



## ENHANCING THE EFFECTIVENESS OF SMART- GOVERNMENT INITIATIVES: RECOMMENDATIONS FOR PUBLIC SECTOR ORGANIZATIONS IN THE EMIRATES

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### Abstract

The purpose of this study is to assess the effectiveness of smart-government initiatives and recommendations for public sector organizations in the Emirates. This study utilized a quantitative research design and collected data from 353 participants, including 191 learners and 162 instructors. The findings reveal that the successful adoption and impact of smart-government initiatives depend on various factors such as trust, environmental factors, and organizational readiness of the public sector. Moreover, the study recommends further research on the integration of games in course components and the influence of moderating variables on smart-government initiatives. The practical implications of these findings are significant for public sector organizations in UAE and other countries as they can use the study's evaluation model to assess their smart-government initiatives and improve their service delivery. The study also suggests that public sector organizations should take into account the opinions of different stakeholders while building a robust platform for the adoption and evaluation of smart-government initiatives to improve service delivery. Lastly, the study highlights the importance of considering multiple factor models while evaluating the adoption and impact of smart-government initiatives.

**Keywords:** Effectiveness, Smart-government initiatives, Public sector, Organisation, Emirates

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**DOI:** 10.31838/ecb/2023.12.1.423

### Introduction

The smart-government initiatives consist of two domains, learning and technology. Learning refers to the cognitive process of acquiring knowledge, skills, and attitudes, while technology serves as a platform for learning to occur anytime and anywhere (Bhalalusesa et al., 2021; Qing et al., 2023). The smart government initiative in the UAE focuses on leveraging technology to enhance the efficiency and effectiveness of public services through the integration of e-learning into the public sector (Moore and Kearsley, 2012; Al-Aulamie, 2021). According to Ehlers (2019), smart-government initiatives have five primary

characteristics. These include the ability for learning to occur anytime and anywhere, learners assuming the role of organizers, learning being a never-ending process, the ability to learn and teach in communities of learning or practice, and learning occurring in both formal and informal contexts. However, Bhalalusesa et al. (2021) reported a slow adoption rate of smart-government initiatives in the UAE. These findings highlight the need for greater efforts to promote the adoption and application of such initiatives in the UAE.

In order to understand the factors that impact the adoption and effectiveness of smart-government initiatives, research has been conducted in this area. For instance, Rachmawati et al. (2019) investigated the relationship between service quality and technical system quality in smart-government initiatives. They found that providing high-quality services is significant in supporting the technical system quality of smart-government initiatives. Tham et al. (2017) and Udriyah et al. (2019) also provided insights and instruments for the successful implementation and evaluation of smart-government initiatives by considering the needs of stakeholders and the effectiveness of the initiatives.

Furthermore, future research should explore the integration of games in course components, as studies have shown that learners are subject to a greater number of influences than instructors. Additionally, the impact of moderating variables such as age, gender, and experience on smart-government initiatives should be investigated. In terms of methodology, future research should consider using a qualitative approach or a combination of qualitative and quantitative approaches to understand the changes in technology and context. Moreover, the addition of necessary constructs to enhance the understanding of smart-government initiatives should be considered. The study by Rachmawati et al. (2019) also suggests involving other stakeholders in future research, such as ICT personnel, e-Learning developers, and industry members, to construct a robust platform for the adoption and evaluation of smart-government initiatives.

Overall, the adoption and effectiveness of smart-government initiatives in the UAE and other countries depend on various factors, and the findings of the studies mentioned above have practical implications for public sector organizations. By understanding these factors and considering the needs of stakeholders, public sector organizations can improve service delivery and the impact of their initiatives. The slow adoption and application of smart-government initiatives in public sector organizations in the UAE is a significant issue that requires attention.

According to Tossy (2017), there is no effective and comprehensive model for evaluating user acceptance, user satisfaction, and utilization of smart-government initiatives in public sector organizations in the UAE. This lack of evaluation models could lead to inadequate decision-making

processes that may result in the inefficient use of resources and the inability to achieve the intended benefits of smart-government initiatives. Furthermore, Tossy (2017) highlighted that there is no model in the UAE that evaluates smart-government initiatives from the perspective of key stakeholders, including learners and instructors. This could result in a lack of understanding of the challenges and benefits of smart-government initiatives from the end-users' point of view.

Therefore, there is a need for the development of an effective and comprehensive model for evaluating the adoption and utilization of smart-government initiatives in public sector organizations in the UAE. Such a model should consider various factors such as user characteristics, context, environmental factors, and trust, as identified by Alshehhi and Dwivedi (2021) in their study on the adoption of smart-government services in the UAE. The model should also take into account the perspectives of different stakeholders, including learners and instructors, to ensure that their needs and expectations are met. The importance of considering stakeholder perspectives is emphasized by Bhalalusesa et al. (2021). The slow adoption and application of smart-government initiatives in public sector organizations in the UAE is a significant issue that requires attention. According to Tossy (2017), there is a lack of effective and comprehensive models for evaluating user acceptance, satisfaction, and utilization of smart-government initiatives in public sector organizations in the UAE. This lack of evaluation models could result in inefficient decision-making processes that may lead to the inability to achieve the intended benefits of smart-government initiatives. Moreover, Tossy (2017) highlighted that there is a need for a model that evaluates smart-government initiatives from the perspective of key stakeholders, including learners and instructors. This could lead to a lack of understanding of the challenges and benefits of smart-government initiatives from the end-users' point of view.

Therefore, an effective and comprehensive model for evaluating the adoption and utilization of smart-government initiatives in public sector organizations in the UAE is necessary. Such a model should consider various factors such as user characteristics, context, environmental factors, and trust, as identified by Alshehhi and Dwivedi (2021) in their study on the adoption of smart-government services in the UAE. The model

should also take into account the perspectives of different stakeholders, including learners and instructors, to ensure that their needs and expectations are met. The importance of considering stakeholder perspectives is emphasized by Bhalalusesa et al. (2021), who reported that only 12.4% of 90 instructors who attended training in the Open Public Sector Organization of the UAE used the system, indicating a lack of buy-in from key stakeholders.

Moreover, the development and implementation of such a model will facilitate the adoption and utilization of smart-government initiatives in the UAE and ensure that their intended benefits are realized. As noted by Ehlers (2019), smart-government initiatives have several characteristics, including learning that can occur anytime and anywhere, learners assuming the role of organizers, learning being a never-ending process, the ability to learn and teach in communities of learning or practice, and learning occurring in both formal and informal contexts. Therefore, an effective evaluation model should consider these characteristics and ensure that they are incorporated into the adoption and utilization of smart-government initiatives in public sector organizations in the UAE.

The adoption and utilization of smart-government initiatives in public sector organizations in the UAE is a significant issue that requires an effective and exhaustive evaluation model. Currently, there is no comprehensive model that considers user characteristics, context, environmental factors, trust, and stakeholder perspectives to ensure successful adoption and utilization of smart-government initiatives (Ahmed, 2021; Al-Aulamie, 2021; Hashim et al., 2023). E-learning is one of the forms of learning that can benefit from smart-government initiatives. E-learning employs digital technology to facilitate knowledge transmission between tutors and learners or between learners, and smart-government initiatives involve technology to facilitate learning anytime and anywhere, with learners assuming the role of organizers and instructors serving as both content providers and moderators of the learning activities (Pambreni et al., 2019; Pushpakumara et al., 2019). However, the adoption of smart-government initiatives in public sector organizations in the UAE is limited (Al-Sabawy, 2021). To address this problem, there is a need to develop a comprehensive evaluation model that can assess user acceptance, user satisfaction, and utilization of smart-government

initiatives. Such a model should also consider stakeholder perspectives, including learners and instructors, to ensure successful implementation and realization of the intended benefits of these initiatives.

According to DeLone and McLean (1992) and Lyytinen and Hirschfeld (1987), system utilization is one sign of effective information systems. Thus, an effective evaluation model is essential in understanding the impact of smart-government initiatives on public sector performance. The lack of such a model in the UAE is one of the reasons why the adoption and application of smart-government initiatives in public sector organizations have been slow.

Another significant issue is the lack of a model that evaluates smart-government initiatives from the perspective of learners and instructors. These initiatives aim to improve learning outcomes and enhance the overall learning experience. Therefore, understanding the views and opinions of learners and instructors is crucial in assessing the effectiveness of smart-government initiatives in meeting their intended goals (Ahmed, 2021; Al-Aulamie, 2021).

To address these issues, there is an urgent need to develop an effective and comprehensive evaluation model for the adoption and utilization of smart-government initiatives in public sector organizations in the UAE. Such a model should consider factors such as user acceptance, user satisfaction, impact on learning outcomes, and stakeholder perspectives. It should also be developed in consultation with different stakeholders to ensure its effectiveness and relevance to the UAE context (Hashim et al., 2023). The development and implementation of such a model can help to improve the adoption and utilization of smart-government initiatives and enhance the efficiency and effectiveness of public services.

### **Literature Review**

The term “e-learning” has been defined in multiple ways by various researchers. As per Adkins’ (2021) definition, e-learning encompasses all modes of learning that are enabled by the utilisation of the Internet and other contemporary information and communication technologies. According to Laurillard’s (2006) definition, e-learning refers to the utilisation of digital technology to enhance the process of teaching and learning. According to Moore and colleagues

(2021), e-learning encompasses all modes of electronically facilitated instruction and education. In contrast, e-learning has been defined by deMaagd et al. (2021) as an educational modality that utilises electronic technologies to facilitate access to educational curriculum beyond the confines of a conventional classroom setting. According to Mohammadi and Emdadi (2021), e-learning refers to the utilisation of internet technology for the purpose of designing, implementing, administering, and developing learning.

The e-learning system is a cloud-based computing model where the institution outsources the software, platform, and infrastructure to a specialised vendor. The vendor provides a metered service on demand, contingent on the availability of an internet connection (Riahi, 2015; Ishaq and Brohi, 2015). In the present investigation, the terms e-learning, electronic learning, and e-learning system are utilised interchangeably and are deemed to be synonymous. Mtebe and Raisamo (2021) and Sharma and Mishra (2007) have classified e-learning into various categories. Regarding this matter, educational resources can be archived in either physical or digital format. Digital storage options include CDs, DVDs, portable and non-portable hard drives, as well as tape drives.

As per the findings of Sharma and Mishra's (2007) research, the fundamental constituents of e-learning encompass the origin of learning resources, digital tools, and digital networks. The provenance of educational resources is the point of origin of said resources. The platform enables interactive and collaborative sessions, allowing instructors or learners to actively participate in the learning process. The digital device serves as a tool for end-users to access learning materials and transmit various forms of content. This may include any digital device that the user is familiar with, and can be used for both sending and receiving information. The digital network serves as the intermediary connecting the point of access for e-learning resources to the ultimate recipients. The means of transmitting educational resources, whether through a wired or wireless medium, establishes a linkage between the source of knowledge and its recipients, who could be students, instructors, or other consumers of electronic learning. The geographical constraint of e-learning may necessitate the network to limit users' access to the materials solely within the school or campus premises. The term "intranet e-

learning" refers to a specific type of electronic learning. In comparison to intranet e-learning, internet-based learning provides users with the ability to access e-learning materials from any location using a variety of digital devices.

The inception of e-learning in developing nations can be traced back to the 1990s, which was facilitated by the emergence of the internet and the proliferation of digital communication. The predominant body of scholarly inquiry on the adoption of e-learning in developing nations has primarily concentrated on the viewpoint of educators, with a limited number of investigations examining the outlooks of both instructors and learners.

The present study investigates various models and theories pertaining to the adoption of technology, such as the Theory of Planned Behaviour (TPB), the Technology Acceptance Model (TAM), the Diffusion of Innovation (DOI), and the Unified Theory of Acceptance and Use of Technology (UTAUT). Various variables are utilised by these models to forecast the impact of technology on individuals and organisations, as well as their intention and usage. This study aims to identify the key factors that contribute to the successful evaluation of smart-government initiatives in public sector organisations in the United Arab Emirates.

The utilisation of information technology has become a crucial component of modern government operations, leading to the emergence of smart-government endeavours that leverage IT to enhance the provision of public services. Assessing the efficacy of said initiatives is imperative to substantiate the allocation of resources and inform prospective improvements. Mtebe (2015) has identified three key metrics for evaluating the effectiveness of smart-government initiatives, namely: utilisation, user contentment, and return on investment (RoI).

The utilisation of information systems, including smart-government initiatives, is a crucial metric for measuring success. Numerous academic investigations have established a correlation between the utilisation of an electronic learning platform and improved academic achievement among learners (Filippidi et al., 2020; Jo et al., 2021; Naveh et al., 2020; Hashim et al., 2023). According to Wixom and Todd's (2005) proposal, the success of information systems can be measured through two means: technology

acceptance, which encompasses both intention to use and actual use, and user satisfaction.

The measurement of user satisfaction is a crucial metric in assessing the efficacy of smart-government initiatives. The relationship between user satisfaction and system performance is a crucial factor in achieving successful adoption and implementation, as evidenced by the works of Tella (2022), Naveh et al. (2020), Shee and Wang (2018), and Wang (2003). Therefore, it is imperative that the development and execution of intelligent governance initiatives prioritise user contentment.

The Return on Investment (RoI) is a supplementary metric utilised to gauge the effectiveness of smart-government initiatives. The aforementioned approach involves a comparison between the quantity of output obtained and the quantity of input expended (Mtebe, 2015). In order to conduct comparisons, it is necessary to ensure that the output and input variables are standardised to a common unit of measurement, as noted by Urbach and Müller (2022) and Govindasamy (2001). However, in the case of an investment involving monetary values, it is necessary to convert the output into monetary values as well. The task at hand may present challenges due to the fact that certain output components may not be amenable to conversion into monetary units (Mtebe, 2015).

DeLone and McLean (2003) conducted a revision of their information system model with the aim of presenting a comprehensive framework for the evaluation of an IS's success. The theoretical framework of the model is based on the communication transmission concept that was originally proposed by Shannon and Weaver in 1948 and 1949, and further developed by Mason in 1978.

The revised model encompasses various challenges, including semantic, technical, and effectiveness-related obstacles that need to be addressed in order to achieve success in the realm of Information Systems. The issue of semantics pertains to the ability of a system to effectively communicate the intended meaning, while the technical issue involves addressing technical barriers such as accuracy, interface, and efficacy. The matter of effectiveness pertains to the expected impact on the receiver's conduct, encompassing factors such as the inclination to

utilise, actual usage, user contentment, and personal as well as institutional consequences.

Conclusively, the assessment of the effectiveness of smart-government initiatives is imperative in substantiating investments and directing improvements. The evaluation of success can be approached through three distinct perspectives, namely use, user satisfaction, and return on investment, each requiring unique methods of assessment. DeLone and McLean's revised IS model presents a thorough structure for assessing the success of information systems, encompassing semantic, technical, and effectiveness factors. By employing these methodologies and frameworks, governmental bodies can proficiently assess the efficacy of their smart governance endeavours and augment the dispensation of civic amenities.

The efficacy of e-learning and smart-government endeavours has been a topic of scholarly investigation for several years, with numerous studies assessing their influence on both learners and personnel. The Information Systems (IS) success model, derived from the DeLone and McLean model of 1992, represents a viable approach to gauging success. The aforementioned model delineates three major impediments that must be surmounted, namely semantic, technical, and effectiveness. Effectiveness pertains to the impact on individuals and organisations, as well as the level of acceptance, utilisation, and satisfaction among users.

Tossy (2017) employed the IS success model to evaluate the influence of e-learning on learners' attainment in four public sector organisations in the United Arab Emirates. The research discovered that the attainment of knowledge and skills by learners, their progression towards becoming self-directed learners, and their drive were crucial factors in determining their academic success.

Marjanovic, Deli, and Lalic (2016) proposed a theoretical framework for assessing the effectiveness of smart-government initiatives in a manufacturing organisation operating within an economy undergoing a period of transition. The DeLone and McLean (2003) model was expanded by integrating a novel construct, namely user performance, in the study. The research conducted employed a combination of observation and survey methods, as well as Structural Equation Modelling (SEM), to authenticate the model.

Furthermore, the efficacy of e-learning and smart-government endeavours can be evaluated through diverse models and constructs. The IS success model and the DeLone and McLean (2003) model are frequently employed in evaluating the efficacy of information systems and smart-government endeavours. Additional variables, including user performance, self-efficacy, and perceived utility, have been identified as influential factors in the effectiveness of these endeavours. Additional research is necessary to authenticate these models and ascertain supplementary factors that influence the effectiveness of e-learning and smart-government endeavours.

### **Research Methodology**

Research philosophy is a way of thinking about and approaching research that informs the research design, methodology, and interpretation of data (Saunders et al., 2021). There are three main research philosophies: positivism, interpretivism, and realism (Bryman & Bell, 2021).

Positivism is a research philosophy that emphasises the importance of empirical evidence and objective observation in research. Positivists believe that research should be based on the scientific method, which involves the formulation of hypotheses, the collection of data through observation and experimentation, and the testing of hypotheses using statistical analysis (Bryman & Bell, 2021).

Interpretivism is a research philosophy that emphasises the importance of understanding social phenomena from the perspective of the individuals involved. Interpretivists believe that research should focus on subjective experiences and meanings, and that the researcher's role is to interpret and make sense of the data rather than simply observing and measuring it (Saunders et al., 2021).

Realism is a research philosophy that emphasises the importance of understanding the underlying causes of social phenomena. Realists believe that social phenomena are influenced by both observable and unobservable factors, and that research should focus on understanding the relationships between these factors (Bryman & Bell, 2021).

The choice of research philosophy depends on the research question, the nature of the data, and the researcher's worldview. It is important to select a

research philosophy that is appropriate for the research question and data, as this will ensure that the research is rigorous and credible. For this study, the positivist research philosophy was adopted.

The process of accumulating information to address a concern or test a hypothesis is an essential component of research, commonly referred to as data collection (Azam et al., 2021; Bryman & Bell, 2021). The selection of a data collection method is contingent upon the research design and the specific nature of the inquiry. The present investigation employed a survey as the data collection method, which is a widely utilised approach for gathering data from a subset of participants (Oppenheim, 1992; Dewi et al., 2019; Manju et al., 2023). The rationale for employing the survey method in this study was its ability to efficiently gather data from a sizable pool of participants within a limited timeframe (Stangor, 2021).

The survey instrument utilised in this study was a structured questionnaire. The survey was bifurcated into two distinct sections, with the initial section centering on the demographic data of the participants, while the latter section was dedicated to their apprehensions. The development of the questionnaire was informed by a thorough review of relevant literature and aligned with the research objectives.

The study employed a stratified random sampling method to choose the sample population. The study's target population comprised of public sector organisations in the United Arab Emirates that have integrated smart-government initiatives. The study sample was stratified according to the seven emirates in the United Arab Emirates, namely Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al Quwain, Ras Al Khaimah, and Fujairah. The researcher obtained a catalogue of public sector organisations from the official government websites of each emirate. A proportional sample was drawn from each emirate, taking into account the population size. The researchers determined the sample size for their quantitative study to be 353 individuals, consisting of 191 learners and 162 instructors, by utilising the formula outlined by Azam et al. (2021). The online survey was conducted using the Google Forms platform, and the survey link was distributed to the participants through email. The participants were provided with a timeframe of three weeks to complete the survey, and two reminders were sent during the

data collection period to improve the response rate. The collected data was analysed using both descriptive and inferential statistics. The Statistical Package for the Social Sciences (SPSS) software was used for data analysis.

### **Data Analysis and Findings**

Factor loading is the link between a survey item and a factor. It shows the factor's variance explanation. Exploratory Factor Analysis (EFA) finds the factors that explain relationships between variables. EFA factor loading values show how strongly each survey question is associated with the identified factors. In this research, factor loadings larger than 0.5 suggest a substantial relationship between the survey item and its related factor.

The study's factor analysis results show that survey items are meaningfully clustered, with significant factor loadings for items from the same factor. This confirms the survey instrument's construct validity. The factor analysis results imply that the survey instrument is reliable and valid for measuring learners' perspectives on e-learning.

Construct validity is the extent to which a measuring instrument, like a learner measurement model, properly measures the intended latent construct (Kline, 2016). It guarantees that a tool measures what it is supposed to. Researchers utilise factor analysis, confirmatory factor analysis, and structural equation modelling to examine construct validity (Byrne, 2016).

Convergent, discriminant, and nomological construct validity are the three categories (Kline, 2016). Convergent validity evaluates the extent to which various measurements of the same construct are strongly linked, whereas discriminant validity measures how uncorrelated distinct constructs are (Fornell & Larcker, 1981). The extent to which a construct is related to other constructs in a theoretically relevant manner is evaluated by nomological validity.

Absolute fit, incremental fit, and parsimonious fit are three categories of fitness indices used to measure construct validity (Hu & Bentler, 1999). Absolute fit assesses how well the model matches the data, whereas incremental fit measures how adding parameters improves model fit. Finally, parsimonious fit evaluates model fit with the fewest parameters (Kline, 2016).

Construct validity ensures that a measuring instrument is reliable and measures the intended construct. The learner measurement model had good construct validity, indicating that it measured the intended latent construct properly.

This study presents three validated Multi-Factors Models based on learner, instructor, and hybrid perceptions to evaluate smart-government initiatives and their impact in UAE public sector organisations.

UAE government initiatives have improved public sector services. It's important to incorporate learner and instructor points of view to ensure initiatives' effectiveness. Usability, accessibility, and applicability are important to learners. Instructors enjoy factors such as training and assistance, as well as the opportunity to customise and adjust the technology to their needs.

Using multi factor models, smart-government initiatives may be evaluated from both perspectives. User satisfaction, system usability, and technological acceptability may be incorporated in a model. Models may provide a more accurate evaluation of the effectiveness of initiatives by evaluating factors including system quality, information quality, and service quality.

A hybrid model may be developed by combining validated learner and instructor models. This model may provide a complete assessment of smart-government initiatives, considering learners' and instructors' perspectives. The hybrid model can identify areas for improvement and guide UAE smart-government initiatives. The researchers developed two suggested Multi-Factors Models based on DeLone and McLean's IS model to answer the second worry, one for the learner's point of view and one for the instructor's point of view. The models were validated using SEM (Structural Equation Modelling) using data from learners and instructors at one public sector organisation and evaluated using data from eight organisations. The researchers developed a hybrid model for assessing smart-government initiatives based on the validated learner and instructor models to address the third point. Using perceived benefits as the outcome variable, the hybrid model was developed by combining predictors from both models. SEM data from eight public sector firms validated the hybrid model.

### **Conclusion and Implications**

UAE government smart-government initiatives have progressed. However, evaluating the efficacy of such initiatives is crucial to their long-term success. This study intended to contribute to the corpus of knowledge (theory) in the disciplines of information systems and smart-government models by devising and validating models for evaluating the adoption and impacts of smart-government initiatives in the United Arab Emirates. By emphasising on the points of view of learners and instructors, the study supported the validity of the proposed models.

The study utilised a baseline model (McLean & DeLone, 2003) to investigate the adoption and impact of smart-government initiatives in the UAE. The fundamental model was augmented with trust, environmental factors, and public sector organisation preparation. These principles assist public sector organisations in evaluating their preparedness to implement and maintain smart-government initiatives. Taking into account all four themes of smart-government initiatives (technology, information, user characteristics, and context), the suggested and validated models for assessing adoption and its implications of smart-government initiatives in the UAE are exhaustive. The models' validity was enhanced by the fact that they were validated from a variety of points of view of learners, instructors, and learners. The research augmented the fundamental model with trust, environmental factors, and public sector organisation readiness. The results of the study demonstrated a significant impact of Service Quality on Technical System Quality, which provide empirical evidence of the interaction between these two exogenous factors.

Based on the validated learner and instructor models, this study proposes a hybrid model for assessing smart-government initiatives. The research will benefit government agencies implementing wise government initiatives. The research provides three instruments for evaluating these initiatives from the perspectives of learners, instructors, and a combined view. This allows stakeholders to fully comprehend the impact of these initiatives.

In smart-government initiatives, the report also emphasises the significance of trust, environmental factors, and public sector organisational readiness.

In evaluating these initiatives, the report highlights the significance of factors including ICT policy, competitive pressure from peer public sector

enterprises, top management support, financial assistance, internet accessibility, and utility power. These factors may have a significant impact on the efficacy of smart-government initiatives; therefore, they must be considered.

This study concentrates on service quality in the technical system quality of smart-government initiatives, a topic that is typically neglected in related research. (Rachmawati et al., 2019) The findings provide empirical evidence of the relationship between service quality and technical system quality, highlighting the significance of delivering high-quality services to support the successful implementation of smart-government initiatives.

This research study provides public sector organisations and educational institutions with insights and tools for launching and evaluating smart-government initiatives. By investigating the factors in this study (Tham et al., 2017; Udriyah et al., 2019), organisations can ensure that their initiatives satisfy stakeholder needs and achieve their objectives.

According to the report, user satisfaction and return on investment are also important indicators for smart-government initiatives. Businesses can measure the impact of their initiatives and improve their effectiveness using these metrics.

This study provides important insights into the success factors of smart-government initiatives and highlights the importance of service quality, customer satisfaction, and return on investment as metrics. By considering these factors, organisations can ensure their initiatives address stakeholder demands and contribute to wise and effective government systems. The paper provides numerous suggestions for organisations within the public sector that have adopted smart-government initiatives. The research emphasises the need to evaluate smart-government initiatives based on a variety of factors. It suggests that public sector organisations evaluate the effectiveness of initiatives using models that incorporate multiple factors, such as those developed by the research.

These models incorporate all the necessary components to make the e-Learning system viable, as well as the requirements and points of view of stakeholders who use it. The research also suggests that public sector organisations prioritise trust, preparation, and environmental factors, which are neglected by the majority of models and



frameworks. These factors are crucial for the adoption and evaluation of smart-government initiatives and may enhance service delivery.

The research study suggests including a wider range of stakeholders in future research in order to provide a firm platform for the adoption and evaluation of smart-government initiatives. This will assist businesses in ensuring that their initiatives meet stakeholder requirements and achieve their objectives. To increase their applicability, the research suggests evaluating the developed models in numerous countries and domains. According to the study, future research on changes in technology and context should employ qualitative or hybrid methods. It also suggests the addition of constructs to aid in the comprehension of smart-government initiatives. Examining moderating factors, such as age, gender, and experience, in smart-government initiatives may provide insight into adoption and effectiveness. The research suggests incorporating activities into course components to improve learner engagement and results. In the assessment of smart-government initiatives in public sector organisations in the UAE, the report recommends including course components such as content, design, and delivery, which have been neglected. The research report provides public sector organisations with important recommendations regarding smart-government initiatives. In addition, it suggests further research to enhance our understanding and the effectiveness of such initiatives.

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