels. Álvarez-García et al. (2019) underscore the significance of these elements by identifying user happiness as a critical success criterion for intangible services such as digital governance platforms. Ilieva et al. (2024) offer further insights by demonstrating that usage frequency and user attitudes are dependable markers of acceptability levels. Their research corroborates the findings of Zubir and Latip (2022) that students are inclined to utilize services that effectively merge practical utility with operational ease. The benefits of well-designed systems are diverse, encompassing improved knowledge transmission as noted by Chen et al. (2021) and prolonged user engagement as evidenced by Rita et al. (2019). These empirical findings jointly affirm the ongoing significance of the Technology Acceptance Model in elucidating e-government adoption trends among university students. The model's fundamental concepts of perceived usefulness and perceived ease of use accurately elucidate the psychological processes influencing student adoption of digital services.

Analysing acceptance levels via frequency, willingness to utilise, and attitudes towards these services might yield insights into potential obstacles and opportunities for enhancement in the acceptance of digital governance among young people (Mohd Suki & Ramayah, 2010). The student’s acceptance of e-government service is significant research as the dynamic nature of technology and the changing perceptions of consumers toward digital government services (Mensah, 2019b). This is because it helps them figure out what users want, what they expect, and what stops them. Ultimately, this helps governments and policymakers make services that people will use and like and shows how culture and country-specific factors affect the use of e-government service (Jung, 2019).

2.2.2 Independent Variable- Performance Expectancy (PE)

Performance expectancy relates to the degree of belief of individuals in adopting a system that would help them achieve benefits and enhance high performance effectively which they believe their performance will enhance if they adopt the system (Sewandono et al., 2022; Alblooshi & Abdul Hamid, 2022). According to Alblooshi & Abdul Hamid (2022), defined the impact on society as the perceived relevance of others in utilizing new technology, with word-of-mouth influenced by family, friends, and IT professionals, which in turn influences the acceptance or use of new information technology. It means that individuals' aspects, willingness, and beliefs about new technologies can be affected by the way that people's insights and opinions around them(Sang & Fortenberry, 2021). For instance, individuals' willingness to try anything new is increased after they hear people introduce it positively which also increases their curiosity.

Additionally, performance expectancy from the perspective of individuals on e-government service. Performance expectation, which is driven by process clarity and efficiency of time and cost, indicates that implementing e-government services would increase performance by improving information and service accessibility (Sabani, 2020). According to the research, the facets that affect performance expectancy of system use in a setting include relative advantage, job fit, perceived usefulness, extrinsic motivation, and result expectations (Maznorbalia & Awalluddin, 2021).

Performance expectancy relates to the ability to complete activities with greater efficiency, improve job performance, and boost productivity (Tahar et al., 2020). Extrinsic motivation is essential for accomplishing desired results. Job fit describes the capacity of the system to enhance job performance. Relative advantage refers to the superiority of innovation in making work more efficient. Outcome expectations refer to the expected rise in job effectiveness, career output, and job satisfaction. In sum, these factors help e-government services to fulfill the individuals' expectations

and needs in their performance by emphasizing the usefulness, motivation, capabilities, benefits, and outcomes in enhancing the acceptance on services of e-government while also satisfying the individuals (Raffaghelli et al., 2022).

There are mixed results for the performance expectancy on the students' acceptance of e-government services. It was found that have a significant impact on the behavioural intentions for students' acceptance of e-government services in several countries, including Malaysia, Turkey, Philippines, Oman, Indonesia, Saudi Arabia, China, Colombia, and Pakistan. Performance expectancy is a significant factor in determining students' behavioural intention to use e-learning and e-government services, especially after COVID-19 (Akbar et al., 2023). Cloud services, such as Electronic Document Management Systems (EDMS), can enhance academic achievement and task completion (San et al., 2024; Ayaz & Yanartaş, 2020). These solutions allow people to execute work more efficiently in document-intensive environments such as universities. Students' perceived utility of e-government learning services is highly influenced by information quality, and this influence has a beneficial effect on students' perceived learning value (Al-Omairi et al., 2020). The availability of features and high-quality content reinforces their belief that these tools would help them achieve their learning objectives (Xin et al., 2022). For example, performance expectancy can be used to assess public perception of e-government's usefulness or future applications, such as e-taxation and e-complaints in government agencies (Berlilana et al., 2017).

Since individuals believe that online services save time and money while improving performance outcomes, performance expectancy is a powerful predictor of adoption in the context of e-government services (Nasri, 2025). However, several studies' findings revealed that performance expectancy had no significant impact on students' intentions to use e-government services, most likely due to a lack of appreciation or understanding of the potential work performance benefits of e-government

services (Mensah, 2019a). Performance expectancy has no substantial influence on continued desire to utilize the service. It's possible that undergraduate students already have a positive perception of digital platforms, which could mitigate the influence of performance expectancy on their behavioural intentions (Méndez-Rivera et al., 2023). A positive user experience for undergraduate students is more important in determining long-term engagement. For some users, performance expectancy may not have a substantial impact on long-term usage intentions, with other variables such as user experience taking priority (Napitupulu et al., 2024).

2.2.3 Independent Variable- Effort Expectancy (EE)

Effort expectancy means the level of individuals' belief in effortlessness while using the system, especially important in the early acceptance stage of new technologies (Camilleri, 2024). It implies that depending on the correlation between effort, performance, and rewards, ease of use becomes irrelevant after long-term use of new technology (Onaolapo & Oyewole, 2018; Camilleri, 2024). The more effortlessness in using the system, the higher the expectation, and the higher the acceptance of individuals in new information and communication technology (ICT). This approach to technology utilization is based on the belief that it doesn't require user effort and relies on innovation and the latest technology to advance the objectives, highlighting how users perceive technology usage (Anggraeni et al., 2024). Moreover, effort expectancy evaluates the ease with which information systems may be used, showing the level of ease of use that users experience which represents the complexity of software-based operations such as payment and application systems (Zainavy et al., 2023). Effort expectancy is consistent with being viewed as user-friendly, which has been explained to have a beneficial and important effect on the views of individuals toward accepting and adopting a new technology.

Besides, effort expectancy from the perspective of individuals on service of e-government. During the early phases of e-government, individuals' perceptions of its ease of acceptance are important factors that impact its acceptance (Sabani, 2020). Since people are reluctant to embrace new technologies, improvements in learnability could encourage the acceptance of e-government, which has been viewed as a more successful approach (Sabani, 2020). Complexity indicates that the system is regarded as difficult to understand and operate. In conclusion, effort expectancy factors took on an important responsibility in e-government services which improved the service to become more effortless, efficient, and effective in fulfilling the expectations and satisfaction of individuals. It helps the government to increase the acceptance of individuals on services of e-government by improving services' accessibility and degree of simplicity.

Effort expectancy has shown mixed results in influencing the intention to use e-government services across various countries, including Malaysia, Philippines, Oman, Indonesia, China, Scotland, Saudi Arabia, and Pakistan. Effort expectancy has demonstrated varying levels of influence on the intention to use e-government services. In several studies, students indicated that perceived ease of use significantly impacts their intention to engage with cloud-based or online public services, suggesting that simplicity and user-friendliness are important factors in task completion and satisfaction (San et al., 2024; Berlilana et al., 2017). Effort expectancy has also been shown to affect students' behavioral intention to adopt e-government platforms, often emphasizing the importance of intuitive design and minimal effort in using the systems such as user-friendly government-run websites (Wu et al., 2024: Xin et al., 2022). In educational contexts, information quality linked to effort expectancy contributes to students' willingness to use e-government learning services (Al-Omairi et al., 2020). Effort expectancy is also associated with higher satisfaction and continued use, especially when systems are designed to accommodate users with varying levels of technological proficiency (Napitupulu et al., 2024).

Students are more likely to adopt Iot technology for educational purposes if it's easy to use, aligning with the trend of students preferring intuitive systems that require minimal effort, enhancing their experience and encouraging continued usage (Almetere et al., 2020). Furthermore, a user-friendly interface can be a stronger influence on satisfaction than perceived usefulness alone. However, the study discovered that effort expectancy had no significant influence on students' behavioral intentions to use e-government services, most likely due to their familiarity and proficiency with internet-related applications (Mensah, 2019a; 2019b). This could be due to the EDMS requirements and terms of service, which can make users unwilling to utilize the system due to its ease or difficulty (Ayaz & Yanartaş, 2020). A simple interface can help overcome obstacles and reduce the number of transactions required to access the essential information. However, effort expectancy had a large influence on attitude, probably because undergraduate students have a good attitude toward technology regardless of its ease of use (Méndez-Rivera et al., 2023).

2.2.4 Independent Variable- Social Influence (SI)

Social influence is the extent to which a person believes that influential individuals think they ought to adopt the new technique (Venkatesh et al., 2003). According to Wang et al. (2024), SI is the level to which the notion is used to improve one's social standing and the reference group's subjective culture. The subjective standard, social influence, and image are similar constructs found in several earlier models and theories (Wijaya et al., 2022; Fitrianie et al. (2021) state that subjective norms also refer to the impact of the perception of most significant persons on an individual's behavior. Individuals who have authority over their behavior, for example, feel that they ought to apply the system, or those who have a significant amount of value over them ought to use it.

According to Chen et al. (2023), social influence could influence individuals who utilize a system because their friends or coworkers do the same, and the system is endorsed by the organization. The final component of this variable is the reputation (Nguyen & Chu, 2021), which measures how much using the system is thought to improve a person's standing or look in their social network. People who use the system are seen as more prestigious within the organization or community than those who do not. In addition, users hold significant positions and access to the system serves as a status marker (Dwivedi et al., 2021). In general, Social influence is the degree to which users believe important people share their views about how to use new technologies. The researchers discovered that these constructs have no importance and that social influence shows a minimal positive association in the UTAUT model. Thereby, the social influence component seems to be significant just in the early phases of acceptance and to become insignificant with more expertise when required (Raffaghelli et al., 2022). In other words, if a person is comfortable with the technology, other people's opinions have no bearing on their intentions. However, social influence and individuals' acceptance of the use on the services of e-government should or would be expected to have a link when it turns up to services of e-government (Al-Hadid et al., 2022).

Although e-government is accessible in Malaysia, the social influence may have an indirect impact on the intention to utilize it. Nevertheless, current research yields inconsistent results concerning the influence of social influence on technology acceptance. Tang et al. (2021) observed no significant association between social influence and technological acceptability in China, suggesting that societal pressure may not promote acceptance. In Indonesia, subjective standards and social pressure significantly influenced technology acceptance, emphasizing cultural disparities in how social expectations drive acceptance behaviors. Additionally, Wang et al. (2024) revealed that social influence in China positively affects individual acceptability through social standing and cultural judgments rather than peer or authority pressure.

The mixed results indicate that the influence of social influence on e-government acceptance may differ based on cultural, sociological, and environmental variables (Jung, 2019). Although social influence may exert considerable impact in settings characterized by robust hierarchical structures and collective standards, its efficacy wanes in contexts where individuals prioritize personal experience and usability above external expectations. Despite the availability of e-government services in Malaysia, social influence may still exert an indirect impact on acceptance, particularly through perceived repute and peer endorsement (El-Ebiary et al., 2019). Nonetheless, its impact may be more pronounced during the initial phases of acceptance and diminish as users develop proficiency with the system (Raffaghelli et al., 2022). Consequently, comprehending the particular context in which social influence is essential for assessing its genuine influence on the undergraduate students' acceptance of e-government services in UTAR Kampar.

2.2.5 Independent Variable -Facilitating Conditions (FC)

According to Venkatesh et al. (2003), "facilitating conditions" are the perceived availability of the organizational and technological infrastructure required to allow the efficient utilization of a system or technology. The idea is essential to comprehending the variables that affect people's acceptance and use of modern technologies. It includes a range of components that influence how users perceive the system's viability and suitability for their needs (Venkatesh et al., 2003). Facilitating Conditions refer to the technological and organizational frameworks that enable the utilization of a system (Abd Rahman et al., 2021). This entails possessing the requisite technology and understanding its utilization. It also pertains to the accessibility of resources that facilitate the utilization of the system (Ayaz & Yanartaş, 2020). This indicates that the individual has access to dependable Wi-Fi, computers, or technical assistance that facilitates the successful use of e-government services (Zeebaree et al., 2022). According to Hagger et al. (2022), facilitating conditions is the belief that people

have about their capacity to use the system effectively, and it interacts with enabling factors. This encompasses things like the availability of required resources and technological support as well as self-efficacy, or the belief in one's capacity to carry out activities mandated by the system (Al-Hadid et al., 2022). In order to efficiently navigate and operate the system, users have to know that they must be equipped with the necessary skills and knowledge.

Institutional support and system compatibility are two facilitating conditions for e-government adoption among UTAR Kampar undergraduates which have a substantial impact on their acceptance of digital government services. Ambarwati et al. (2020) note that enabling conditions require proactive guidance such as targeted training on myPTPTN online and accessible support systems to troubleshoot technical issues. Chatterjee et al. (2021) emphasize the compatibility of the congruence between e-government systems and students' academic processes, values, and digital practices. These synergies between institutional support and user-system fit reduce adoption barriers and improve undergraduates' acceptance of e-government service which is crucial to their sustained use and satisfaction.

Facilitating conditions are crucial when it turns up to services of e-government, as citizen acceptance and utilization are crucial (Raffaghelli et al., 2022). If citizens are aware of strong external support from organizational infrastructure such as clear policies, accessible support channels and technical infrastructure such as dependable platforms, secure networks, they tend to use services of e-government (Li, 2021). The idea of facilitating conditions emphasizes how crucial it is to make sure that the equipment, networks, and compatibility elements required to enable users' acceptance and efficient use of new technologies are available (Dwivedi et al., 2021). Organizations and politicians can increase the chances of effective technology acceptance and integration in a variety of sectors, including e-government services, by attending to these factors.

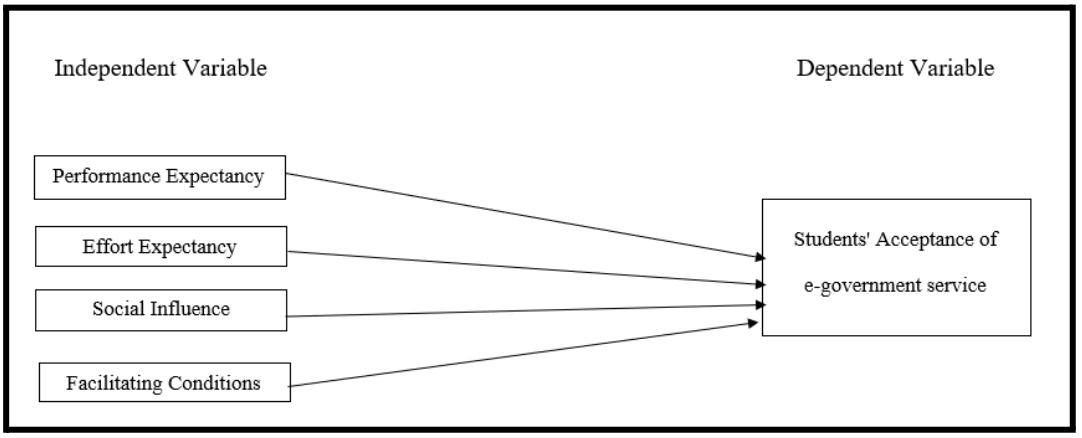
The association between facilitating conditions and technological acceptability is inconsistent in extant studies. In Malaysia, Abd Rahman et al. (2021) discovered no significant correlation between facilitating conditions and individual technology acceptance, indicating that the availability of resources and infrastructure may not directly affect user acceptance. This contrasts with research in the UK, where Hagger et al. (2022) demonstrated that facilitating conditions positively influences technology acceptance as individuals with enhanced resource availability and heightened perceived behavioural control are more inclined to accept new technologies. In China, Li (2021) discovered that infrastructure, technical support, and organisational help substantially improved facilitating conditions hence facilitating e-government acceptance.

The varied findings indicate that the influence of facilitating conditions on e-government acceptability may be contingent upon circumstance. Some research imply that infrastructure and assistance positively influence acceptance while others argue that external resources alone may be inadequate without considering additional behavioural or motivational elements. In the Malaysian context, the absence of a substantial correlation between facilitating conditions and acceptance suggests that alternative factors, such as individual motivation or trust in e-government services, may exert a more influential effect. Comprehending these contextual variables is essential for policymakers seeking to improve e-government acceptance by ensuring that facilitating conditions correspond with users' expectations and requirements.

2.3 Proposed Conceptual Framework

Figure 2.4 :

Conceptual Framework Model



Source : Developed for the research

The study's conceptual framework is illustrated in Figure 2.4 to study the students' acceptance of e-government services among undergraduate students in UTAR, Kampar. This framework consists of four independent variables which are performance expectancy , effort expectancy , social influence and facilitating conditions. These variables are drawn from the theory of technology acceptance model, theory of reasoned action, theory of planned behaviour and UTAUT which are expected to significantly influence students' acceptance of e-government services among undergraduate students in UTAR, Kampar. Based on prior research, it is inferred that these independent variables will play a crucial role in shaping students' acceptance behavior. Therefore, this framework will be used to examine whether this inference is correct. In the subsequent section, hypotheses will be formulated based on this conceptual framework.

2.4 Hypotheses Development

2.4.1 Performance Expectancy and Students' Acceptance of E-Government Services

According to Venkatesh et al. (2016), performance expectancy is the degree to which people think that utilizing the system will enable them to perform better at work. The degree to which individual users perceive telecenters as a means to improve their overall efficiency. Additionally, it serves as a significant indicator of the intention to utilize information systems (Macedo, 2017). Lallmahomed et al. (2017) conducted empirical research to identify the elements impacting the willingness to accept telecenter users. The results revealed that performance expectancy is a highly influential variable in determining its acceptance. Rehman et al. (2016) found that performance expectancy has a notable impact on individuals' attitudes and opinions about the implementation of e-government. Sharma et al. (2018) observed that performance expectancy had a crucial role in determining users' inclination to utilize mobile apps for government services.Therefore, Dagnoush and Khalifa (2021) discovered that performance expectancy had a substantial link with students' acceptability of mobile commerce transactions in their research of Libya. The study conducted by Leong et al. (2021) additionally claimed that performance expectancy has a substantial influence on students' acceptance of M-payment in Malaysia.

Hence, the hypothesis has been formulated as follows :

H_1: There is a significant relationship between performance expectancy and undergraduate students' acceptance of e-government service in UTAR Kampar.

2.4.2 Effort Expectancy and Students' Acceptance of E-government Service

Venkatesh et al. (2003) defined effort expectancy as the degree of ease, particularly when used in conjunction with the system. Users feel relieved when technology requires less effort to utilize. It is connected to the level of simplicity associated with using e-government in telecenters. Telecenter users tend to accept e-government if it is easy to use and requires little effort. Most research revealed that effort expectancy was associated with a higher desire to utilize information systems (Bhatiasevi, 2016). Other scholars like Yaseen and El Qirem (2018) also discovered that effort expectancy has a significant influence on behavioral intention. Effort expectancy described the simplicity of learning how to use e-government through telecenters based on perceptions of ease related to its usage. Numerous studies have proven that effort expectancy has a significant influence on behavior intention in terms of technology utilization (Venkatesh et al., 2016). According to Jevsikova et al. (2021), effort expectancy has a major impact on teachers' students' acceptance of online educational tools. Furthermore, Wijaya et al. (2022) further demonstrate that effort expectancy has a major impact on the students' acceptances of the implementation of micro-lecture Mathematics instructors in China.

Hence, the hypothesis has been formulated as follows :

H_2: There is a significant relationship between effort expectancy and undergraduate students' acceptance of e-government service in UTAR Kampar.

2.4.3 Social Influence and Students' Acceptance of E-Government Service

According to Venkatesh et al. (2016), social influence is a notion that other people's experiences should be used to create a new system. This is due to the assumption that ambiguity created by new services in the center like e-government has a significant impact on telecenter users and will compel them to consult with others prior to adopting the service. When SI is considered as a key component of a communal culture like Malaysia, this study implies that users would be heavily impacted by others (Tabassum et al., 2019). Past studies (Xin et al., 2022; Zubir and Latip, 2022) have revealed that social influence is a crucial factor for launching e-government in many circumstances.

According to Fitrianie et al. (2021), social influence has a considerable effect on the individual's acceptance of mobile phones for mental behavioral treatment of insomnia. Nguyen and Chu (2021) further revealed that social influence has a strong relationship on the students' acceptance among university students particularly on the digital instruments for learning English in the UTAUT Model. Thereby, social influence also has a significant impact on the students' acceptance for using the electronic payments for the financial industry (Chen et al., 2023). Raffaghelli et al. (2022) also concluded that social influence is positively influencing the students' acceptance to adopt the alert system on tertiary education.

Hence, the hypothesis has been formulated as follows :

H_3: There is a significant relationship between social influence and undergraduate students' acceptance of e-government service in UTAR Kampar.

2.4.4 Facilitating Conditions and Students' Acceptance of E-government Service

According to Venkatesh (2003), facilitating conditioning refers to an individual's view that their current system facilitates acceptance of technology. Each technology requires unique infrastructure to function properly. For health support facilities, consumers require a reliable internet connection, a cell phone, and a grasp of technology. Facilitating conditions is the premise that there exists a well-established institutional and practical framework to support the use of the system (Venkatesh et al., 2016). Robust technological assistance, explicit instructions, and a conducive system of regulation guarantee that individuals can confidently access and make use of these services (Camilleri, 2019). It can be defined as the user's belief that there is a well-established operational and scientific framework to support the usage of e-government in telecenters. Wardana et al. (2022) and Terrance (2023) reveal that facilitating conditions is an important characteristic that impacts e-government acceptances by citizens in multiple nations. Furthermore, Al-Mansoori et al. (2018) determined that having strong support and adequate facilities should increase the behavioral intention to utilize mobile applications for government services. According to Ma et al. (2019), facilitating conditions has a strong relationship with the students' acceptance particularly on transformation of digital information among the teachers in China. Thus, Abbad (2021) noted that facilitating conditions significantly influenced the students' acceptances specifically on the acceptance of online learning among students.

Hence, the hypothesis has been formulated as follows :

H_4: There is a significant relationship between facilitating conditions and undergraduate students' acceptance of e-government service in UTAR Kampar.

2.5 Chapter Summary

In conclusion, this chapter briefly discusses the literature review of the research. It focused on the literature review of independent variables (performance expectancy, effort expectancy, social influence and facilitating conditions) and the dependent variable (undergraduate students' acceptance of e-government service). In this chapter, the researchers reviewed theories, conceptual frameworks, and developing hypotheses. The research methodology will be discussed in the next chapter.

CHAPTER 3 : RESEARCH METHODOLOGY

3.0 Introduction

This chapter briefly described what is the method to carry out the research and how the study from the research has been undertaken. This chapter discusses whether the research design is qualitative or quantitative, who the target participants are, and why they were chosen. In this chapter, researchers will discuss layout, gathering data, sampling, instruments for construct measurement, processing of information and analysis.

3.1 Research Design

This research aims to study which factors will have a significant influence towards the acceptance of e-government among private university students. For the purpose of this study, quantitative research will be conducted because this research focuses on collecting and analyzing the data received from the respondents (Busetto et al., 2020). In quantitative research, the research questions are often proposed at the early stage of the study to investigate the correlation between the variables of the study (Barroga & Matanguihan, 2022). An investigation is held to perform statistical techniques with the quantifiable variables to collect data from the targeted respondents. In quantitative research, a survey form is distributed to private university students to collect their opinion. The survey will provide multiple-choice answers for each question of variables to avoid complexity and reduce the burden of respondents online with open-ended questions. This research proposal adopts a causal research design as being adopted by Al-Omairi et al. (2020) and Méndez Rivera et al. (2023) to investigate the factors affecting the student's acceptance on e-government services. As we are only focusing on sending survey forms to university students to receive a wide range of opinions, it can be classified as quantitative research (Sivasamy, 2023).

3.2 Data Collection Methods

Collection of data is identified as a crucial process to gather information for the research project. Which can be sourced in two ways namely primary and secondary data. Primary data is also known as original data which is directly collected from the source itself, also known as first-hand data (Mubarok et al., 2023). This study was carried through a questionnaire survey. The online survey form will be sent to our target respondents using Microsoft Teams, Google form and email. This data gathering approach is preferred for its reliability and ease of coding, analysis, and interpretation. This way, we are able to reduce the amount of time, use less cost, and, at the same time, reach a wider target audience (Nayak & Narayan, 2019). Secondary data is existing data that was gathered by someone else to assist their research for purposes different from the current research topic (Ajayi, 2023). We used secondary data sources such as journals and articles to conduct more reliable literature reviews (Rosmayanti et al., 2022).

3.3 Sampling Design

3.3.1 Target Population

The targeted population is a specific subset of the population that is the main focus of study or analysis (Willie, 2023). It is the responsibility of the researchers to ensure that the respondents are from the target population in order to collect and analyze the appropriate data. In essence, verifying the respondents' eligibility for the survey is of the utmost importance. The purpose of this study is to examine the elements that could influence undergraduate students' acceptance of e-government services in UTAR Kampar.

3.3.2 Sampling Frame and Sampling Location

A sampling frame is a list of individuals or items included in a selected population for research purposes. Residents and data sampling differ in that population sampling comprises all individuals, whereas sampling frames are more specific (Mooney & Garber, 2019).The place that is selected to collect the data is the sampling location and the target population are all undergraduate students in UTAR Kampar Campus. This research analyzes undergraduate students from six faculties that are located from Universiti Tunku Abdul Rahman, Kampar.

3.3.3 Sampling Elements

An element represents an individual unit or instance from a specified population. A specific sampling technique will be employed to choose certain elements from the population for analysis in the study. The research project targets UTAR undergraduate students from six different faculties at the Kampar campus, selected by quota sampling. In addition to faculties, the chosen respondents for this survey also vary by gender, age, ethnicity, highest education completed and current year of study.

3.3.4 Sampling Technique

Sampling approaches consist of two components which are probability and non-probability (Raifman et al., 2022). One way to choose responders is through probability sampling, in which each part has an equal chance of being chosen (Singh et al., 2023). According to Ahmed (2024), there is a method known as non-probability sampling that does not offer a means of assessing the likelihood that each element of the population will be represented in the sample.

For this study, researchers used questionnaires delivered to undergraduates as a means of collecting data. Quota sampling which is a non-probability sampling technique was chosen for this study in order to pick respondents from the UTAR Kampar Campus. Without a sampling frame, this sampling method can be applied (Mooney & Garber, 2019). The reason this method was chosen is because Ahmed (2024) indicates that quota sampling gives results that are similar to those found with probability sampling. In addition, quota sampling helps with the limited response rate difficulties that probability sampling has (Raifman et al., 2022).

This methodology was employed in several empirical research projects. Zubir and Latip (2022) and Zagyi (2021) implemented quota sampling methods to gather data from individuals utilizing e-government service. In summary, quota sampling is a fundamental sampling selection method that is straightforward to comprehend. It enables researchers to sample a subset to achieve the aims of their study. Consequently, implementing quota sampling facilitates the acquisition of sufficient and reliable data to conduct the pilot test and thereafter evaluate the hypotheses (Raifman et al., 2022).

3.3.5 Sampling Size

Figure 2.5 :

Sample size table

Table for Determining Sample Size from a Given Population

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.
S is sample size.

Source : (Krejcie & Morgan, 1970)

Table 3.1 :

Population of undergraduate students in UTAR, Kampar Campus

Faculty	Undergraduate Students	% of Overall Students	Number of Respondents
Faculty of Engineering and Green Technology (FEGT)	463	5.2%	19
Faculty of Information and Communication Technology (FICT)	1,972	22.6%	83
Faculty of Science (FSc)	1,489	17.1%	63
Faculty of Business and Finance (FBF)	3,058	35.1%	129
Faculty of Arts and Social Science (FAS)	1,467	16.8%	62
Institute of Chinese Studies (ICS)	286	3.3%	12
Total	8,735	100%	368

Source: Developed for the research

Table 3.1 showed that there are 8,735 undergraduates students enrolled in total at the six faculties in UTAR Kampar in 2023. The sampling sizes provided in by Krejcie and Morgan (1970) can be used by researchers to estimate the number of respondents required for this study. As a result, Figure 2.5 indicates that in order to guarantee more precise data and outcomes without experiencing significant difficulties, this research minimum must gather about 368 responses.

3.3 Research Instrument

3.3.1 Questionnaire Design

There were six primary components to the questionnaire, which were components A, B, C, D, E, and F. Section A will request the respondent's demographic information, while Section B is composed based on the independent variable, performance expectancy. Thus, Section C is the second independent variable which is effort expectancy while Section D is the third independent variable which is social influence. Section E is the last independent variable which is facilitating conditions. In contrast, Section F is the dependent variable which is the students' acceptances. Both nominal and ordinal scales were used in Section A. Section B, C, D, E and F used an interval scale with a 5-point Likert scale.

3.3.2 Pilot Studies

According to Arain et al. (2010) , pilot studies is a small feasibility investigation envisaged to assess multiple elements of the methods proposed for a more extensive, exacting, or corroborated examination. Pilot examination is an early feasibility study performed to investigate multiple components of the proposed methodology in preparation for a more vast, accurate, or proved investigation (Lowe, 2019). For the pilot testing reliability test to be conducted using Cronbach's alpha, a minimum of thirty respondents are needed as stated by Bujang et al. (2024). There are 30 sets of questionnaires that have been distributed to UTAR students. In this study, the pilot studies were conducted for five days from 26 August 2024 to 30 August 2024. The researchers used the SPSS program to develop the data after the data collection was completed.

3.4 Constructs Measurement

3.4.1 Nominal Scale

Question 1 (Gender), Question 3 (Ethnic group), and Question 4 (Faculty) are the three questions in Section A that employ a nominal scale.

1.Gender **:**

- ☐ Male
- ☐ Female

3.4.2 Ordinal Scale

Question 2 (Age), and Question 5 (Year of study) are the three items in Section A of the questionnaire that use an ordinal scale.

2. Age :

- ☐ 18 to 21 years old
- ☐ 22 to 25 years old
- ☐ 26 to 29 years old

3.5.3 Interval Scale

In parts B, C, D, E, and F, scales based on Likert were used to analyze questionnaire variables categorized as 1 respectively disagree strongly, 2 indicates disagreement, 3 indicates neutral in nature, 4 representatively agree, and 5 represent highly agree. An illustrative example is given below :

Figure 2.6 **:**

Example of questionnaire

Performance Expectancy (PE)		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
PE 1	By using e-government services, I would be able to complete tasks in the public sector quickly.	1	2	3	4	5
PE 2	Using e-government services enables me to effortlessly get the information I require.	1	2	3	4	5
PE 3	E-government leads to reduced service times with simplification of processes.	1	2	3	4	5
PE 4	Using the e-government services improve the quality of services.	1	2	3	4	5

3.5.4 Origin of Measure of Construct

The questionnaire comprises 22 question elements. The questionnaire sought to determine the factors that influence the undergraduate students' acceptance of e-government service in UTAR Kampar. Some of the questions in Sections B through F were taken from previous research. Each and every questionnaire is assessed using the five-point Likert measure.

Table 3.2 **:**

Origin of Construct Questionnaire

Construct	**Number of Items**	**Adapted From**	**Scale**
Performance Expectancy	4	(Maznorbalia & Awalluddin, 2021） Zahid & Haji Din, 2019; Zeebaree et al., 2022)	Strongly disagree (1) to Strongly agree (5)
Effort Expectancy	4	(Maznorbalia & Awalluddin, 2021)	Strongly disagree (1) to Strongly agree (5)
Social Influence	4	(Alblooshi & Abdul Hamid, 2022; Maznorbalia & Awalluddin, 2021)	Strongly disagree (1) to Strongly agree (5)
Facilitating Conditions	5	(Haji et al., 2023; Zeebaree et al., 2022)	Strongly disagree (1) to Strongly agree (5)
Students' Acceptance of e-government service	5	(Alblooshi & Abdul Hamid, 2022; Maznorbalia & Awalluddin, 2021; Zahid & Haji Din, 2019)	Strongly disagree (1) to Strongly agree (5)

3.5.5 Measurement of Independent Variables and Dependent Variable: Operational Definition

In this research, four factors shaped university students' acceptance of e-government services in Malaysia, including performance expectancy, effort expectancy, social influence, and facilitating conditions. The items from the questionnaire were all measured using the five-point Likert scale, which represents the respondents' association degree on a scale from 1 to 5, "Strongly disagree" to "Strongly agree."

3.5.5.1 Performance Expectancy

The operational definition of performance expectancy is referred to as the degree to which individuals expect that using the technologies will assist them attain gains in job performance (Xue et al., 2024). In this research, it can be explained that the students' acceptance of e-government services is influenced by the improvement in their performance through service efficiency, information accessibility, time-reduction, and service quality.

Performance expectancy is measured using the four items derived from Zahid and Haji Din (2019), Maznorbalia & Awalluddin (2021), and Zeebaree et al. (2022). For example, *"By using e-government services, I would be able to complete tasks in the public sector quickly."*, *"Using e-government services enables me to effortlessly get the information I require."*, *"E-government leads to reduced service times with simplification of processes."*, and *"Using the e-government services improve the quality of services."*

3.5.5.2 Effort Expectancy

The operational definition of effort expectancy is defined as the extent to which individuals assume that the utilization of new technologies would be easy to use without difficulties (Faroqi et al., 2020). In this research, it can be explained that the students' acceptance of e-government services is influenced by the ease of use, ease of learning, skill development, and ease of access to government services.

Effort expectancy is measured using the four items derived from Maznorbalia & Awalluddin (2021), including *"Learning to use the e-government services system is easy."*, *"Using the e-government services system is easy."*, *"It is easy for me to become skillful at using the e-government services system."*, and *"By using the e-government system, I am able to get government services easily."*

3.5.5.3 Social Influence

The operational definition of social influence is referred to as the degree of the impact of others, such as peers, friends, and family, on an individual's decision to use or avoid a certain new technology (Bulya & Pribadi, 2024). It can be explained that the students' acceptance of e-government services is the willingness of the students to decide on using e-government services is affected by the university's lecturers and tutors, course mates, friend groups, influencers and family members (Zeebaree et al., 2022).

Social influence is measured using the four items derived from Shaban and Anas Salman Alabboodi (2019), and Maznorbalia & Awalluddin (2021). For instance, *"People who are important to me think that I should use e-government services."*, *"People who influence my behavior think I should use the e-government services."*, *"I would use e-government services if my peers did use the services."*, and *"Government agencies encourage citizens to use the e-government services system."*

3.5.5.4 Facilitating Conditions

The operational definition of facilitating conditions is defined as the extent to which individuals view the availability of organizational and technical infrastructure to facilitate system utilization (Abbad, 2021). It can be explained that the students' acceptance of e-government services is considered the foundation to enjoy the services based on the infrastructure and guidelines provided by the government, their resources, and their internet experience.

Facilitating conditions are measured using the four items derived from Maznorbalia & Awalluddin (2021), Zeebaree et al. (2022), and Hajj et al. (2023). For example, *"I have the resources necessary to use e-government services.", "I have sufficient experience with the Internet to utilize e-government services."*, *"There is technical assistance from government available for using e-government services."*, *"When I use e-government services, I am guided by good instructions."*, and *"The e-government services are provided with the necessary infrastructure.*

3.5.5.5 Students' Acceptance

The operational definition of students' acceptance describes an individual's personal possibility of engaging in a specific behaviour, such as accepting and utilizing technology, which affects their willingness and attitude to utilize it in the present and the future (Antoniadis et al., 2022).

Students' acceptance is measured using the four items derived from Shaban and Anas Salman Alabboodi (2019), Zahid and Haji Din (2019), Mensah et al. (2020) and Maznorbalia & Awalluddin (2021). For instance, *"I am confident that I will use e-government services in the future."*, *"I use e-government services on a regular basis."*, *"Most of my government requests are done through e-government services."*, *"Using e-government services is a good idea."*, and *"I recommend for my peers to utilize the e-government services platform."*

3.6 Data Processing

Data processing is a critical element of research as it empowers organizations to enhance their strategic initiatives and increase their competitive edge. It involves a number of steps, such as editing, checking, and deleting unnecessary content, before it is analyzed. In order to compile the survey data, we input the responses into the Statistical Package for the Social Sciences (SPSS) software.

3.6.1 Data Checking

Data checking is an important part of data processing that makes sure the information from the questionnaire is accurate and valid. Out of the 50 answers we got, we had to check to make sure no one answered the same question more than once or only partially. The design of the questionnaire takes into account the needs of our research.

3.6.2 Data Editing

Data editing was the process of applying examinations to identify entries that are absent, incorrect, inconsistent, or pointers to possibly false data records. Although our questionnaire had no missing or nonsensical answers, we changed it to guarantee that there were 50 responses in total. The questions on the questionnaire were clear to our responders, who did not need to modify any information.

3.6.3 Data Coding

Coding data was a classification technique utilized in the statistical analysis of observational data. SPSS software was used to code each and every questionnaire response for the research project. The demographic section's (Section A) numbers are coded as follows:

Table 3.3 **:**

Data Coding

Question 1	Gender	1 = Male 2 = Female
Question 2	Age	1 = 18 to 21 years old 2 = 22 to 25 years old 3= 26 to 29 years old
Question 3	Ethnic Group	1= Malay 2= Chinese 3= Indian 4=Others
Question 4	Faculty	1= Faculty of Engineering and Green Technology (FEGT) 2=Faculty of Information and Communication Technology (FICT) 3= Faculty of Science (FSc) 4 = Faculty of Business and Finance (FBF) 5= Faculty of Arts and Social Science (FAS) 6= Institute of Chinese Studies (ICS)

Question 5	Year of study in university	1= Year 1 2= Year 2 3= Year 3 4= Year 4 or above

In addition, the responses to question Section B to C were ranged on a scale from 1 – 5, with "1" that indicates strong disagree and "5" representing strong agree such as:

A response of 1 indicates a strong disagreement with the statement.

A response of 2 signifies disagreement.

A response of 3 reflects a neutral stance, meaning no agreement or disagreement.

A response of 4 indicates agreement.

A response of 5 represents strong agreement with the statement.

3.6.4 Data Transcribing

Data transcription refers to the process of converting data from one format to another. Once the data has been collected from all questionnaires, it will be inputted into computer software in order to expedite the analysis process. Prior to being inputted into the SPSS software, the data will undergo encoding. The questionnaire's validity and reliability will thereafter be assessed by reliability analysis, aligning with the objectives and hypotheses of our study.

3.7 Data Analysis

Data analysis converts collected data into meaningful facts that can be used to understand, analyze qualitative or quantitative data, compare outcomes, determine relationships, and estimate results to achieve research objectives (Alem, 2020). The researchers used SPSS 16.0, a statistical software to analyze the collected data. SPSS is a software for quantitative data analysis among researchers in social sciences and educational institutions due to its user-friendly features and availability on Windows and other platforms (Rahman & Muktadir, 2021). The analyses used by SPSS included descriptive analysis, reliability analysis, inferential analysis and multiple linear regression analysis.

3.7.1 Descriptive Analysis

Descriptive analysis is the first step of the data analysis as a fundamental part of the analysis which must be the starting point. Furthermore, descriptive analysis is also a type of statistical analysis that compares dependent and independent variables by calculating frequency, central tendency, and distribution (Kaur et al., 2018). The demographic section of the questionnaire was analyzed, focusing on factors such as gender, age, ethnicity, faculty, and year of study. The analysis will be interpreted with tables and charts by showing the analyzed data from percentage and frequency.

3.7.2 Scale Measurement

3.7.2.1 Reliability Analysis

Reliability analysis in data analysis and statistics refers to the consistency and repeatability of measurements or evaluation, which is frequently measured using statistical measurements like test-retest reliability, inter-rater reliability, or internal consistency (Hassan, 2023). Cronbach's alpha coefficient is a statistic frequently used by researchers to illustrate that tests and scales developed or accepted for research projects are suitable for the research objectives (Taber, 2018). The method has been used in this research to determine the reliability between dependent and independent variables.

Table 3.4 :

Cronbach's Alpha Coefficient

Cronbach's Alpha (α)	**Reliability Level**
$\alpha \geq 0.9$	Excellent reliability
$0.8 \leq \alpha < 0.9$	Good reliability
$0.7 \leq \alpha < 0.8$	Acceptable reliability
$0.6 \leq \alpha < 0.7$	Questionable reliability
$0.5 \leq \alpha < 0.6$	Poor reliability
$\alpha < 0.5$	Unacceptable reliability

Source: Shukla et al. (2023)

3.7.3 Preliminary Data Screening

3.7.3.1 Multicollinearity Test

Multicollinearity testing is a crucial diagnostic tool in regression analysis that assesses the extent of correlation among independent variables inside a model (Kim, 2019). It can skew results by complicating the isolation of each predictor's independent effect on the dependent variable (Hatem et al., 2022). Using Variance Inflation Factors (VIF), results above 5 indicate considerable multicollinearity and values above 10 indicate severe concerns that need to be addressed (Shrestha, 2020). Tolerance values (1/VIF) below 0.2 indicate significant overlap among variables(Tsagris & Pandis, 2021). In multicollinearity, standard errors increase and statistical significance decreases, which may lead to inaccurate conclusions (Tyzhnenko & Ryeznik, 2019) .

3.7.3.2 Normality Test

Normality testing is an important part of statistical analysis because it tells you if a set of data follows the expected trend of normal distribution (Khatun, 2021). This bell-shaped distribution is essential for regression analysis, ANOVA tests, and structural equation modeling (Hatem et al., 2022). Checking for normality helps make sure that the results are correct when it comes to important concepts (Orcan, 2020). The Shapiro-Wilk test works best for smaller sample sizes, while skewness and kurtosis measurements can be used for larger datasets (Mishra et al., 2019). Values below 2 and 7 for these measurements, respectively, usually mean that the dataset is normal (Kuranga et al., 2020). Visual inspection tools, such as Q-Q plots and histograms can also be used to find possible deviations from normal distribution trends (Hatem et al., 2022).

3.7.4 Inferential Analysis

Inferential statistics are used to make inferences about a population by investigating random samples and aiming for generalizations (Cuemath, 2021). Moreover, the pilot study in this research uses inferential analysis by collecting data from 30 students at the Universiti Tunku Abdul Rahman, Kampar campus. In order to be able to comprehend the perspectives of all undergraduate students acceptance of e-government services in UTAR Kampar, this research will be using Multiple linear regression analysis to investigate the relationship between dependent and independent variables.

3.7.4.1 Multiple Linear Regression Analysis

Multiple linear regression estimates the intensity of the relationship between a single dependent variable and two or more independent variables (Taylor, 2022). This research uses multiple regression analysis to predict the dependent variable's value using known variables. ANOVA test, coefficient, and model summary tables will display multiple linear regression results.

The equation of the multiple linear regression:

$$SA_i = \beta 0 + \beta_1 PE_i + \beta_2 EE_i + \beta_3 SI_i + \beta_4 FC_i + \mu_i$$

SA_i = Undergraduate Students' acceptance of e-government service

PE_i = Performance expectancy

EE_i = Effort expectancy

SI_i= Social influence

FC_i = Facilitating conditions

μ_i = Error term

3.8 Chapter Summary

In conclusion, Chapter 3 delves into research methodology, which involves data collection methods, research design, research tools and sampling design. In addition to this, we also used construct measurement in the questionnaire, and subsequently, data processing shall be performed to handle the data that was provided by respondents. Finally, this chapter concludes the analysis methods used to test questionnaire data through data analysis, including reliability analysis, descriptive analysis, and inference analysis.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

In this chapter, we will go over the findings from the survey that were derived from the data collected using SPSS. From the questionnaire collection, 368 questionnaires were collected. Outputs obtained using SPSS software will be outlined, quantified, and analysed in this chapter. The results of this chapter will be the subject of Chapter 5, which will analyse and discuss them in light of prior research and literature.

4.1 Descriptive Analysis

In descriptive analysis, researchers utilise fundamental visual tools such as bar charts, pie charts, and tables to succinctly show and interpret the collected data. This enables a comprehensive understanding of the respondents' demographic traits, providing a concise overview.

4.1.1 Respondent Demographic Profile

In this section, we utilize tables, graphs, and pie charts that illustrate demographic information and conduct a descriptive analysis of respondents based on gender, age, ethnic, faculty and year of study.

4.1.1.1 Gender

Table 4.1 :

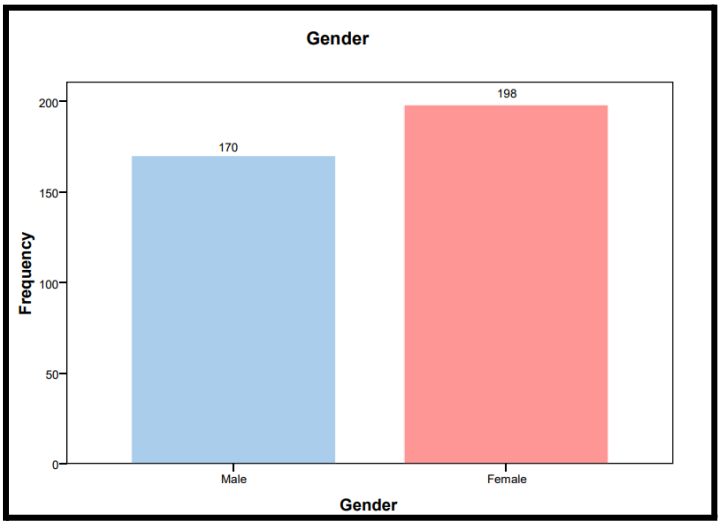
Descriptive Analysis for Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	170	46.2	46.2	46.2
Female	198	53.8	53.8	100.0
Total	368	100.0	100.0	

Source: Developed for the research

Figure 4.1 :

Descriptive Analysis for Gender



The first step is to classify the respondents by gender. There were 368 undergraduates who filled out the survey, as shown in Table 4.1. Then, according to Table 4.1 and Figure 4.1, there are 198 female respondents (53.8%) and 170 male respondents (46.2%).

4.1.1.2 Age

Table 4.2 :

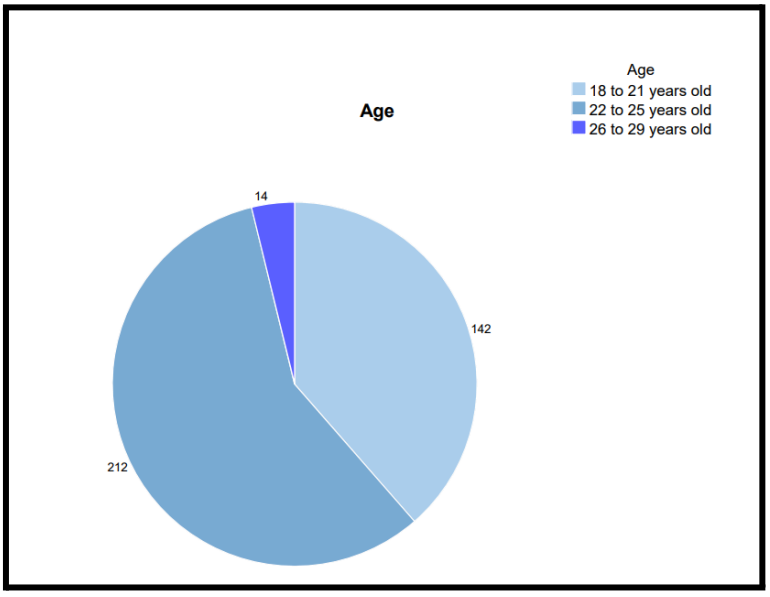
Descriptive Analysis for Age

Age	Frequency	Percent	Valid Percent	Cumulative Percent
18 to 21 years old	142	38.6	38.6	38.6
22 to 25 years old	212	57.6	57.6	96.2
26 to 29 years old	14	3.8	3.8	100.0
Total	368	100.0	100.0	

Source: Developed for the research

Figure 4.2 :

Descriptive Analysis for Age



The ages of the respondents were classified into categories, as illustrated in Table 4.2 and Figure 4.2. In the total of 368 respondents, 38.6% (142 respondents) were between the ages of 18 and 21, 57.6% (212 respondents) were between the ages of 22 and 25, and 3.8% (14 respondents) were 26 to 29 years old. There are no respondents aged 17 or younger who participated in this research questionnaire.

4.1.1.3 Ethnic Group

Table 4.3:

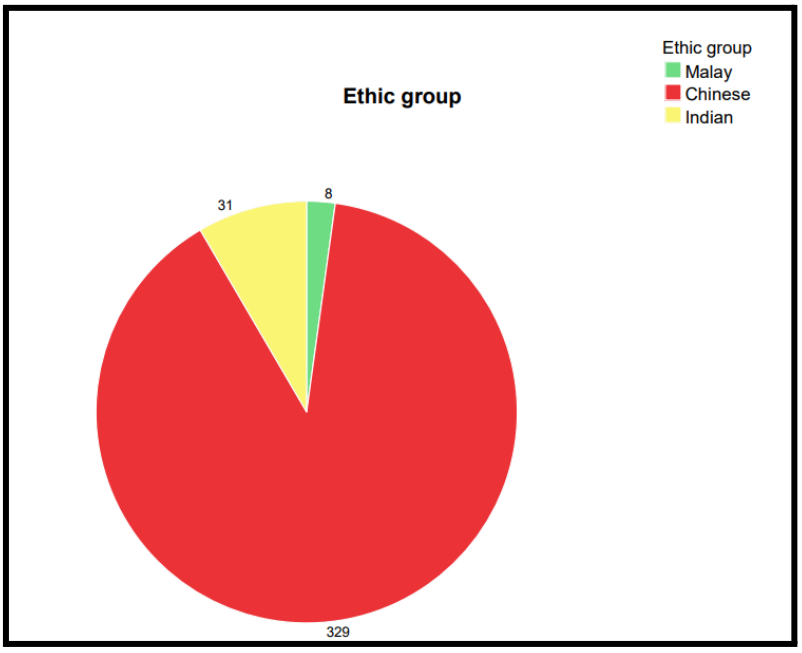
Descriptive Analysis for Ethnic Group

Ethnic Group	Frequency	Percent	Valid Percent	Cumulative Percent
Malay	8	2.2	2.2	2.2
Chinese	329	89.4	89.4	91.6
Indian	31	8.4	8.4	100.0
Total	368	100.0	100.0	

Source: Developed for the research

Figure 4.3:

Descriptive Analysis for Ethnic group



The third category is related to ethnicity. Table 4.3 and Figure 4.3 indicate the presence of three ethnic categories among the participants. The majority of respondents are Chinese, comprising 89.4% (329 respondents) of the total participants. 8.4% (31 respondents) of the participants are of Indian nationality. The smallest proportion of respondents are Malays, comprising about 2.2% (8 respondents).

4.1.1.4 Faculty

Table 4.4 :

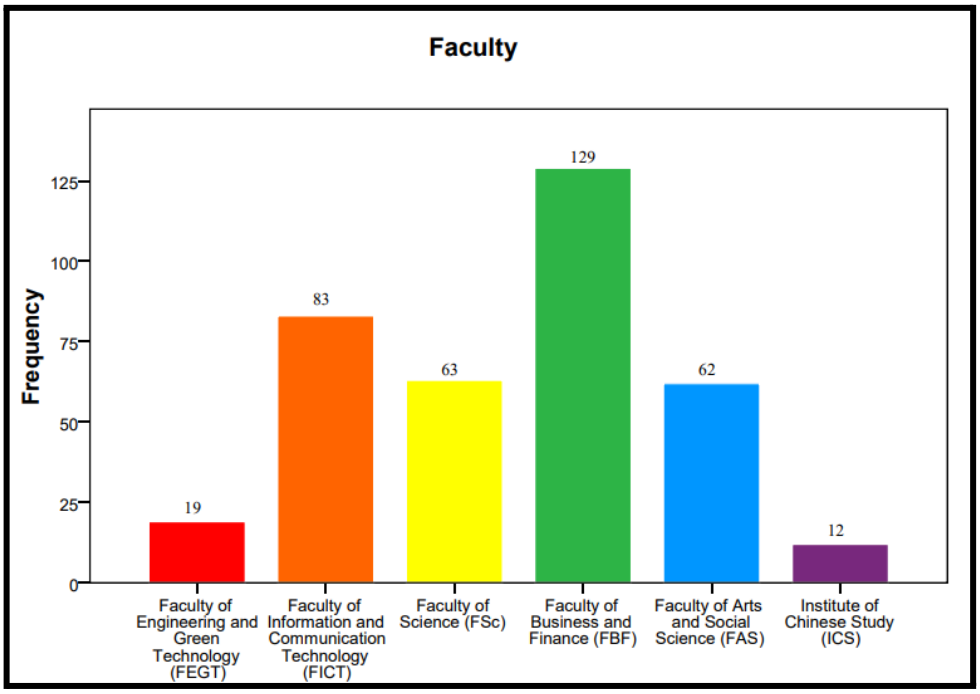
Descriptive Analysis for Faculty

Faculty	Frequency	Percent	Valid Percent	Cumulative Percent
Faculty of Engineering and Green Technology (FEGT)	19	5.2	5.2	5.2
Faculty of Information and Communication Technology (FICT)	83	22.6	22.6	27.7
Faculty of Science (FSc)	63	17.1	17.1	44.8
Faculty of Business and Finance (FBF)	129	35.1	35.1	79.9
Faculty of Arts and Social Science (FAS)	62	16.8	16.8	96.7
Institute of Chinese Study (ICS)	12	3.3	3.3	100.0
Total	368	100.0	100.0	

Source: Developed for the research

Figure 4.4 :

Descriptive Analysis for Faculty



According to Table 4.4 and Figure 4.4, the Faculty of Business and Finance (FBF) was the most represented, making up 35.1% (129 respondents). The Faculty of Information and Communication Technology (FICT) accounts for 22.6% (83 respondents), while the Faculty of Science (FSc) comprises 17.1% (63 respondents). The Faculty of Arts and Social Science (FAS) accounted for 16.8% (62 respondents), whilst the Faculty of Engineering and Green Technology (FEGT) represented 5.2% (19 respondents). The Institute of Chinese Studies (ICS) exhibited the least representation, accounting for 3.3% (12 respondents). Most respondents were from the Faculty of Business and Finance (FBF), while the Institute of Chinese Studies (ICS) had the fewest.

4.1.1.5 Year of Study

Table 4.5 :

Descriptive Analysis for Year of Study

Year of Study	Frequency	Percent	Valid Percent	Cumulative Percent
Year 1	83	22.6	22.6	22.6
Year 2	90	24.5	24.5	47.0
Year 3	174	47.3	47.3	94.3
Year 4 and above	21	5.7	5.7	100.0
Total	368	100.0	100.0	

Source: Developed for the research

Figure 4.5 :

Descriptive Analysis for Year of Study

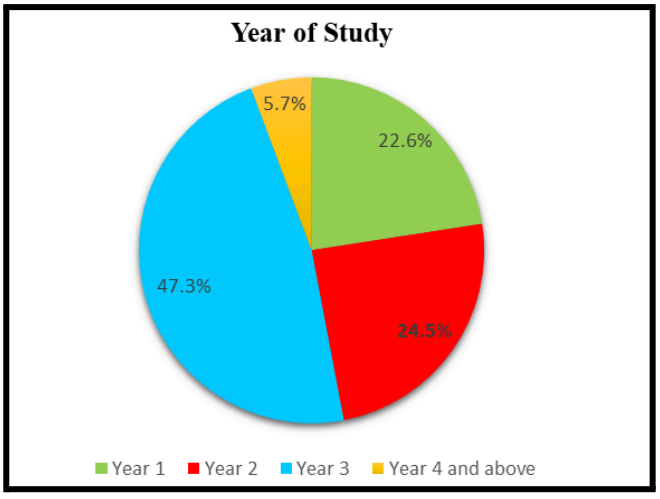


Table 4.5 and Figure 4.5 illustrate the distribution of respondents by year of study reveals that Year 3 students constituted the majority, accounting for 47.3% (174 respondents) of the overall sample. Subsequently, Year 2 pupils represented 24.5% (90 respondents), while Year 1 students constituted 22.6% (83 respondents). Students in Year 4 and above constituted the lowest demographic, at merely 5.7% (21 responses). The data indicate that the survey primarily included respondents from Year 3, whereas students in Year 4 and higher were the least represented.

4.1.2 Central Tendencies and Dispersion Measurement of Constructs

The subsequent part analyses the replies to the questions concerning the dependent and independent variables gathered in part B and Section F. The analyses conducted encompass a measure of central tendency, specifically the mean, and a measure of dispersion, namely the standard deviation. The analysis is conducted individually for each variable.

4.1.2.1 Students' Acceptance of E-Government Services

Table 4.6 :

Central Tendencies Measurement of Students' Acceptance of E-Government Services

Question	Statement	Sample Size (N)	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
SA1	I am confident that I will use e-government services in the future.	368	4.4158	0.85357	2	3
SA2	I use e-government services on a regular basis.	368	4.3777	0.90788	4	1
SA3	Most of my government equests are done through e-government services.	368	4.3777	0.90788	4	1
SA4	Using e-government services is a good idea.	368	4.4212	0.85727	1	4
SA5	I recommend for my peers to utilize the e-government services platform.	368	4.4049	0.88381	3	2

Firstly, the questions associated with students' acceptance of e-government services are analysed. Table 4.6 indicates that SA4 possesses the highest mean of 4.4212. Nevertheless, it possesses the lowest standard deviation of 0.85727, signifying that students exhibited greater uniformity in their responses to this statement. SA1 possesses the second-largest mean of 4.4158, accompanied with a standard deviation of 0.85357. The third-largest mean of 4.4049 is associated with SA5 which has a standard deviation of 0.88381. Despite SA2 and SA3 exhibiting the fourth-highest mean of 4.3777, they also possess the highest standard deviation of 0.90788, indicating substantial variation in students' responses.

4.1.2.2 Performance Expectancy

Table 4.7 :

Central Tendencies Measurement of Performance Expectancy

Question	Statement	Sample Size, N	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
PE1	By using e-government services, I would be able to complete tasks in the public sector quickly.	368	4.4511	0.86582	2	3
PE2	Using e-government services enables me to effortlessly get the information I require.	368	4.4158	0.87874	4	2
PE3	E-government leads to reduced service times with simplification of processes.	368	4.4565	0.84057	1	4
PE4	Using the e-government services improves the quality of services.	368	4.4321	0.88324	3	1

Secondly, the variable that has been examined is regarding the performance expectancy. According to Table 4.6, PE3 ranks 1 since its mean is 4.456 and its standard deviation is the smallest at 0.84057. PE3 which has the least variation is placed in Rank 4 for both variance and standard deviation. PE1 owns the second-largest mean of 4.4511 which places Rank 2. With a standard deviation of 0.86582, PE1 falls in Rank 3 on variability. PE4 is ranked third because it has the third-highest mean, at 4.4321. But with a 0.88324 standard deviation, it ranks first in variability which has the most response variation. With a mean of 4.4158, PE2 ranks fourth overall. PE2 is ranked second-highest for variability, with a standard variation of 0.87874.

4.1.2.3 Effort Expectancy

Table 4.8 :

Central Tendencies Measurement of Effort Expectancy

Question	Statement	Sample Size, N	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
EE1	Learning to use the e-government services system is easy.	368	4.3940	0.90090	4	1
EE2	Using the e-government services system is easy.	368	4.4103	0.87509	2	4
EE3	It is easy for me to become skillful at using the e-government services system.	368	4.4239	0.87638	1	3

EE4	By using the e-government system, I am able to get government services easily.	368	4.4076	0.89330	3	2

Thirdly, the variable that has been studied is the effort expectancy. Table 4.8 illustrates EE3 has the highest mean of 4.4239 and first place as it has a standard deviation of 0.87638 thus placing it at Rank 3 in terms of unpredictability. The second-largest mean of 4.4103 belongs to EE2 . However, it has the smallest standard deviation of 0.87509, making it Rank 4 in unpredictability. The third-largest mean of 4.4076 belongs to EE4 placing it at Rank 3. Its standard deviation is 0.89330, making it Rank 2 in unpredictability. Lastly, EE1 has the smallest mean of 4.3940, placing it Rank 4. EE1 has the largest standard deviation of 0.90090, earning it Rank 1 in terms of variability, signifying the most consistency among replies.

4.1.2.4 Social Influence

Table 4.9 :

Central Tendencies Measurement of Social Influence

Question	Statement	Sample Size, N	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
SI1	People who are important to me think that I should use e-government services.	368	4.3451	0.94418	4	1

SI2	People who influence my behavior think I should use e-government services.	368	4.3723	0.91013	3	2
S13	I would use e-government services if my peers used the services.	368	4.4103	0.90569	1	3
SI4	Government agencies encourage citizens to use e-government services.	368	4.3913	0.86980	2	4

Social influence is the fourth variable that has been studied in this research. According to Table 4.9 SI3 has the biggest mean of 4.4103, making it Rank 1.SI 3 has a standard deviation of 0.90569, placing it at Rank 3 in terms of unpredictability. The second-largest mean of 4.3913 belongs to SI4 making it Rank 2. However, it has the least standard deviation of 0.86980, making it Rank 4 in unpredictability. The third-largest mean of 4.3723 corresponds to SI2 and its the second-largest standard deviation with 0.91013. Lastly, SI1 has the smallest mean of 4.3451. However, it has the largest standard deviation of 0.94418, making it Rank 1 in terms of variability, showing the highest variety in answers.

4.1.2.5 Facilitating Conditions

Table 4.10 :

Central Tendencies Measurement of Facilitating Conditions

Question	Statement	Sample Size, N	Mean	Standard Deviation	Mean Ranking	Standard Deviation Ranking
FC1	I have the resources necessary to use e-government services.	368	4.3696	0.90974	3	3
FC2	I have sufficient experience with the Internet to utilize e-government services.	368	4.3832	0.93228	2	2
FC3	There is technical assistance from the government available for using e-government services.	368	4.3668	0.89728	4	5
FC4	When I use e-government services, I am guided by good instructions.	368	4.3967	0.94260	1	1
FC5	The e-government services are provided with the necessary infrastructure.	368	4.3668	0.90935	4	4

According to Table 4.10, FC4 has the largest mean of 4.3967, making it Rank 1 in terms of agreement. It also has the largest standard deviation of 0.94260, placing it at Rank 1 in variability, indicating the highest variation in responses. The second-largest mean of 4.3832 belongs to FC2 ranking it Rank 2. It has a standard deviation of 0.93228, placing it Rank 2 in variability. The third-largest mean of 4.3696 belongs to FC1 making it Rank 3. It has a standard deviation of 0.90974, placing it at Rank 3 in variability. The fourth-largest mean of 4.3668 belongs to both FC3 and FC5 placed at Rank 4. However, FC3 has the smallest standard deviation (0.89728), making it Rank 5, while FC5 has a slightly higher standard deviation (0.90935), placing it at Rank 4 in variability.

4.2 Scale Measurement

4.2.1 Reliability Test

Table 4.11 :

Cronbach's Alpha Reliability Analysis

No	Type of the Variable	Name of the Variable	Number of Items	Cronbach's Alpha	Reliability Test
1	Dependent Variable	Students' Acceptance of E-government Services	5	0.960	Excellent
2	Independent Variable	Performance Expectancy	4	0.967	Excellent
3	Independent Variable	Effort Expectancy	4	0.967	Excellent
4	Independent Variable	Social Influence	4	0.949	Excellent
5	Independent Variable	Facilitating Conditions	5	0.968	Excellent

The reliability of the components in this study was examined using Cronbach's Alpha as demonstrated in Table 4. 11. From the table, all variables exhibited excellent reliability. The facilitating conditions variable received the greatest reliability value (0.968), showing strong internal consistency among its five components. Similarly, performance expectancy and effort expectancy both revealed a Cronbach's Alpha of 0.967, validating the dependability of questions measuring performance expectancy and effort expectancy of e-government services. Lastly, social influence obtained a reliability score of 0.949 which indicates excellent reliability too. The dependent variable which names the undergraduate students' acceptance of e-government services likewise demonstrated excellent reliability with a Cronbach's Alpha of 0.960. It shows that the measuring items adequately represented students' acceptance levels.

4.3 Preliminary Data Screening

4.3.1 Multicollinearity Test

According to Kim (2019), multicollinearity happens when there is a significant level of correlation between the independent variables. Unreliable findings are produced when this issue is present in a model as it causes a high error term. The variance inflation factor (VIF) and tolerance value are the two methodologies employed to identify the multicollinearity issue in this study (Tsagris & Pandis, 2021). A high multicollinearity problem is present when the VIF is greater than 10 and the tolerance value is less than 0.1 (Shrestha, 2020).

Table 4.12 :

Multicollinearity Analysis

Independent Variable	**Collinearity Statistics**	
	Tolerance	**VIF**
Performance Expectancy	0.185	5.420
Effort Expectancy	0.122	8.210
Social Influence	0.127	7.847
Facilitating Conditions	0.158	6.340

According to Table 4.12, all independent variables have VIF values below 10. Thus, their tolerance levels exceed 0.1. Consequently, it is evident that the multicollinearity issue is absent among the independent variables.

4.3.2 Normality Test

Normality tests are used to investigate data normalcy following the multicollinearity test. Skewness and kurtosis values, a histogram, and a normal Q-Q plot are the three methodologies used to determine the normality of the data in this study.

Table 4.13 :

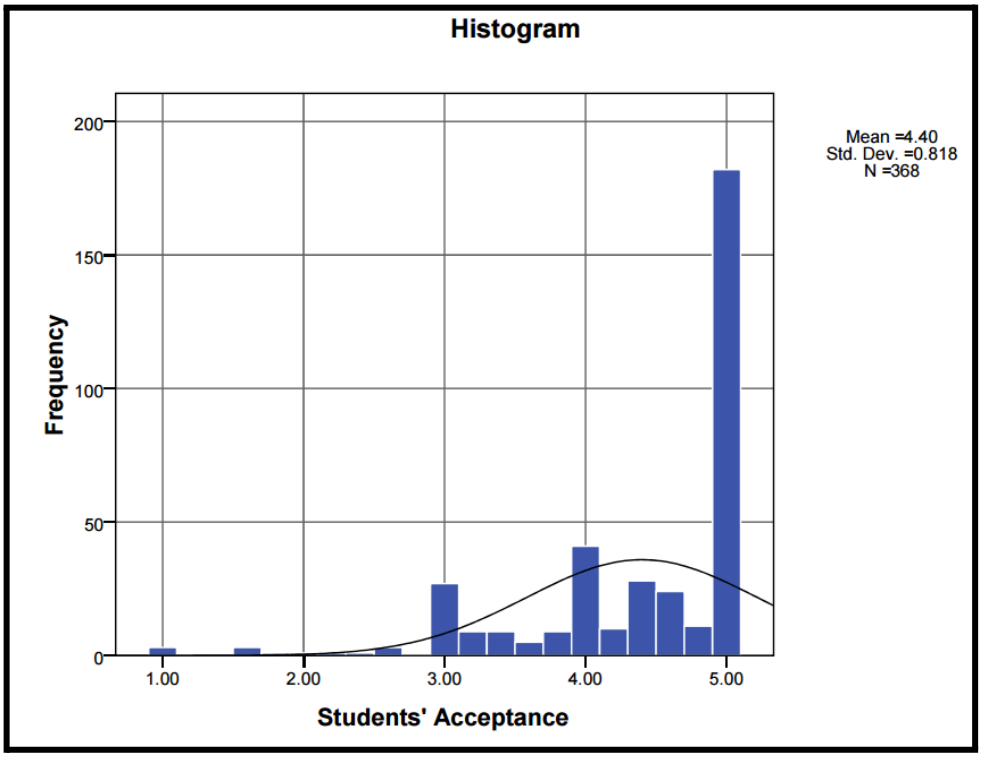
Normality Analysis

Variable	Skewness	Kurtosis
Dependent Variable : Students' Acceptance of e-government service	-1.582	2.495
Independent Variable 1 : Performance Expectancy	-1.898	4.054
Independent Variable 2 : Effort Expectancy	-1.736	3.109
Independent Variable 3 : Social Influence	-1.556	2.348
Independent Variable 4: Facilitating Conditions	-1.529	2.077

The degree of normality of the data is assessed by examining its skewness and kurtosis. If the sample size exceeds 300, the data exhibits a normal distribution when skewness is between -2 and +2, and kurtosis is between -7 and +7 (Hatem et al., 2022). Table 4.13 indicates that the analysis of data normality for the sample size of 368 revealed that all variables satisfied the established criteria for normal distribution in large samples. All skewness values were within the allowed range of -2 to +2, with performance expectancy exhibiting the most pronounced negative skewness (-1.898) and facilitating conditions reflecting the least negative skewness (-1.529). All kurtosis values consistently fell within the specified range of -7 to +7 as performance expectancy demonstrated the highest kurtosis at 4.054 whereas facilitating conditions exhibited the lowest kurtosis at 2.077. Thus, the data for all variables is viewed as being normally distributed.

Figure 4.6 :

Histogram of Undergraduate Students'Acceptance of E-Government service in UTAR Kampar

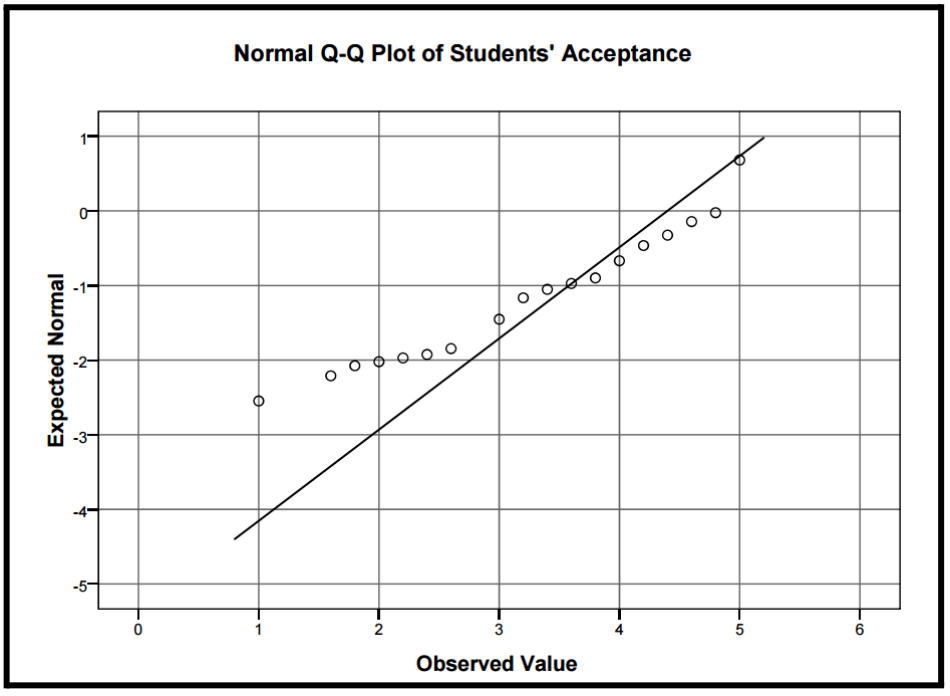


Thereby, an alternative way to check if the data is normal is to look at the histogram (Orcan, 2020). Figure 4.6 shows the histogram of undergraduate students' acceptance of e-government services has a negatively skewed (left-skewed) bell curve distribution with numerous notable characteristics. The data exhibits an asymmetrical bell curve, with the peak displaced towards the upper end of the 1-5 scale with the mean of 4.40 and standard deviation of 0.818 resulting in an elongated tail on the left side. This left-skewed bell distribution illustrates a pronounced, narrow peak concentrated around the 4.00-5.00 scores, a swift decrease in frequency towards the lower scores (1.00-3.00) and a truncated left tail with negligible responses at the scale's lowest points, signifying a ceiling effect. Although the overall bell shape indicates a rough normality, the significant left skew and elevated peak differentiate it from an ideal symmetrical normal distribution (Mishra et al., 2019). The altered bell shape indicates

that although parametric tests are applicable, the distribution's skewness and kurtosis may necessitate further robust analysis to address the concentration of high-value responses and minimal negative feedback in the dataset. The visual bell curve pattern thus confirms the numerical findings of non-normal characteristics within an overall normal framework.

Figure 4.7:

Normal Q-Q plot



Additionally, a normal Q-Q plot is a kind of normal probability plot that helps visualize if the data is normally distributed (Mishra et al., 2019). Figure 4.7 shows a normal Q-Q plot of undergraduate students' acceptance of e-government services shows crucial data distribution insights. Complete normalcy is demonstrated by points lying precisely along the diagonal reference line in the plot of observed values against a theoretical normal distribution (Kuranga et al., 2020). There are big differences at both ends of the distribution, but the middle part of the distribution stays close to the diagonal line, which means that mid-range scores are pretty

normal large-sample normality thresholds where skewness of -1.582 and kurtosis of 2.495 are acceptable. Points curve well below the diagonal line on the left side, confirming the left-skewed distribution and indicating fewer low-scoring responses than expected under normality (Khatun, 2021). The higher end (right side) has points arching above the diagonal, indicating a ceiling effect when many respondents gave high acceptance ratings which ranged from 4 to 5 on the measurement scale. This core normality with skewed tails suggests leptokurtosis which is a sharper peak and heavier tails than a normal distribution (Hatem et al., 2022).

4.4 Inferential Analysis

4.4.1 Multiple Linear Regression Analysis

Table 4.14

Multiple Linear Regression Analysis

Model	Unstandardized Coefficients Beta	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	*t*	Sig.
Multiple R					0.935
R Square					0.875
Adjusted R Square					0.874
Std. Error					0.29106
F					634.622
Sig.*F*					0.000
Constant	0.325	0.085		3.821	0.000
Performanc e Expectancy	0.085	0.043	0.086	1.998	0.046
Effort Expectancy	0.139	0.051	0.144	2.707	0.007
Social Influence	0.177	0.050	0.183	3.527	0.000
Facilitating Conditions	0.526	0.044	0.557	11.906	0.000

According to Table 4.14, the multiple regression model analysing the predictors of undergraduate students' acceptance of e-government services in UTAR Kampar reveals a significant explanatory power as demonstrated in the R-value of 0.935. This implies a high correlation between the independent variables and the dependent variable. The R Square value of 0.875 implies that 87.5% of the variance in students' acceptances of e-government services can be explained by the independent variables included in the model. However there are still 12.5% (100% - 87.5%) still left unaccounted for. Hence, some elements and characteristics that can

explain undergraduate student's acceptance of e-government service in UTAR Kampar have been missed out of this study.

Furthermore, the regression model is statistically significant at the confidence level of 95%. This is because the p-value of F-test is 0.000 which is less than the significance level of 0.05. Hence, the F-statistic of 534.622 is significant. Hence, this model significantly illustrates the relationship between the four independent variables, which are performance expectancy, effort expectancy, social influence and facilitating conditions and the dependent variable, which is the undergraduate students' acceptance of e-government services in UTAR Kampar. The considerable F-statistic indicates compelling evidence that the model significantly outperforms an intercept-only model. Thus, the multiple linear regression analysis showed very significant results, with all independent factors exhibiting statistically significant correlations with the dependent variable at p-value less than 0.05.

In this study, the dependent and independent variables were modelled to show that undergraduate students' acceptance of e-government services in UTAR Kampar is significantly explained by the independent variables. In this study, the relationship between the four independent variables, which are performance expectancy, effort expectancy, social influence and facilitating conditions and the dependent variable, which is the undergraduate students' acceptance of e-government of e-government service in UTAR Kampar is examined. The data are consistent with the alternate hypothesis. The significance level is higher at a 95% confidence level (± = 0.05), which means that variables with a p-value below 0.05 are only thought to be significant.

First independent variable which is performance expectancy is significant at a 95% confidence level. This is due to its p-value of 0.0046 being lower than the significance level of 0.05. This outcome aligns with the conclusions of Al-Hadid et al. (2022), Chen et al. (2021), Dwivedi et al. (2021) and Wijaya et al. (2022). The outcome aligns with this study's hypothesis that the performance expectancy is highly correlated with the undergraduate students' acceptance of e-government service in UTAR Kampar. Furthermore, the unstandardized regression coefficient is 0.085, signifying that a one-unit rise in performance expectancy results in a 0.085 unit increase in the undergraduate students' acceptance of e-government service in UTAR Kampar,ceteris paribus.

The second independent variable is the effort expectancy is significantly at a 95% confidence level as its p-value of 0.007 is less than the significance level of 0.05. The result was similar to the findings of Abbad (2021), Al-Hadid et al. (2022), Jevsikova et al. (2021) and Maznorbalia and Awalluddin (2021). The outcome aligns with this study's hypothesis that the effort expectancy is highly correlated with the undergraduate students' acceptance of e-government service in UTAR Kampar. Thereby, it is proven that the effort expectancy is significantly related to the undergraduate students' acceptance of e-government service in UTAR Kampar. A positive unstandardized regression coefficient of 0.139 indicates that effort expectancy with a one unit improvement in undergraduate students acceptance of e-government service in UTAR Kampar.

Besides that, the third independent variable which is the social influence is significant at a 95% confidence level. This is due to the p-value of the social influence is 0.000 and it is less than the significance level of 0.05. The result was similar to the findings of Abbad (2021), Jevsikova et al. (2021), Junnonyang (2021) and Maznorbalia and Awalluddin (2021). The outcome aligns with this study's hypothesis that the effort expectancy is highly correlated with the undergraduate students' acceptance of e-government service in UTAR Kampar. Thereby, it indicates that the

social influence is significantly related to the undergraduate students' acceptance of e-government service in UTAR Kampar. A positive unstandardized regression coefficient of 0.177 indicates social influence with a one unit improvement in undergraduate students' acceptance of e-government service in UTAR Kampar.

Last but not least, the facilitating conditions which is the fourth independent variable is significant at a 95% confidence level. This is due to the p-value of the social influence is 0.000 and it is less than the significance level of 0.05. The result was similar to the findings of Al-Hadid et al. (2022), Camilleri (2019), Fitrianie et al. (2021) and Raffaghelli et al. (2022). The outcome aligns with this study's hypothesis that the facilitating conditions are highly correlated with the undergraduate students' acceptance of e-government service in UTAR Kampar. Thereby, it indicates that the facilitating conditions are significantly related to the undergraduate students' acceptance of e-government service in UTAR Kampar. A positive unstandardized regression coefficient of 0.526 indicates facilitating conditions with a one unit improvement in undergraduate students' acceptance of e-government service in UTAR Kampar.

4.5 Conclusion

In this chapter, we disseminated, gathered, assessed, and presented the results of the questionnaire. The SPSS program was used to calculate the results of the Multiple Linear Regression. In short, from the multiple regression analysis, all the four independent variables which are performance expectancy, effort expectancy, social influence and facilitating conditions are significantly related to the undergraduate students acceptance of e-government service in UTAR Kampar.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0 Introduction

Chapter five provides a full discussion of the findings presented in chapter four. The findings of the inferential analysis are summarised first. Secondly, the rationale behind these outcomes is examined. Thirdly, recommendations for the application of the findings are presented. Finally, the limitations of this study and recommendations for future research are addressed.

5.1 Summary of Inferential Analysis

Table 5.1

Summary of inferential analysis findings

Independent Variable	T-statistics	P-value	Results
Performance Expectancy	1.998	0.046 ($p < 0.05$)	Significant
Effort Expectancy	2.707	0.007 ($p<0.05$)	Significant
Social Influence	3.527	0.000 ($p<0.05$)	Significant
Facilitating Conditions	11.906	0.000 ($p<0.05$)	Significant

Table 5.1 illustrates that performance expectancy, effort expectancy, social influence and facilitating conditions average is significant with the undergraduate students' acceptance of e-government service. Consequently, these four independent variables serve as robust predictors of undergraduate students' acceptance of e-government services in UTAR Kampar.

5.2 Discussion on Major Findings

In this section, the major findings, which are summarized in Section 5.1, are analysed in a more detailed manner.

5.2.1 Key Determinants of Undergraduate Students' Acceptance of E-Government Services in UTAR KAMPAR

5.2.1.1 Performance Expectancy and Students' Acceptance of E-Government Services

Inferential analysis indicates no significant association between performance expectancy and e-government service acceptance among undergraduate students at UTAR, Kampar. This is similar to the finding of the Morchid (2019) , Raffaghelli et al. (2022) and Utomo et al. (2021) which show a significant relationship between performance expectancy and the students' acceptance.

UTAR can increase students' acceptance of e-government services by providing workshops and training on digital literacy as well as internet tools. This includes training on government portals, online payment systems, and other e-services. Undergraduate students' desire to use e-government platforms improves as they perceive them to be efficient, time-saving, and dependable. They are more likely to consider these

services helpful if they recognize substantive advantages such as quicker document processing, higher quality of public information, and more types of application procedures. These findings are consistent with the UTAUT, which implies that users are more inclined to accept technology that they believe will improve performance. Exposure to practical applications of e-government through educational activities and university services strengthens these favourable expectations. UTAR's roles in promoting e-government services enable students to understand the value of e-government systems, which improves performance expectancy and leads to higher undergraduate students' acceptance of e-government services.

5.2.1.2 Effort Expectancy and Students' Acceptance of E-Government Services

Inferential analysis indicates there is significant association between effort expectancy and e-government service acceptance among undergraduate students at UTAR, Kampar. This is similar to the finding of the Jevsikova et al. (2021)， Raffaghelli et al. (2022) and Tang et al. (2021) which show a significant relationship between effort expectancy and the students' acceptance.

UTAR can increase students' acceptance of e-government services by providing user-friendly interfaces, simple processes, and easily accessible information. This can be performed with instructions, instructional videos, and multilingual assistance. Intuitive interfaces, clear instructions, and ease of access to e-government services all have a substantial impact on students' adoption behaviour. This simplicity of use reduces worry and minimizes the learning curve, particularly for undergraduate students with diverse degrees of digital literacy. UTAR's educational programs and digital literacy efforts provide undergraduate students with the required abilities to comfortably interact with e-government services. UTAR's tech-friendly environment involves internet access, digital platforms, and

regular usage of digital university systems, which makes e-government services feel more accessible. Undergraduate students are more likely to accept e-government services as a result of the reduced effort needed to understand technology and its increased ease of use, which is consistent with effort expectancy.

5.2.1.3 Social Influence and Students' Acceptance of E-Government Services

Inferential analysis indicates there is significant association between social influence and e-government service acceptance among undergraduate students at UTAR, Kampar. This is similar to the findings of the Jevsikova et al. (2021), Junnonyang (2021) and Maznorbalia and Awalluddin (2021) which show a significant relationship between effort expectancy and the students' acceptance.

UTAR can promote the use of e-government services by utilizing the influence of peers and instructors. This can be conducted by integrating e-government service use into assignments, projects, or student-led activities. Social influence is important in developing undergraduate students' views regarding digital public discussions. Respected faculty members and favourable peer experiences can encourage people to use e-government services. Participation in group assignments, internet campaigns, or student-led initiatives multiplies the impact. The university community's collaborative conduct and approval foster a supportive atmosphere, making undergraduate students more willing to use and trust e-government services. UTAR organizes speeches and activities, collaborates with government agencies and other influencers, and introduces undergraduate students to inspirational individuals and peers who use e-government services. Their conduct is also influenced by social interaction gained through groups or coursework. Integrating students with

influencers and professionals enhances their probability of accepting and using e-government services.

5.2.1.4 Facilitating Conditions and Students' Acceptance of E-Government Services

Inferential analysis indicates there is significant association between facilitating conditions and e-government service acceptance among undergraduate students at UTAR, Kampar. This is similar to the findings of the Maznorbalia and Awalluddin (2021)，Raffaghelli et al. (2022) and Abbad (2021) which show a significant relationship between effort expectancy and the students' acceptance.

UTAR can assist students in accepting e-government services by providing them with the necessary resources and support. This includes dependable internet access, computers, and IT assistance on campus. UTAR can also collaborate with e-government services providers to give on-site support and advice. The availability of dependable internet connectivity, technical assistance, and direction from faculty or administration has a substantial impact on undergraduate students' ability to use e-government services. The university's offering of digital technologies, campus facilities, and informative resources helps to overcome potential acceptance challenges. UTAR's collaboration with government agencies to raise awareness and provide access to services such as e-filing for fees and online educational applications further reduces entrance restrictions. These favourable conditions provide a solid foundation for undergraduate students' confidence and preparedness to interact with e-government services platforms. UTAR provides instruction, technical assistance and administrative assistance with e-filing, digital job applications, and online government portals. It also makes it easier for undergraduate students to access e-government services by conducting awareness campaigns or providing one-stop support centres.

5.3 Implications of the Study

In this part, the practical implications are discussed. It provides key insights for addressing factors influencing acceptance and implementing practical actions to enhance undergraduate students' acceptance of e-government services among government agencies and universities based on the data analysis findings.

5.3.1 Practical Implications

Based on the findings of the multiple regression analysis, performance expectancy was found to have a significant impact on the students' acceptance of e-government services. In the hope of raising the students' acceptance of e-government services, government agencies play a critical role in increasing the perceived benefits and effectiveness of these services. Government agencies must highlight the advantages of e-government services for undergraduate students, including convenience, improved information availability, and quicker processing times. They can boost the utilization of these services by simplifying online procedures, offering transparent information, and attending to undergraduate students' requirements. For instance, simplified renewal of driving licence, scholarship applications, or document registration. Meanwhile, universities can include critical e-government services within its online portal, allowing students to access them from a familiar platform. For example, UTAR can include a linked pathway in the UTAR portal to access the e-government services portal directly. Universities and the government can collaborate to promote e-government services on campus and run digital literacy programs, such as informational talks to showcase practical benefits.

Apart from that, effort expectancy also has a significant positive relationship with the students' acceptance of e-government services. Intending to accelerate the students' acceptance of e-government services, government agencies play an important role in simplifying access and usability. Government agencies should create user-friendly, mobile-optimised, multilingual e-government platforms that cater to undergraduate students' diverse needs. These platforms should feature clear interfaces, simplified menus and task steps. Interactive auto AI chatbots, detailed video instructions, and clear guidelines should be provided to guide university students through various services. Platforms should also support multiple languages, including English, Malay, and Mandarin, to accommodate the multilingual undergraduate student population. At the same time, universities can enhance student acceptance by offering technical support through dedicated helpdesks or online support systems and conducting training workshops to guide undergraduate students in using e-government services effectively. For example, these workshops can include hands-on training sessions, digital literacy workshops, and assigning information technology help personnel or peer guides in computer labs.

On the other hand, social influence significantly influences the dependent variables, the students' acceptance of e-government services. In order to increase the degree of student acceptance, government agencies play a vital role in raising awareness and gaining social influence. Government agencies can raise awareness among students about e-government services by providing appealing information and engaging with social media. They can work with university administrators to incorporate e-government services into campus ecosystems, promote success stories, and interact with social student influencers and campus ambassadors. Short videos or reels can be developed to explain the benefits of using e-government platforms, which will improve undergraduate students' understanding and acceptance. In the meantime, universities can promote e-government

services by introducing them during orientation, encouraging lecturers to briefly discuss them in class, and fostering peer-to-peer recommendations, which can positively influence student adoption and acceptance. For instance, faculty lecturers should highlight or illustrate e-government services when supporting undergraduate students with real-world issues and include student leaders in organizing peer-to-peer sharing sessions.

Last but not least, students' acceptance of e-government services was found to be significantly impacted by the facilitating condition. For the purpose of enhancing the students' acceptance of e-government services, the government agencies have a crucial role in upgrading e-government service support systems and necessary infrastructures. Government agencies can improve information technology infrastructures, cybersecurity, service quality, and server connection stability by establishing a professional information technology team. They should offer 24-hour technical assistance, ensuring that platforms are suitable with mobile devices and low-bandwidth internet, and create designated educational accounts for e-government portals to simplify access to student-related services. Simultaneously, universities should develop advanced computer and internet access systems to enhance campus connectivity, ensuring that undergraduate students with unreliable internet access can efficiently use e-government services. For example, they can optimize campus facilities by installing strong Wi-Fi zones, particularly in hostels, study bases, computer labs, and libraries, to allow efficient access to e-government services.

5.4 Limitations of Study

Several constraints have been identified for the study. First and foremost, this study focuses on undergraduate students at UTAR Kampar campus, as stated in the title. This is because undergraduate students, the generation who are familiar with technologies, are the primary audience for e-government services due to their familiarity with these technologies. The Malaysian government is implementing technology into the education system by providing students with e-gov services, including online application platforms, accessibility to e-learning resources, and online educational and instructional tools. For instance, Malaysia's Ministry of Education provides centralized online platforms like MOE Online Services, UPU Online, eSSem, and SSM for educational applications, promoting digital learning through DELIMa and virtual libraries. However, the study's findings may not be applicable to undergraduate students from other Malaysian universities. This is because UTAR is not the only Malaysian university, and there are limited acknowledgements of other universities' perspectives, which may lead to different levels of acceptance of e-government services.

Furthermore, quantitative methods are used for the data collection in this study to gather the perspectives of undergraduate students to examine the relationship between students' acceptance of e-government services as the dependent variable and performance expectancy, effort expectancy, social influence, and facilitating conditions as the independent variables. The study utilized a survey to collect data from undergraduate students since it is an effective method for acquiring different information, including beliefs, perspectives, behaviours, and attitudes, making it applicable to a variety of fields of study, including social sciences (Albudaiwi, 2017). In addition, it also provides advantages in cost-effectiveness, ease of management, data collection efficiency, and significant data identification. However, the involvement of undergraduate students as survey respondents may not provide a comprehensive understanding of their perspectives, and their responses may lack seriousness. As a result, the data analysis may not accurately represent university students' acceptance of e-government services, leading to potential inaccuracies.

Lastly, the Unified Theory of Acceptance and Use of Technology (UTAUT) is the theoretical framework that was implemented for the purpose of the study in examining the relationship between the dependent variable and the independent variables directly. This is due to the reason that UTAUT is chosen to assess students' acceptance of e-government services, as it predicts behaviour intention, understands usage, and identifies factors like perceived usefulness, perceived ease, influences, and accessibility. However, UTAUT's focus on behavioural intention, with the concentration on the four core constructs, may overlook e-government services implementation. Highlighting its shortcomings in organizational contexts and the need for considering contextual and local changes. Thus, oversimplification in UTAUT perspectives leads to inefficient analysis due to a lack of specific examination.

5.5 Recommendations for Future Research

Certain aspects of the research can be enhanced in future studies examining the factors influencing undergraduate students' acceptance of e-government services, hence facilitating a more comprehensive understanding of this topic. Consequently, several recommendations are provided in this section.

Due to potential institutional differences in e-government service acceptability, this study can only draw conclusions based on undergraduates enrolled at private university UTAR Kampar. Therefore, future studies should examine this by comparing the acceptance trends of e-government among students from Malaysia's public and private universities. There may be differences between public universities and other private universities in terms of their digital infrastructure, support for e-services, and types of students in Malaysia. By using a wide range of samples, researchers can find similar issues and solutions that work in various educational settings. This gives policymakers more complete information to help make nationwide e-government projects better. In order to better tailor initiatives to particular institutional environments, data analysis

stratifying the sample by university type may also show whether students at public or private universities accept digital government services more frequently.

The second recommendation is for future scholars to employ qualitative research methodologies in their investigations. To mitigate potential limits in survey replies, future research should employ mixed-method approaches by integrating surveys with interviews or focus group discussions. This would facilitate more profound qualitative insights and corroborate survey results. For instance, qualitative research methodologies, including focus group interviews and in-person interviews could be implemented to accumulate information regarding the factors that undergraduate students' acceptance. Surveys effectively identify general trends in user attitudes, whereas qualitative methods enable researchers to investigate the underlying reasons for students' acceptance or resistance to e-government services. This may enable future researchers to comprehend the respondents' perspectives more profoundly.

Lastly, the future researcher should consider adding complementing theories like the Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI) theory to the UTAUT framework to boost future investigations. Though UTAUT's four primary factors explain the acceptance of technology, adding these models would shed light on e-government service perceived utility, ease of use, and innovation diffusion patterns. The framework could also be improved by adding contextual factors like cultural norms, institutional policies, and government laws that have a big impact on how technology is used in the public sector. Moderating elements including digital infrastructure quality, government support, and cybersecurity perceptions may significantly affect students' acceptance of e-government platforms. This will lead to more solid findings and useful suggestions for policymakers.

5.6 Conclusion

The primary objective of this study is to examine the factors affecting undergraduate students' acceptance of e-government services at UTAR, Kampar. Questionnaires were circulated to gather data, and SPSS was utilized for data analysis. The results indicate all hypotheses are supported. The data are comprehensively analysed, and several implications are presented. Finally, the limitations of the study are examined, and relevant recommendations for future research are presented. Consequently, this study may offer valuable insights to future studies about respondent selection, data collecting, and variable selection.

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Appendices

Appendix 1 : Questionnaire

UNIVERSITI TUNKU ABDUL RAHMAN
TEH HONG PIOW FACULTY OF BUSINESS AND FINANCE
BACHELOR OF PUBLIC ADMINISTRATION (HONS)

TOPIC: Factors shaping undergraduate students' acceptance of e-government services in UTAR Kampar : A UTAUT Perspective

Dear respondents,

We are undergraduate final year students from Universiti Tunku Abdul Rahman (UTAR), pursuing Bachelor of Public Administration (Honors) and currently conducting our final year project. The aim of this research questionnaire is to study performance expectancy, effort expectancy, social influence and facilitating conditions that could affect the undergraduate students' acceptances of e-government services in UTAR Kampar.

There are **Six (6)** sections in this questionnaire. Section A is on demographics. Section B,C,D E and F which cover all of the variables in this study. Please read the instructions carefully before answering the questions. Please answer **ALL questions** in **ALL sections**. Completion of this questionnaire will take you approximately 5 **to 10 minutes.**

Your participation in this study is entirely voluntary. There will be no disadvantage if you decide not to complete the attached anonymous questionnaire. You can withdraw at any time without any penalty. You can refuse to answer any question at any time if you feel uncomfortable. The information collected from you will be kept strictly private and confidential. All responses and findings will be used solely for academic purposes.

Your assistance in completing this questionnaire is very much appreciated. Thank you for your participation. If you have any questions regarding this questionnaire, you may contact our leader at **wanwei@1utar.my or 011-33668014.**

If you decide to complete this attached anonymous questionnaire, this will be taken as you voluntarily agree and formally consent to participate in this study. Thank you very much for your cooperation and willingness to participate in this study.

Yours Sincerely,

Ho Ying Xuan yingxuan313@1utar.my
Suzanne Yap Shu Xuan suzanne090902@1utar.my
Yeo Wan Wei wanwei@1utar.my.

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-
    - For assessment of any application to UTAR
    - For processing any benefits and services
    - For communication purposes
    - For advertorial and news
    - For general administration and record purposes
    - For enhancing the value of education
    - For educational and related purposes consequential to UTAR
    - For the purpose of our corporate governance
    - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/study loan

2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

4. UTAR is committed to ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorize and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.

2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

3. You may access and update your personal data by writing an email to our leader wanwei@1utar.my or call 011-33668014 (Yeo Wan Wei).

Acknowledgment of Notice

( ) I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice

( ) I disagree, my personal data will not be processed.

Section A: Demographic Profile

Please place a tick "√" for each of the following:

1.Gender:

- ☐ Male
- ☐ Female

2.Age:

- ☐ 18 to 21 years old
- ☐ 22 to 25 years old
- ☐ 26 to 29 years old

3.Ethnic group:

- ☐ Malay
- ☐ Chinese
- ☐ Indian
- ☐ Others,please specify_____

4.Faculty :

- ☐ Faculty of Engineering and Green Technology (FEGT)
- ☐ Faculty of Information and Communication Technology (FICT)
- ☐ Faculty of Science (FSc)
- ☐ Faculty of Business and Finance (FBF)
- ☐ Faculty of Arts and Social Science (FAS)
- ☐ Institute of Chinese Studies (ICS)

5.Year of study in university :

- ☐ Year 1
- ☐ Year 2
- ☐ Year 3
- ☐ Year 4 or above

Section B:Performance Expectancy (Independent Variable)

Based on your experience, please circle the most appropriate option that best indicates your agreement level about the following statements.

Level of agreement

1- Strongly disagree;
2- Disagree;
3- Neutral;
4- Agree
5- Strongly agree

Performance Expectancy (PE)		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
PE 1	By using e-government services, I would be able to complete tasks in the public sector quickly.	1	2	3	4	5
PE 2	Using e-government services enables me to effortlessly get the information I require.	1	2	3	4	5
PE 3	E-government leads to reduced service times with simplification of processes.	1	2	3	4	5
PE 4	Using the e-government services improve the quality of services.	1	2	3	4	5

Section C: Effort Expectancy (Independent Variable)

Based on your experience, please circle the most appropriate option that best indicates your agreement level about the following statements.

Level of agreement
1- Strongly disagree;
2- Disagree;
3- Neutral;
4- Agree
5- Strongly agree

Effort Expectancy (EE)		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
EE 1	Learning to use the e-government services system is easy.	1	2	3	4	5
EE 2	Using the e-government services system is easy.	1	2	3	4	5
EE 3	It is easy for me to become skillful at using the e-government services system.	1	2	3	4	5
EE 4	By using the e-government system, I am able to get government services easily.	1	2	3	4	5

Section D: Social Influence (Independent Variable)

Based on your experience, please circle the most appropriate option that best indicates your agreement level about the following statements.

Level of agreement
1- Strongly disagree;
2- Disagree;
3- Neutral;
4- Agree
5- Strongly agree

Social influence		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
SI 1	People who are important to me think that I should use e-government services.	1	2	3	4	5
SI 2	People who influence my behavior think I should use the e-government services.	1	2	3	4	5
SI 3	I would use e-government services if my peers did use the services.	1	2	3	4	5
SI 4	Government agencies encourage citizens to use the e-government services system.	1	2	3	4	5

Section E: Facilitating Conditions (Independent Variable)

Based on your experience, please circle the most appropriate option that best indicates your agreement level about the following statements.

Level of agreement
1- Strongly disagree;
2- Disagree;
3- Neutral;
4- Agree
5- Strongly agree

Facilitating Conditions		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
FC 1	I have the resources necessary to use e-government services.	1	2	3	4	5
FC 2	I have sufficient experience with the Internet to utilize e-government services.	1	2	3	4	5
FC 3	There is technical assistance from the government available for using e-government services.	1	2	3	4	5
FC 4	When I use e-government services, I am guided by good instructions.	1	2	3	4	5
FC 5	The e-government services are provided with the necessary infrastructure.	1	2	3	4	5

Section F: Undergraduate Students' Acceptance of e-government services (Dependent Variable)

Based on your experience, please circle the most appropriate option that best indicates your agreement level about the following statements.

Level of agreement
1- Strongly disagree;
2- Disagree;
3- Neutral;
4- Agree
5- Strongly agree

Students' Acceptances		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
SA 1	I am confident that I will use e-government services in the future.	1	2	3	4	5
SA 2	I use e-government services on a regular basis.	1	2	3	4	5
SA 3	Most of my government requests are done through e-government services.	1	2	3	4	5
SA 4	Using e-government services is a good idea.	1	2	3	4	5
SA 5	I recommend for my peers to utilize the e-government services platform.	1	2	3	4	5

Thank you for your participation.

Appendix 2 : Reliability Test Analysis Results for Pilot Test

Dependent Variable : Students' Acceptance (SA)

Scale: IA - Reliability Analysis

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.924	.927	5

Inter-Item Correlation Matrix

	Planned use	Like to use	Used for government requests	Use on regular basis	Did most request
Planned use	1.000	.829	.743	.724	.737
Like to use	.829	1.000	.693	.619	.781
Used for government requests	.743	.693	1.000	.710	.739
Use on regular basis	.724	.619	.710	1.000	.599
Did most request	.737	.781	.739	.599	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Planned use	15.7000	13.734	.866	.775	.896
Like to use	15.7000	13.528	.823	.752	.902
Used for government requests	15.6333	14.033	.815	.677	.905
Use on regular basis	15.9333	13.237	.731	.590	.924
Did most request	15.7000	13.459	.800	.688	.907

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
19.6667	20.851	4.56624	5

Independent Variable 1 : Performance Expectancy (PE)

Scale: PE - Reliability Analysis

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.945	.946	4

Inter-Item Correlation Matrix

	Accomplishment of needs	Fairness and equality	Timesaving	Quality of services
Accomplishment of needs	1.000	.796	.908	.883
Fairness and equality	.796	1.000	.751	.664
Timesaving	.908	.751	1.000	.881
Quality of services	.883	.664	.881	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Accomplishment of needs	12.0000	9.931	.939	.885	.908
Fairness and equality	12.1333	10.671	.765	.652	.958
Timesaving	12.0667	8.961	.916	.858	.914
Quality of services	12.0000	9.931	.866	.823	.928

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
16.0667	17.237	4.15172	4

Independent Variable 2 : Effort Expectancy (EE)

Scale: EE - Reliability Analysis

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.903	.906	4

Inter-Item Correlation Matrix

	Easy to learn	Easy to use	Easy to become skillful	Easy access to service
Easy to learn	1.000	.832	.653	.677
Easy to use	.832	1.000	.703	.735
Easy to become skillful	.653	.703	1.000	.634
Easy access to service	.677	.735	.634	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Easy to learn	12.1333	7.154	.805	.707	.867
Easy to use	12.0000	7.379	.862	.766	.850
Easy to become skillful	11.8667	7.292	.726	.533	.897
Easy access to service	11.9000	7.403	.752	.575	.886

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.9667	12.585	3.54754	4

Independent Variable 3 : Social Influence (SI)

Scale: SI - Reliability Analysis

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.784	.783	4

Inter-Item Correlation Matrix

	Important people	Influencer	Friends and colleagues	Government agencies
Important people	1.000	.845	.308	.421
Influencer	.845	1.000	.265	.408
Friends and colleagues	.308	.265	1.000	.602
Government agencies	.421	.408	.602	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Important people	11.5667	5.702	.705	.723	.668
Influencer	11.3667	5.826	.676	.718	.685
Friends and colleagues	11.0667	7.857	.438	.368	.800
Government agencies	10.9000	7.472	.573	.433	.745

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
14.9667	11.137	3.33718	4

Independent Variable 4 : Facilitating Conditions (FC)

Scale: FC - Reliability Analysis

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.919	.919	5

Inter-Item Correlation Matrix

	Resources	Knowledge	Assistance of encountered technical problems	Confidence in security and privacy	System compatible with other systems
Resources	1.000	.751	.764	.776	.595
Knowledge	.751	1.000	.796	.671	.692
Assistance of encountered technical problems	.764	.796	1.000	.678	.679
Confidence in security and privacy	.776	.671	.678	1.000	.551
System compatible with other systems	.595	.692	.679	.551	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Resources	15.2667	14.133	.833	.726	.893
Knowledge	15.2000	13.200	.836	.715	.892
Assistance of encountered technical problems	15.3333	13.540	.840	.719	.891
Confidence in security and privacy	15.3000	14.148	.756	.626	.908
System compatible with other systems	15.1667	15.661	.703	.526	.918

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
19.0667	21.651	4.65302	5

Appendix 3 : Reliability Test Analysis Results for Final Test

Dependent Variable : Students' Acceptance (SA)

Scale: Reliability Analysis - Students' Acceptance (SA)

Case Processing Summary

		N	%
Cases	Valid	368	100.0
	Excluded[a]	0	.0
	Total	368	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.959	.960	5

Inter-Item Correlation Matrix

	Confident in future use	Regular basis	Requests done online	Good idea	Recommend
Confident in future use	1.000	.813	.816	.832	.860
Regular basis	.813	1.000	.851	.789	.790
Requests done online	.816	.851	1.000	.803	.817

Inter-Item Correlation Matrix

	Confident in future use	Regular basis	Requests done online	Good idea	Recommend
Good idea	.832	.789	.803	1.000	.889
Recommendation	.860	.790	.817	.889	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Confident in future use	17.5815	10.974	.891	.800	.949
Regular basis	17.6196	10.760	.866	.774	.953
Requests done online	17.6196	10.689	.881	.791	.951
Good idea	17.5761	10.964	.889	.819	.949
Recommendation	17.5924	10.738	.902	.845	.947

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
21.9973	16.744	4.09193	5

Independent Variable 1 : Performance Expectancy (PE)

Scale: Reliability Analysis - Performance Expectancy (PE)

Case Processing Summary

		N	%
Cases	Valid	368	100.0
	Excluded[a]	0	.0
	Total	368	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.966	.967	4

Inter-Item Correlation Matrix

	Task accomplishment	Information accessibility	Reduced service times	Improve service quality
Task accomplishment	1.000	.899	.903	.845
Information accessibility	.899	1.000	.886	.891
Reduced service times	.903	.886	1.000	.846
Improve service quality	.845	.891	.846	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Task accomplishment	13.3043	6.207	.921	.862	.954
Information accessibility	13.3397	6.100	.935	.877	.950
Reduced service times	13.2989	6.346	.916	.849	.956
Improve service quality	13.3234	6.219	.893	.811	.963

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
17.7554	10.932	3.30633	4

Independent Variable 2 : Effort Expectancy (EE)

Scale: Reliability Analysis - Effort Expectancy (EE)

Case Processing Summary

		N	%
Cases	Valid	368	100.0
	Excluded[a]	0	.0
	Total	368	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.967	.967	4

Inter-Item Correlation Matrix

	Easy to learn	Easy to use	Easily become skillful	Easily get services
Easy to learn	1.000	.928	.916	.860
Easy to use	.928	1.000	.870	.845
Easily become skillful	.916	.870	1.000	.868
Easily get services	.860	.845	.868	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Easy to learn	13.2418	6.347	.946	.911	.949
Easy to use	13.2255	6.568	.918	.870	.957
Easily become skillful	13.2120	6.544	.924	.865	.955
Easily get services	13.2283	6.591	.886	.789	.966

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
17.6359	11.453	3.38421	4

Independent Variable 3 : Social Influence (SI)

Scale: Reliability Analysis - Social Influences (SI)

Case Processing Summary

		N	%
Cases	Valid	368	100.0
	Excluded[a]	0	.0
	Total	368	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.949	.949	4

Inter-Item Correlation Matrix

	People who important	People who influence	Peer's utilization	Government's encourage
People who important	1.000	.903	.828	.797
People who influence	.903	1.000	.829	.793
Peer's utilization	.828	.829	1.000	.792
Government's encourage	.797	.793	.792	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
People who important	13.1739	6.275	.904	.842	.925
People who influence	13.1467	6.442	.903	.841	.925
Peer's utilization	13.1087	6.593	.867	.751	.937
Government's encourage	13.1277	6.875	.836	.700	.946

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
17.5190	11.444	3.38287	4

Independent Variable 4 : Facilitating Conditions (FC)

Scale: Reliability Analysis - Facilitating Conditions (FC)

Case Processing Summary

		N	%
Cases	Valid	368	100.0
	Excluded[a]	0	.0
	Total	368	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.968	.968	5

Inter-Item Correlation Matrix

	Necessary resources	Internet experience	Technical assistance	Guided by instructions	Necessary infrastructure
Necessary resources	1.000	.922	.872	.836	.830
Internet experience	.922	1.000	.854	.840	.808
Technical assistance	.872	.854	1.000	.900	.863
Guided by instructions	.836	.840	.900	1.000	.876
Necessary infrastructure	.830	.808	.863	.876	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Necessary resources	17.5136	12.098	.915	.880	.960
Internet experience	17.5000	12.011	.904	.867	.962
Technical assistance	17.5163	12.131	.925	.865	.958
Guided by instructions	17.4864	11.896	.913	.857	.960
Necessary infrastructure	17.5163	12.240	.888	.808	.964

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
21.8832	18.719	4.32658	5

Appendix 4 : Multiple Linear Regression Analysis Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935[a]	.875	.874	.29106

a. Predictors: (Constant), Facilitating Conditions average, Performance Expectancy average, Social Influences average, Effort Expectancy average

b. Dependent Variable: Students' Acceptance average

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	215.048	4	53.762	634.622	.000[a]
	Residual	30.752	363	.085		
	Total	245.800	367			

a. Predictors: (Constant), Facilitating Conditions average, Performance Expectancy average, Social Influences average, Effort Expectancy average

b. Dependent Variable: Students' Acceptance average

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.325	.085		3.821	.000
	Performance Expectancy average	.085	.043	.086	1.998	.046
	Effort Expectancy average	.139	.051	.144	2.707	.007
	Social Influences average	.177	.050	.183	3.527	.000
	Facilitating Conditions average	.526	.044	.557	11.906	.000

a. Dependent Variable: Students' Acceptance average

Appendix 5: SPSS Output of Normality Test

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Social Influences average	368	100.0%	0	.0%	368	100.0%
Facilitating Conditions average	368	100.0%	0	.0%	368	100.0%

Variable			Statistic	Std. Error
Students' Acceptance average	Mean		4.3995	.04266
	95% Confidence Interval for Mean	Lower Bound	4.3156	
		Upper Bound	4.4833	
	5% Trimmed Mean		4.4891	
	Median		4.8000	
	Variance		.670	
	Std. Deviation		.81839	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-1.582	.127
	Kurtosis		2.495	.254
Performance Expectancy average	Mean		4.4389	.04309
	95% Confidence Interval for Mean	Lower Bound	4.3541	
		Upper Bound	4.5236	
	5% Trimmed Mean		4.5435	
	Median		5.0000	
	Variance		.683	
	Std. Deviation		.82658	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-1.898	.127
	Kurtosis		4.054	.254
Effort Expectancy average	Mean		4.4090	.04410
	95% Confidence Interval for Mean	Lower Bound	4.3222	
		Upper Bound	4.4957	
	5% Trimmed Mean		4.5140	
	Median		5.0000	
	Variance		.716	
	Std. Deviation		.84605	
	Minimum		1.00	

	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-1.736	.127
	Kurtosis		3.109	.254
Social Influence average	Mean		4.3798	.04409
	95% Confidence Interval for Mean	Lower Bound	4.2931	
		Upper Bound	4.4664	
	5% Trimmed Mean		4.4748	
	Median		4.8750	
	Variance		.715	
	Std. Deviation		.84572	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-1.556	.127
	Kurtosis		2.348	.254
Facilitating Conditions average	Mean		4.3766	.04511
	95% Confidence Interval for Mean	Lower Bound	4.2879	
		Upper Bound	4.4653	
	5% Trimmed Mean		4.4761	
	Median		5.0000	
	Variance		.749	
	Std. Deviation		.86532	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-1.529	.127
	Kurtosis		2.077	.254

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Students' Acceptance average	.263	368	.000	.757	368	.000
Performance Expectancy average	.292	368	.000	.713	368	.000
Effort Expectancy average	.287	368	.000	.731	368	.000
Social Influences average	.268	368	.000	.757	368	.000
Facilitating Conditions average	.278	368	.000	.751	368	.000

a. Lilliefors Significance Correction

Appendix 6 : Multicollinearity Test Result

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.325	.085		3.821	.000		
	Performance Expectancy average	.085	.043	.086	1.998	.046	.185	5.420
	Effort Expectancy average	.139	.051	.144	2.707	.007	.122	8.210
	Social Influences average	.177	.050	.183	3.527	.000	.127	7.847
	Facilitating Conditions average	.526	.044	.557	11.906	.000	.158	6.340

a. Dependent Variable: Students' Acceptance average