

Female Staffs' Acceptance and Use of Self-Service System: Review of the Current Trend at Saudi Arabian Ministry of Education

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Abstract: In the recent years, Saudi Arabia has put tremendous efforts to move to e-government. Ministry of Education at Saudi Arabia moved to e-government where it launched Faris Self Service System to enable the teachers benefit from the Ministry services easily. Faris Self Service System is an integrated web-based system used to provide various services to teachers, administrators through an online integrated electronic system (MOE, 2018). The aim of the current study was to evaluate the female administrative staff's acceptance and use of Faris Self Service System where semi-structured interviews were conducted with 17 of the female staff's working at the ministry of education in Saudi Arabia. Results of the study revealed that some of the female teachers and administrative staff have rated the Faris program favorably, while some other rated the program negatively and they just use it because they are obliged to do so. This suggests that the Saudi Ministry of Education who has sought to implement the electronic self-service program did well in taking the whole nation into account when formulating their strategy, and ideally focused on improving their operations in order to deliver better service to the female staffs. Finally, the results revealed the need to handle the system drawback and fix them to meet the needs of the female teachers and administrative staff.

Keywords: E-government, Faris, Self-service program, Saudi Ministry of Education, TAM.

قبول المعلمات والموظفين لاستخدام نظام فارس للخدمة الذاتية: دراسة حالة على وزارة التربية والتعليم السعودية

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الملخص: في السنوات الأخيرة، بذلت السعودية جهود كبيرة للتحويل نحو الحكومة الإلكترونية. وقد قامت وزارة التربية والتعليم السعودية بالتحويل إلى الحكومة الإلكترونية حيث أطلقت نظام فارس للخدمة الذاتية. فارس هو نظام متكامل قائم على الويب يستخدم لتقديم خدمات متنوعة للمعلمين والمسؤولين من خلال نظام إلكتروني متكامل على الإنترنت. هدفت هذه الدراسة إلى تقييم قبول المعلمات والموظفين الإداريين لاستخدام نظام فارس للخدمة الذاتية حيث أجريت مقابلات شبه منظمة مع 17 من الموظفات العاملات في وزارة التعليم في المملكة العربية السعودية. تشير النتائج إلى أن الموظفات صنّفن برنامج فارس بشكل إيجابي وهذا يدل على أن وزارة التعليم السعودية التي سعت إلى تنفيذ برنامج الخدمة الذاتية الإلكتروني قد نجحت في أخذ عدة اعتبارات تخص كافة الشرائح عند صياغة استراتيجيتها، وركزت بشكل مثالي على تحسين عملياتها من أجل تقديم خدمة أفضل للموظفات. في حين قدمت بعض المعلمات والموظفات الإداريات رأياً سلبياً حول البرنامج وقالوا بأنهم يستخدمونه لأنهم مضطرين لذلك. وأخيراً، أوصى البحث بضرورة العمل على معالجة أي مشاكل في النظام لتلبية احتياجات المدرسين والعاملات في الوزارة.

Introduction

The management of the educational system in Saudi Arabia falls squarely on the Ministry of Education, Ministry of Higher Education and General Organization for Technical Education and Vocational Training (GOFEVT). Other authorities that oversee educational matters include the Ministry of Defense and Aviation, Ministry of Interior and Presidency of the National Guard. Supreme Committee for Educational Policy formed in 1963 is the overall authority supervising education in Saudi Arabia (Saudi Ministry of Education, 2018).

The Ministry of Education has a long history of changes. Prior to the creation of this ministry, Directorate of Education had been formed in 1925 followed closely by the formation of Basic Instructions established in 1926. A new dawn in modern education came in 1953 when the Ministry of Education was established. During its formation, the ministry was known as Ministry of Educational Disciplines but changed later to become the Ministry of Education following a Royal Decree. The first minister in this docket was the late King Fahd bin Abdul-Aziz. Following its formation, the Ministry of Education strived to expand and modernize the educational resources. More schools were opened and access to public education improved throughout the country. Given the rapid expansion, the Ministry of Education created school districts in various parts of the country to aid the Ministry in discharging some of its responsibilities.

The aims of formation of Ministry of Education were to ensure that every citizen within the learning age got an equal chance in education based on their abilities and to come up with projects catering for the needs of the Ministry including construction of classes and renovation of educational facilities. Moreover, the ministry was tasked with the mandate of improving the education system to respond to the requirements of society. The main responsibilities of the Ministry of Education were to ensure that education was free. Consequently, students were provided with transport and textbooks for free. In higher education, students were given monthly allowances to meet their needs (reference/s). Moreover, students from poor backgrounds were given monthly allowances regardless of their level. In 1958, the education system in the country had grown tremendously and Kingdom of Saudi Arabia together with other members of Arab League made an agreement to enforce a uniform educational system having 6-years at elementary, 3 years intermediate and a 3-year period in the secondary level (reference/s). Higher education, however, remained a separate program (Badwelan, Drew and Bahaddad, 2016).

Research Objectives

The research set out to ascertain the following objectives: 1) To determine the perceived advantages and benefits of the Faris self-service program from the perspective of female staffs; 2) To ascertain the barriers and challenges that would affect the female staffs adoption of Faris program from the perspective of female staffs; and 3) To put forth recommendations to enhance the willingness of the female staffs to adopt such a program.

Literature Review

E-government - Overview

There are various definitions that can be derived from the term e-Government. According to Mayhew (2005), the concept e-government is designed to enhance the internal processes of government agencies as reflected on the users of e-government service program. This has been supported by the definition indicated by Chatfield and AlAnazi (2015), they defined e-government as a means of administrative reforms in order to enhance the public services being provisioned by the management. A broad definition stated by Sakowicz (2003) is that e-government programmes make use of Information and Communication Technology for providing virtual services to citizens and thereby supporting the government operations with respect to e-commerce, e-management, and e-democracy.

Based on the varying definitions stated, it can be noted that despite the variance in the explanation provided by three authors, the context of their statements are similar in a way that e-government is a government program provisioned through a virtual medium. In that regard, it must not be considered as transmission of paper-based procedures concerning government activities towards information and communication technology (Al-Solbi & Al-Harbi, 2008). It is beyond the process of transferring methods and processes. It is the explicit utilization of technological advancements as a means to improve existing processes, thus enabling the Saudi Arabian government to employ better management in terms of the degree of quality reflected on the services they provide. This positive implication significantly contributes to the betterment of the country's economy (Alhujran, 2009). In essence, e-government has become an effective global phenomenon as each country in the world is equipped with its own mission, objectives, and motivation to establish and implement e-government programmes (Lee, Tan, and Trimi, 2005).

E-government is an innovation towards the provision of government processes and is an efficient use of Information and Communication Technology (ICT) for increasing the effectiveness of public management, quality of services and the quality information offered to citizens. Napitupulu, Sensuse, and Sucahyo. (2017) stated that e-government is the next wave of the Information Age, which is why most of the governments

around the world are focusing on it as a means to build the trust among their citizens and to enhance the quality of services delivered by the public sector through the reduction of costs and immediate completion of practices. The aforementioned advantages of the implementation of e-government programs enhance the transparency of government. However, some contradicting views and argued that e-government, in its barest context, is adopted to increase the cost-saving potential of government processes, but if the innovation is technically and administratively complex in a society or nation, then it will not be compatible with existing values and self-interests. The adoption of e-government techniques could be resisted by some employees even with its promising benefits (Sá, Rocha and Cota, 2016).

Other researchers have focused on the relationship between the government and its citizens in order to cull the definition and purpose that e-government serves. According to Almuftah, Weerakkody, and Sivarajah (2016), e-government can be perceived as to how governments utilize technology in order to promote the delivery of the services it provisions to its citizens, employees and other government entities. This statement has been fortified with Schnoll's (2015) perspective in regards to e-government's purpose of building and maintaining relationships with its stakeholders, through stating that e-government refers to the usage of technology for improving the relationship between government and its citizens, government and business, between local and central government. Based on the definitions presented, one can note that e-government is a program that can be defined in different perspectives. Its classification is attributed to its purpose, which can either be on a technological, societal or political point of view.

Faris Self-Service Program in the Ministry of Education– KSA

Within the Saudi efforts to adopt e-government, the Saudi Ministry of Education launched the Faris self-service program for facilitating the provision of services to the teachers. Faris is an integrated web-based system used to provide various services to teachers, administrators through an online integrated electronic system. It has numerous advantages including keeping track of all employee needs; enhanced turnaround time on procedures; less expense in reduced paperwork, time, travel; less staffing in the human resource department; more efficient hence less errors generated; easier to generate reports from any sector of the ministry of education; able to keep track of employees' performance, benefits, attendance, sickness etc.; and harnesses all ministry data on one database among others. (Sorgente et al., 2017)

In Saudi Arabia, the main web-based human resource (HR) system adopted is the Employee Self-Service (ESS), which is a module of the much more comprehensive industry-wide scheme the enterprise resource planning (ERP) systems. This has been used to assimilate the major HR organizational procedures while offering more discernible information. In the past decade, and prior to the launch of the Saudi e-government program, the Saudi Ministry of Education used traditional ERP mainly SAP to manage the human

resources, yet the traditional ERPs has some malfunctions. The new employee self-service (ESS) module (Faris) is a solution that is based on the ministry to the employee model, which facilitate access to the company's HR data by the employees.

Most of the organizations using the Internet-based HR systems employ the system through the firm's intranet. Initially, these applications were only accessible through already set-up templates of the existing forms however this later evolved to more interactive access that allowed employees to perform paperless real-time procedures in the ministry website. This was due to the realization of the great savings arising in printing costs, time-saving, administrative overheads and the empowerment of staff. An employee self-service (ESS) browser interface has pertinent HR information and transactions enabling updating of an employee personal data, vocational application, payment details, and other related remuneration, scrutinize in-house employment opportunities, and reserve educational schedules among other options within the ministry website.

Reasons for the adoption of Faris at the Saudi Ministry of Education

Clearly, the ministry of education has not declared specific reasons for launching Faris as it is still under development. However, based on my experience and through similar trials around the world, it could be said there are various Political, Economic, Social and Technological reasons on why the Saudi Ministry of Education has launched Faris program. The reasons are classified into three groups that are listed as follows:

Economic reasons include: (1) reduced costs for both the ministry and adoption of electronic services. all the online services are comparatively cheaper and faster; thereby improving the interaction between the teachers and the ministry (Sharma & Gupta, 2003; Al-Soma, 2008). Social reasons include: (1) through the access of information online teachers empowerment can be offered; (2) providing place for learning and education among teachers; (3) an efficient and effective delivery of ministry services; and (4) by enabling the online services accessible for all the teachers via a single portal at any time from any place in order to obtain the services within the limited Internet access (Al-Tawil, 2001; Sharma & Gupta, 2003; Belanger and Carter 2006). Technological reasons include: (1) corruption can be reduced; (2) greater efficiency and convenience for all the teachers; (3) highly avoiding the human errors that arise due to manual processing; (4) the management can be made most effective; (5) sharing the knowledge and information within the ministry offices; and (6) finally, making the best use of ICT for reengineering the operations and processes involved in the services (Kerby and Qian, 2008).

Furthermore, the key features of Faris are its utility, social acceptance, and enjoyment level as stated by some of the interviewed teachers. Faris pertains to the perception that self-service systems can make the "encounter easier or better in some way for the teachers". Social acceptance is also important for self-service

systems, where social acceptance "relates to the approval or disapproval of others when the teachers decide to adopt and use the ministry services". The higher the social acceptance for self-service systems, the more teachers will be encouraged to try and adopt it. Finally, Faris offer an underlying outcome of easiness and enjoyment for the teachers. Enjoyment is a primary driver in consumer patronage of self-service systems.

Advantages of the implementation of Faris

1- The self-service program can enhance operational efficiency.

From the teachers' perspective, operational efficiency is a major advantage of Faris deployment. The most prominent reason for ministry introducing Faris is potential cost savings. Customer service applications help the ministry to reduce labor costs since technology solutions either automate service encounters or substitute for personal interactions. Faris can decrease operational costs by reducing the number of employees required to deliver usual service encounters, such as providing information online. Managers then see a strong financial advantage of promoting SST-based customer service interactions.

2- Self-service program can improve customer service and customer satisfaction.

Some teachers prefer and are beginning to favor Faris because it serves them better. Faris that enables teachers to use services when and how they please. Faris can also save time, energy and costs, which will help increase teachers' satisfaction.

3- The self-service program can enhance staff and organizational productivity.

SSTs can ramp up employee productivity because staff can be relegated to value-enhancing services. Employees no longer have to deal with repetitive and usually boring transactions and they can be freer to respond to more complex teachers' issues.

Factors affecting Female Staffs' Acceptance and Use of Faris Self-Service System

Societal Factors

Culture

Conquering cultural lethargy is deemed as one of the key challenges that countries have faced in the process of implementing e-government programmes. The issues related to the entire concept of culture delve on social qualities, backgrounds, education, religion and the societal expectations towards the electronic system (Bhuasiri, Zo, Lee and Ciganek, 2016). In order to encourage society to accept a new innovation, cultural issues must be thoroughly assessed so that interventions can be formulated that would build an aura

of acceptance and trust towards the integration and utilization of e-government programs. Technological developments are not only impeded by lack of technical resources but cultural implications as well.

Through the adoption of the Faris self-service program in Saudi, organizational culture demanded change. Others may choose not to partake in the adoption of these advancements as their culture might dictate that the customary means of processes is the most ideal way of dealing. In that regard, the adoption of e-government systems requires the harmonious cooperation between the government and its citizens. Apart from the government's stakeholders, they must first address their internal stakeholders, which are the employees. It is crucial to positively modify the attitudes of the personnel as their confidence in the adoption of the program would reflect on how they deliver their tasks, thus positively affecting the citizens in return (Bhuasiri, Zo, Lee and Ciganek, 2016).

Technological Limitations

Poor IT Infrastructure

The technological issues affecting the implementation of the e-government program pose a serious threat to the government's capacity to provide services and transactions through a virtual medium. The technological limitations comprise of the country's poor ICT infrastructure, issues pertaining to privacy and secure authentication. The country's weak IT infrastructure is considered as the most counterproductive barrier in the adoption and the actual implementation of the Faris self-service program. Due to the technological core aspect of the whole program, it is of utmost importance that the country is equipped with the necessary information and communication technology resources, that include networks and servers as these are the channels that would be used in the diffusion and application of the e-government program. The availability of these resources allows government agencies to work in effective collaboration and facilitate their roles through the utilization of technology to save time and effort (Aladwani, 2016).

There are organizations in KSA's public sector that lack the necessary IT infrastructure, and this issue must be addressed by upgrading the current infrastructure and installing new equipment that would best serve the program. Prior to the initialization of the e-government program, the government of Saudi should have considered the insufficiency in the technological aspect as it is the core factor that binds the whole virtual program. IT infrastructure does not simply pertain to the availability of computers, but also the availability of intranets or internets that would serve as networks in sharing and transferring of files and documents. In that regard, KSA must first establish a standardized and progressive ICT infrastructure in order to enable the government agencies and its stakeholders in participating with the adoption of the e-government. Being able

to address this crucial barrier is one step towards the peoples' acceptance of this new phenomenon (Aladwani, 2016).

Another issue is that the people fail to realize the significance of an ICT infrastructure as groundwork for the integration of all information systems across all government agencies in the country. The government and employees must first understand this premise before it can be communicated towards the external stakeholders, mainly the citizens and businesses. Upgrading the technological capacity of the public sector would not suffice, as the government must also help the private sector towards this change (Rose et. al, 2015).

Lack of Trust

Another critical factor that would severely affect the adoption of the Faris self-service program is the people's assurance of privacy and security policies within the e-government transactions (Layton, 2016). Without the guarantee of security and privacy, the public would not make use of this service as they do not trust it. However, this problem is not only prevalent in KSA, but in almost every nation across the world. The utilization of online websites as a means to transmit personal information that ranges from one's name, birth date, identification numbers, and credit card information is considered hazardous by most as hackers could access this information and use it for malicious activities such as identity theft. This is why people fear that sharing personal information with government agencies electronically does not assure them that their information would be kept secure.

The common concern is that people feel that e-government services are not secured to the extent that even professional hackers would not be able to access their private information (Layton, 2016). Such networks can easily be corrupted through the incorporation of a virus or can be tapped by those who are tech-savvy. The concept of trust in online transaction seem superficial to most as they are unsure whether the right person is seeing their details and if proper action is being undertaken. Another issue is the prevalent fraud issues pertaining to credit card transactions online to buy goods and services.

The lack of security towards the protection of the information that would be encrypted in e-government services poses a major challenge towards its adoption. If the citizens and businesses choose not to use these e-services as they don't think it could be trusted, then the implementation of the Faris self-service program would be useless because no one is using it (Layton, 2016). In order for the citizens to turn out to be amenable towards the utilization of e-services, they must first be ensured that the information and data they input are secured safely. If the government is able to apply a secure access point in all the services transacted online, then it can help build trust among its people (Layton, 2016).

Organizational Barriers

Lack of Qualified Personnel and Training

It is a prevalent fact that not every individual is adept with using the Internet or are even computer savvy. The lack of proper training makes it harder for the Kingdom of Saudi Arabia to implement new processes that involve technological advancements. Without proper training, the application of the e-government program would be useless and the personnel assigned in this task would be unproductive and inefficient. In line with technological deficiencies of KSA's ICT infrastructure, another barrier is the lack of IT professionals in the country that would ensure the smooth and effective implementation of the e-government program among various public organizations. In accordance with the aforementioned issue, there is a great need to implement computer training programmes.

Aside from the necessary professionals who would work on sustaining the program, it is also necessary for existing staff members to undergo training program so that they would be able to integrate their skills related to their tasks in the virtual platform. It is safe to say that this factor is not as critical as those of the technological limitations because each government agency in Saudi Arabia has its own IT department that is designated to maintain all ICT concerns and processes. They can also be utilized to provide the training programmes to increase the workforce in their area of expertise (Janowski, 2015).

Resistance to Change to Electronic Ways

Despite the introduction and rampant development of the internet medium years ago, e-government is still considered as a phenomenon that is gradually applied from one nation to another. In the perspective of KSA's government, this implies that the entire work environment would be modified- as traditional methods would be replaced by electronic ones. These modifications would produce an environment that is new and completely different from what people have been used to (AlSobh, et. al, 2009). Although resistance towards technological advancements and adoption is not considered as a critical factor that the government must address, it is still worth considering. More than 50% of the population in Saudi Arabia comprises of individuals under 30 years old and are familiar with information and communication technology. Despite it being a potential challenge, the transformation of processes from customary to progressive methods is deemed acceptable to the majority of the public (Janowski, 2015). In spite of that, others who continue to resist adopting technological development must be helped by the government in line with the Faris self-service program's vision of enabling each and every one of its citizens to make use of the e-government services. Another dimension of resisting towards this technological change is that people think that they would lose their jobs as their tasks would be processed by applications and programmes.

Lack of Policy and Regulation for re-usage

The rules and regulations promulgated among government agencies follow a complex structure and is centralized in nature. This makes the process of e-government adoption difficult as thorough restructuring and streamlining of processes and protocol is needed. Along with the adoption of an entire platform based on a virtual medium, the government must also come up with policies and regulations concerning the usage of e-government services (Aljarallah and Lock, 2018). This avoids the abuse and misuse of the services provisioned by the government online. In order for this medium to be fully effective, the governments must formulate laws and regulations that encompasses all the applications contained in the e-service program, as well as all relevant functionalities such as the utilization of e-mails, electronic payments, e-commerce, online business transactions, and copyright rules, to name a few. The existence of such policies and its effectiveness would guarantee users that the services provided are ideal and legit (Alssbaiheen and Love, 2016). This, in turn, would promote the utilization and acceptance towards its adoption. At present, the KSA government has started to issue regulations and policies concerning e-transactions.

Accountability

Some people think that the directors of electronic systems are not professional enough to manage such systems. This is one of the reasons why King Abdullah bin Abdul-Aziz has established a body in 2007 that would address the concurrent issues among government departments. The body is referred to as the Control and Investigation Board.

Users adoption of E-Government Related Research Studies

Carter and Belanger propose that “e-government is the use of information technology to enable and improve the efficiency with which government services are provided to citizens, employees, businesses and agencies” (Sobhi, Weerakkody & Kamal, 2010). Providing e-government services is meant to make it easier for consumers to access services from the comfort of their homes but various factors inhibit the growth and development of e-government services as has been revealed through studies conducted by different researchers. The e-government model has three constituents – the government, the businesses and the citizens (Rana, Dwivedi and Williams, 2015). E-government can hence be categorized into three different categories – Government-to-Government, Government-to-Business, and Government-to-Citizens (G2C). The G2C initiatives have been designed with the intention of facilitating services like the renewal of a license, paying of taxes and applying for benefits. While the purpose is to make it easier for the citizens as well as the government, e-government services have not been well accepted so far. While the benefits of e-government are immense, the adoption rates are extremely low.

E-government implementation is severely impacted by security and privacy concerns, trust, authentication and computer literacy (Al-Sobhi, Weerakkody & Kamal, 2010). Citizens would fear online financial transaction and hence would resist from sharing personal information. This privacy and security concerns are inter-related and impact e-government adoption. Using electronic intermediaries can reduce the risks and uncertainties in using e-government services. This is particularly helpful in developing economies where citizens demonstrate trust in intermediaries such as post offices. However, the intermediary concept can be useful in penetrating in regions that have poor infrastructure to conduct e-services and in regions with the digital divide.

Coping with corruption, inefficiency, ineffectiveness and policy alienation can help the governments restore public trust in web-based public services (Al-Shafi, 2008). On the other hand, lack of access to e-services and digital divide are challenges that impact participation and act as barriers to take up e-government services. Age has been found to impact the use of technology as the younger generation is more likely to use such services. In Qatar, the government launched free wireless internet access to encourage citizens to use e-government services. The study found that ease of use, perceived usefulness, safety and security measures and intention to use the services were the independent variables that impact the city's intention to use the services.

The adoption of e-government services has been extensively studied in different environments. In India, e-gov initiatives were taken in Tamil Nadu but it was not a success because of lack of government support, nonscaleable technology, and ownership problems. In Saudi Arabia, e-gov initiatives failed due to lack of a legal framework for secure e-transactions (Yeow & Loo, 2009).

The government of several nations such as Bahrain, Oman, Philippines, Australia has been offering short-messaging service (SMS) based e-government services to their citizens. However, a survey to determine what factors inhibit the acceptance of these services found most factors as having been included in the Unified theory of acceptance and use of technology (UTAUT) model of technology adoption. These include perceived ease of use; perceived efficiency in time and distance; perceived value for money; perceived usefulness; perceived responsiveness; perceived convenience; perceived relevance, quality and reliability of the information; trust in the SMS technology; perceived risk to user privacy; perceived reliability of the mobile network and the SMS-based system; trust in government and perceived quality of public services; perceived risk to money; perceived availability of device and infrastructure; perceived compatibility; and perceived self-efficacy in using SMS (Susanto & Goodwin, 2010).

Several other factors that deter the consumers from adopting e-government services include poor website and functions available on the government websites as has been found by Leigh and Atkinson (Rana,

Dwivedi and Williams, 2015). The same authors cite that in Egypt the decision-making process has to be better understood and the related organizational problems have to be addressed. Besides, e-government services are accessible from anywhere in the world which exposes the services to a high amount of external risk.

Alzharani (2011) cites several studies conducted by Carter and Belanger on consumers' intention to use e-government services. These studies were conducted on people that had been using the internet for over nine years and found that perceived ease of use does not necessarily enhance the willingness to use and accept e-government services. Using TAM and DOI the researchers also found that relative advantage and compatibility have significant influence over the intention to use technology and e-government services. However, the results from findings can differ based on the size of the sample and also the period in which the study is conducted. This was the contention of Carter and Belanger when they encountered different results between the pilot study and the main study. Again, the factors that are significant for a certain age group may not be the causal factor for another age group. For instance, the image is significant for the younger generation but it is not the case with the older generation.

Evaluating Female Staffs' Acceptance and Use of Self-Service System

Following are some models and theories that could be used to evaluate the female staff's acceptance and used of the self-service system:

Technology Acceptance Model (TAM)

Based on the TRA, TAM was proposed to explain and predict users' acceptance of IT and IS systems by assuming that the constructs - perceived ease of use (PEOU) and perceived usefulness (PU) - are the key determinants of IT and IS acceptance behavior. According to Zhengchuan, Chenghong, and Hong (2008), the success of m-commerce depends upon the acceptance of new and well-defined technologies by consumers. TAM was basically developed to explain computer usage behavior but has since then been used for several other types of research in different fields.

Davis (1989:320) defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance", and defined perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort". According to the TAM, usefulness and ease of use will have a significant impact on a user's attitude toward using the system, defined as feelings of positively influenced or negatively influenced toward the system (Alzharani, n.d.). Davies further postulates that perceived usefulness has a much stronger effect on technology acceptance than ease of use. However, Davies clarifies that ease of use could have a direct impact on perceived usefulness,

cites Alzharani (2011) In addition, perceived usefulness and the amount of information provided by the websites, impact adoption of technology.

Fishbein and Ajzen (1975:216) defined behavioral intention as "the strength of one's intention to perform a specified behavior". This model explains the attitude towards technology because attitudes directly impact intentions to use and adopt the technology. How an individual responds to a stimulus conveys his attitude towards that stimulus. Attitude is important because some consumers may still use technology and m-commerce despite having a negative attitude because the environment may so demand. Hence it also becomes important to determine the satisfaction level of the consumers.

How the behavior intention develops over a five-stage process has been explained by Karaatli, Ma and Suntornpithug. This is the Expectation-Confirmation Theory (ECT) which explains that:

- The consumers first form an expectation from the service prior to purchase
- Thereafter they use the service
- Consumers form a perception of the performance of the service.
- They then assess the difference between the perceived performance and actual performance
- Satisfaction/dissatisfaction is arrived at depending upon the experience and the level of expectation that has been achieved.

In short, TAM states that PU and PEOU affect behavioral intention to use a system, which in turn affects actual use. Attitude towards technology is also based on security concerns, privacy, and compatibility which suggest that the TAM model should extend beyond the perceived use and ease of use. Online shopping is also influenced by normative beliefs and self-efficacy.

According to Wang et al. (2016) subjective norms, perceived usefulness, ease of use, behavioral control and personal innovativeness contribute significantly to technology adoption. Social influence also shapes an individual's ability to use and have confidence in using and adopting the technology. Hence if the government in Saudi Arabia could evaluate the social context in which e-governance would operate, the adoption rates could be high.

TAM is criticized for ignoring the social influence on technology adoption of social and human factors. Marangunić and Granić (2015) extended TAM by integrating social and cognitive variables such as experience, job relevance, image, and voluntariness. This extended model is referred to as TAM2. Other researchers have also extended the TAM model by integrating factors from TPM such as self-efficacy, perceived financial cost, and also from trust literature factors such as credibility (Alzharani, 2011.). Alzharani cites that Schierz extended the model by incorporating quality, enjoyment and trust factors to evaluate the adoption of electronic shopping. These factors according to the study also influenced the perceived usefulness

and attitude towards technology adoption. TAM has also been criticized for being too general as it fails to supply meaningful information. Besides, it does not consider barriers such as lack of expertise, time or budgetary constraints that can hinder the use of technology (Yeow & Loo, 2009).

Overall, TAM is a simple and practical theoretical model. It has been tested extensively and widely accepted (Gupta et al., 2008). At the same time, several researchers have added their extensions to the model or integrated factors from other models. Hence, it cannot be said to be an all-encompassing model that can be used for all studies. Modifications may have to be made as and when necessary depending upon the subject, the size of the research or the duration of the study.

Research Method

Due to the small population of study, the researcher followed the qualitative approach and used the semi-structured interview as study tool. The research targeted all female administrative staff working at the Saudi Ministry of Education where interviews were conducted with all of them. The interviews were held with the staff until the saturation status was achieved, a stage in which most of the responses provided by teachers were similar. The saturation was achieved at the interview number 17. In other words, 17 interviews were held until reaching saturation.

Results and Discussion

The current results suggest that some of the female teachers and administrative staffs have rated the Faris program positively (11 participants), while other rated it negatively (6 participants). This suggests that the Saudi Ministry of Education who has sought to implement the electronic self-service program did well in taking the whole nation into account when formulating their strategy, and ideally focused on improving their operations in order to deliver better service to the female staffs. However, additional effort need to be exerted by the program managers to deal with its drawbacks. As such, it readily apparent that it would be extremely expedient to adopt such a program, not least because this would allow the Ministry of Education to better serve its female staffs. These points were all validated in the agreement garnered from female staffs. The female staffs would also benefit as different services would then enjoy a higher degree of coordination, allowing them to work in concert to achieve greater ends.

The participants' acceptance of the program is associated with their experience in using the computer as well as the distance between their residence and the directorate of education in their area.

The pragmatic benefits that may be garnered from the Faris program have likewise been acknowledged by the interviewed female staffs. Implementing the Faris program would also go a long way in cutting the time and money to be spent. For one thing, the higher quality of communication allowed by such

technologies makes communication between Ministry offices. For a start, the Saudi Ministry of Education no longer needs to spend too much on printing paper or on the dispatch of messengers. More to the point, the Faris program would thoroughly improve the Ministry's' day-to-day operations as a whole. These were acknowledged by female staffs.

Faris program would also allow for better management planning, allowing the Ministry to more time and money that it can then use for the good of its constituents. While implementing such a program would momentarily bring about a spike in costs, this would be paid back in the long run by the increased convenience and diminished expenditures brought on by such programs.

The benefits of the Faris program in terms of individual economics has also been assessed favorably by female staffs. Time has always been a universal concern, especially where transactions and processes are concerned, in which case it becomes as much of, if not an even greater consideration than quality. The Faris program would go a long way in rectifying this scenario as they allow tasks to be completed more quickly yet without sacrificing too much in the way of quality. This becomes even more readily apparent when one considers that websites can be accessed 24/7, as opposed to offices which are only open for a given time period each day. The convenience afforded by online self-service is especially obvious as most of them are automated, and can easily be taken care of by staffs even by themselves. That these services can be readily accessed even by female staffs residing in remote areas further adds to their usefulness.

The provision of adequate infrastructure is also firmly upheld by female staffs. Ever since the Kingdom of Saudi Arabia's induction into the self-services stream, they have had to concern themselves with fulfilling the terms and conditions of their membership – which is where the self-service program comes in. Most of the female staffs have sufficient knowledge of the use of the computer and the internet.

Though it may not directly help productivity rates, technology is an undeniable asset when it comes to the development of a country's economy, as evidenced from how even remote, rural female staffs can easily access government services with its help. The use of Faris has allowed Saudi Arabian Ministry of Education to make its environment more welcoming to female staffs. The services most commonly availed of have become much more convenient and efficient than before, which helps the female staffs. From the current results, the Faris program is deemed acceptable from most of the interviewed female staffs.

On the second objective of the study which aims to ascertain the barriers to the implementation of the Faris program, one possible barrier is said to be culture. However, this has not been supported by the responses of the sample. Cultural lethargy is undoubtedly a major obstacle in the implementation of self-service programs, especially due to the sensitive nature of social norms and personal backgrounds, as well as of education and religion; however, these have not been supported by the present study.

Poor IT Infrastructure and lack of experience in using computer are yet another barrier to the implementation of the Faris program. However, similarly, this has not been supported by the present study. Technological issues also need to be taken care of, especially where the country's ICT infrastructure and its track record on privacy and security are concerned and this has been successfully established in the case of Saudi Arabia. These are particularly problematic, due to the need for ample ICT-related resources such as networks and servers in the effective implementation of self-service systems.

This being the case, another problem is that a good IT infrastructure has never been a primary concern among the Ministry of Education facilities, which necessitates the improvement of existing infrastructure and equipment. However, at least at the perceptual level, these concerns do not serve as a barrier to the implementation of the Faris program.

Yet another problem is the lingering concerns of the female staffs with regard to privacy and security, which is a major requirement if they are to really maximize self-services— and which also happens to be a global concern. These have not been supported in the present study. The most problematic thing about disclosing one's personal data on the internet is that it could easily be intercepted by hackers, who would then use the information to achieve their own malicious ends.

As such, female teachers and staffs have become wary of putting too much faith in online transactions – due to their weak knowledge in computer, which would definitely be a problem in the implementation of the Faris program.

The lack of qualified personnel and training is also not a barrier to the successful implementation of the Faris program. While the internet has become all but commonplace these days, there will always be those who have somehow remained computer illiterate. Computer illiteracy would definitely be an impediment to the implementation of self-service programs in Saudi Arabia. This problem is further compounded with the lack of available IT professionals who would have been useful in ensuring a smoother and more efficient implementation of such services.

Resistance to change to electronic ways is also not a barrier since most of the respondents have high computer literacy. Despite the undeniable benefits associated with Faris program, most countries still have lingering misgivings on the idea of supplanting traditional methods with more modern ones. This is not a problem, especially in Saudi Arabia where over half of the population is comprised of relatively young individuals with a decent familiarity of ICT but is still worth considering regardless.

Conclusion and recommendations

Ultimately, if the implementation of Faris self-service program were to fail, the final nail in the coffin would most likely be the lack of accountability, or otherwise the lack of monitoring on the progress and

development of such programmes – which, unfortunately, has long been a pressing issue in Saudi Arabia, where teachers may not always display an acceptable level of professionalism on the job.

The research recommends organizing training for the staff at Saudi MOE in order to increase their capacity in using Faris. Furthermore, operational manual should be developed and distributed amongst the users/staff in order to increase their efficiency in this regard.

Future researches may further delve into ways of enhancing the effectiveness of the Faris program, focusing on its functionality. Differences in perceptions of various demographic groups, such as those categorized by age and economic status may be investigated. Qualitative methods, such as interviews and focus group discussions may likewise be carried out.

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