INTERNATIONAL JOURNAL OF SUSTAINABLE CONSTRUCTION ENGINEERING AND TECHNOLOGY
Vol. 14 No. 2 (2023) 76-87

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IJSCET

http://penerbit.uthm.edu.my/ojs/index.php/ijscet
ISSN : 2180-3242 e-ISSN : 2600-7959

International Journal of Sustainable Construction Engineering and Technology

Service Quality Factors Influencing the Use of Artificial Intelligent Security Technology in UAE

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DOI: https://doi.org/10.30880/ijscet.2023.14.02.008
Received 30 January 2023; Accepted 07 February 2023; Available online 08 May 2023

Abstract: This study assessed various factors related to service quality in influencing artificial intelligence security technology. It was carried out through quantitative approach where the data of respondents perceptions of UAE citizens towards the enhancing service quality in the UAE's AI security sector was derived through queationnaire survey. The factors were categorized in four groups which are performance expectancy group with seven factors; effort expectancy group with seven factors; social influence group with four factors; and facilitates condition group with five factors. With these factors, the respondents were requested to gauge the degree of influence of each factor using 5-points likert scale. The questionnaire survey managed to secure 359 completed questionnaire forms. The data from these forms were analysed using descriptive statistic. It was found that facilitates condition group of factor is the most influencing category on service quality to adopt AI technology. It can be concluded that the overall results indicate that facilitates condition, effort expectancy and performance expectancy groups are reported having very high influencing categories while social influence group having high influencing ategory. It was also found that AI technologies are very frequently used technologies by the UAE citizens. Based on the study, it is deduced that service quality is a basic consideration as reported by the UAE personnel for adoption of any technology.

Keywords: Artificial intelligence, service quality, UAE

1. Introduction

The goal of the computer science field of artificial intelligence (AI) is to make robots behave intelligently in a manner similar to that of humans. The first commercial AI-based system, called XCON (Expert System), wasn't made public until the 1970s (Hussain and et al. 2015). Industrial AI systems that were useful at the time were also hard to come. By early 1980s, a Danish cement manufacturer used manufacturing applications and Japanese metro trains to implement fuzzy logic. At the time, only a few million dollars were made from commercial AI products (Hussain et al., 2015). In the middle of the 1980s, businesses started to use expert systems, and a number of significant companies created AI teams. The use of neural networks in commercial applications has also seen a rise in interest. Expert systems were being used more frequently in industry by the

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end of the 1980s, and other AI techniques were also being used, sometimes covertly but with promising results (Pirani & Arafat 2016). Applications like data mining software, email filters, and web crawlers were developed and widely used up until the late 1990s (Kamaladevi et al. 2016).

Because of robust databases and advanced computing capabilities, AI technology has become more widely used (Almarashda et al. 2021). The UAE government unveiled its "UAE Strategy for Artificial Intelligence (AI)" in October 2017. The post-mobile government era has begun, and a number of upcoming utilities, businesses, and infrastructure initiatives will influence it (Ahmed et al., 2017). The policy is truly revolutionary in the region and around the world with the aims of achieving the UAE Centennial 2071 objectives, enhancing government performance, utilising an embedded digital communications system that can overcome obstacles and provide fast, effective performance, making the UAE the first in the field of AI investments in various sectors, and creating a new vital growing market economic potential. On the other hand, the policy would cover a range of industries. First, the transportation sector lowers operating costs and incident rates. Second, the healthcare sector strives to eradicate dangerous and chronic illnesses. Third, the space industry supports precise test execution, reducing the likelihood of expensive mistakes. Fourth, facility management is the responsibility of the clean energy sector. Fifth, the water industry conducts analyses and studies to provide water supplies. Sixth, the education industry lowers costs while enhancing learning capacity. Seventh, increased forestry is a result of the environmental sector. Finally, the traffic sector reduces accidents and gridlock while also creating more effective traffic regulations.

A study by Tran, et al. (2021) had the aim of developing a theoretical model to examine medical students' behavioural intentions to use an AI-based Diagnosis Support System in Singapore. In Arabian Peninsula For public sector organisations, artificial intelligence (AI) has been hailed as having revolutionary potential, allowing for greater efficiency and innovative methods of providing public services. An attention-based view of AI assimilation in public sector organisations, a study by Alshahrani, et al., (2022) showed that situated attention and structural distribution of attention have a mutually reinforcing relationship, which can speed up the successful integration of AI in public sector organisations. Most nations still accept artificial intelligence, and a survey of 28 nations found that different nations and individual factors affect how well people accept robotics and artificial intelligence (Vu and Lim 2021).

A paradigm shift in the structure of our society is predicted to be brought about by artificial intelligence (AI). To maximise the societal and economic benefits of AI and to be best equipped for future challenges, it is more important than ever to invest in it thoughtfully. As a result, the United Arab Emirates (UAE) has recently pursued AI in an original and creative way. We provide a high-level overview of key initiatives crucial to the strategic development of AI in the UAE, including the national vision and strategy, research infrastructure, capacity-building, AI adoption, and cross-sector collaborations. There are guidelines and plans for the advancement of AI technology in the United Arab Emirates. By 2031, the UAE wants to be a global leader in artificial intelligence as stated in its National Artificial Intelligence Strategy, which was unveiled in 2017. The strategy aims to establish the UAE as a regional and international AI hub, develop local talent and skills, and apply AI to both the public and private sectors to enhance performance (National Program for Artificial Intelligence, 2022).

The fundamental idea behind usage, marketing, and application theory and practise is quality. The secret to maintaining a competitive advantage in the public sector is to provide high-quality services that will result in satisfied customers (Katono, 2011). Information systems (IS) success in the IS field, as well as user satisfaction, retention, and loyalty in the marketed or application, are all related to artificial intelligence service quality in the public domain (Yen, & Lu, 2008; Cronin et al., 2000). For example, the security technology in the United Arab Emirates can be improved by using artificial intelligence, but the main reason for the lack of quality in the security system is that there is low technology adoption. The lack of quality in a system is typically caused by resource efficiency, availability, and compatibility among the component of the system.

Future AI will enable us to learn, make better and healthier decisions as a society, improve health care, treat mental illnesses like dementia, and develop cutting-edge treatments. According to some experts, AI could be used to create "mental wheelchairs" for people who suffer from mental illnesses. The United Arab Emirates (UAE) is eager to take advantage of artificial intelligence's (AI) advantages in order to fulfil its ambitions and goals of establishing sensible self-service technological governance (Almarashda et al. 2022). In order to ensure that the UAE continues to develop as a progressive and forward-thinking nation, the government has made AI one of its top priorities. In order to maintain growth and stability, security must be a top priority for every person, corporate environment, organisation, community, and region (Dhingra et al., 2016). Threats to security can lead to a variety of issues, such as unrest, economic collapse, and the loss of life due to terrorist acts. They may also give you a sense of insecurity. Humans have difficulty with security because they are limited in their ability to simultaneously analyse and digest large amounts of data. The current security architecture has a significant flaw that can be fixed using AI techniques (Jones, 2015). The security framework includes elements like Homeland Security, intrusion detection systems, denial-of-service attacks, cryptography, and video surveillance systems. Because security is so crucial, adding AI techniques makes the current security system

more effective. In order to secure facilities, government agencies in the UAE use a variety of AI security technologies. It is essential to provide quality service related to security. Adoption of AI for security depends on service quality significant which can be defined by different factors and paramters. Hence, this paper focused on studying the factors which have influence of service quality towards the adoption of AI security technology in UAE.

2. Literature Review

2.1 Artificial Intelligence

McCarthy defined AI as "the science and engineering of creating intelligent machines" in 1956 (McCarthy, 1958). False optimism and upswings have followed. AI researchers predicted future success based on intriguing findings (Russell & Norvig, 2010). AI development took longer than expected due to shifting research priorities, with phases for introducing new techniques and improving existing ones. Intelligence is a mental activity that only humans can do. Reading and comprehension are enabled by brain functions and biological processes (Langton, 2019). Intelligence's etymological roots are unclear. The word is composed of the Latin verb legere, which means "to choose," and the prefix inter, which means "about." Intelligence gathers, compiles, organises, chooses, and creates impressions to contribute to understanding, perception, or knowledge (Carson, 2018).

There are many academic and common definitions of intelligence today. The term has many meanings, from inter-human ability or authority comparisons (focusing on intelligence's social role) to highly theoretical meanings of intelligence as one example of a global class of "optimization processes" that includes, in the broadest sense, natural selection's adaptation responses (Williams, 2018). In its broadest sense, AI is "the automation of intelligent behaviour" or "the study of the computations that allow us to perceive, think, and perform" AI has many definitions and classifications. In some contexts, AI is a non-human intelligence that can mimic human cognitive abilities like information processing, natural language processing (NLP), understanding from experience, structuring, or making decisions about others (Salinas, 2018).

Human intelligence has long been used as a benchmark for comparing or evaluating AI success, but some techniques focus on ideal-typical "rational" understanding rather than human intelligence or effectiveness (Luhmann, 2018). Most concrete AI concepts can be divided into four groups, each representing a unique perspective on two conceptual dimensions as 'intelligent' or'sentient' as presented in Figure 1.

	Human Benchmark (H)	Rationality benchmark (R)
Intelligence as Thought Processes (T)	**(T-H) Systems that think like humans** (e.g. cognitive science) *"The exciting new effort to make computers think ... machines with minds, in the full and literal sense"* Haugeland, 1985 *"The automation of activities that we associate with human thinking, activities such as decision-making, problem solving, learning ..."* Bellman, 1978	**(T-R) Systems that think rationally** (logic/ laws of thought) *"The study of mental faculties through the use of computational models"* Charniak and McDermott, 1985 *"The study of the computations that make it possible to perceive, reason, and act"* Winston, 1992
Intelligence as goal-oriented behavior (B)	**(B-H) Systems that act like humans** (Cf. Turing test; Winograd Schema Challenge[24]) *"The art of creating machines that perform functions that require intelligence when performed by people"* Kurzweil, 1990 *"The study of how to make computers do things at which, at the moment, people are better"* Rich and Knight, 1991	**(B-R) Systems that act rationally** (rational agents) *"A field of study that seeks to explain and emulate intelligent behavior interms of computational processes"* Schalkoff, 1990 *"The branch of computer science that is concerned with the automation of intelligent behavior"* Luger & Stubblefield, 1993

Fig. 1 - A typology on the definitions of AI

2.2 Service Quality

Quality is a parameter that can't be measured directly because it depends on how much the customer values and is satisfied with the product (Memon et al. 2018). Service quality is a fundamental criteria to consider any new technology. It is evaluate based on SERVQUAL instrument created by Parasuraman et al. in (1988) and frequently used instrument in high-contact services like healthcare, education, and tourism. The many variables that influence consumer loyalty and perceptions of quality, including health care, are difficult to standardise. It is much more difficult to assess the level of quality in health care compared to financial services or visitor

facilities because it involves a person's health and is intimately connected to his or her life (Fragoso & Espinoza 2017). Healthcare must be aided by quality control (Chen, & Ko, 2016). Customers should be happy with the performance fundamental needs as well as the quality of services provided. The SERVQUAL model has been used in earlier studies in a number of countries and has shown to be a useful tool for assessing health services. The scientific literature is replete with data regarding service quality in all the fields. For example, Li and Kaye (1999) conducted research on 228 University of Portsmouth students who had taken math and building courses. They showed that students' perceptions are largely stable over time, despite the fact that their evaluation of service quality changes as the study progresses and the perceived level of quality declines. 350 students from the Economics Faculty of Zagreb participated in a study by Vraneevic et al. (2007) where the majority of students believed that the teaching staff had a significant influence on how satisfied they were with the services provided by the Zagreb Faculty of Economics. Nearly half of students (47%) conclude that it has little bearing on their satisfaction despite the fact that non-teaching staff is the least satisfied. Students' overall satisfaction with the faculty of economics' physical environment is too unimportant, according to 36% of them. According to the faculty website, 68 percent of students base their expectations for instruction and teachers on what other students have experienced, 15 percent base their expectations on faculty presentations, and 11 percent base their expectations on faculty presentations. External factors influenced the expectations of the remaining 6% of students.

Only humans used to provide services to other humans in the past. But as technology advances, social robots are being used more frequently in the service industry to carry out tasks (Wirtz et al., 2018; Chiang and Trimi, 2020). The Internet of Things (IoT), mobile and cloud technology, social robotics, and artificial intelligence (AI) are rapidly disrupting the service industry and altering what customers expect and experience from their service providers (Huang and Rust, 2018; Wirtz et al., 2018; Pavon et al., 2020). The COVID-19 pandemic also encouraged the growth of the robotics ecosystem and the use of robotics (Tung, 2020; Yang et al., 2020; Zeng et al., 2020). During the COVID-19 pandemic, social robots were successfully used in hotels, stores, hospitals, airports, and public areas, demonstrating the value and applicability of using robots in a variety of settings. Through contactless services, social robots have proven they are effective at preventing cross-infections (Pani et al., 2020). Additionally, they provided confined patients and other vulnerable individuals with therapeutic and entertaining activities (Aymerich-Franch and Ferrer, 2020).

Many academics have worked to comprehend and recognise service quality over the past forty years. If companies want to compete successfully in the future and gain a competitive advantage, they must raise the quality of their services (Gronroos, 1984; Parasuraman et al., 1988). Product and service quality is seen as a strategic factor in order to achieve efficiency and effectiveness in corporate operations (Babakus and Boller, 1992). According to Lehtinen and Lehtinen (1991), interactions between customers and parts of the service organisation, like contact person(s), result in high-quality service. The difference between a customer's expectations of a service and their perceptions of the quality of the service, according to Parasuraman et al. (1998), is the definition of service quality. Service quality is an intangible concept that is challenging to conceptualise and quantify due to its intangibility, the fact that a service is produced and consumed simultaneously, and the distinction between mechanical and humanistic quality (Carman, 1990). Due to perceived service quality, which is an assessment of a service's overall quality, a business can profit from a number of favourable outcomes (Cronin and Taylor, 1992). Academics claim that measuring service quality involves comparing what customers expect from a company with the firm's actual performance (Parasuraman et al., 1988) People were once believed to be the source of service quality.

2.3 Service Quality in Relation to Security Artificial Intelligence Technology

Quality is the guiding principle behind usage, marketing, and application theory and practice of any technology. Delivering a high-quality service that will leave customers satisfied is the key to achieving a sustainable competitive advantage (Katono, 2011). Artificial intelligence service quality is related to user satisfaction, information systems (IS) success, and user satisfaction, retention, and loyalty in the marketed or application (Yen, & Lu, 2008; Cronin et al., 2000). For example, the security technology in the United Arab Emirates can be improved by using artificial intelligence, but the main reason for the lack of quality in the security system is that there is low technology adoption. The lack of quality in a system is typically caused by resource efficiency, availability, and compatibility among the component parts of the system.

In addition to providing various businesses with competitive advantages in the online environment, the enhancement of customer relationships and their level of satisfaction through customer feedback also involves the various clients who are involved in the production process (Santos, 2003). Additionally, the notion of the quality of traditional services served as a foundation for this concept of an electronic service's quality. The quality of an online business's e-services can significantly predict whether it will succeed or fail. According to research, the level to which a website for the government supports the competent delivery of effective e-services to assist citizens, businesses, and agencies in completing their governmental transactions. The measurement of e-service quality in the e-commerce space has received an increasing amount of attention in recent years. As a

result, a variety of studies have been conducted in an effort to identify the key aspects of the E-service quality that are related to the online environment. These studies have been carried out in a variety of contexts, including the E-service area, online banking, online travel agencies, online public libraries, online retailing, and online shopping. The level of E-service quality is also the main factor in determining whether any E-government project succeeds or fails (Papadomichelaki & Mentzas, 2012). A growing number of studies have been conducted specifically to examine the quality of e-services, and these studies have shown that there are more variables to consider when assessing e-service quality. Additionally, little is known about how these specific expectations and perceptions of service quality will affect users' satisfaction in the context of e-government; because service quality is a multi-dimensional concept, many different dimensions may be apparent in determining users' satisfaction in various contexts. There will therefore always be a need for more research into how these various service quality dimensions affect users' satisfaction with E-government services.

Numerous studies on the quality of e-services have recently been carried out in a variety of areas, including online banking, e-services, online public libraries, online travel agencies, online retail, online shopping, and web portals. According to Nusair and Kandampully (2008), playfulness, information quality, trust, navigability, personalization, and responsiveness are the six factors that have been identified as having the greatest impact on the quality of an e-service in an online travel environment. The traditional service quality dimensions of comfort, competence, courtesy, and cleanliness, however, were not appropriate for the online environment (Cox and Dale 2001).

3. Research Methodology

There are three types of research methods which are mixed-mode, qualitative, and quantitative (Bachayo et al. 2022). In this study, the addressed questions need to employ a quantitative approach (Creswell, 2013). The quantitative method is a structured approach that combines deductive reasoning with in-depth empirical observations of individual behaviour (Creswell, 2013; Punch, 2013). It is to find and validate a set of probabilistic rules used to forecast broad trends in human behaviour. With the help of systematic data collection techniques from a large representative sample, the quantitative method can measure specific characteristics and extrapolate the results to the entire population (Creswell, 2013). The exploratory nature of this study, with its objective of learning about people's expectations, behaviours, and attitudes, justifies the use of quantitative techniques to delve into and surface deeply ingrained employee perceptions for analysis (Padgett, 2016). In this study, data were gathered using a self-administered questionnaire survey. Because they depend more on the accuracy of the written word than on the interviewers' skills, self-administered questionnaires are challenging to use (De Vaus & De Vaus, 2013; Bryman & Bell, 2018). On the other hand, there are several benefits to this form it involves "selecting a relatively large number of units from a population, or specific subgroups (strata) of a population, in a random manner where the probability of inclusion for every member of the population is determinable," probability random sampling was used for sampling purposes (Teddlie & Yu, 2007). Each trait has an equal chance of being chosen using this method (Hussain et al. 2022). In order to gather data, a questionnaire with a five point Likert scale was created. Social Science Statistical Package was used for the data analysis (SPSS). Frequency, standard deviation, and reliability analysis were all calculated.

4. Results and Discussion

4.1 Questionnaire Administration

A questionnaire was used in this study's survey research design to collect data. The study uses 359 respondents as its sample size gathered against 420 questionnaires given out to the operational staff of the United Arab Emirates' Ministry of Interior employees to ensure an adequate response (UAE). Table 1 below details the administration of the questionnaire in detail.

Table 1 - Questionnaire administration

Questionnaires	Frequency	Percentage
Distributed	420	100%
Returned	389	92.6%
Discarded	389	92.6%
Useable/Valid	359	90.5%

4.2 Reliability Test

The reliability of constructs with many components depends on internal consistency. This implies that the components of the construct should be tightly coupled. Reliability is the extent to which a scale yields consistent

results after repeated measurements of the variable under study and the extent to which research measurement is free from random error (Pallant, 2011; David & Sutton, 2011). The dependability metric that is most frequently used is Cronbach's alpha. The consistency of a measuring scale is gauged by Cronbach's alpha. To achieve internal consistency, Cronbach's alpha must be higher than 0.7. (Hair et al. 2011; Memon & Rahman, 2014; Pallant, 2011; Wong, 2016, Almansoori et al. 2021). Therefore, Cronbach's alpha was used to evaluate the dependability of the research constructs, as shown in table 2 below:

Table 2 - Reliability analysis

Variable	No. of item	Cronbach alpha
Performance Expectancy	7	.828
Effort Expectancy	7	.837
Social influence	4	.848
Facilitates condition	5	.787

4.3 Respondents' Demographic

In order to ensure an unbiased and objective sampling of the respondents, this sampling technique was used in this study. A total 400 questionnaires distributed but only 363 were collected for analysis. During the data screening process, it was found that 4 responses contained a number of disengaged responses and outliers. As a result, they were eliminated from the sample, leaving 359 elements overall and a 95.22% response rate. The sample's demography is represented in Table 3.

Table 3 - Demographic profile of respondents

Gender	**Frequency**	Percentage
Male	231	64.4
Female	128	35.6
Total	359	100
Level of employment		
Managerial	198	55.2
Operational	161	44.8
Age Distribution		
18-28	77	21.45
29-38	101	28.13
39-48	83	23.12
49-58	71	21.77
Above 59	27	7.52
Nationality		
Local	265	73.82
African	27	7.52
European	32	8.91
Asian	25	6.96
Americans	10	2.79
AI type		
Facial recognition	38	10.58
Computer-Assisted Passenger Pre-screening	37	10.30
Airport racial profiling	17	4.73
Secondary Security Screening Selection	36	10.02
Pattern recognition	18	5.01
Thermal cameras	49	13.65
Emotion detection, face perception	41	11.42
Speech recognition, Iris recognition, pattern Recognition, analogy and case-based reasoning.	45	12.53
Three-dimensional face recognition, facial profiler	78	21.73

Working Experience		
Less than 3 years	102	28.41
3 to 5 years	110	30.64
Above 5 years	147	40.95
Frequency of using AI features		
Very infrequently	90	17.79
Somewhat Infrequently	85	25.06
Somewhat frequently	105	29.25
Very frequently	79	22.00

Table 3 depicts that according to the actual employees of the company, 64.4% of the respondents are men and 35.6% were women, indicating that there are more men than women working in Arab countries. This gender disparity is much more pronounced. 55.4 percent of participants work in managerial units, compared to 44.6 percent of employees who work in operational units, in terms of the employment unit. Age factors show that there are approximately 77 respondents are between the ages of 18 and 28 accounting for about 21.45% of the total respondents. They are followed by respondents between the ages of 29 and 38, 23.13%, 23.12, 39 to 48, 21.77%, and respondents over the age of 59. According to the nationalities of the respondents to this study, 265(73.82%), 27, 7.52%, 32.89%, 25.96%, and 10.29% are respectively from the locals, Africans, Europeans, Asians, and Americans. Statistics of the respondents show that 39(10.16%) of the respondents use facial recognition, 37(10.13%) respondents use computer-assisted passenger pre-screen, 17(4.73%) people use choose secondary security screening, 18(5.01%) participants use pattern recognition, 49(13.6%) participants use thermal cameras, 41(11.42%) respondents use emotion detection face perception, and remaining 45(12.53%) use speech recognition and iris recognitions. Among the respondents participating in the survey, 147 respondents have more than five years of work experience, 110 have work experience for three and five years, and 102 respondents have experience less than three years. Evaluation of utilization of AI features showed that 90(17.79%) respondents use the AI feature very infrequently, 85(25.6%) respondents use it somewhat infrequently, 105(29.25%) users use it somewhat frequently, and 79(22.0%) respondents use it very frequently.

4.4 Influence Level of the Factors

Descriptive analyses were required to pinpoint the influence level of each individual factor and the overall groups of the factors as the objective of this descriptive study. A 5-point Likert scale was used throughout the entire study, with various variables having comparable or unique scale descriptions. Despite the various descriptors, the concept has a consistent mean ranking scale. The ranks were numbered as a result, with level one (1) denoting the lowest level and level five (5) denoting the highest level. As this study aimed to assess influence level and performance level for the parameters of the categories of factors. The interval decisions were derived from the mean score decision interval used in this study, which was modified based on the works of Hassanain and Iftikhar (2015) for assessing influence level and performance level. The mean value interpretation is displayed in table 4.

Table 4 - Mean value interpretation

Range of means for 5-points Likert scale		Interpretation
4.21	5.00	very high
3.41	4.20	High
2.61	3.40	Moderate
1.81	2.60	Low
1.00	1.80	very low

Based on the mean score and standard deviation of each factor and also the range of mean score of table 4, the results of this study are presented in table 5 to 9.

Table 5 - Factors in performance expectancy group

Factors in Performance Expectancy Group	Mean	Std. Deviation	Ranking	Degree of influence
I find AI useful in my job.	4.45	.725	1st	***Very high***
Using an AI device helps me to do my tasks more quickly.	4.40	1.009	2nd	***Very high***

Using AI device increases my working performance outcomes.	4.39	.818	3rd	***Very high***
The use of AI device allows me to perform my work well.	4.26	.881	4th	***Very high***
The use of the AI device increases my chances of getting accurate information	4.17	.825	5th	***High***
Using AI device makes analysis easier.	4.14	.968	6th	***High***
By using AI tools, I have more control over my work.	3.81	1.119	7th	***High***

The outcomes of a descriptive statistical analysis of the performance expectancy factors influencing the use of AI technology are displayed in Table 5. Use of the AI device increases my chances of receiving accurate information had the highest mean value, with a mean value of 4.45, and the factor with the lowest mean value was I can complete my tasks more quickly using an AI device thanks to its mean value of 3.81. The results show that four of 7 factors are very high influencing factors with mean value ranging 4.45 to 4.26 while three factors have mean value of 4.17 to 3.81. Effort expentancy also exert serious influence on service quantity leading to use of AI. The respondents were asked to rate various questions describing effort expectany which were analysed with mean and standard deviation values to rank as presented in Table 6.

Table 6 - Factors in effort expectancy group

Factors in Effort Expectancy group	Mean	Std. Deviation	Ranking	Degree of influence
My interactions with AI are transparent and understandable	4.38	.912	1st	***Very high***
I can easily learn how to use artificial intelligence and do it well.	4.36	.894	2nd	***Very high***
I find AI device easy to use/operate.	4.22	.818	3rd	***Very high***
Learning how to use artificial intelligence applications is easy for me	4.21	.942	4th	***Very high***
Artificial intelligence task performance is simple to recall.	4.13	.910	5th	***High***
I am comfortable in using artificial intelligence.	4.05	.868	6th	***High***

Table 6 depicts that four factors have mean value between 4.38 to 4.21 and are inferred as very high influencial factors while only two factors have mean value between 4.13 to 4.05 reported as high influencial factors. Among the factors, "My interactions with AI are transparent and understandable" is reported as the first ranked factor while "I am comfortable in using artificial intelligence" is the least influencing factor with minimum mean value given by the respondents. Social influence related factors were also asked by the respondents and the results are presented in Table 7.

Table 7 - Factors in social influence group

Factors in Social Influence group	Mean	Std. Deviation	Ranking	Degree of influence
My coworkers believe I should employ artificial intelligence.	4.29	.761	1st	***Very high***
In general, my institution will support the use of artificial intelligence.	4.22	1.116	2nd	***Very high***
People believe that I prefer to use the AI device.	4.17	.925	3rd	***High***
My organization's seniors have been helpful in utilising artificial intelligence.	4.11	.987	4th	***High***

Table 7 reveals that the respondents mentioned that the factors "My coworkers believe I should employ artificial intelligence" is the most influencing factor related to social influence related factors while the least influencing factor is "My organization's seniors have been helpful in utilising artificial intelligence". The results also reveal that two factors are reported as very high influencing factors while remaining two factors are reported as high influencing factors. The ranking of the perception regarding the question defining the Facilitates condition is presented in table 8.

Table 8 - Factors in facilitates condition group

Factors in Facilitates Condition group	Mean	Std. Deviation	Ranking	Degree of influence
I know necessary to use artificial intelligence in my role.	4.51	.741	1st	***Very high***
Training concerning AI was available to me.	4.26	.881	2nd	***Very high***
A specific person is available for assistance with difficulties that arise in working with artificial intelligence.	4.25	.958	3rd	***Very high***
Using AI fits well with the way I work.	4.23	1.040	4th	***Very high***
The AI device is very compatible with other systems I use.	4.15	.913	5th	***High***

Ranking of the factors regarding facilitates condition to defing service quality to adopt AI security technology as reported in table 8 show that "I know it is necessary to use artificial intelligence in my role, is the most influencing parameters as perceived by the respondents with a mean value of 4.51. The respondents considered the factor "The AI device is very compatible with other systems I use" as the least influenincg in this category with mean value of 4.15. Further, it can be seen that expect this one least influencing factor, all other factors in this category are inferred as very high influencing factors. The ranking of overall the categories of the factors is presented in Table 9.

Table 9 - Groups of factors influencing service quality to adopt AI security technology

Groups of Factors	Mean	Std. Deviation	Ranking	Degree of influence
1. Facilitates condition related factors	4.28	.907	1st	***Very high***
2. Effort Expectancy related factors	4.23	.891	3rd	***Very high***
3. Performance expectancy related factors	4.23	.906	2nd	***Very high***
4. Social influence related factors	4.20	.947	4th	***High***

Table 9 depicts that Facilitates condition, Effort Expectancy and Performance expectancy categories are inferred as very high influencing categories while Social influence category of factors is reported as High influencing category regarding service quality for using AI security technology in UAE.

5. Conclusion

The descriptive statistical analysis was used to study the influence level of various factors which define service quality for Artificial intelligence security. The finidng of this study showed that facilitate conditions influence very high on the service quality while social influence is rated as the least influencing category. Ranking of the several factors for each category revealed that the questions "*I know necessary to use artificial intelligence in my role*" in tehcategory of facilates is the top most factors with highest mean value among all the factors investigated. Majority of the respondents participants in the data collection process mentioned that *they are very frequently using AI technology*. This shows that above identified ranking is a valid as it is perceived by the experienced users of the technology considered for investigation. It can be concluded that the overall results indicate that facilitates condition, effort expectancy and performance expectancy groups are reported having very high influencing categories while social influence group having high influencing ategory. It was also found that AI technologies are very frequently used technologies by the UAE citizens. Based on the study, it is deduced that service quality is a basic consideration as reported by the UAE personnel for adoption of any technology.

Acknowledgement

The authors would like to thank the university for providing assistance in conducting this study.

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