THE EFFECT OF E-LEARNING SYSTEM QUALITY ON TRAINING ENGAGEMENT TO IMPROVE CREATIVITY AMONG WORKFORCE OF PUBLIC SECTOR IN THE MINISTRY OF INTERIOR ABU DHABI, UNITED ARAB EMIRATES (UAE)

AHMED SALEM SALEH SULAIMAN ALKAABI

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AHMED SALEM SALEH SULAIMAN ALKAABI (904305)

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Kolej Undang-Undang, Kerajaan dan Pengajian Antarabangsa
(College of Law, Government and International Studies)
UNIVERSITI UTARA MALAYSIA

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Tarikh Date	:	**14 AUGUST 2024**		

Nama Pelajar : **AHMED SALEM SALEH SULAIMAN ALKAABI (904305)**
(Name of Student)

Tajuk Tesis : **THE EFFECT OF E-LEARNING SYSTEM QUALITY ON TRAINING ENGAGEMENT TO IMPROVE CREATIVITY AMONG WORKFORCE OF PUBLIC SECTOR IN THE MINISTRY OF INTERIOR ABU DHABI, UNITED ARAB EMIRATES (UAE)**
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Penyelia Pertama (*First Supervisor*) : **DR. ABDUL RAHIM ROMLE** Tandatangan *(Signature)*

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ABSTRACT

Creativity development has become crucial in changing scenarios worldwide, especially in the changing nature of work requirements. The majority of governments worldwide stress the implementation of e-learning systems and continuously urge the improvement of the quality of e-learning. Furthermore, without engaging the learners, the success of any program will be difficult. Therefore, the purpose of the study is to identify the impact of e-learning system qualities on training engagement to improve creativity among the employees in the Ministry of Interior Abu-Dhabi, United Arab Emirates. The ministry was chosen due to the UAE's focus on employees' creativity to cope with the economic downturn after the COVID-19 pandemic. Although the government invested a lot in e-learning system qualities, they were facing issues during the implementation of it. The investment theory of creativity has been used as the underpinning theory to develop the framework which has been tested over the data collected from 400 employees working at the Ministry of Interior Abu-Dhabi using the questionnaires adopted from prior studies. After ensuring the external model for checking the reliability of the data, the inner model was evaluated to test the hypothesis raised in the study. The findings revealed that all the direct and indirect hypotheses were accepted, confirming that e-learning system qualities significantly impacted employees' creativity and training engagement mediates the relationship between the dimensions of e-learning system qualities (system quality, service quality, interface quality and emotional quality) and employees' creativity. Theoretically, this study contributed to the use of the investment theory of creativity in studying the context of e-learning system qualities and training engagement in improving employees' creativity. From a practical point of view, this study found that e-learning system quality and training engagement have great potential to enhance employees' creativity in the UAE based on the factors studied.

Keywords: Employees' Creativity, E-Learning System Quality, Training Engagement, Public Sector.

ABSTRAK

Pembangunan kreativiti merupakan elemen yang penting dalam perubahan senario di seluruh dunia, terutamanya perubahan sifat keperluan kerja. Majoriti kerajaan di seluruh dunia menekankan pelaksanaan sistem e-pembelajaran dan secara berterusan menggesa untuk meningkatkan kualiti e-pembelajaran. Tambahan pula, kejayaan mana-mana program akan menjadi sukar tanpa melibatkan individu berkenaan. Oleh itu, tujuan kajian ini adalah untuk mengenal pasti kesan kualiti sistem e-pembelajaran terhadap penglibatan latihan untuk meningkatkan kreativiti dalam kalangan pekerja di Kementerian Dalam Negeri Abu-Dhabi, Emiriah Arab Bersatu. Kementerian ini dipilih kerana tumpuan kerajaan UAE terhadap kreativiti pekerja untuk menghadapi kemelesetan ekonomi selepas pandemik COVID-19. Walaupun kerajaan meningkatkan pelaburannya dalam meningkatkan kualiti sistem e-pembelajaran, mereka menghadapi isu semasa pelaksanaannya. Teori pelaburan kreativiti telah digunakan sebagai teori asas untuk membangunkan rangka kerja yang telah diuji ke atas data yang dikumpul daripada 400 pekerja yang bekerja di Kementerian Dalam Negeri Abu-Dhabi menggunakan soal selidik yang diadaptasi daripada kajian terdahulu. Selepas menyemak kebolehpercayaan data dalam model luaran, model dalaman dinilai untuk menguji hipotesis yang dibentuk dalam kajian ini. Analisis data mendapati bahawa semua hipotesis langsung dan tidak langsung telah diterima, sekaligus mengesahkan bahawa kualiti sistem e-pembelajaran memberi kesan ketara kepada kreativiti pekerja dan penglibatan latihan menjadi pengantara bagi hubungan antara dimensi kualiti sistem e-pembelajaran (kualiti sistem, kualiti perkhidmatan, kualiti antara muka dan kualiti emosi) dan kreativiti pekerja. Secara teorinya, kajian ini menyumbang kepada penggunaan teori pelaburan kreativiti dalam mengkaji konteks kualiti sistem e-pembelajaran dan penglibatan latihan dalam meningkatkan kreativiti pekerja. Dari sudut praktikal, kajian ini mendapati kualiti sistem e-pembelajaran dan penglibatan latihan mempunyai potensi besar untuk meningkatkan kreativiti pekerja di UAE berdasarkan faktor-faktor yang dikaji.

Kata kunci: Kreativiti Pekerja, Kualiti Sistem E-Pembelajaran, Penglibatan Latihan, Sektor Awam.

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LIST OF ABBREVIATIONS

COVID-19	Corona Virus Disease 2019
UAE	United Arab Emirates
PLS	Partial Least Square
SEM	Structural Equation Modelling
VIF	Variable Inflation Factor
AVE	Average Variance Extracted

CHAPTER ONE

INTRODUCTION

1.1 Conceptual Background

On-line learning (likewise known as e learning and distance learning) is actually education or training that takes location over the net. Over the final few years, on the web training has actually risen in popularity (Milakovich & Wise, 2019). Individuals are actually generally busier, and technology has created huge innovations, consequently on the internet discovering is actually ending up being a far more eye-catching alternative when it pertains to qualified and private progression (Chary, 2016).

Organization can easily buy or established as numerous programs as they need for their employees, using transportable tools. The training programs are actually at that point circulated to the decided-on staff members, that can then find out at their personal speed (Pacansky-Brock, 2013). Provided that they have access to the web, students can access their training anywhere utilizing a computer system, phone, laptop pc or tablet computer. On the internet learning delivers excellent adaptability, to name a few benefits, and help in making the job of setting up development possibilities far simpler (November, 2012).

Moreover, it is actually difficult to select a time that meets all workers when everyone possesses a different schedule and it is actually difficult to acquire all of them all in one area (especially if you have a scattered company) (Batalla-Busquets & Martínez-Argüelles, 2014). On the whole, it is much more advantageous and handier to your firm to invest in top quality on the web training courses (Becker, Fleming, & Keijsers, 2012).

Simmilarlly, the on-line discovering is described as the shipping of knowing web content to students using mobile processing tools (Aji et al., 2020). Another definition of training engagement is e-learning that extends to non-fixed locations or learning that occurs when students take use of the understanding opportunities provided by mobile technologies." is valuable given that its inclusiveness does not prematurely deal with valuable understanding devices (Yang, 2019).

Furthermore, the training through possess numerous advantages over typical training consist of, Flexible and practical gain access to, Easy on the spending plan, serves several forms of learning, Self-directed and independent, quantifiable results and coverage, monitoring and managing digital reports, the 21st century's business, Gamification and interactivity, Easily accessible professional assistance, cooperation and organizational framework, Instant feedback, prompt acknowledgement, widespread connection, and regimentation (Mason, 2020).

The online discovering (also understood as e learning and distance knowing) is education and learning or training that takes area over the web. Folks are generally busier and innovation has produced massive breakthroughs, therefore on-line

understanding is actually coming to be a much a lot more desirable alternative when it happens to private and professional advancement (Chary, 2016).

However, the most learning environments right now integrate some type of technology to aid guideline and knowing, nonetheless this innovation needs to record the passion of learners and inspire them to be actually more engaged within the discovering circuMStance (Gupta & Belford, 2019). On the web modern technology is believed to possess the potential to build exciting knowing atmospheres that interacts students (Harley et al., 2019). By creating an environment where artistic thoughts are actually appreciated, association may draw in experts that are extra accomplished. They have the capacity to fill up roles better and successfully. A similar impact develops along with present employees, who are most likely to remain on panel because of the imaginative environment (Schilling, 2019). They come to be content with their project and commit to staying with the business long term. The very most essential facet of creativity is how it has an effect on the work. With the capability to think creatively and outside the container, staff members are actually more very likely to follow up with innovative and distinct answers to oBStacles they run into. This eagerness to deal with problems can lead to brand new techniques to accomplish activities and manage the organization a lot more properly (Gogoi & Barua, 2018).

While analysis on the fostering of online discovering in education and learning institutes including colleges might suggest a few of the factors that may be essential in the interesting students, this idea may be actually as well overall to become useful to organisational decision-makers looking at online-learning (Ibrahim, Boerhannoeddin, & Bakare, 2017; Panigrahi, Srivastava, & Sharma, 2018). Learners have actually gone

through a primary paradigm switch brought on by the development of brand new innovation and the breakthroughs created in details and interaction modern technologies (Harasim, 2017). Training engagement increasingly reconfigures Learners potential to find out and acquire brand new knowledge and tasks to take conveniences of brand new technology and include it along with existing techniques (Turnbull, Chugh, & Luck, 2019).

Learners who are actually much more motivated are actually most likely to be successful in their understanding, matched up to students along with reduced degrees of incentive that are actually most likely to release (Fredricks et al., 2019). The initial principle of effective training is ensuring that you catch students' passion, which includes creating the discovering of system component a 'enjoyment' for students (Kunter et al., 2008). This principle was actually more clarified how carriers can capture learners' attention through proactively stimulating and developing all of them and by utilizing result centered discovering settings (Desjardins & Bullock, 2019).

Over recent handful of decades, creativity study has grown significantly and offers various insights on exactly how individual employee creativity may be actually promoted (Amabile, Conti, Coon, Laznby, & Herron, 1996) and, a lot more recently, how group creativity can easily be actually boosted (Joo, Song, Lim, & Yoon, 2012).

E-Learning Satisfaction Level Among Undergraduates and Postgraduates

	Highly satisfied	Satisfied	Dissatisfied	Highly dissatisfied
Undergraduate e-learners	186	248	213	373
Post graduate e-learners	167	147	121	55

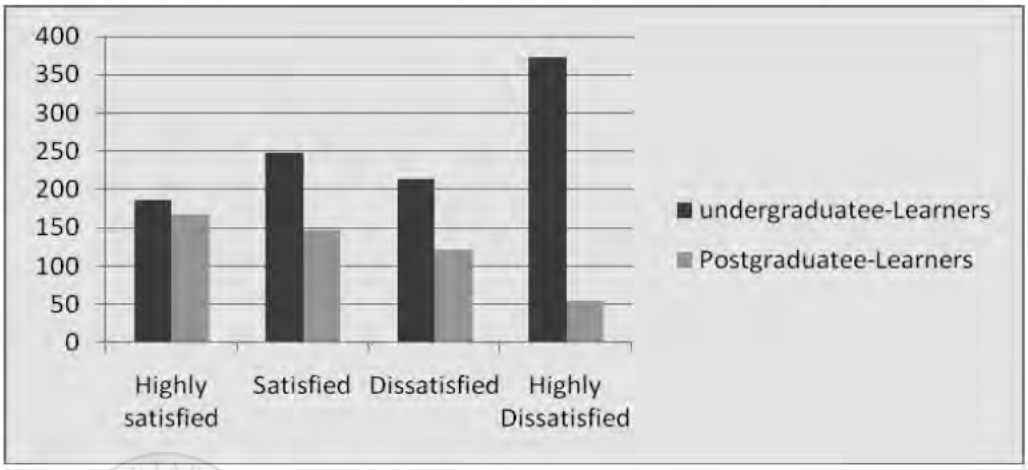

Figure 1. 1 E-learning Satisfaction Level Among Undergraduate and Postgraduate Source: Gokah et al. (2015)

Training engagement has likewise been described as an expansion of e-learning that takes place when the learner is not at a set, present location or when they choose the understanding options because it is more convenient for them offered by mobile phone innovations" is actually helpful because its own inclusiveness does not prematurely eliminate valuable knowing units (Yang, 2019).

Furthermore, workforce performance is a crucial concern in the public sector, particularly within the Police department (Rajagopalachari et al., 2015). The job description of a police officer entails performing extraordinary tasks that may seem exceptional to others (Ban et al., 2021). Officers often have to work under conditions of personal discomfort or risk, which are typically expected in this field. Such

exceptional demands contribute to stress among employees, adversely affecting their quality of life (Ban et al., 2021; Easton et al., 2013). However, quality training can help to improve quality of life at workplace (Iri, 2021; Gharagozlou et al., 2020).

Organisations develop many programs including training to increase the power or their human capital. Training, in any form, has a main aim to develop abilities, knowledge, skills, and much more (Noe & Kodwani, 2018). In the modern competitive environment, increasing employees creativity and innovation is one of the main issue. Creativity in organisations is vital especially with the increase of competition and clients' awareness (Proctor, 2018).

1.2 Problem Statement

The recent Covid-19 pandemic enforces many changes in business and management matters, including the training and human development approaches (Flack, Walker, Bickerstaff, Earle, & Margetts, 2020; Mukherjee, 2020). In addition to the control movement, the COVID-19 has caused training institutions to close all around the world (Fadhel, Aljalahma, Almuhanadi, Asad, & Sheikh, 2022). All traditionally scheduled training and educational programs are canceled worldwide. Since e-learning has become increasingly popular and allows for remote learning on digital platforms, training and development have undergone significant transformation (Bozkurt et al., 2020; Crawford, Butler-Henderson, Rudolph, & Glowatz, 2020).

Furthermore, the training engagement of on-line training supplies the possibilities for learners to utilize their newly obtained skills and knowledge in a genuine or simulated environment, able to enhance their understanding (Harley et al., 2019). Training

engagement on the web training has actually been actually shown to offer learners and educators a sense of contentment especially when the innovation was simple to use, applicable and handy in their knowing (Hamidi & Jahanshaheefard, 2019).

Training in the UAE federal authorities is actually looked at among the methods of building individual funding that swears by to lift the degree of project efficiency for staff members which requires employee creativity. Due to the fact that, the training leads to the move of technological and efficient knowledge in a manner that enables the public employee and the government company to experience any challenges presented by cognitive velocity within the job atmosphere (Federal Authority for Government Human Resources, 2020).

Training engagement more and more reconfigures Learner's ability to know and obtain new knowledge and tasks to take conveniences of new technology and integrate it with existing techniques (Turnbull, Chugh, & Luck, 2019). Training engagement on the web training offers the opportunities for learners to use their newly obtained skills and knowledge in a simulated or genuine environment, capable to strengthen their discovering (Harley et al., 2019). Training engagement of internet training is actually vital for evaluating the diffusion of technology. It is actually also vital to look at the method of consumer affirmation (Min et al., 2019).

In line with keeping pace with the rapid changes and developments, and developing the performance of its human resources, and in line with the precautionary measures that have been taken to reduce the outbreak of the new Corona virus, the UAE has launched smart platforms to train employees in several quarters (Al Ain News

newspaper 2020). In UAE, implementation and adoption of online training at the public sector have been take place recently. However, the success of the modern training system (e-learning) in the public sector has not been explored well, which is vital to assess the design quality of the system and the contents. Public sector can gain many benefits from effective use of online training system. However, preparing well for implementation and prior to implementation is essential to assure the smooth and successful adoption of e-learning training system. Understanding for the critical factors of online training system is important to adapt and improve the systems. Therefore, the system qualities of training engagement and its interacting together may assist the quality and benefits of the system.

1.3 Research Questions

The study explored the impact of online training qualities on the training engagement and employees' creativity. The following questions are proposed for exploration during this research

1. Do E-Learning Systems Quality (information quality, system quality, service quality, interface quality, emotional quality) relate to training engagement among employees of Interior Ministry – Abu Dhabi?
2. Do E-Learning Systems Quality (information quality, system quality, service quality, interface quality, emotional quality) relate to employee creativity among employees of Interior Ministry – Abu Dhabi?
3. Do training engagement relate to employee creativity among employees of Interior Ministry – Abu Dhabi?
4. To what extent training engagement mediate the relationship between E-Learning Systems Quality (information quality , system quality , service

quality , interface quality , emotional quality) and employee creativity among employees of Interior Ministry – Abu Dhabi?

1.4 Research Objectives

The main objective of the study is to explore the effect of E-Learning Systems Quality attributes on training engagement and employee creativity. Along with the following sub-goals were explored in this research:

1) To investigate the effect of E-Learning training system elements (information quality, system quality, service quality, interface quality, emotional quality) on training engagement among employees of Interior Ministry – Abu Dhabi.
2) To determine the effect of E-Learning training system elements (information quality, system quality, service quality, interface quality, emotional quality) on employee creativity among employees of Interior Ministry – Abu Dhabi.
3) To examine the effect of training engagement on employee creativity among employees of Interior Ministry – Abu Dhabi.
4) To investigate the extent to which the mediating effect of training engagement on the relationship between E-Learning Systems Quality (information quality , system quality , service quality , interface quality , emotional quality) and employee creativity among employees of Interior Ministry – Abu Dhabi.

1.5 Significances of the Study

The study specifically beneficial to the principals of HRM and training to develop their development training approach via E-Learning Systems Quality in Interior Ministry - Abu Dhabi. At the same time, it could have widespread implications to other sectors in the different areas, practitioners, owners, decision makers, researchers and academics. The present research contributes to the understanding of online training success factors.

There is no denial to the fact that Training Engagement can prove to be instrumental in leveraging the Employee Creativity of the organization because entire operational activities in any organization are ultimately dependent on availability and utilization of human resources. Human skills and expertise are matchless; thus, they are invaluable, rare and inimitable resources. Past researchers have demonstrated the link between Training Engagement and Employee Creativity in developed countries (Chen, 2019; Min et al., 2019); however, there is acute shortage of literature on public sector which sheds light on training engagement and employee creativity relationship, in emerging economies like Abu Dhabi (Hamidi & Jahanshaheefard, 2019).

In the same vein, eLearning System Qualities are an academic domain which has mostly been researched in developed countries and it is yet to be explored in depth in case of public sector of emerging economies (Batalla-Busquets & Martínez-Argüelles, 2014; Becker, Fleming, & Keijsers, 2012; Yang, 2019). However, there exist inconsistencies in findings with respect to aforementioned constructs and their impact on employee creativity as discussed in literature review. Thus, there is further room

for exploring the relationship between Elearning System Qualities, Training Engagement and Employee Creativity.

Moreover, this current study is also import for the UAE social empirical research, because the original data of this study will increase the knowledge of the online training and its impact in UAE and particular among employees of Interior Ministry of Abu Dhabi. The result is important for other research to make a better understanding for the UAE public sector behaviour.

The study used Self-determination theory (SDT)to measure the qualities of online training. This empirical investigation will be useful for researchers to figure out whether the E-Learning Systems Quality can have the same results, or it will be different.

1.6 Research Scope

Every research has its own distinctiveness, which is based on a variety of factors from study to study, including the research objective, ideas, location, demographics, data type, research instrument, time horizon, and many more. The following are the research scope issues for this study.

- This study measure employee's creativity based on training qualities.
- The concepts used are information quality, system quality, service quality, interface quality, emotional quality, training engagement, and employee creativity.
- Location of the study is Abu Dhabi, specifically Abu Dhabi Interior Ministry.
- The data that was collected are original data for this study only.

- Research instrument is well-structured survey based on closed end question in Likert 5-point.

- For this study, the data were collected from early February to July 2023.
- The terminology used in this study have previously been defined in various ways based on the ideas of information system management by a number of academics and practitioners. As a result, the following important phrases were often used in this study:

  - **Information Quality**: Information quality is the top quality of the content of relevant information systems. It is actually usually pragmatically described as: "The physical fitness for usage of the info given". IQ platforMS also gives a positive technique to examine and measure data premium in a strong and rigorous manner (Farrell, 2015). Hilligoss, B., & Rieh (2008) defined information quality as users' "subjective assessment of the accuracy and value of the information." According to Taylor (1986), information quality is the relevance of the information to the goals of the consumers. Information quality was described by Wang & Strong (1996) as "fitness for use."The terminology used in this study have previously been defined in various ways based on the ideas of information system management by a number of academics and practitioners. As a result, the following important phrases were often used in this study." the researcher will adopt the definition of Hilligoss & Rieh (2008) in this study
  - **System Quality**: System quality is the quality of the circumstance of relevant information unit. System quality measurements are located on technical factors for a web site featuring accessibility, effectiveness, reliability, safety (Farrell, 2015). System quality is a measurement of how

technically sound the system is and refers to the caliber of the information system processing as a whole, including software and data components. Seddon (2007), p. 246. Aspects including usability, usefulness, dependability, data quality, adaptability, and integration are used to gauge the quality of a system (DeLone & McLean, 2003, p.30). The researcher will adopt Seddon (1997) difinition.

- **Service Quality**: service quality is the premium of the specific function communication between individuals and company. Quality dimensions that advertise interactivity one of internet site consumers and are worried about reacting consumers' activities, consisting of personalization, help, network variety, compensation, responsiveness, and motivation (Farrell, 2015). Parasuraman et al. (1994) consider it to have a "interaction" quality as well as a "physical" and "corporate" aspect. From a higher level, and primarily from the viewpoint of the client, quality is perceived as being two-dimensional and made up of "process" and "output" quality. GroÈnroos (1984) As stated in his approach, there are two fundamental elements of service quality. He refers to the first as the "technical" quality, or "what" the consumer receives, and the second as the "functional" quality, or "how" a service is supplied. the researcher adopted Parasuraman et al. (1994) definition in this study
- **Interface Quality**: Interface quality is the layout quality of site or shipment device. Quality measurements with which a user might experience concerning user interfaces and interactivity, featuring distance, being compatible, look, navigation, and format (Benaida & Namoun, 2018). Interface quality refers to how quickly and easily users can complete

activities while using a quality user interface; in other words, how well it works (Stocker et al., 2018).the researcher will adopt Benaida & Namoun (2018) definition in this study.

- **Emotional Quality**: Emotional quality is actually the associated to the viewed feeling from making use of the device. Quality sizes concerned along with emotional states that customers might really feel while using a web site like guarantee, compassion, emotional state, a sense offun, and interaction (Sundar & Oh, 2019). The capacity to comprehend, use, and control one's own emotions in order to reduce stress, communicate clearly, sympathize with others, overcome oBStacles, and diffuse conflict is known as emotional intelligence (Lopes et al., 2003). Researcher will adopt this definition.
- **Training Engagement**: Engaged apprentice get involved definitely in the training, perform it willingly, do not regret that they require to devote effort and time to it. In other words, they possess an inner incentive to participate in the training. Interacted student efficiently accomplish their projects, they involve in discussions and make excellent end results (Sitzmann & Weinhardt, 2018). Training Engagement defined as actively participate in the training, that they do so willingly, They do not lament the time and work they must put in, they are internally motivated to take part in the training (Rangel et al., 2015) the researcher wil adopt the difinition of Sitzmann & Weinhardt (2018) for this study.
- **Employee creativity**: Creativity refers to workers' creation of novel and valuable tips regarding products, treatments, and methods at job. It needs to be actually taken note that creativity is taken a look at with goal alignment

(Ohly, 2018). Employee creativity refers to the capacity for employees to operate creatively and proactively in order to produce outstanding results (Aldabbas et al., 2023). the researcher will adopt this definition.

1.7 Organization and Summary of the Study

Five chapters make up the context body of the thesis. Chapter 1: "Prepare a Statement of the Sty" - In the first chapter, please state what the pretend society's statement is in order to explain the pretend society's statement. The significance is addressed by discussing how the research study contributes to the theoretical body of knowledge in the research study and the field's useful significance for interaction experts in the field being taken a look at. Chapter 2: Reading the Library - The government wants to recall some temporary labor so that it may be used to the next chapter. The classroom is experiencing increased excitement as the test preparation period nears its conclusion. Chapter 3: Mechanics - The prerequisite is to have the necessary application requirements in place. To start with and thereafter, you examine your data. Chapter 4: "F" - The chapter urges you to withdraw from your meal immediately. To the point when you are affected by your fault or the consequences of your actions. Chapter 5: D - The first part of the chapter is to reiterate that your goal should be to treat the tip of the spear as your prize.

The main rationale of this research is the role of training qualities (information quality, system quality, service quality, interface quality, emotional quality) in training engagement of online training and employee creativity in Ministry of interior - Abu Dhabi. The study are filling the gaps of exploring the factors of engaging employees to online training and how it impact their creativity in such competitive market like

UAE. To achieve the research aim of the study, five objectives have been achieved as well. First, to examine the impact of information quality of online training system on training engagement and employee creativity among employees of Interior Ministry – Abu Dhabi. Second, to investigate the impact of system quality of online training system on training engagement and employee creativity among employees of Interior Ministry – Abu Dhabi. Third, to assess the impact of service quality of online training system on training engagement and employee creativity among employees of Interior Ministry – Abu Dhabi. Fourth, to examine the impact of interface quality of online training system on training engagement and employee creativity among employees of Interior Ministry – Abu Dhabi. Fifth, to assess the impact of emotional quality of online training system on training engagement and employee creativity among employees of Interior Ministry – Abu Dhabi.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

chapter two contain the previous discussion and literature of the study variables, where the first concept will be discussed is the Employee Creativity followed by training management and will end up with the E-learning System Qualities, then the main theories related to the study's model will be showed and discussed in this chapter. Then the research framework and hypothesis development will be indicated at the end of the chapter along with the summary.

This study demonstrates that the quality of information, systems, services, user interfaces, and emotions significantly influences the performance of government employees in Abu Dhabi, United Arab Emirates, in altering their behavior using e-learning systems. The establishment of the United Arab Emirates Federation on December 2, 1971, was the result of the diligent efforts of the founding fathers, who united to elevate the Union's flag. The formation of the Ministry of Interior coincided with the foundation of the state as a principal federal entity. The Ministry of Interior (MOI) is a significant federal authority in the United Arab Emirates, with its headquarters located in the city of Abu Dhabi.

Consequently, all police and security agencies were consolidated to achieve the crucial purpose of ensuring stability and safety for all inhabitants and residents of the nation. The Ministry has numerous roles and responsibilities, primarily safeguarding state security against domestic threats, formulating overarching policies for crime prevention and control, overseeing their execution, establishing and organizing federal security forces, coordinating and fostering collaboration among police forces across all emirates, and supervising the traffic safety system on federal roads. The Ministry guarantees the safeguarding of people, assets, and infrastructure, while enhancing community collaboration to attain increased security and stability.

2.2 Employee Creativity

Employees that are creative tend to come up with original and practical suggestions for the tools, methods, and procedures they use at work (Younas et al., 2018). These positionings can be actually an outcome of interior factors in which individuals are actually affected through their own personal need to do in such a technique (Song & Gu, 2020). Note that external factors may be portioned in to easy and active strategies: those that seek to achieve beneficial opinions, and those who stay clear of unfavourable judgments, respectively (Guo et al., 2018).

A major oBStacle facing supervisor in the 21st century is actually exactly how to use the prospective abilities of workers to improve and speed up organizational

technology (Shao, Nijstad, & Täuber, 2017). To attain this goal, workers may utilize their mental functionalities to trigger positive company changes by utilizing their knowledge and creativity to inspire such adjustments (Duan, Liu, & Che, 2018). Creativity study possesses a long past history in psychological science, paying attention to personal variations in character, cognitive capabilities, and analytical styles (Younas et al., 2018). Latest theoretical and empirical work has appeared at creativity as something the brain does normally (Hong, Hou, Zhu, & Marinova, 2018). That is, creativity is an adaptive attribute of ordinary intellectual working that advanced to assist complication fixing under problems of unpredictability. Under such circuMStances, novel strategies and creation are actually strongly favorable (Wang, Liu, & Cai, 2019). Creativity is originated from an individual's accumulated creativity skills and expertise based on their past adventures and professional learnings (Peng & Wei, 2018). In some studies, creativity is actually taken into consideration to be a private distinctive with attributes that feature wide regions of enthusiasm and high electricity degrees (Ogbeibu, Senadjki, & Gaskin, 2018). An understanding of company creativity will necessarily involve understanding (a) the imaginative procedure, (b) the innovative product, (c) the creative individual, (d) the imaginative situation, and (e) the method in which each of these components engages along with the others (Jaiswal & Dhar, 2016). Creativity is crucial to companies due to the fact that imaginative payments may certainly not only aid institutions become a lot more reliable and much more receptive to options, but also aid associations adjust to transform, contend and increase in the international market (Lin, Ma, Zhang, Li, & Jiang, 2018). Researchers have mentioned that some amount of creativity is required in practically any task (Gu, Hempel, & Yu, 2020). Given the significant part of employee creativity in the organization, scientists have actually come to be

increasingly curious in pinpointing the ailments that predict creativity of private employees, consisting of contextual factors and individual characteristics (Li, Duverger, & Yu, 2018). It is evident that a lot of associations do not consider creativity, particularly in cultivating nations. Thus, it is required to study nature of creativity and employees' creativity in associations (Liao & Chen, 2018).

Creativity analysis possesses a long past in psychological science, focusing on personal variations in individual, intellectual capabilities, and problem-solving designs (Younas et al., 2018). Given the crucial role that employee creativity plays in the firm, analysts have been increasingly interested in identifying the health factors that anticipate creativity of individual employees, including personal characteristics and contextual factors (Li, Duverger, & Yu, 2018). It is needed to examine attributes of creativity and employees' creativity in companies (Liao & Chen, 2018).

2.2.1 Nature of Creativity

As a result of its own verifiable importance to private, teaMS and companies, the principle of creativity has actually been largely talked about over the last years in a selection of willpowers featuring psychology, sociology, organizational actions, and Is Actually (Aaltonen & Heinonen, 2016). Most likely the absolute most often-used framework for innovative researches is that advised through Rhodes (1987). It is actually a repetitious system that separates innovative researches right into the adhering to groups: person, press, item, and procedure. The individual group features research study on personal qualities. These may reflect individual, for example, and there has actually been actually generous investigation on the characteristics that characterize imaginative individuals (Jafri, Dem, & Choden, 2016). However,

ecological adjustments have pushed organizations to assume artistically to help ensure their survival (Akgunduz, Alkan, & Gök, 2018). Creativity has been described as a judgment of the novelty and convenience (or even market value) of something (Y. Wang, Tang, Naumann, & Wang, 2019). Creativity could be defined as the ability to know new partnerships, take a look at topics coming from new point of views, and create brand new ideas coming from existing details (Shen, Zhang, Yang, & Liu, 2020). As a whole, creativity in the work environment is actually determined as the creation of useful and novel concepts or even options (Chaubey, Sahoo, & Khatri, 2019). According to Boden (1998), there are actually three main styles of creativity, including different means of generating the novel concepts:

- The "combinational" creativity that entails new mixtures of common concepts.
- The "preliminary" creativity that includes the creation of originalities due to the expedition of structured ideas.
- The "transformational" creativity that includes the makeover of some size of the construct, in order that new structures may be created.

2.2.2 Employee Creativity

Depending on to regular wisdom, creativity is actually one thing that imaginative people have or do (Jaiswal & Dhar, 2017). People who are creative differ from their less creative peers in a number of ways, including having a large body of domain-relevant knowledge and strong skills, finding their work fundamentally motivating, being independent, non-traditional, and more risk-taking, having a wide range of interests, and being more receptive to learning new skills (Rego, e Cunha, Jnior, Anastácio, & Savagnago, 2018). Numerous studies have identified creativity as a result

that emphasizes fresh and useful concepts (Wang, Liu, & Shalley, 2018). According to Amabile (1998), Expertise, creative-thinking abilities, and motivation make up the three categories that define individual creativity. Through office methods and disorders, supervisors may readily impact these areas for better or worse (L. Zhou, Zhao, Tian, Zhang, & Chen, 2018). It takes far longer and more effort to develop skills and creative abilities than it does to develop motivation. In professional settings where creativity is appropriately acknowledged, innate inspiration inspires a high degree of perseverance and artistic endeavour (De Clercq, Mohammad Rahman, & Belausteguigoitia, 2017). Innovative people have a number of characteristics that set them apart from their less creative peers. For example, they have a wealth of domain-relevant knowledge and well-developed skills; they find their work to be inherently motivating; they tend to be independent, distinctive, and greater risk takers; and they have strong passions and are more receptive to learning new things (Knippenberg & Hirst, 2020).

Numerous current studies of management have actually checked out the influence of innovators on staff members' artistic behaviours. Followers' creativity achievement is probably to become resolved mostly by their levels of emotional engagement in imaginative methods (Chen, Liu, Tang, & Hogan, 2020). Sizable evidence indicates that employee creativity can effectively bring about company advancement, effectiveness, and survival (Zhang, Ke, Frank Wang, & Liu, 2018). Many research studies have actually illustrated a favourable relationship between assistance from supervisors and employee creativity. As an example, Ivcevic et al., (2020) discovered that supportive oversight created a substantial payment to the number of disclosed patents workers composed over a two-year time period (Pan, Sun, & Lam, 2020).

Nonetheless, creative workers that are positioned in standard performance steered companies with professional frameworks, time restraints, meticulous laws, daily similar joBS, standardized workplaces, etc., might certainly not be promoted to show the preferred artistic practices (Jiang & Gu, 2017). The assistance received from the workplace affects how much an individual comes up with innovative and valuable ideas (Feng, Zhang, Liu, Zhang, & Han, 2018). According to Piccolo and Colquitt (2006), there are really four dimensions of a leader's influence on an employee's creativity: idealistic impact, inspiring motivation, cerebral stimulation, and individual point of consideration (Ng & Yam, 2019).

Also, Wardani & Eliyana, (2020) looked at three different methods which administrators might boost employee creativity: via providing developing responses, via presenting interactional justice, and with being actually dependable. Much more specifically, creating reviews fosters the alignment between learning and progress, which is essential for creativity; Interactional justice guarantees that employees will have the knowledge and information they need to be creative, that they will receive appreciation even when their ideas don't work out, and that their hard work and risk-taking will be worthwhile because managers have the expertise and professionalism to evaluate creative ideas (Groen, Wouters, & Wilderom, 2017; Ribeiro, Gomes, & Kurian, 2018). Because of this, it is crucial for all businesses to boost employee creativity. As a result, managers must focus on finding, understanding, and utilizing strategies that encourage employees' creativity (Groen et al., 2017; Irakoze & David, 2019; Saleh, 2018).

Innovative people differ from their less creative peers in several ways, including having a wealth of domain-relevant knowledge and strong skills, finding their work to be fundamentally encouraging, being independent, unusual, and higher risk-takers, as well as having big passions and being more receptive to new experiences (Rego, e Cunha, Júnior, Anastácio, & Savagnago, 2018). They have a wealth of domain-relevant knowledge and well-developed skills; they find their work intrinsically inspiring; they tend to be independent, distinctive, and better risk-takers; and they have broad interests and a higher sensitivity to new experiences, among other characteristics that set them apart from their less creative peers (Van Knippenberg & Hirst, 2020).

Even more particularly, developing responses creates a balance between learning and improvement that is crucial for creativity; Trust ensures that employees' risk-taking and hard work are worthwhile because managers have the expertise, professionalism, and trust to follow through on innovative ideas. Interactional justice ensures that employees will have the knowledge and relevant information they need to be innovative and will be treated with appreciation even if their suggestions do not work out (Groen, et al., 2017; Ribeiro, Gomes, & Kurian, 2018).

2.2.3 Employees' Experiences about Creativity in the Organization

The level of creativity needed and the relevance of creativity can vary depending on the job or even work in concern, there is actually room for creativity in nearly every task (Anwaar, Nadeem, & Hassan, 2016), offering a structure for company creativity and development (Hijry & Haleem, 2017). Creativity was actually needed to have in every time work, for instance when "tailoring the solutions to accommodate the customer's requirements" or even "finding the ideal methods and executing all of

them". One of the interviewees directed out that creativity is needed to lighten one's own work: "when you are actually a little bit of a careless person, you like to create new means of making your job easier" (Song & Gu, 2020; Yu et al., 2019).

The company modifications in the provider have actually focused on the necessity for creativity in the association (Guo et al., 2018). Business improvements minimized possibilities for collective task in the institution due to the fact that employees were actually uncertain of whom to ask for aid or even they concentrated just on their own job. Below are some comments made by the interviewees: ".. to endure, I determined to concentrate on job and have a favorable mindset" and "It is actually matter of perspective.

Back then when the existing business was actually founded, creativity and innovativeness were actually specifically needed to have: "folks were utilized without crystal clear work explanations and everybody needed to define his/her location in the institution". However, that opportunity was also considered "a rewarding time to alter factors and do factors differently" (Ogbeibu et al., 2018; Peng & Wei, 2018).

To alter factors was actually certainly not automatically easy to perform considering that "there is a need to hang on to the outdated and risk-free methods even when they have not been actually an operating option in the altered condition". Thus, creativity pressures individuals to step out of secure and familiar circuMStances and to reside with unpredictability (Jaiswal & Dhar, 2016). In the event provider, innovative concepts originated from a variation of outside and interior sources (Lin et al., 2018). The absolute most typical answer in the job interviews was that day-to-day situations

produce concepts at the office and during leisure time. According to one interviewee, "these tips do certainly not regularly associate purely to one's very own work but are actually perhaps valuable in other portion of the business" (Gu et al., 2020). One more interviewee explained these tips as a source of small innovations: "a lot of these developments and concepts are tiny Experiencing Creativity in the Organization points, like building every time work regimens". Instances of exterior resources are actually seminars and seminars (Li et al., 2018). The function of competitors and various other stakeholders was recognized as a resource of beneficial tips. Getting outside knowledge was actually cherished: ".. it ought to be actually promoted extra to become updated regarding what is actually taking place in this particular division" (Liao & Chen, 2018).

Depending on to Amabile et al. (2002), one of the very most often mentioned factors necessary for originality is sufficient time to think artistically and explore different point of views (Aaltonen & Heinonen, 2016). Nowadays employees are many times constrained, inducing all of them to feel overworked and worn out. The in-creased workload and keeping with the timetables was actually viewed as especially harmful to creativity and originality through the interviewees: it is actually testing to discover the moment to become creative given that you possess to keep to schedules and carry out routine job" (Jafri et al., 2016).

The aBSence of opportunity was actually discussed in every job interview (Akgunduz et al., 2018). The diminishing of the job pressure in the company placed an added concern on the staying staff members. Corresponding to the interviewees, the incentive in their work comes from "the problems of the job", "the results of the work",

"responses", or "when you have the possibility to reveal your experience". Creativity demands competence. One may certainly not be truly artistic unless one recognizes a good bargain regarding a certain area (Shen et al., 2020; Y. Wang et al., 2019). People have to proactively obtain and operate along with knowledge if creative trouble remedies are actually to become produced. One of the most significant characteristics of imaginative folks is that they possess a significant financial investment in proficiency and the continuous development of knowledge (Chaubey et al., 2019; Jaiswal & Dhar, 2017). Mainly, interviewees aimed to their own competence instead than outside expertise. In the data, there were actually 15 opinions relevant to private and five reviews to external knowledge. The interviewees recognized that "you have to be actually proficient at what you are doing" to create concepts that possess electrical for the company (Rego et al., 2018). Know-how was likewise considered essential in applying suggestions: "those who determine the more development of concepts should be experts because location". In this particular sense, they highlighted previous experience as essential (Wang et al., 2018). Ac-cording to the analysis, handling creative issues collectively in institutions depends on attaching past experiences to the complications of the present situations (De Clercq et al., 2017; Zhou et al., 2018).

The degree of creativity required and the usefulness of creativity can vary depending on the job or even job in question, there is actually area for creativity in almost every job (Anwaar, Nadeem, & Hassan, 2016), supplying a groundwork for organizational creativity and innovation (Hijry & Haleem, 2017). Only one interviewee in the scenario firm was actually sceptical regarding the requirement for creativity in his/her job (Jannit & Wongleedee, 2020). Creativity was required in every time job, for

example when "adapting the companies to suit the client's necessities" or "discovering the absolute best process and applying them". One of the interviewees directed out that creativity is actually needed to have to brighten one's own work: "when you are actually a little bit of bit of a lazy individual, you like to build brand new techniques of making your job simpler" (Song & Gu, 2020; Yu et al., 2019). The in-creased work and always keeping with the timetables was actually viewed as especially detrimental to creativity and innovativeness by the interviewees: it is definitely testing to find the opportunity to be actually imaginative given that you possess to maintain to timetables and carry out regimen work" (Jafri et al., 2016).

According to Cohen and Levinthal (1990), higher aBSorptive capacities give growth to innovative suggestions since they raise an employee's potential to sense brand-new links in between recently irrelevant systems of knowledge (Chen et al., 2020). The troubles in the instance provider are highly intricate, needing various kinds of proficiency; as one interviewee placed it, "you can't be expert in every issue" (S. Zhang et al., 2018).

The only technique to move in advance is to do a regular breakout from the bounds of what was actually already recognized (Pan et al., 2020). In different kinds of advancement groups or teaMS, the advantage of having staff members with different kinds of histories was actually not made use of (Feng et al., 2018).

In the interviews this kind of society was additionally connected to the uniformity of the staff members, which in turn will improve thought in the firm (N. Farooq et al., 2020). In add-on to the visibility to range, previous research has actually also revealed

the usefulness of acquaintance and count on for the effective usage of assorted information for innovative trouble resolving ((Song & Gu, 2020; Yu et al., 2019). The perks of collective task or even the demand for that kind of task was mentioned in every meeting (Guo et al., 2018; Shao et al., 2017).

In over fifty percent of the job interviews together was actually mentioned a number of times during the interview (Younas et al., 2018). It was also recognized that range, significance, for example, different kinds of skills, assists the thought: "others along with a little bit of bit different know-how help to view the concern from an additional point of view" (Hong et al., 2018). One interviewee mentioned that, generally, dialogue companions from different components of the firm will help in inventing new concepts and services, yet "it is actually difficult to discover the right individual in a distributed institution" (Ogbeibu et al., 2018).

The interviewees felt that creativity or innovativeness were certainly not valued in the strategies of the provider, as being one interviewee explained that "our experts are actually not actually introducing at all". Strategy and points connected to strategy were actually discussed eight attend the data although it was actually certainly not asked in the meetings (Gu et al., 2020). Nor was creativity motivated through the leadership. All interviewees recognized that innovators possess a crucial task in promoting creativity but none of the interviewees might exactly determine how this may be performed. The innovators were oBServed as possessing a significant duty in creating a setting that motivates creativity and originality in the firm (Li et al., 2018). This suggests that supervisors, aside from handling artistic individuals in the creative method, need to also focus their attention on bolstering the interactions that turn people

into innovative collectives (Liao & Chen, 2018). With all job interviews either reviews or even incentive was actually looked at as significant procedures for innovators in producing cutting-edge atmosphere. One of the interviewees it was actually focused on that "dealing with technology needs to be done naturally, and you can't lead individuals likewise as you lead regular job" and "you must concentrate on the employees as individuals". Some of things that the leaders ought to use was sources, like time (Aaltonen & Heinonen, 2016). The forerunners also have the accountability to drive thought to the right traits. One option to direct creativity was actually "to develop approaches or even ways of doing to lead creativity and to pick those concepts that serve the advantage of the firm" (Jafri et al., 2016). ABSence of suited techniques was found in the meetings, be-cause just one interviewee discussed a technique that was utilized in the provider to sustain tip age and knowledge sharing in between staff members (Akgunduz et al., 2018).

Depending on to Cohen and Levinthal (1990), higher aBSorptive capabilities offer surge to imaginative tips given that they increase an employee's potential to detect brand-new affiliations in between formerly irrelevant systems of knowledge (Chen et al., 2020). In different kinds of progression groups or even crews, the advantage of having workers along with various kinds of histories was actually not utilized (Feng et al., 2018).

In the job interviews this kind of society was actually also connected to the solidarity of the staff members, which in turn would certainly enhance ideation in the firm (N. Farooq et al., 2020). The benefits of collective activity or the need for that kind of task was stated in every interview (Guo et al., 2018; Shao et al., 2017).

ABSence of suitable approaches was actually seen in the job interviews, be-cause simply one interviewee discussed an approach that was actually utilized in the provider to sustain suggestion age and knowledge sharing in between workers (Akgunduz et al., 2018).

2.2.4 The Benefits of a Creative Workplace

Lots of companies boast about being cutting-edge and innovative, and many are actually in some technique, form or even type. If this were actually accurate, companies would certainly be actually obtaining far even more of the advantages of an artistic workplace. main three vital perks for creative place of work (Shen et al., 2020; Y. Wang et al., 2019).

2.2.5 Better Teamwork and Team Bonding

Creativity influences staff members to partner with one another. As they possess brand-new suggestions, they find associates for their responses. Through design, the artistic process motivates cooperation, and this is actually the very most necessary advantage of offering a work environment where artistic reasoning may happen. Group building likewise aids the overall engagement amongst workers. Interactions are much more likely one of associates, also those that carry out certainly not interact on a regular basis. An enhanced amount of convenience in a team is actually a favorable for any association (Chaubey et al., 2019; D. Jaiswal & Dhar, 2017).

2.2.6 Boosted Ability to Attract and Retain Employees

By cultivating an environment where innovative minds are actually welcome, providers can easily draw in much more talented experts. A similar impact occurs with

present staff members, that are more likely to keep on panel given that of the innovative environment.

2.2.7 Raised Problem-solving

Absolutely, the very most important part of creativity is how it influences the work. Along with the ability to presume artistically and outside package, staff members are actually most likely ahead up with impressive and unique remedies to hurdles they come across. This passion to deal with problems can easily lead to new means to complete joBS and manage the company better (De Clercq et al., 2017; L. Zhou et al., 2018).

Several companies flaunt about being actually innovative and artistic, and the majority of are in some kind, technique or condition. If this were in fact true, companies would certainly be actually gaining much more of the advantages of an imaginative office. Through design, the artistic process urges partnership, and this is actually the most vital perk of giving an office where artistic reasoning may happen.

2.2.8 Training Engagement

Training is the organized way that businesses foster employee development and raise the standard of both new and veteran employees. Training is actually thought of as a deliberate strategy to learning and development that enhances each individual, each group, and each enterprise (Fletcher, 2016) in Khawaja & Nadeem (2013). Therefore, knowledge or skill acquisition for developing purposes is really triggered by the collection of actions started by the institution (Bolli, Caves, Renold, & Buergi, 2018). As a consequence, institutions, society as a whole, and human capital will all be

healthy and productive. Manju & Suresh (2011) claim that training serves as a procedure of therapy to boost a company's solutions and goods quality in order to compete more effectively (Zhang, Rudi, Zamir, & Gewirtz, 2018).

The adopting of technology in training is an intricate procedure with many factors figuring out the fostering fee, and these factors may differ in between scholastics and public sector (Kalogiannakis & Papadakis, 2019). In the circuMStance of engagement of online training, it may be shared as the mental convenience of using the online system for getting brand new knowledge (Nikolopoulou, 2020). Training engagement of internet training is actually vital for evaluating the diffusion of innovation it is actually likewise necessary to consider the process of consumer acceptance (Min et al., 2019).

In fact, training has been crucial to increasing business efficiency. It not only increases employee creativity but also gives them the opportunity to virtually understand their assignments and work more efficiently (Ebersöhn, 2019). Improving certainly not only workers productivity but additionally institutions' efficiency (ArMStrong, Walker, Feld, & Weidner, 2019). Numerous studies demonstrate the positive effect of training on employees' performance. One of the most common ways to improve employee performance and align corporate goals with employees is via training (Haji, Cooke, Chahine, Watling, & Duggal, 2017; Stevens, WilliaMS, & Dowd, 2020). Additionally, Rohan & Madhumita (2012) said that investing in staff training in selection creation, unity, problem-solving, and social ties benefits businesses' rate of growth as well as impacts workers' productivity (Smith & Sheridan, 2019). Training influences staff

members' behavior and their functioning skills which leads right into employees boosted functionality along with valuable changes (Mawn et al., 2017).

The best way to retain and motivate top-notch human resources inside an organization is through training (ArMStrong et al., 2019; Haji et al., 2017; Mawn et al., 2017; Smith & Sheridan, 2019; Stevens et al., 2020). According to Lowry, Simon, and Kimberley (2002), training is a method for boosting employee commitment and maximizing employee potential. Training is a musical instrument, according to Konings & Vanormelingen (2009), Colombo & Stanca (2008), and Sepulveda (2005), that largely influences the successful fulfillment of institutions' goals and objectives. However, the ultimate goal of every business is to generate high earnings and maximize revenue, and a reliable and productive workforce is an essential instrument for doing so (Ghajar & D'souza, 2018). Therefore, a workforce can only be successful and efficient if the necessary training and growth are provided, which in turn leads to performance (DuPaul et al., 2018).

Companies offer growth and improve the quality of both new and existing employees through organized training prograMS. By enhancing employees' technical abilities, training serves as a method of therapy to enhance a company's goods and solutions in the face of fierce competition (N. Zhang, Rudi, Zamir, & Gewirtz, 2018). Additionally, Rohan and Madhumita (2012) provided evidence that investing in employee training in decision-making, unity, social and analytic relationships has a positive impact on an organization's level of growth as well as having an impact on workers' performance (Smith & Sheridan, 2019).

2.2.9 Employees Training

In this particular new time of understanding and development, organization's excellence generally depends upon continuous functionality improvement with working with the correct individual for performing the ideal job, creating and improving top quality items and procedures, reducing cost and all various other beneficial components of the association are actually likewise associated with enhancing functionality (Thomas et al., 2018). Depending on to different writers, training is thought about to become a vital activity if you want to have actually effectively trained, adaptable and properly ready staff to attain the greater specifications of efficiency. Training and growth in its modern principle is actually an integrated framework and a key selection in the system and advancement of personnels that the federal authorities seeks to achieve to always keep pace with the obstacles of changing work needs.

For example, "Emirates Transport launched for its employees a smart platform for distance training through its smart learning program" My Platform ", while the Ministry of Economy launched a training academy in the insurance sector for distance education for free. There is also a central training platform available for public sector employees through the Federal Authority for Government Human Resources via Al-Mawred platform (Federal Authority for Government Human Resources, 2020).

Employee training markets a learning lifestyle, reduces protection to alter, establishes decision creating skills and entails workers proactively in the process of selection making instead of to provide just brand-new knowledge, skills and capabilities to staff members (Mawjee et al., 2017). Looking at the significance and need of training is not

only significant but it is likewise needed to know that what kind and the amount of training is demanded for a certain job demand. Inconsidering this, one needs to have to establish that need to be taught, what areas of training need to be actually dealt with, what strategies and sources may be utilized and who ought to carry out the training (Olszewski, Waldron, & Hackey, 2017).

Olszewski et al., (2017) Also incorporated that the picture of a business cheers top when an employee learns to carry out the skills properly in his efficient job which he has actually acquired from training (Kok & Singer, 2017). Just those organizations may accomplish higher performance and total satisfaction both in the lengthy and quick term which commit highly in their employee progression and training courses. It is essential to think about that development and execution of training bodies, strategies and procedures have to line up with the company requirements and strategies to achieve service objectives (Sachs, Kaplan, Der Sarkissian, & Habibi, 2017). To obtain the genuine function of training procedure and to make it methodical, it is actually very crucial that company forerunners need to combine with practical department heads and Human Resources staffs for preparing (Hochberger et al., 2019). Harvey et al., (2020) Contributed that the training goals generally clear what objectives and objectives are actually required to become achieved in the end of the training system (Costley et al., 2020). While supplying an employee training and development course it have to be considered that its effectiveness generally relies on its suitable implementation and advancement of approaches to identify training necessities that must line up with business targets. If training is actually carried out specifically to attain details business objectives at that point any type of financial factors to consider coming from the training process like a financial investment in the long term presence

of any service (Fleming, Kimonis, Furr, & Comer, 2020). Employees supply selection of skills, knowledge and talents to a business and they think about the most valuable and essential asset of any type of firm, so institutions are required to keep such human resource by maintaining all of them encouraged by means of effective instructions for further growth and to enhance their skills for betterment and success of the provider (Schöbel, Janson, Hopp, & Leimeister, 2019). Heavy assets of your time, initiative and loan in training method promotes employee commitment in the direction of organizational objectives. Staff members via training systems commonly disclose higher amounts of devotion to their project and are much less probably to have turn over goals (Fletcher, 2016). Organizations, in which their staff members support and value the training prograMS, have the ability to accomplish better devotion outcomes (Gascó-Hernández, Martin, Reggi, Pyo, & Luna-Reyes, 2018). Control habits is additionally some of one of the most important factors of effective training prograMS. Employee dedication is actually greater in those organizations where management permits access to and sustains employee training (Sitzmann & Weinhardt, 2018).

To completely understand the training method and how it could be performed properly, it is actually vital to determine training styles by numerous companies and established through various researchers and academics. Such versions would certainly not merely give a groundwork for a lot more extensive study in employee training, however they likewise provide considerably to preparation of training versions for better training end results. There are actually a few extensive designs of employee training.

For example, (Chacko et al., 2016) cultivated a well-known and widely used four-level training assessment model. Chacko et al., (2016) Also suggested an incorporated model of motivational impacts on training efficiency. Simpson & Owen, (2018) Then developed a model of training move. Based Upon (Bolli et al., 2018)'s model, N. Zhang et al., (2018) produced an enhanced three-level training assessment model. Later On, (Ebersöhn, 2019) developed an included model of training incentive located on a meta-analytic road review of similar research in the final 20 years (ArMStrong et al., 2019).

Moreover, the process of training and development is essential especially in long-term crisis. For organizations, training is important to keep the employees skillful and possess the updated knowledge to increase the employees' creative behavior (Ashton, Lloyd, & Warhurst, 2017; Kondratyuk, 2018). The creativity of the participants of group carrying out an organisation is necessary for the results and performance of the organization. Several intellectuals examined and verify the significant relation in between creativity and company effectiveness (Coulson-Thomas, 2016; R. E. Johnston & Bate, 2013; Lund, Byrge, & Nielsen, 2017).

Inconsidering this, one needs to determine that must be trained, what locations of training ought to be actually covered, what sources and methods can easily be used and that need to carry out the training (Olszewski, Waldron, & Hackey, 2017). Harvey et al., (2020) Contributed that the training purposes usually remove what goals and goals are actually demanded to be accomplished at the point of the training system (Costley et al., 2020). While delivering an employee training and growth course it need to be kept in mind that its own effectiveness mainly depends upon its own effective execution and growth of strategies to pinpoint training necessities that have to line up

along with business goals. Such designs would certainly not just provide a foundation for more in depth analysis in employee training, yet they likewise contribute greatly to planning of training styles for better training end results.

2.2.10 Engagement

Engagement As a conceptthat has built as time go on, engagementhas been described in several, commonly irregular, techniques in the literature, a lot to ensure that the term has actually come to be ambiguous to numerous and it is actually unusual to find two individuals specifying it in exact same means (Stevens et al., 2020). It has otherwise been developed as a mental or even affective condition (eg devotion, engagement, accessory etc.), a performance construct (eg part performance, initiative, tangible practices, organisational citizenship behavior etc; (Haji et al., 2017) or a mindset. Some people even link the idea to more specific concepts like initiative or selflessness (Smith & Sheridan, 2019). Regarding whether of these interpretations is the decisive, or even at the very least, the "best-fit" model of engagement, there has been some disagreement in the literature (Mawn et al., 2017). According to Ghajar and D'Souza (2018), a genuinely good explanation of an idea, particularly one that highlights certain personal or intellectual qualities, "leads to popular understanding." is demonstrated together with several behavioural examples that are stated to provide the impression that the methods for measuring it are truly clear and generally accepted as realistic and acceptable' (DuPaul et al., 2018). The usefulness of determining terMS including Rotter brought up engagement, advising that various interpretations of the word lead to significant variations in what is being evaluated, which "generates a set of conflicting and non-replicable research studies' (Thomas et al., 2018).

In 2006, Saks commented that there is actually relatively thin scholastic literatureon employee engagementand much of the research study has actually been within the expert and working as a consultant sectors. Whilst scholarly literature might deliver far fewer interpretations, scholars are actually considerably revealing passion in the debate with several looking for to comprehend various parts of engagementfrom the drivers to its impact on organisational performance (Mawjee et al., 2017). However, the term "engagement" is sometimes used in academic writing in a negative sense.The Meaning of Employee Engagement, a recent assessment by Macey and Schneider (2008a), proposes that engagement is sometimes described in terMS of what it "is actually" (psychological state), other times in terMS of the behaviors it produces (behavioral), and still other times in terMS of a predisposition or even mindset toward one's job (characteristic) (Olszewski et al., 2017).In order to define engagement, Macey and Schneider (2008a, p. 6) divided it into these three categories. They suggest that "attribute engagement" refers to a tendency to see the world from a particular point of view, which is reflected in the person's "state engagement," which results in "behavioural engagement," which is defined in relation to making optional effort (Kok & Singer, 2017). This proposal has, however, drawn criticism from Newman and Harrison (2008), who contend that state engagement becomes a redundant construct and tells our team nothing more than a person's attitude toward their work, which, as they explain, has actually been actually suitably assessed by other constructs over the past (Sachs et al. Instead, they contend that the defining characteristics of employee engagement are the concurrent visibility of three practices in staff workers, especially their effectiveness in the workplace, citizenship behavior, and engagement. However, This idea just shows the outcomes rather than expressing the psychological state of participation (Hochberger et al., 2019).

2.2.11 Training Engagement

Based on the previous literature review in this part, Training engagement would of be the phycological state of link of employees or workforce toward the training prograMS in the firMS and organizations, whereby this make them more contributing in the training and being in the training with full power and willing (Harvey et al., 2020). As an engaged employee make a better performance same goes for training, an engaged employee in training gives a better training and outcome. Training engagement is its ability to record interest, ensure importance by means of genuine joBS, strengthen peace of mind and boost fulfillment with discovering appears to possess the prospective to boost learner incentive (Chen, 2019).

The concept of training engagement is still fresh and new, according to (Costley et al., 2020; Fleming et al., 2020; Fletcher, 2016; Harvey et al., 2020; Schöbel et al., 2019) employee training engagement is very important to ensure that the training programme will be effective and fully active, as many researcher such as (Chacko et al., 2016; N. Farooq et al., 2020; Fletcher, 2016; Gascó-Hernández et al., 2018; Schöbel et al., 2019; Sitzmann & Weinhardt, 2018) they emphasized on the importance of engagement in the training in order to get a better results of the programs. Training engagement to internet training has actually been shown to offer learners and teachers a sense of contentment specifically when the innovation was actually quick and easy to utilize, useful and relevant in their understanding (Hamidi & Jahanshaheefard, 2019). Training engagement is its capacity to grab focus, advertise importance by means of genuine jobs, improve confidence and rise contentment along with discovering seeMS to have the possible to enhance student incentive (Chen, 2019).

Employee engagement is actually commonly deprioritized, however a little bit of engagement is actually verified to produce fantastic enhancements. Gallup's Q12 ® Meta-Analysis Report7 presents that business along with taken on workers continually surpass those without in the locations of client productivity, devotion, and success (N. Zhang et al., 2018). For a ton of manager, the large concern is actually how to strengthen engagement and motivate development at the ground level. Just like many factors, the solution is actually gazing all of them in the face - the biggest tool against employee apathy is the training program and same selects training engagement, additional engagement means a much better training and end results (Ebersöhn, 2019).

For a bunch of services, training is just one of the couple of interaction tools they have. Other than providing the workers the knowledge they need to perform their work; training is very closely linked to performance assessments (ArMStrong et al., 2019). In most cases, these customer reviews are actually the only option that employees and managers need to discuss their opinions regarding the workplace in an organized means (Stevens et al., 2020). When it involves taking on employees, communication is actually critical and the training system is actually, by-and-large, an underutilized interactions resource (Haji et al., 2017).

2.3 E-learning System Qualities

E-learning system qualities consists of main four dimensions (System Quality Dimension, Service Quality Dimension, Interface Quality Dimension and Emotional Quality Dimension) which will be discussed in this part in details. Some are unsure if the acceptance of e-learning would continue to endure post-pandemic and how such a move would affect the global education sector in light of the abrupt shift away from

direct sessions in many areas of the world. One of the things to explore is the ELearning systems qualities that contribute to keep learners engaged and improve their creative behavior at workplace.

2.3.1 Information Quality Dimension

Given the substantial and rapidly improving volume of service that firMS and consumers are conducting online (Firmani, Tanca, & Torlone, 2019), relevant information is becoming a necessary requirement for putting together an energetic partnership between vendors and customers (Watungwa & Pather, 2018). Involved websites are making the interaction of information a key aspect of sites (Widiyanto, Sandhyaduhita, Hidayanto, & Munajat, 2016). In the context of e-commerce, information quality dramatically influences the success of on the internet organizations (Batini & Scannapieco, 2016b) due to the fact that it influences individual choices relating to on the internet buying, consisting of layout, assortment and information (Pérez et al., 2018). Content recommends to the details, components, or even companies used in web sites, while design is actually the way in which the content exists to consumers (Sharma & Sharma, 2019). Latest investigation has confirmed that information quality influences customer depends on and commitment; particularly, the website material and design impact consumer rely on and loyalty (Kang & Malmgren, 2017; Osman, 2017).

Individuals would such as to buy by means of a specific buying website, but they might locate their tastes and get energetic hunt relevant information from several choices (e.g., various other buying web sites) to match their needs. As they recognize specific site-related information content (e.g., on-line establishment product relevant

information) and end up being included along with the information coming from a specific internet site, information satisfaction might be actually gotten (Romero-Rodríguez & Aguaded, 2017). Buyers with much higher web content gratification may feel that the details delivered through a particular purchasing web site is trustworthy, particularly with top notch internet site content and layout that help make on the internet customers think that a website is reliable (Al-Jefri, Evans, Uchyigit, & Ghezzi, 2018; Alshikhi & Abdullah, 2018; Ayyash, 2017; Romero-Rodríguez & Aguaded, 2017).

A key component of the purchasing decision-making process is searching websites for relevant information. 91% of adult Internet users in the US used a search engine to get information, according to the Pew Internet & American Life Project Tracking study, which was conducted in February 2012 (Pewinternet.org, 2012). On the web relevant information search strategies feature using an universal online search engine to indicate several vast hunt terMS ("wide 1st"), defining key qualities on internet search engine ("search engine shortening"), utilizing "to-the-point" key phrases on online search engine that are going to steer details outcomes, or getting through straight to a web site ("well-known handle") (Ghezzi & Ford, 2020). Completion target of the customer is to get to a site that will certainly deal with the consumer's details requirements. According to recent study, people evaluate the quality of pertinent information on websites, while performing on the web details search ((Batini & Scannapieco, 2016a). The premium of relevant information provided on an internet site is actually essential to the excellence of the website (Firmani et al., 2019), It has been found to play a significant role in the assumption made about that website

(Watungwa & Pather, 2018). Information quality is a sub-dimension of the site premium assessment tool WebQual (Widiyanto et al., 2016).

However, there hasn't been much study done to explore the role of information quality in the context of consumer information searches on websites. As the value of websites continues to grow through giving users useful information, it is crucial to have a better grasp of this specific architecture (Batini & Scannapieco, 2016b). Our firm are given a framework for evaluating information quality by the Information Systems (Is Actually) Success Model (Batini & Scannapieco, 2016b; Pérez et al., 2018; Sharma & Sharma, 2019), which may be used to the scenario of a customer details search on a website. As a result, our team uses the IS Success Model and information that is best sourced from writings in the field of advertising (Busert & Fay, 2018; Kang & Malmgren, 2017; Osman, 2017) to develop and test a model that investigates the responsibility of information quality of a site in an effort to understand the specific causes and effects of this particular construct in the context of customer-relevant information search on websites (Busert & Fay, 2018; Rodríguez-Hidalgo et al., 2020).

The IS excellence model is especially useful in the context of personal information search because it is based on the idea that recipients are influenced by relevant information connected to them, which leads to results at a personal (or organizational) level (Ayyash, 2017). Contentment with the Is Actually and the "internet perks" obtained are outcomes of using an Is Actually (i.e., a site in our study) (Romero-Rodrguez & Aguaded, 2017). According to Alshikhi & Abdullah (2018), the benefits of an IS really vary according on the scenario. Without initially defining the situation or even the frame of reference, it is actually impossible to calculate net benefits (p.

33)." It is anticipated that the high caliber of information a user discovers when visiting a website would motivate her to recommend the site to other online users (Al-Jefri et al., 2018). According to the Pew Internet & American Life Project Tracking study, 66 percent of adult online users in the United States use social media websites like Facebook, LinkedIn, or even Google Plus, and 32 percent post comments on blogs, foruMS, or websites (Ghezzi & Ford, 2020), They serve as examples of potential online foruMS where these customers can debate specifics with other consumers. Additionally, it is anticipated that the information's quality would affect how the person feels about the website (Batini & Scannapieco, 2016a).

As they recognize specific site-related information content (e.g., on the internet store product information) and become entailed along with the information coming from a specific web site, information satisfaction might be acquired (Romero-Rodríguez & Aguaded, 2017). According to recent research, consumers evaluate the quality of the material on websites while doing online information searches (Batini & Scannapieco, 2016a). There has been some research done to examine the role of information quality in the context of customer information search on a website. A framework for evaluating information quality is provided to our organization by the Information Systems (Is Actually) Success Model (Batini & Scannapieco, 2016b; Pérez et al., 2018; Sharma & Sharma, 2019), which may be used in the scenario of a user searching for information on a website. Our team makes use of the IS Success Model and the information search strategy that was developed using marketing-related literature (Busert & Fay, 2018; Kang & Malmgren, 2017; Osman, 2017) to develop and evaluate a model that examines the function of information quality of a website in an effort to

pinpoint specific antecedents and effects of this construct in the context of consumer information search on websites (Busert & Fay, 2018; Rodríguez-Hidalgo et al., 2020).

2.3.2 System Quality Dimension

Additionally, one of the most crucial factors in past studies has been considered to be system quality. Particularly in the Web 2.0 environment, the amount of components has rapidly increased thanks to UCC (or even UGC) websites like YouTube (Mohammed et al., 2016). However, this approach also raises potential security issues because of the characteristics of Web 2.0 situated technology. Thus, a great deal of customer happiness is impacted by the quality of the site's system. The timetable, effectiveness, safety and security, and dependability dimensions of the system quality (Russo, Ciancarini, Falasconi, & Tomasi, 2017).

The term "availability" refers to a website's accessibility and availability throughout the entire year, 365 days a year. Frequent website outages have the potential to destroy a company's reputation with customers (Zuama, Hudin, Puspitasari, Hermaliani, & Riana, 2017). The website should make significant efforts to shorten the shutdown duration and warn visitors early when a site must go offline for ordinary maintenance or even development (Jun & Palacios, 2016).

To obtain higher productivity of a site, certainly not just ought to sufficient equipment capability or system transmission capacity be actually secured, but likewise graphic components with ideal dimension requirement to be used (Filieri & Willison, 2016). An internet site ought to be scalable sothat it may supportunexpected massive traffic (Firmani et al., 2019).

According to Watungwa and Pather (2018), "reliability" refers to a site's capacity to perform tasks correctly and consistently without experiencing any errors or failures.A website must be free of any errors that can indicate its vulnerability to outside attackers and alienate users (Widiyanto et al., 2016).When an issue occurs, the website should be restored right away, and it should be ensured that further occurrences of this problem won't be possible. Since the usage of interactive media data, which requires more computer power, has increased dramatically, especially in the Web 2.0 context, a higher level of dependability is essential for the websites to allow users to access interactive media data simultaneously (Batini & Scannapieco, 2016b).

"Security" refers to how well a website can withstand any potential spells or outside attacks and constantly maintain exclusive and private information safely. Customers were concerned about disclosing private information online since it may end up in the wrong hands or even be overused, according to Pérez et al.'s (2018) research (Sharma & Sharma, 2019). As a result, a website's ability to secure and protect any information that is supplied to it is directly related to its quality. Site administrators must be extra vigilant in the Web 2.0 environment to prevent any potential information loss caused by XSS (Cross-Site Scripting) attacks versus Ajax-established websites (Ritchie, 2007), social networking solution, wikis, RSS (Really Simple Syndication), etc. (Osman, 2017).

When a website must go down for routine maintenance or growth, the website must take significant steps to reduce the closing opportunity and provide people with inventive advice (Jun & Palacios, 2016).

The ability of a website to safeguard and protect information that is supplied to it is correlated with the quality of the website. Website administrators must exercise greater caution in the Web 2.0 context to prevent potential data leaks caused by XSS (Cross-Site Scripting) attacks against Ajax-based websites, social networking services, wikis, RSS (Really Simple Syndication), etc. (Osman, 2017).

2.3.3 Service Quality Dimension

According to de Oa, de Oa, Eboli, and Mazzulla (2016), service quality may be defined as the difference between what customers expect from a company and the actual service or even functionality that the firm provides.According to Blut (2016), Samoszuk (2011) defines service quality as a measurement of a company's level of customer service in terMS of whether the standard of the product provided or even presented by a provider falls short of, meets, or exceeds a customer's real expectations for that business.On the other side, service quality might also be described as a comparison between a customer's expectations and their views of the service that a firm will give (H. Jiang & Zhang, 2016). When it comes to the quality of the company's services, it may be claimed that they are exceptional if a client finds that they exceed their expectations with regard to the product or service they received from the business (Priporas, Stylos, Rahimi, & Vedanthachari, 2017).

On the other hand, if customers' perceptions of the company's service quality are equal to or lower than their prior expectations, the service quality of the company can be considered to be good; conversely, if customers' perceptions of the company's service quality are greater than or equal to their prior expectations, the service quality of the company can be considered to be bad. The importance of the idea of service quality in

the area of marketing has grown over the past ten years, and many marketers and businesses are working extremely hard to be able to consistently deliver exceptional service quality to all of their clients (M. S. Farooq, Salam, Fayolle, Jaafar, & Ayupp, 2018). However, According to recent studies (de Oa et al., 2016; M. S. Farooq et al., 2018; Izogo, 2017), a company's top objective today is to fully comprehend the influence that service quality has on its profitability and other financial outcomes from which it might gain. This is the reason why many businesses nowadays are working hard to provide their clients with the highest level of customer service possible (Arcand, PromTep, Brun, & Rajaobelina, 2017). Additionally, businesses that can deliver services that people and customers perceive as being of "High Quality" typically have a larger market share, a higher return on investment, and a higher asset turnover than other businesses whose services are seen as being of "Low Quality" by people and customers (Budianto, 2019). Because of this, many businesses make ongoing efforts to raise the standard of customer service they offer (Khoja, Prajapati, Khoja, Panjwani, & Ray, 2017). According to Parasuraman et al. (1991), a company can use technologies to enhance or improve the quality of its services more precisely and effectively. Over time, this enhancement may also lead to an increase in the demand for the company's services on the market (Mohammed et al., 2016). In addition, the way individuals do business in the modern day has changed as a result of the rapid advancement of technology, (Russo et al., 2017). service In order for a business to maintain and attract clients and keep them from switching to rivals, quality has become an even more important aspect (Zuama et al., 2017).

Particularly, lots of researches have certainly not only checked out functional elements featuring information quality, convenience of make use of and availability (Inaloo & Beigi, 2018; Jun & Palacios, 2016; Sultono et al., 2016) however have actually likewise sought to examine connections between website service quality, individualized knowledge (Kant & Jaiswal, 2017), and the credibility and reputation of a hotels institution/website (Blut, 2016). Web site service quality has actually ended up being a necessary problem for lodging administration to draw in online consumers these days (H. Jiang & Zhang, 2016).

2.3.4 Interface Quality Dimension

Many studies (Dalapati et al., 2017; Huang, Zhao, Liu, Xia, & Liu, 2019) have revealed they are without assurance in the surveillance of deals, are actually concerned about the confidentiality of their individual details and skepticism the partner-supplier. It has actually been suggested that factors of individual pc interface style possess a considerable impact on customer perspectives and assumptions of the reliability of a supplier (Chimeni, Toupe, Dubois, & Rodrigue, 2016; C. Yang et al., 2020; H. Zhou, Alghmadi, Si, Qiu, & Peide, 2016).

User interface consists of such problems as navigation, site association, looking ease, user-controlled navigating, hyperlinks, cross-platform style, composing type, and multimedia functionalities (Bhaduri et al., 2019; Chimeni et al., 2016; Narayanaswamy et al., 2019; Y. Peng, Mao, & Liu, 2018). No matter how our experts develop the navigation user interface, the Internet website should be constructed on clear framework (Huang et al., 2019). If the web site company is actually baffled, no great navigating help could possibly aid it (Dalapati et al., 2017).

Online, individuals manage the progression of their navigating via the webpages. Internet web sites need to have to sustain user-controlled navigating and support buyers handle big volumes of information. Websites need to give customers reliable details sources. Hyper-links are actually the best integral part of hypertext (Cui et al., 2018). They hook up the web pages and enable customers to go to brand new and exciting put on the Web (Y. Peng et al., 2017). Website page need to have to become created to users who stem from unique platform including huge or even little display screen, sluggish modem or even broadband and 'Explore' or even 'Netscape'(Trinh et al., 2019). Website is much more independent than print magazine in conditions of going straight to the particular info without checking out beginning (Stocker, Zimmermann, Zdun, Lübke, & Pautasso, 2018).

Internet writing must be hypertext link, clear, concise, and total adequate to notify buyers appropriately of contents (Kant & Jaiswal, 2017). A lot of powerful modern technology of body language is actually interactives media innovation integrating text, graphics, appears, and relocating images to supplement the consumers' shopping experience (Blut, 2016; H. Jiang & Zhang, 2016; Kant & Jaiswal, 2017; Priporas et al., 2017). Individuals are able to try garments and oBServe their appeals coming from various angles with online model (M. S. Farooq et al., 2018).

Many studies (Dalapati et al., 2017; Huang, Zhao, Liu, Xia, & Liu, 2019) have shown they are without confidence in the safety and security of purchases, are actually involved concerning the privacy of their personal information and wariness the partner-supplier. It has been recommended that aspects of human personal computer user interface layout possess a considerable impact on customer attitudes and

perceptions of the dependability of a vendor (Chimeni, Toupe, Dubois, & Rodrigue, 2016; C. Yang et al., 2020; H. Zhou, Alghmadi, Si, Qiu, & Peide, 2016). Interface features such issues as navigating, website organization, exploring convenience, user-controlled navigating, links, cross-platform layout, writing design, and mixeds media abilities (Bhaduri et al., 2019; Chimeni et al., 2016; Narayanaswamy et al., 2019; Y. Peng, Mao, & Liu, 2018). The majority of powerful modern technology of visual interaction is actually mixeds media technology blending text, graphics, sounds, and moving photos to enhance the consumers' purchasing experience (Blut, 2016; H. Jiang & Zhang, 2016; Kant & Jaiswal, 2017; Priporas et al., 2017).

2.3.5 Emotional Quality Dimension

Over times, the concentration of study in business of human-computer communication has been actuallyusability, which generally focuses on the simplicity of use and functionality based on noted intellectual activity. Just just recently, and triggered through (Bijlard et al., 2017), the role of emotive and cosmetic aspects of interface style (Saunders et al., 2017) end up being more famous bring about an expanding enthusiasm on mental factors. Works including Jordan (2000), Schmieder et al., (2017) support a higher pay attention to delight and emotion in the individual experience design of a product. "Emotions perform a vital job in exactly how the customer recognized the item (..) to attain a significant relationship to an item." (Bentenuto, Perzolli, de Falco, & Venuti, 2020; Faller et al., 2017). Furthermore, emotional states dominate decision-making method (Fredricks, Naftzger, Smith, & Riley, 2017; Kim, Choi, & Suk, 2016), direct interest and boost specific moments overothers (Reeves & Nass, 1998), being thereby very closelylinked to customers, perspectives and inspirations' decisions (Lelorain et al., 2016). SuBSequently

emotional states affect all elements of our interactions along with web sites (Chou & Lechêne, 2019; Khojasteh Mehr, Ahmadi Ghozlojeh, Sodani, & Shirali Nia, 2016; Kim et al., 2016; Lelorain et al., 2016) (Emanuel, Rodrigues, & Martins, 2015; Yin, Zhang, & Li, 2014). These trigger facility mental and social reactions the same to that emotional responses experienced when communicating with individuals (Schwartz, Michael, & Rapkin, 2017). Specifically, the good feelings may improve individuals' motivation and fixation (Bijlard et al., 2017). Emotional states may be thereby looked at inthe business of human-computer communication, as essential factors to takeinto account for the development of affectional, dependable and sufficient interfaces (Hickey, Nix, & Hartley, 2019). In this sense, feelings begin to pioneer role in item layout becoming a competitive differentiator factor, because items identified as pleasurable, along with cosmetic premiuMS that catch the focus of customers (Hickey et al., 2019; Jeong, Lee, Shin, Kim, & Shin, 2018), are simpler to discover and run much better (Rajeev-Kumar et al., 2019). While surfing the web, individuals are dealt with a number of choices of sites, possessing the potential to move rapidly and conveniently coming from one to one more. Depending on to Prietch & Filgueiras, (2016) emotional feedbacks are actually an essential factor for the consumer desire for a particular internet site (Cline & Edwards, 2017). Therefore, emotional design has actually become an effective device in producing awesome user knowledge online, creating the customer happen back, reveal and engage (Bordne, Rietz, Schulz, & Zank, 2020; Brackbill et al., 2019; Cline & Edwards, 2017).

C. Yang et al., (2020) stressed psychological aspects as well, mentioning that websites offer voluptuous purposes as effectively as pragmatic ones (H. Zhou et al., 2016).

Guarantee, empathy, communication, emotion, and a sense of humor are all part of the emotional quality component (Chimeni et al., 2016).

The term "assurance" refers to the extent to which a website's staff members are informed about their technique, polite in their replies, and able to instill confidence and assurance in clients. Marek (2018) pointed out that many virtual activities on websites seldom promoted any form of direct engagement aside from using e-mail services and emphasized that they should exert substantial effort to provide people with exquisite responses (Saunders et al., 2017).

Empathy is the degree to which a website can deliver a caring and individualized attention to customers' needs and concerns. According to Schmieder et al. (2017), such individualized attention is actually more successful than typical automated actions in showing customers empathy; a website's emphasis should be truly aware of users' requirements and indicate both a problem with them and a knowledge of their wants (Faller et al., 2017).

'Intimacy' suggests the degree to that make consumers experience a near partnership along with or affection to a site with active procedures. Affection can easily be developed while customers are interacting with others with energetic interactions (Bentenuto et al., 2020). Users have the chance to better comprehend services or items thanks to this communication, which increases their love for a website. For SNS websites in particular, it is regarded as the single most important component for a website to promote customer communications (Fredricks et al., 2017). This kind of

interaction is not only one of Web 2.0's most noticeable characteristics, but it is also the main justification for the term "Social Web" to be used to Web 2.0 (Kim et al., 2016).

'Playfulness' indicates the degree to which a site can delight or captivate customers. Lelorain et al., (2016) emphasized that website developers needed to have to look at voluptuous satisfaction truly in creating a website through motivating customers to engage, through advertising client enjoyment and concentration, and through consisting of captivating attributes to attract consumers and to create them take pleasure in the check out (Khojasteh Mehr et al., 2016). For instance, playing games on a website may make users happy and satisfied, increasing the likelihood that they will return to the website (Chou & Lechêne, 2019). In the Web 1.0 context, a sense of humor is only satisfied by amusing features or businesses, however in the Web 2.0 environment, even simple website user interface activities provide clients with great joy. Customers may enjoy cutting-edge and colorful interfaces with RIAs (Rich Internet Applications) and have a fun experience with them (Chou & Lechêne, 2019; Schwartz et al., 2017).

This measurement was used in the study by Bijlard et al. (2017), who noted that its own components include difficulty, story, character endurance, and speed. Instead of functional complexity or even oBScurity, challenge records the idea of achievement (Hickey et al., 2019). Speed shows how well a website delivers users and offers a way to control the flow of pertinent information (Jeong et al., 2018).

Merely recently, and triggered by (Bijlard et al., 2017), the duty of artistic and emotive aspects of interface style (Saunders et al., 2017) end up being extra prominent leading to a developing enthusiasm on mental factors. (Bentenuto, Perzolli, de Falco, & Venuti, 2020; Faller et al., 2017) Furthermore, emotional states dominate decision-making process (Fredricks, Naftzger, Smith, & Riley, 2017; Kim, Choi, & Suk, 2016), Straight attention can enrich certain brains more than others (Reeves & Nass, 1998), and is consequently intimately related to inspirations, attitudes, and consumer decisions (Lelorain et al., 2016). Websites and all other areas of our relationships are influenced by our emotional moods (Chou & Lechêne, 2019; Khojasteh Mehr, Ahmadi Ghozlojeh, Sodani, & Shirali Nia, 2016; Kim et al., 2016; Lelorain et al., 2016) (Emanuel, Rodrigues, & Martins, 2015; Yin, Zhang, & Li, 2014). In this sense, emotions begin to take the lead task in item layout becoming an affordable differentiator factor, in that items recognized as positive, along with aesthetic high qualities that catch the interest of individuals (Hickey et al., 2019; Jeong, Lee, Shin, Kim, & Shin, 2018), are less complicated to know and work far better (Rajeev-Kumar et al., 2019). Lelorain et al., (2016) stressed that web site designers needed to have to think about voluptuous pleasure truly in creating an internet site by stimulating customers to get involved, by marketing consumer exhilaration and concentration, and through consisting of enchanting attributes to entice customers and to make them delight in the browse through (Khojasteh Mehr et al., 2016).

2.4 Underpinning Theories

This section will contain the main theory that is related to the research framework is Theory and the investment theory of creativity.

2.4.1 The Investment Theory of Creativity

Thinkers are actually like great real estate investors, according to the investment hypothesis of creativity (Sternberg & Lubart 1995), in that they buy cheap and sell for a high price. While capitalists carry out this globalization of finance, creative people carry out this globalization of ideas. Creative individuals develop concepts that appear to be discounted resources (resources with a low price-to-earning ratio), but each is usually rejected because of the individuals.

Artistic people, like excellent financiers, create suggestions that, at the opportunity are actually watched as unfamiliar and possibly slightly foolish (Ferschtman, 2018). The moment their concepts have actually gained some approval, the imaginative people "sell high," reaping the earnings of their really good tip and relocating on to the following out of favor idea (Plucker, 2018). Imaginative people, through their attributes, tend to defy the group.

Creativity is actually a decision similarly investing is actually (Labed, 2020). People are actually not born uncreative or imaginative. Instead, they develop a set of mindsets towards life that identify those who agree to go their personal means (Davies, 2018). Instances of such mindsets towards lifestyle are actually desire to (a) redefine issues in novel methods, (b) take practical dangers, (c) "offer" suggestions that may not at first allow, (d) stand firm despite hurdles, and (e) take a look at whether their own preconceptions are actually hindering their creative method. Such attitudes are actually educable and may be instilled in trainees with direction that motivates pupils to presume for on their own (Héraud, 2016). Creativity makes up many different components: (a) potentials, (b) knowledge, (c) styles of reasoning, (d) personality

associates, (e) motivation, and particularly intrinsic inspiration, and (f) environment (Harmon, 2018; Héraud, 2016; McIntyre, 2016). An individual may have the innovative ability that would permit creativity, for example, but without a determination to take wise dangers or an environment that gives at the very least low assistance for creativity, that person's possible creativity might be actually subdued (Burkšaitienė, 2018). It is thus most importantly significant, specifically in colleges, to offer an environment that allows creativity to develop certainly not just in word, but also in action (Park, 2017; Sternberg, 2018). Concurrently, a person can easily possess an artistic attitude yet without the skills of creativity such as trying to find getting back together of opposing tips and dialectical thinking might certainly not achieve his/her full innovative potential (Davies, 2018; Ferschtman, 2018; Harmon, 2018; Sternberg, 2017; Taylor, 2018).

When creative ideas are presented, they are typically seen as strange, pointless, and even insane, and are quickly rejected. The person making the suggestion is then regarded with suspicion, as well as possible scorn and mockery.

Imaginative individuals, like really good capitalists, create suggestions that, at the time are watched as unfamiliar and probably somewhat preposterous (Ferschtman, 2018). The moment their ideas have actually gotten some recognition, the innovative people "market high," gaining the revenues of their excellent suggestion and relocating on to the next unpopular tip (Plucker, 2018). At the very same time, an individual can easily have a creative perspective but without the skills of creativity such as looking for reconciliation of resisting tips and dialectic reasoning may not meet his or her complete

innovative possibility (Davies, 2018; Ferschtman, 2018; Harmon, 2018; Sternberg, 2017; Taylor, 2018).

2.4.2 Self-determination theory (SDT

Self-determination theory (SDT) is a widely recognized framework in psychology that focuses on human motivation and personality development. According to SDT, individuals have three basic psychological needs: autonomy, competence, and relatedness. When these needs are satisfied, individuals are more likely to be intrinsically motivated, engaged, and creative in their activities. In the context of e-learning systems, understanding and applying the principles of SDT can have significant implications for enhancing employee engagement and creativity.

One of the key implications of SDT on e-learning systems is the importance of providing learners with autonomy. Autonomy refers to the sense of control and choice that individuals have over their own actions. In the context of e-learning, this can be achieved by giving employees the freedom to choose their learning goals, methods, and pace. Research has shown that when employees feel a sense of autonomy in their learning, they are more likely to be motivated, engaged, and creative (Deci & Ryan, 2000).

Another implication of SDT on e-learning systems is the importance of fostering a sense of competence in learners. Competence refers to the feeling of being capable and effective in one's actions. In the context of e-learning, this can be achieved by providing employees with challenging tasks that are within their skill level, offering constructive feedback, and recognizing their achievements. When employees feel

competent in their abilities, they are more likely to be motivated to learn, engage in the learning process, and be creative in their problem-solving approaches (Deci & Ryan, 2000).

Finally, SDT emphasizes the importance of fostering a sense of relatedness in learners. Relatedness refers to the feeling of being connected to others and having a sense of belonging. In the context of e-learning, this can be achieved by creating a supportive and collaborative learning environment, encouraging social interactions among employees, and providing opportunities for peer feedback and collaboration. Research has shown that when employees feel a sense of relatedness in their learning environment, they are more likely to be motivated, engaged, and creative in their learning activities (Deci & Ryan, 2000).

In conclusion, the implications of Self-determination theory on e-learning systems are clear: by understanding and applying the principles of autonomy, competence, and relatedness, educators can enhance employee engagement and creativity in online learning environments. By providing employees with opportunities to make choices, develop their skills, and connect with others, e-learning systems can foster intrinsic motivation and creativity in learners. As educators continue to explore new ways to enhance the effectiveness of e-learning, incorporating the principles of SDT can be a valuable strategy for promoting employee engagement and creativity in online education.

2.5 Conceptual Framework and Hypothesis Development

Figure 2.1 shows the proposed model of this particular study, in which the online training system have five qualities as independent variables, which supposed to have impact on training engagement and employee creativity.

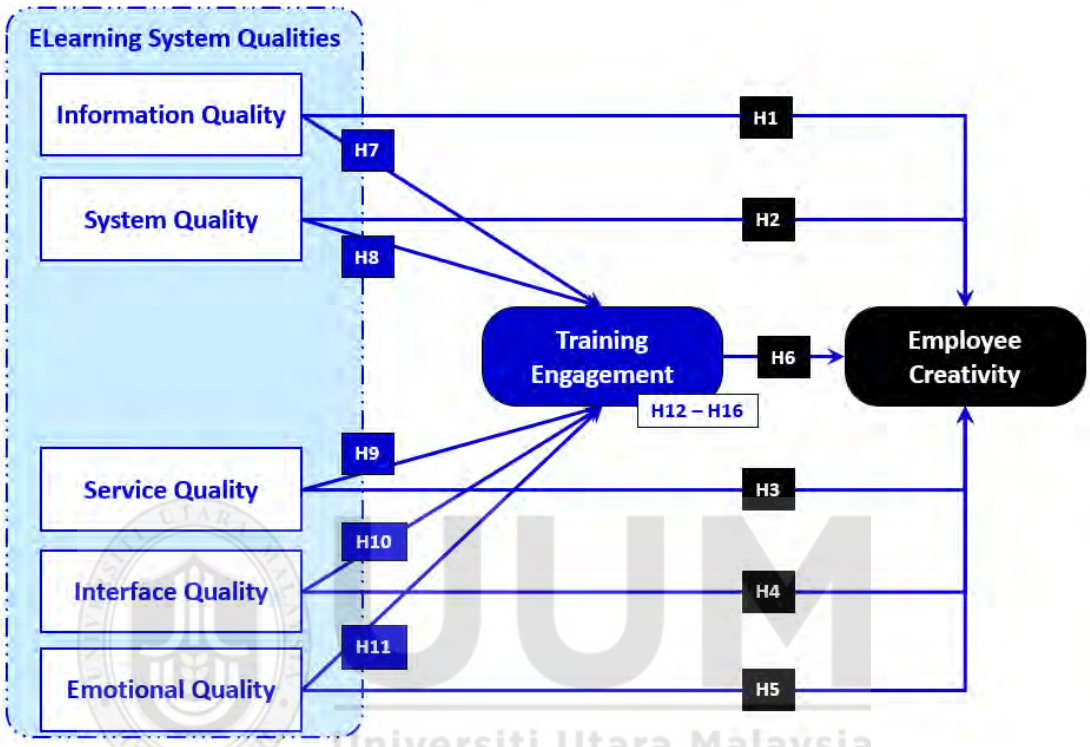

Figure 2. 1 Proposed Model and Hypothesis

- **Information Quality effect on Employee Creativity**

Creativity refers to staff members' production of unique and practical ideas regarding items, techniques, and processes at the office (Liu et al., 2017). It needs to be actually kept in mind that creative thinking is actually taken a look at with target positioning (Liu et al., 2017). As we defined Information quality the researcher is expecting a positive direct effect of Information quality on Employee Creativity. As this both hypotheses is compatible with other hypotheses in others studies; (Burges, Svore, & Volkovs, 2019; Mishchenko, Monastyrev, & Evdokimtsev, 2018; Suliman, Hassan, Athamneh, Jenkins, & Bylund, 2018; Worsley, Webb, & Vaux, 2016)

- Hypothesis1: Information Quality has a significant positive direct effect on Employee Creativity

- **System Quality effect on Employee Creativity**

Creativity has been specified as an opinion of the uniqueness and convenience (or worth) of one thing (He et al., 2019; Van Marle, 2017). Creativity may be determined as the capacity to determine brand new connections, examine topics coming from brand new viewpoints, and create new ideas from existing info (Budiardjo et al., 2017; Kurakin et al., 2018). According to how system quality is defined, the researcher anticipates a favorable direct impact of system quality on employee creativity. Due to the fact that both of these ideas are congruent with those in previous research;(Ismail, Iqbal, & Nasr, 2019; Tang, Yu, Cooke, & Chen, 2017; Tsygankova, 2019; Vila-Vázquez, Castro-Casal, & Álvarez-Pérez, 2020; X. Yang et al., 2018).

- Hypothesis2: System Quality has a significant positive direct effect on Employee Creativity

- **Service Quality effect on Employee Creativity**

According to commonplace, creativity is something that innovative folks perform or even possess (Ismail et al., 2019). Artistic people possess a number of components that identify all of them coming from their a lot less innovative peers, Specifically, they find their work to be fundamentally motivating, are independent, unconventional, and greater risk-takers, have broad interests, and are significantly more open to learning new skills. They also have a rich physical body of domain-relevant knowledge and strong skill sets (Tang et al., 2017; Tsygankova, 2019; Vila-Vázquez et al., 2020). As we defined Service quality the researcher is expecting a positive direct effect of

Service quality on Employee Creativity. As this both hypotheses are compatible with other hypotheses in others studies;(Gani & Qazi, 2018; Joshi & Dhar, 2020; Marlow, Lacerenza, Woods, & Salas, 2018; Piske et al., 2017; Scotti, Driscoll, Harmon, & Behson, 2007).

- Hypothesis3: Service Quality has a significant positive direct effect on Employee Creativity

- **Interface Quality effect on Employee Creativity**

Creativity has been specified as an opinion of the uniqueness and convenience (or worth) of one thing (He et al., 2019; Van Marle, 2017). Creativity may be determined as the capacity to determine brand new connections, examine topics coming from brand new viewpoints, and create new ideas from existing info (Budiardjo et al., 2017; Kurakin et al., 2018). The study anticipates that Interface Quality will have a favorable direct impact on Employee Creativity as we have characterized it. Due to the fact that both of these ideas are congruent with those in previous research;(Bowers, 2019; Razack, 2017; Yeh, Rega, & Chen, 2019; Yuksel, 2016).

- Hypothesis 4: Interface Quality has a significant positive direct effect on Employee Creativity

- **Emotional Quality effect on Employee Creativity**

As has been defined before, creativity is something that innovative folks perform or even possess (Ismail et al., 2019). Artistic people possess a number of components that identify all of them coming from their a lot less innovative peers, Specifically, they find their work fundamentally motivating, they tend to be independent, unconventional, and greater risk-takers, and they have broad interests and a more

significant openness to learning new skills (Tang et al., 2017; Tsygankova, 2019; Vila-Vázquez et al., 2020). They also have a rich physical body of domain-relevant knowledge and strong skill sets. The researcher anticipates a favorable direct influence of emotional quality on employee creativity given how we characterized it. Due to the fact that both of these ideas are congruent with those in previous research; (Darvishmotevali, Altinay, & De Vita, 2018; J. Peng, Chen, Xia, & Ran, 2017; Rahman, De Clercq, Wright, & Bouckenooghe, 2016; E. J. Wang, Berthon, Pitt, & McCarthy, 2016; J. Wang, Zhang, & Jia, 2017).

- Hypothesis5: Emotional Quality has a significant positive direct effect on Employee Creativity

- **Training Engagement and the relationship with Employee Creativity**

In General, Employee engagement is a property of the connection between an organization and its staff members (Al-Ajlouni, 2020; Zaitouni & Ouakouak, 2018). An "engaged staff member" is actually one that is actually totally aBSorbed through and passionate regarding their work therefore takes beneficial action to further the institution's track record and passions (Kwan et al., 2018; Zaitouni & Ouakouak, 2018). Training Engagement is the level of how workers are enthusiastic about the training plan and experience fastened to it (Eldor & Harpaz, 2016; Li & Sandino, 2018). While Creativity pertains to employees' creation of unique and useful tips regarding items, procedures, and methods at work (Eldor, 2017). It should be noted that creativity is actually reviewed with goal positioning (Kwan et al., 2018; Zaitouni & Ouakouak, 2018) These positionings may be an end result of internal factors in which individuals are actually influenced through their own private wish to do in such a way (Al-Ajlouni, 2020; Eldor, 2017). These desires are actually stimulated through

specific ideas without the influence of exterior benefits. On the contrary, people might likewise be determined through external factors including taking on others, recognition, or even steering clear of criticism (Jain & Khurana, 2017). Based on that, the researcher anticipates a strong correlation between employee creativity and training engagement. Due to the fact that this theory is congruent with theories from other research;(Eldor, 2017; Eldor & Harpaz, 2016; Jain & Khurana, 2017; Mubarak & Noor, 2018; Sendawula, Nakyejwe Kimuli, Bananuka, & Najjemba Muganga, 2018).

- Hypothesis 6: Training Engagement has a significant relationship with Employee Creativity

- **Information Quality effect on Training Engagement**

Information quality refers to how well-written and accurate the material on websites, electronic gadgets, etc. (Tate, 2018). It is frequently pragmatically defined as: "The exercise for use the info provided" (Senaratne et al., 2017). While Engaged employees engage proactively in the training, do it willingly, do certainly not be sorry for that they need to commit effort and time to it (ArMStrong & Landers, 2018). In short, they possess an interior incentive to take part in the instruction (Hanaysha & Tahir, 2016). Involved employees efficiently finish their tasks, they take part in dialogues and make wonderful end results (Hanaysha, 2016). Based on that, the researcher anticipates that Information Quality will have a large positive direct influence on Training Engagement.

- Hypothesis7: Information Quality has a significant positive direct effect on Training Engagement

- **System Quality effect on Training Engagement**

The preferred characteristics of the information in websites, apps, or device systems are system quality. An IS's system quality may be measured from both a technical and design standpoint. Accordingly, perceived system quality is the assessment of an IS by users from both a technical and design standpoint (Worsley et al., 2016).For instance, ease of use, unit dependability, learning convenience, intuitiveness, class, and response opportunity (Budiardjo et al., 2017).The degree to which users felt that using IS required less effort on their part to utilize the system is really the measure of ease of use (Worsley et al., 2016). Additionally, an IS's quality must be adaptable enough for the user to operate the system (Budiardjo et al., 2017). While in general Everyone that has been associated with corporate trainings has actually discovered that so as for the training to become successful, it needs to be actually interesting (Budiardjo et al., 2017). When folks like what they carry out and locate the internal inspiration to do it, they are actually most likely to put in and focus time (Kurakin et al., 2018). Based on that, the researcher anticipates that System quality will have a large positive direct influence on Training Engagement.

- Hypothesis8: System Quality has a significant positive direct effect on Training Engagement

- **Service Quality effect on Training Engagement**

Service quality, in its modern concept, is actually a contrast of regarded expectations of a service along with identified performance, producing the formula SQ = P-E (H. Gupta, 2018). This concept of service quality has its own origins in the expectancy-disconfirmation paradigm (H. Gupta, 2018; Yang et al., 2018). While Training is mentor, or establishing in oneself or others, any abilities and know-how or physical

fitness that relate to particular beneficial capabilities (Devlin et al., 2018; Phillips & Phillips, 2016). Instruction possesses details goals of enhancing one's capability, efficiency, performance and ability (Gabbett, 2016). And Training engagement is the level of how employees are attached to the assigned instruction (Devlin et al., 2018; Gabbett, 2016). Based on that, the researcher anticipates that Service Quality will have a large positive direct influence on Training Engagement.

- Hypothesis9: Service Quality has a significant positive direct effect on Training Engagement

- **Interface Quality effect on Training Engagement**

Quality measurements along with which a user may experience concerning user interfaces and interactivity, featuring closeness, compatibility, format, appearance, and navigation. and there has been considerable conversation about the results of consumer interface quality on customer habits (Cerrato et al., 2019; Strutton & Guzmán, 2016). and a bunch of researchers connected a beneficial influence of Customer interface quality (Banerjee & Chiu, 2018; Ikwuemesi & Onwuegbuna, 2018). Consumer interface quality, seen surveillance, and client loyalty are actually important factors for results of a shopping site (Allison & Stanton, 2020; Di Fuccio et al., 2019). While typically Everyone who has actually been involved in corporate instructions has actually learned that in order for the instruction to become effective, it has to be actually interacting. When people like what they carry out and find the internal motivation to accomplish it, they are very likely to focus and commit time (Razack, 2017). Based on that, the researcher anticipates that Interface Quality will have a large positive direct influence on Training Engagement.

- Hypothesis 10: Interface Quality has a significant positive direct effect on Training Engagement

- **Emotional Quality effect on Training Engagement**

Emotional quality is Quality aspects that interested in emotions that consumers may feel while using an internet site, affirmation, compassion, emotional state, interaction, and playfulness (Berg et al., 2017). while Engaged workers take part actively in the training, do it willingly, do certainly not regret thatthey need to dedicate time andeffort to it (R. Gupta & Bajaj, 2017). Basically, they have an interior inspiration to take part in the instruction. Engaged employees properly accomplish their tasks, they engage in conversations and generate wonderful outcomes (Geng et al., 2018). Based on it, the researcher anticipates that emotional quality will have a large beneficial direct influence on training engagement.

- Hypothesis11: Emotional Quality has a significant positive direct effect on Training Engagement

- **Training Engagement as a Mediator**

Let's start by quickly defining the phrase "independent variables." System quality is defined as the positive features of an information system. Flexible IS refers to the system's ability to be modified in response to the environment and internal and external changes (Ismail et al., 2019). The individual's level of pleasure decreases with decreasing system flexibility, which eventually affects the customer's engagement with the system. Reliability is another crucial indicator of high-quality IS (Yang et al., 2018). Information quality refers to the caliber of the information provided by information devices (H. Gupta, 2018). It is usually pragmatically specified as: "The

fitness for use the relevant information provided (Micikevicius et al., 2017). System quality is the beneficial characteristics of a details unit. Interface Quality dimensions, including proximity, compatibility, look, style, and navigation, along with how a user may perceive user interfaces and interactivity (Gabbett, 2016). And as has been actually described in the past, emotional quality is one of Quality dimensions worried about feelings that individuals may feel while utilizing a site, assurance, sympathy, communication, a sense offun, and feeling (Devlin et al., 2018).On one hand Creativity describes workers' generation of helpful and unique concepts worrying items, procedures, and processes at work (Allison & Stanton, 2020). It needs to be actually noted that creativity is actually taken a look at with objective positioning (Banerjee & Chiu, 2018).

On the other hand, training is the process of imparting information and abilities, as well as physical fitness, that are connected to certain useful proficiencies to oneself or others (Ikwuemesi & Onwuegbuna, 2018). Training has details targets of strengthening one's capability, performance, productivity and ability (Strutton & Guzmán, 2016). And Training engagement is the degree of just how workers are actually affixed to the delegated instruction (Cerrato et al., 2019). So the researcher and according to some studies like: (Curran et al., 2016; Elizur, Somech, & Vinokur, 2017; Granholm, Holden, & Worley, 2018; Watson, Rogers, Watson, & Liau-Hing Yep, 2019). They showed and indicated to the mediation role of the Training Engagement in some different models (variable) including some of this study variables to show the impact on creativity and to what extend can Training Engagement improve employee’s creativity. For this study the researcher is taking the mediation role of the Training Engagement in the relationship between Independent variables (IV)

(Information Quality, System Quality, Service Quality, Interface Quality, Emotional Quality) and the (DV) dependent variable (Employee Creativity) to test the positive impact. All in all, the researcher is expecting a significant mediation role of Training Engagement on the relationship between Independent variables and Employee Creativity. As this hypothesis is compatible with other hypotheses in others studies; (Charleston & Martin, 2016; Elizur et al., 2017; Forsberg, Fellman, Laine, Johnson, & Logie, 2020; Granholm et al., 2018; Qu, Yu, Cong, & Hao, 2017).

- Hypothesis 12: Training Engagement has a significant mediation effect in the relationship between information quality and Employee Creativity.
- Hypothesis 13: Training Engagement has a significant mediation effect in the relationship between System Quality and Employee Creativity.
- Hypothesis 14: Training Engagement has a significant mediation effect in the relationship between Service Quality and Employee Creativity.
- Hypothesis 15: Training Engagement has a significant mediation effect in the relationship between Interface Quality and Employee Creativity.
- Hypothesis 16: Training Engagement has a significant mediation effect in the relationship between Emotional Quality and Employee Creativity.

2.6 Summary

In this chapter the previous literature of the main variable have been illustrated and discussed, according to literature review employees creativity is considered a very important core aspect should of be existed in the organization to maximize the performance, as the literature showed that the training engagement is the best way to improve employees performance and to ensure the success of the training prograMS, as well as the E-learning system qualities and its dimensions play a big role to make a

better satisfaction for costumers which will be reflected on employees as well. The main theories have been discussed and related to the research framework are Self-determination theory (SDT) and the investment theory of creativity. And this chapter ends up with the illustration of conceptual framework and hypothesis development.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the study's methodology. An overview of the study design, construct measurement, questionnaire design, research sample procedures, data collecting technique, and a description of the data analysis approach are all included in the discussion of the methodology.

3.2 Research Design

A research study's methodology is outlined in the analysis style. The decision about a research style is actually based on the methods and strategies employed throughout the investigation. It outlines the procedures used to collect and analyze data in order to accomplish the study objectives (Sekaran & Bougie, 2016). This research study is noteworthy because it focuses on a field of study where prior research studies have already been conducted, but where more preliminary research study was still necessary to address unresolved issues. The demands for the preliminary research study described above address the issues raised in this research because they focus on the need to understand the effects of the earlier mentioned.

According to Trochim (2006), a research study layout is an overarching framework that brings together several elements, such as the sample or even group, techniques,

and assignment ways, to solve the main research question. The chosen research methodology should include a survey on the elements that encourage employee innovation and training engagement in the public sphere of the UAE. In describing the literary works assessments, four independent variables necessitated that their relationship with support for business continuity be thoroughly investigated.

Utilizing science as a pillar for the research study technique is common in the quantitative approach. In this approach, there are some methodical steps that include defining the research topic and developing the desired hypotheses as hypothesis, proceeding with a designed model and data collection tool, and typically, the research concludes with a numerical-based discussion to determine whether the commenced beliefs are agreed upon or not (Creswell, 2012; Jackson, 2015). In Figure 3.1, a flowchart of the steps and procedures for an inquiry, the scientific analysis plan is shown as a series of systematic steps.

The study is following the systematic steps of scientific approach in research. Therefore, the study is seductive approach as it has hypotheses in an early stage and have evaluation at late stage. However, the main research methodology choice is quantitative research selection. A schematic representation of the phases of quantitative research:

1) Theory - The straightforward beginning of quantitative research with theory represents the broadly deductive approach to the partnership in between theory and study in this heritage. The sociological theory most closely affiliated along with this strategy is actually Functionalism, which is actually a growth of the positivist beginnings of sociology.

Figure 3. 1 Research Flowchart

2) Hypothesis - It prevails summarizes of key components of quantitative research to advise that a hypothesis is actually reasoned from the theory and is tested. Having said that, a lot of quantitative analysis does certainly not necessitate the specification of a hypothesis, and rather theory acts freely as a collection of worries relative to which social analyst accumulates data. The standard of hypotheses to be tested is specifically most likely to be found in experimental investigation yet is frequently found as effectively in survey research, which is typically located on cross-sectional style.

3) Research design - The researcher selected a study layout as requires action which possesses effects for a range of problems, including the external validity of results and scientists' potential to impute rootstock to their lookings for.

4) Operationalizing ideas - Operationalizing ideas is actually a procedure where the scientist develops procedure of the concepts which she prefers to investigate. This usually includes malfunctioning aBStract sociological ideas right into additional specific actions which may be conveniently know by participants. For instance, 'social lesson' could be operationalied right into 'occupation' and 'toughness of spiritual strongly believe' could be gauged through making use of a series of inquiries regarding 'tips concerning God' and 'attendance at spiritual services'.

5) Selection of an investigation study sites - With research laboratory experiments, the website will certainly currently be established, in field practices, this are going to entail the collection of a field-site or even websites, including a school or even manufacturing plant, while with survey research, site-selection might be actually a lot more assorted. Practical and ethical factors are going to be a limiting factor in choice of analysis sites.

6) Selection of respondents - Step six entails 'opting for a sample of attendees' to participate in the research study-- which can include any type of variety of sampling approaches, relying on the hypothesis, and honest and sensible factors. If the hypothesis needs evaluation between two different groups (males and females as an example), then the sample should mirror this.

7) Data assortment - Step seven, is what many people most likely believe of as 'doing study'. In experimental research study this is study to entail pre-

testing respondents, operating the independent variable for the experimental group and afterwards post-testing respondents. In cross-sectional study making used of polls, this will certainly include questioning the sample members by structured-interview or even utilizing a pre-coded questionnaire. For oBServational analysis this will certainly involve seeing the setup and practices of individuals and afterwards appointing categories to every aspect of behavior.

8) Processing data – we use transforming information which has been actually accumulated into 'data'. With some information this is a simple method-- for instance, variables including 'age', or even 'income' are actually presently numerical. Other info may need to be actually 'coded'-- or improved in to amounts to ensure it may be analysed. Codes serve as tags that are put on data regarding individuals which allow the info to become processed by a software.

9) Data evaluation - In measure nine, evaluating data, the researcher makes use of an amount of analytical procedures to search for significant relationships between variables, to observe if one variable has a considerable effect on yet another variable. The easiest sort of strategy is actually to set up the connection in between variables right into graphs, pie graphes and bar charts, which give a quick 'intuitive' graphic feeling of whether there is actually a substantial partnership, and such resources are actually likewise important for presenting the end results of one's quantitative data analysis to others. So as for quantitative study to become taken truly, analysis needs to make use of a lot of allowed analytical methods, like the Chi-squared exam, to evaluate whether there is a partnership between variables.

10) Findings and outcomes - The researcher interpreted the analysis' findings in light of the data's evaluation. The searches show up at this point: is the hypothesis supported, assuming there is one? What are the results' implications for the academic theories that shaped the development of the research study?

11) For this study creating A blurb should convince the reader that the analysis method has been really reliable, that the data is as legitimate, dependable, and depictive as it needs to be for the research objectives, and that the findings are significant in the context of actually existing research. This can be done for either an academic audience or even a client. Deductivism (activity 2) and inductivism are both present, which truly suggests the positivist foundations of quantitative analysis.

In order for quantitative research regarded seriously, it is necessary to used a variety of recognized analytical techniques, including the Chi-squared test, to determine whether or not there is in fact a relationship between the variables.

Either a client or a scholarly audience will be the target audience for the study's writing, but in either case, the audience must be persuaded that the research process was sound, that the data is as accurate, reliable, and descriptive as is necessary for the study's goals, and that the research questions are actually important given the state of other ongoing studies.

3.3 Questionnaire Design

It is a statement of the truth that implementation and adoption of online training at the public sector is unstable. However, the empolyess at public sector still not explored well the new modern training system. So, It is necessary to enhance the capabilities of employes from public sector in UEA which is vital to collect data from this sector. This instrument was used because questionnaire survey is able to capture a much wider data set, which is used for the evaluation of perception and performance of specific aspects (Hair Jr, Wolfinbarger, Money, Samouel, & Page, 2015). A large number of people are there at the same time, according to a witness. There will come a time when it's necessary to interrupt (Sekaran & Bougie, 2016).

Questionnaire of multi-pages was developed with a coverpage to explain the background of researcher and the objective of the study. Hard copy of the questionnaire was distributed to selected respondents. The questionnaire has multiple questions; which is splatted into demographic questions and perceptional questions. Perceptional questions are close-ended questions with limited five polls. All the items were adapted or replicated from previous studies. Every item in the questionnaire is a statement or question, which is rated according to a Likert scale. A five-point Likert scale is used, with 1 denoting strongly agree, very good, very satisfied, or extremely likely, and 5 denoting strongly agree, extremely good, very satisfied, or extremely probable.

The closed-endedquestions are allocated into seven groups to evaluate respondents' opinion for the research seven concepts of the study. Demographic questions are five questions on respondents' demographic characteristics such as gender, nationality,

age, education, income. This information is essential to demonstrate that the sample is representative and to ensure that findings can be generalized to the broader population of organizations and employees. All the previously mentioned items of the questionnaireare shown below.

The instrument used for measuring employee creativity has been adopted from Tang, Yu, Cooke, and Chen (2017) including 9 items. All the items are mentioned in table 3.1.

Table 3. 1
Employee Creativity

No.	Items	Source
1	Demonstrated originality in his/her work	(Tang, Yu, Cooke, & Chen, 2017)
2	Took risks in terMS of producing new ideas in doing job	
3	Found new uses for existing methods or equipment	
4	Solved problems that had caused others difficulty	
5	Tried out new ideas and approaches to problems	
6	Identified opportunities for new products/processes	
7	Generated novel, but operable work-related ideas	
8	Served as a good role model for creativity	
9	Generated ideas revolutionary to our field	

The instrument used for measuring training engagement has been adopted from Haider, Asad, Fatima, and Abidin (2017) including 8 items. All the items are mentioned in table 3.2.

Table 3. 2
Training Engagement

No.	Items	Source
1	The trainings given here are very useful to my job	(Haider, Asad, Fatima, & Abidin, 2017)
2	Trainings are relevant to my job description	
3	Training can really translates its benefits in my performance	

4	Selection criteria for training is fair enough
5	Training is quite beneficial to improve my performance at workplace
6	I wish to join more training sessions
7	After attending training sessions now I am more clear about my job
8	Training brought a positive impact on my job performance

The instrument used for measuring information quality has been adopted from Ramayah, Ahmad, and Lo (2010) including 3 items. All the items are mentioned in table 3.3.

Table 3. 3
Information Quality

No.	Items	Source
1	Accuracy of information received	(Ramayah, Ahmad, & Lo, 2010)
2	Completeness of information received	
3	Relevance of information received	

The instrument used for measuring system quality has been adopted from Ramayah, Ahmad, and Lo (2010) including 4 items. All the items are mentioned in table 3.4.

Table 3. 4
System Quality

No.	Items	Source
1	An online catalog that is easy to use	(Ramayah, Ahmad, & Lo, 2010)
2	An online catalog that is easy to learn	
3	An online catalog that you can interact with in a clear and understandable way	
4	An online catalog that is easy to become skillful at using	

The instrument used for measuring service quality has been adopted from Ramayah, Ahmad, and Lo (2010) including 12 items. All the items are mentioned in table 3.5.

Table 3. 5
Service Quality

No.	Items	Source
1	Dependability in handing users‟ problems	(Ramayah, Ahmad, & Lo, 2010)
2	Willingness to help users	
3	Readiness to respond to users‟ request	
4	Courteous staff	
5	Staff instill confidence in users	
6	Staff have the knowledge to answer users‟ questions	
7	Giving users individual attention	
8	Staff have the users‟ best interests at heart	
9	Staff deal with users in a caring fashion.	
10	Staff understand the needs of users	
11	Good relations between staff and users	
12	Communication between staff and users	

The instrument used for measuring interface quality has been adopted from including 6 items. All the items are mentioned in table 3.6.

Table 3. 6
Interface Quality

No.	Items	Source
1	The information service centre enables me to accomplish tasks faster.	(Alsabawy, Cater-Steel, & Soar, 2016)
2	The information service centre improves my ability to do research.	
3	The information service centre enhances my effectiveness.	
4	The information service centre enables me to be more productive.	
5	The information service centre males it easier to do research.	
6	I find the information service centre at this organization useful.	

The instrument used for measuring emotional quality has been adopted from including 6 items. All the items are mentioned in table 3.7.

Table 3. 7
Emotional Quality

No.	Items	Source
1	I am satisfied with the performance of e-learning system	
2	I enjoy using e-learning system	
3	e-learning system satisfies my needs	
4	Overall, I am pleased with the experience of using e-learning system	
5	e-learning system enables me to accomplish my tasks more quickly	
6	On average, I spend a long time on using e-learning system	

3.4 Instrument Reliability

Academics advise that a pilot test be undertaken before formal research is conducted. Please be aware that you are in error (Bryman, 2016). The pilot sample is composed of 30 employees from another ministry in Abu Dhabi. The pilot test results showed that the questionnaire structure was easily understood by the passengers and they took approximately ten minutes to answer all the questions.

The study utilizes Cra'apa to the population of the regions as it is to ask the territorial integrity of the lands. The majority views a party as a preliminary requirement. The Cronbach's alpha reliability examinations acquired through the equipment SPSS 23. Table 3.1 shows the results of Cronbach's Alpha scores and all of the variables have appropriate scores of Cronbach's alpha between 0.711 up to 0.855. Internal consistency reliability assessed by Cronbach's' alpha must be bigger than 0.70 and less than 0.95. Nevertheless, in exploratory scientific investigations, results as high as 0.6 are recognized (Bryman, 2016).

Table 3. 8
Pilot Study Reliability Tests Results

Variables	Cronbach's Alpha
information quality	0.882
system quality	0.762
service quality	0.723
interface quality	0.794
emotional quality	0.855
training engagement	0.711
employee creativity	0.803

3.5 Sampling Design

3.5.1 Target Population

A research population is a defined collection of individuals or objects known to have related characteristics. All individuals or objects within a certain population usually have a common, requisite characteristic or peculiarity. Population has been regarded as one of the most important element in research. Castillo (2009) pointed out that; population could be categorized into two: target population and accessible population. Target population refers to the whole group of individuals or objects to which researchers are interested in generalizing the conclusions (it is also called theoretical population). The accessible population on the other hand is the population in which the researchers can apply their conclusions. In other words, is a subset of the target population and is also known as the study population. It is from the accessible population that researchers draw their samples. Based on the recent statistics of employment in interior ministry in Abu Dhabi, the total population related to the employees in all level is 15000 (Ministry of Interior United Arab Emirates,2023).

3.5.2 Sample Size

Samples are representatives of the entire population in which the size and selection techniques have to be appropriate and not biasing the results. Roscoe (1975) provides the 'rule of thumb' for determining sample size; as it is declared that sample size larger than 30 and smaller than 500 are appropriate for most of the studies. Whereas, some statistical experts suggest a data range between 5-10 times the number of items used in the scale (Hair, Black, Babin, & Anderson, 2009). Thus, it is always advisable that the number of respondents or sample size should be 10 times of the number of items in the instrument.

Since the population for this study is not a resident population, the actual sample size may vary over time. Because of this, predicting the sample size based on population size might be complicated, thus it is preferable to base the estimation on other formulae where population size is not a component of the mathematical function. The earlier-mentioned generalization—that the sample size should be 10 times the number of questionnaire items—will be applied to this investigation. The sample size for this study is calculated at 400 employees because it includes 35 perceptional items and 5 demographic factors. There will be 400 samples in this investigation.

3.5.3 Sampling Technique

The study is focusing in a specific group, "employees", contained in different categories (three categories). In addition, members of the population cannot have the same opportunities to be sampled due to difficulties in performing random sampling (cannot have a list of all employees), and the availability of the samples during the time of data collection is questionable. Therefore, quota sampling and not stratified

random sampling applied. Quota sampling is similar to stratified random sampling in making stratus of population but differ in using convenience/purpose sampling to select samples at every sub-group (Hair et al. 2016). A subgroup is a natural set of items. Subgroups might be based on company size, gender, or occupation (to name but a few).

A quota sample is a non-probability sample that is selected based on distributing the population and sample among the listed categories (quota). quota sampling is also known as categorical sampling. In this study, the population is allocated into three sub-groups of the population. The total population is 15000 and the target sample size of 400 is distributed among the three categories based on the population distribution rate (Knapp, 2013). There are three main categories among the Interior Ministry: Administrative, Technical and field employees. Administrative employees are related to the management of the Interior Ministry and mostly took executive decisions regarding the ministry. Secondly, the technical employees provide technical support to the department regarding logisticts, IT, and technocratic advice. Lastly, the field employees have direct contact with the public. They offer different public services on behalf of the Interior Ministry. As a result, the quota sample is an appropriate data collection method for this particular investigation.

The selecting techniques used non-probability stratified randon sampling technique and the design has the following characteristics:

- In stratified sampling, respondents are divided into subgroups known as strata based on shared factors (such as race, gender, and level of education).

- After being split into subgroups, each one is randomly sampled using a different probability sampling technique.

3.6 Data Collection Procedure

The study adopts using emails, SMS, as well as through WhatsApp messages technique to reach a relatively specific-target sample of employees of the Interior Ministry in Abu Dhabi due to covid 19 situation. By using this method, the chosen locations can be covered with confidence (Nuno & John, (2015). In addition, it is easy to conduct any type of online data collection, due to the aim of this study and the specific target population.

As discussed in previous paragraph, the selected areas in the Abu Dhabi (Ministry of interior). The researcher visited potential volunteers to gather information. A two-person research team will gather data from the areas after making arrangements with the management. In order to provide travelers adequate time to complete the surveys, data collection will begin after 10 to 15 minutes. Information gathered in 2022.

3.7 Data Analysis Procedure

Statistical Data analysis strategy is done by using two software packages. First, SPSS software is used for early phase analysis of cleaning data, frequency and descriptive analysis, and reliability of pilot test. However, the main results are conducted by applying PLS techniques with the use of SmartPLS software. The following steps are applied for testing the data by using SmartPLS (Hair et al., 2016).

The SEM method is one of the most important components of applied multivariate statistical analyses. This technique has been employed by many researchers in different fields such as biologists, economists, educationalists, marketing, medical and a variety of other social and behavioural scientists (Anderson & Gerbing, 1988). In fact, SEM can be seen as a statistical procedure that takes a confirmatory method (i.e., hypothesis-testing) to the analysis of a structural theory on a given phenomenon (Byrne, 2013a). Usually, SEM can be seen as a theory that reveals "causal" techniques that present observations on multiple variables (Gefen, Straub, & Boudreau, 2000; Hair, Ringle, & Sarstedt, 2011). This technique represents two essential concepts: a) that a group of structural (i.e., regression) equations, by considering the measurement error, provide the studied causal processes, and b) that these structural relations can be modelled visually to simplify and facilitate a clearer conceptualisation of the theory and studied hypotheses (Roldán & Sánchez-Franco, 2012; Wong, 2013).

One essential factor for both the researcher and reader is the description of the analysed data. Moreover, in both quantitative and qualitative approaches, the reduction of a large amount of data to a comprehensible summary is a significant function (Black, 1999). Descriptive statistics are used to provide quantitative descriptions in a manageable structure and reduce many numeric data into a simple summary. Descriptive statistics deals with the presentation of numerical data, in form of tables or graphs, and with the methodology of analysing the data. They allow researchers to summarise and describe the collected numeric data in a way in which readers can easily understand the results (Black, 1999; Fraenkel, Wallen, & Hyun, 2011).

SEM is a considerably complex statistical method for assessing relations between constructs, including latent and observed variables. Latent variables refer to the conceptual terms that are employed to show the theoretical concepts. These variables in the model are graphically symbolised by a circle. Observed variables refer to items, measures and indicators of variables that are measured directly and graphically represented by a square in the model (Andreev, Heart, Maoz, & Pliskin, 2009; Fornell & Larcker, 1981). Latent variables can be exogenous (independent variables), or endogenous (dependent variables). In fact, a latent variable is defined as a hypothetical construct or an unobservable variable, which is a theoretical concept that is not directly measurable, however, is a useful concept. A latent variable can only be derived and concluded from multiple measured variables, which are also known as manifest variables, indicators, items or observed measures (Fornell & Larcker, 1981).

The literature review on SEM distinguishes between two different operationalisation of the relationships between constructs/latent variables and their observed indicators: 1) the reflective indicators/main factor, and 2) the formative indicators/composite index measurement models of the latent variable (Coltman, Devinney, Midgley, & Venaik, 2008; Diamantopoulos & Siguaw, 2006; Hair et al., 2014).

3.8 Reporting the Result of Structural Equation Model

The estimation of a model delivers empirical measures of: 1) the relationships between the indicators and the constructs (measurement models or outer model) and 2) the relationships between the constructs (structural model or inner model) (Byrne, 2013b; Hair et al., 2014). The empirical measures allow the researcher to compare the theoretically established measurement and structural models with reality, as

represented by the sample data. In other words, the empirical measures enable the researcher to determine how well the theory fits the data. Therefore, using PLS-SEM enabled the researcher to measure the model's predictive potential and competences to judge the quality of the model (Hair et al., 2014). In general, Structural Equation Model (SEM) is composed of two sub-models, the measurement model and the structural model (Hair et al., 2014; Jung, 2007). The measurement model identified the nature of the relationship between the manifest indicators and latent variables. The structural model identified the causal relationships among the latent variables. It also specified whether particular latent variables directly or indirectly affect certain other latent variables in the model (Byrne, 2013b; Jung, 2007; Weston & Gore, 2006).

Table 3. 9
Systematic evaluation of PLS-SEM results

Systematic Evaluation of PLS-SEM Results	
Step 1: Evaluation of the Measurement Model	
Stapes 1a: Reflective Measurement Model	**Stapes 1b: Formative Measurement Model**
Internal Consistency	Collinearity among Indicators
Construct Validity	Significance and Relevance of Outer
Discriminant Validity	weights
Step 2: Evaluation of Structural Model	
Collinearity Assessment	
Structural Model Path Coefficients and Hypothesis Testing	
Coefficient of Determination (R2 Value)	
Effect size F2	
Predictive Relevance Q2	

3.9 Summary

This chapter outlines the research method and strategy employed in the study. It details how the sample of organizations was selected, the criteria for choosing respondents, the development of the questionnaire, the research materials used, and the survey

process. Additionally, this chapter provides a brief overview of the various analyses conducted, including the structural and measurement models, to test the research hypotheses. The results of this study will be presented in the following chapter, Chapter 4.

CHAPTER FOUR

ANALYSIS AND FINDINGS

4.1 Introduction

The demographics of the respondents, reliability, validity, and the outcomes of the examined hypothese are included in the findings. This chapter involves the following attributes; Initially, response rate, nonresponse rate, and common method bias test are shown; Secondly, the data acquired from the descriptive analysis, analysis of missing data, evaluation of normalcy, evaluation of multicollinearity, and the results are shown with the aid of the measurement model. The determination coefficient, the size of the effect, and the predictive significance are then determined using calculations.

4.2 Response Rate

The data has been gathered from the employees of the Interior Ministry in Abu Dhabi-UAE through questionnaires which were distributed by emails, SMS, as well as through WhatsApp messages, however, for improving the effective response rates, reminders were sent to those having more than two weeks without giving any response (Silva, Smith, & Bammer, 2002; Traina, MacLean, Park, & Kahn, 2005). Due to the prevailing situation of pandemic, personal visits to every respondent were a major risk factor for everyone, therefore, the data attained through those resources which were accessible for everyone was used. Furthermore, free consultation has

been provided for helping the respondent for completion of questionnaires. This was done that if any of the respondents faced any difficulty in getting or understanding the questionnaire distributed through social media resources (i.e., Skype, WhatsApp, and Phone calls, etc). A total of 600 questionnaires were distributed, 423 were answered. Among those returned, 400 questionnaires were deemed usable as they were free from errors.; however, 23 questionnaires were excluded because of having errors due to unknown several reasons. The findings of response rates are depicted in table 4.1.

Table 4. 1
Response rate of the Questionnaires

Responses	**UAE**	**Freq /Rate**
No of questionnaires distributed	600	100%
Returned questionnaires	423	70.5
Returned and usable questionnaires	400	66.66
Returned and excluded questionnaires	23	3.83
Response rate %		70.5%
Usable response rate %		66.66%

4.3 Non-Response Rate

It is one of the biggest difficulties in any quantitative investigation. Nonresponse errors occur when it is impossible to obtain information from individual respondents. These inaccuracies happen when respondents who chose not to participate in a survey give significantly different answers than those who did. For instance, difficulties reaching respondents or their refusal to take surveys may be factors in respondents' inability to respond. ArMStrong and Overton (1977) suggested that the major issue with non-response errors arises from the respondent's responses to questions as well as the provided information by respondents which differs significantly from those who provided the responses on initially sending the instrument. Moreover, if non-response

bias arises in the data, it will make impossible for the researcher to determine how the entire sample obtained from the respondents, responded. Additionally, non-response bias could affect how well the sample generalises to the population. As a result, it is essential to analyze this type of inaccuracy in survey research, before proceeding on to the analysis of hypothesis testing.

To deal with non-response bias, the target participants in this study were initially boosted to 50% of the original sample size, as referred by (Bartlett, Kotrlik & Higgins, 2001). Followup has been done through SMS, Emails, WhatsApp and free consultation has been provided as motivation (Rogelberg & Stanton, 2007). The study variables have also been used to assess any potential differences, despite the increased response rates in this research. In order to test for response bias, the participants were separated into two divisions: early and late respondents. Early respondents refer to those who provided their responses within a time frame of fifteen days. On the other hand, respondents who submitted their responses after the fifteen-day period were categorized as late responders.

It has been determined whether there is a significant difference in the variances between early and late respondents using Levene's test for equality of variances. The p-values related to the hypotheses were examined using the t-test in order to discover whether there is a significant difference between the two groups. The results depicted that the majority of responders had provided prompt responses. The breakdown was as follows: as indicated in table 4.2, the early responses totaled 287, while the late responses were 13.

Table 4. 2
Descriptive Statistics for the Early and Late Respondents

Variable	Response	N	Mean	SD
Employee Creativity	Early	287	3.73	0.96
	Late	113	3.68	0.93
Information Quality	Early	287	3.52	0.89
	Late	113	3.59	0.83
System Quality	Early	287	3.89	0.79
	Late	113	3.79	0.71
Service Quality	Early	287	3.52	0.93
	Late	113	3.46	0.87
Interface Quality	Early	287	3.92	0.98
	Late	113	4.02	0.93
Emotional Quality	Early	287	3.71	0.77
	Late	113	3.65	0.69
Training Engagement	Early	287	3.84	0.88
	Late	113	3.93	0.95

Following the Levene's test, a study of the collected data showed that there was no bias of any kind. The demographics of the respondents were also looked at before the structural analysis was done.

4.4 Demographics of Respondents

This section deals with the demographic characteristics of the participants who were actively involved in the study. Demographics of respondents include age, gender, qualification, marital, status, and occupation of respondents.

4.4.1 Age of Respondents

In this study age of the respondents has been calculated to determine from which age groups most of the respondents belong. Table 4.3 displays the obtained results.

Table 4. 3
Age of Respondents

Variables	Frequency	Percentage	Cumulative percent
Under 25	85	21.25	21.25
26-35	87	21.75	43.00
36-44	121	30.25	73.25
45-60	91	22.75	96
Over 60	16	4	100
Total	400	100	

The Table 4.3 show that the respondents' age distribution shows a larger frequency in the 36-44 age group than in other age groups.

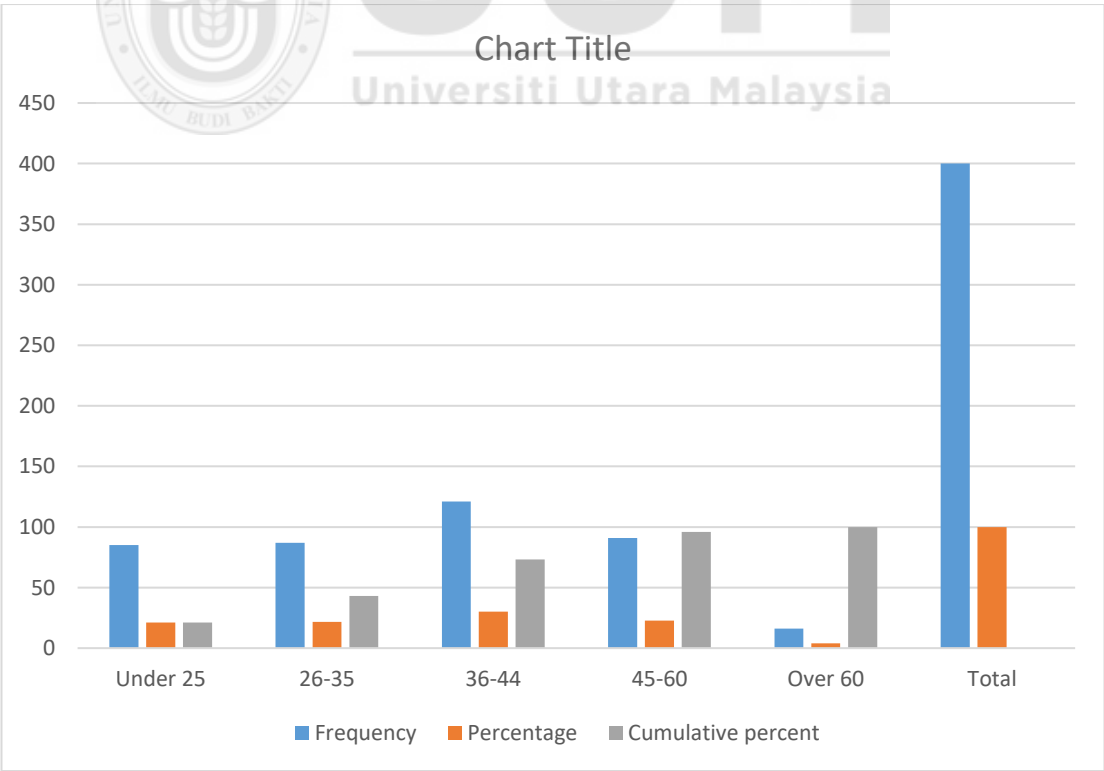

Figure 4. 1 Age of Respondents

4.4.2 Gender of Respondents

The employee's gender of the Interior Ministry in Abu Dhabi-UAE towards its employee creativity. It has been examined those genders affect the advantage of creativity. Kaufman (2006) argued that creativity in employees has a significant variation on the basis of genders. As a result, the Abu Dhabi, United Arab Emirates, ministry of interior examined the public sector workers' gender. Hence, the findings of the genders respondents in employees creativity can be visualized in table 4.4.

Table 4. 4
Gender of Respondents

Variable	Frequency	Percentage	Cumulative Percentage
Male	289	72.25	72.25
Female	111	27.75	100
Total	400	100	

According to data from the Interior Ministry, 27.75 percent are female and 72.25 percent are male. The analysis of genders can also be seen in figure 4.2 for more better understandings.

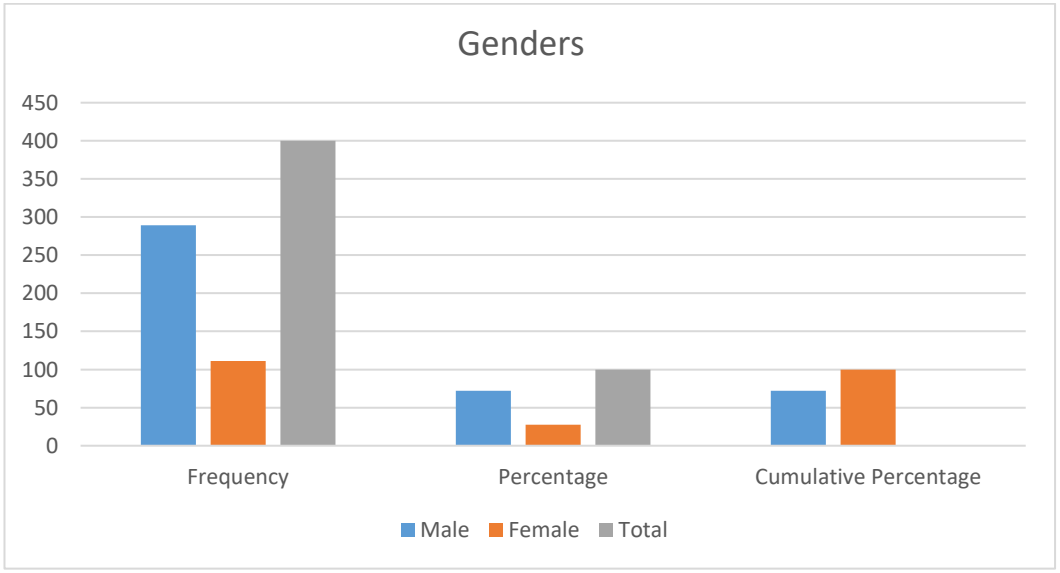

Figure 4. 2 Gender of Respondents

4.4.3 Qualification of Respondents

The educational background of Ministry of Interior employees has a significant impact on their creativity. According to Ron A. Boschma (2009), staff credentials significantly influence creativity. According to the data, 22.25 percent of respondents have completed high school, 19.50 percent hold certifications, 31 percent have earned a BS degree, and 27.25 percent posses a MS degree. The findings of qualification of employees which are shown in table 4.5.

Table 4. 5
Qualification of Respondents

Qualification	Frequency	Percentage	Cumulative Percentage
High School	89	22.25	22.25
Certifications	78	19.50	41.75
Bachelors	124	31	72.75
Masters	109	27.25	100
Total	400	100	

Above findings reveals that the majority of the BS employees are more qualified as compared to other respondents. Therefore, for better understanding of the results can be seen in figure 4.3.

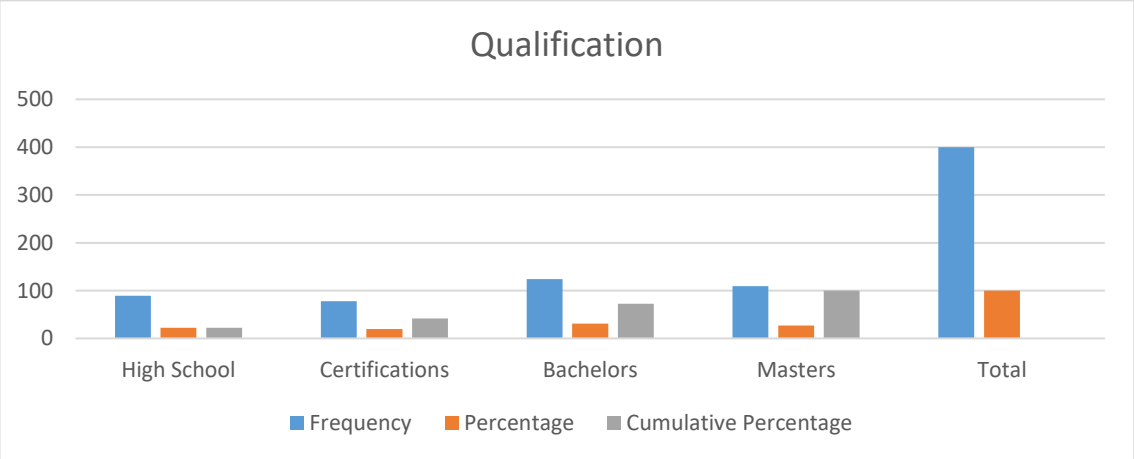

Figure 4. 3 Qualification of Respondents

4.4.4 Marital Status of Respondents

To establish whether marital status group shown a higher degree of employee creativity, the marital status of the respondents was analysed in this study. The findings revealed that single respondents are 39.5 percent, married respondents having 43 percent, 6 percent are from widows and 11.5 percent respondents are from divorced. The results, which are presented in Table 4.6, are as follows.

Table 4. 6
Marital Status of Respondents

Marital Status	Frequency	Percentage	Cumulative Percentage
Single	158	39.5	39.5
Married	172	43	82.5
Widow	24	6	88.5
Divorced	46	11.5	100
Total	400	100	

After all, analysis demonstrated that married respondents have the higher result as compared to other respondents. Consequently, for a precise understanding of the results, they are shown in figure 4.4.

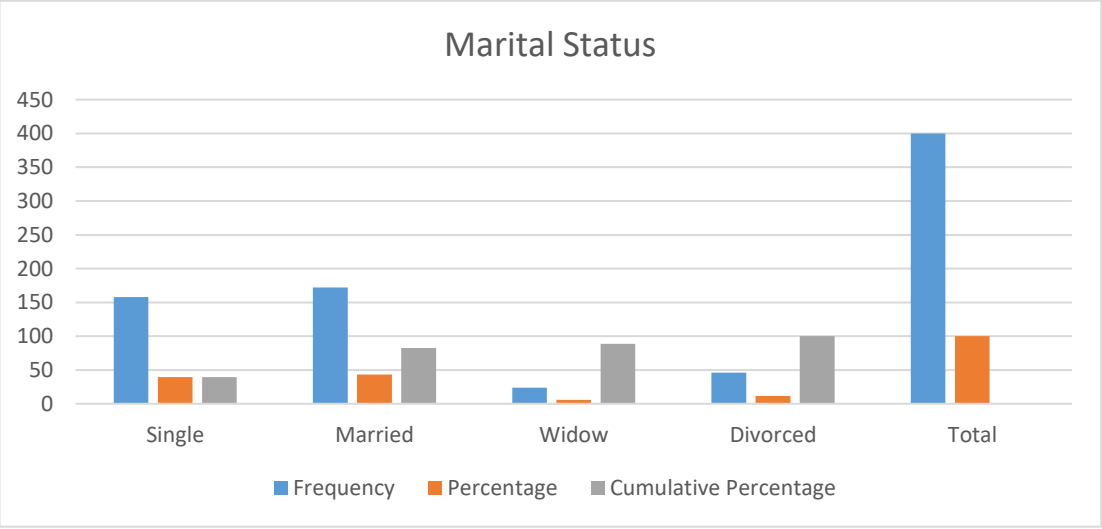

Figure 4. 4 Marital Status of Respondents

4.4.5 Designation of Respondents

The position of the respondents was analysed to determine the respondent's position in the ministry of interior in which they also identify the eligibility of respondents according to their positions in designation. The Ministry of Interior employs 24.50 percent in managerial roles, 27.25 percent in professional roles, 13.25 percent in technical roles, 17.25 percent in operator roles, and 17.75 percent in clerical roles. Consequently, the outcomes are illustrated in Table 4.7.

Table 4. 7
Designation of Respondents

	Frequency	**Percentage**	**Cumulative Percentage**
Managers	98	24.50	24.50
Professionals	109	27.25	51.75
Technicians	53	13.25	65.00
Operators	69	17.25	82.25
Clerical Staff	71	17.75	100
Total	400	100	

After the analysis in 4.7, the findings show that the professional respondents have more creativity as compared to others.

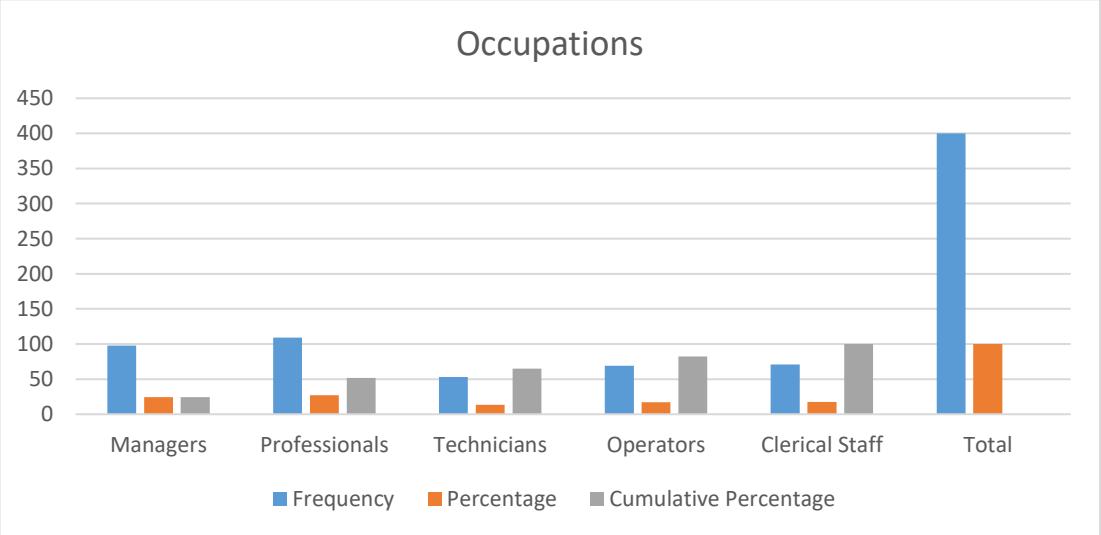

Figure 4. 5 Occupation of Respondents

4.5 Common Method Bias Test

The data may be biased due to common methods bias, but they were collected simultaneously using the same instrument in a common method test. Given the potential issues that are affected by conventional techniques. Furthermore, a test was employed to ensure the reliability of the observed scores and to mitigate the potential inflation of correlations caused by the method's influence. Rather than expressing changes in the underlying variables themselves, the variances in the data can be attributed to differences in how the measurements were made, as Podsakoff, MacKenzie, Lee, and Podsakoff (2003) pointed out.

There were also other points of contention regarding the study's data's applicability and the prevalence of bias in the methods used. There are a number of statistical tools and strategies available for reducing the method-wide inconsistency. Among these include the use of the statistical Harman's one-factor test and the reversal of question and item wording (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). An unrotated factor analysis was performed on 70 items representing all of the variables, and it was indicated that none of the factors individually accounted for over 50% of the variability. Scale improvements for certain items have also been employed to achieve these aims. If one variable accounts for more than half of the variation, Lowry and Gaskin (2014) state that there is common method bias.

4.6 Descriptive Analysis of Major Variables

The 5-point Likert scale was used to calculate the pertinent items in the descriptive analysis, which covered all the significant variables in this study. The availability of employee creativity items ranges from 1 (strongly disagree) to 5 (strongly agree). A

rating of 1 represents a significant disagreement regarding the presence of employee creative elements in an e-Learning system, whereas a rating of 5 indicates a strong agreement. Similarly, a score of 1 signifies a strong disagreement with the availability of e-Learning system qualities (Information Quality, System Quality, Service Quality, Interface Quality, and Emotional Quality), while a score of 5 indicates strong agreement with the availability of e-Learning system qualities. The descriptive analysis results are shown in Table 4.8.

Table 4. 8
Descriptive Analysis of Major Variables

Variable	Mean	SD	Minimum	Maximum
Employee Creativity	3.70	0.94	1	5
Information Quality	3.55	0.86	1	5
System Quality	3.84	0.75	1	5
Service Quality	3.49	0.90	1	5
Interface Quality	3.97	0.95	1	5
Emotional Quality	3.68	0.73	1	5
Training Engagement	3.88	0.91	1	5

4.7 Analysis of Missing Data

The researcher assumed the missing data would have a negative impact on the study and proposed preventative actions to implement at the data collection site. After receiving all of the completed questionnaires, the researcher went through each one to make sure it was filled out correctly. In addition, if respondents ignored any of the questions, they were gently prompted to fill out the questionnaire thoroughly and accurately. When less than 5% of the values for a given item are missing, Hair, Ringle, and Sarstedt (2013) recommended suBStituting the mean for the missing data. The investigation of missing values in this study found that no indicator had more than 5%

missing values, with values missing over a range of 0.2% to 1.5%. Therefore, SPSS 24's mean replacement was used to fill in the missing values.

4.8 Assessment of Normality

After looking at outliers, the data was found to have a normal distribution. The assumption of a normal distribution is fundamental to the fields of statistics (Hair, Black, Babin, & Anderson, 2010). The PLS-SEM (Partial Least Squares Structural Equation Modelling) is a flexible model that does not enforce any assumptions on the normality distribution of the data, despite the fact that ensuring the normality of the data is crucial for generalising findings (Henseler, Ringle, & Sinkovics, 2009; Hair, Ringle, & Sarstedt, 2013). PLS-SEM is a non-parametric statistical technique and does not require that the data be normally distributed (Hair, Ringle, & Sarstedt, 2013). Bootstrapping has the potential to overestimate standard errors and parameters when dealing with significantly non-normal data.

Normality, as defined by Hair, Black, Babin, and Anderson (2010), a condition where both the data distribution and the single metric variable have the same shape, which is the normal distribution. In addition, the study checked for normality by utilizing the skewness and kurtosis statistical approaches to look for outliers and assess the distribution's shape (Hair, Black, Babin, & Anderson, 2010; Kim, 2013). In addition, Kurtosis skewness scores of less than 7 and less than 2 are required per the criteria. There may be serious issues with the data and the results if the absolute values of Skewness and Kurtosis are greater than 3 and 10, respectively. In contrast, readings in excess of 20 may indicate much more serious problems (Kline, 2011). Therefore, after

calculating their absolute values, Skewness and Kurtosis were found to fall within the desired rangebetween 2 and 7 for all of the items in this study.

4.9 Assessment of Multicollinearity

When there is a strong relationship between the independent variables, a problem known as multicollinearity might arise (Hair, Black, Babin, & Anderson, 2010; Tabachnick & Fidell, 2013). When two or more variables have a high degree of correlation, it means that they are closely associated and have a tendency to vary together. This suggests that variations in one variable cause predictable variations in the other variable. A significant correlation implies that the variables have information in common or overlap, which may not be directly relevant to the study question or may add confounding variables into the analysis.

Multicollinearity between variables increases the regression coefficient beyond the standard error, reducing the coefficient's statistical reliability. Tolerance testing and the Variance Inflation Factor (VIF) test are two of the most reliable statistical methods for detecting multicollinearity (Hair, Black, Babin, & Anderson, 2010). As a result, the tolerance and VIF (Variance Inflation Factor) levels of multicollinearity for the independent variables have been evaluated in this study. This assessment aids in determining the degree of correlation between the independent variables and whether multicollinearity might be problematic for the study.

The independent variables have been analyzed in the same way that the correlation between the dependent variables has been. If the correlation between the independent variables is 0.9 or greater (Hair, Black, Babin, & Anderson, 2010), then

multicollinearity will also persist. The results show that there is no evidence of a significant link between any of the exogenous factors. This implies that none of the exogenous variables in the analysis are significantly related to or dependent on one another.

In addition, the correlation coefficients in this study are lower than the 0.7 threshold. Multicollinearity has been tested through the use of VIF and tolerance analysis on regression results obtained from SPSS collinearity diagnostic information. This is the gold standard for determining multicollinearity. Following is a presentation of the collinearity-related tolerance and VIF values in Table 4.9.

Table 4. 9
Multicollinearity analysis

Variables	VIF	Tolerance
Information Quality	2.15	0.41
System Quality	1.06	0.52
Service Quality	2.18	0.62
Interface Quality	1.23	0.58
Emotional Quality	1.73	0.65
Training Engagement	1.21	0.69

After all the analysis of variables in multicollinearity, the tolerance values are range from 1.06 to 2.18 whereas the values of VIF are range from 0.41 to 0.69.

4.10 Assessment of PLS-SEM

Here, we show you what the factor analysis found. The validity and reliability have been evaluated in this research. When discussing factor analysis, the outer model indicates that the studied variables are unidimensional and that the items used to assess the variables are highly relevant. Then, the links between the latent variables and the

structural models are assessed, and the validity and reliability of the construct assessments are confirmed.

In addition, the inner model and the outer model were evaluated following the data screening and testing (Vinzi, Chin, Henseler, & Wang, 2010; Hair, Ringle, & Sarstedt, 2013) that was previously stated. Before executing the analysis of PLS-SEM, the model needs to be put up in a way that is intuitive. Indicators need to be defined so that they may be separated into formative and reflective categories. A formative measurement model is evaluated in a very different way than a reflecting measurement model (Hair, Ringle, & Sarstedt, 2013), demonstrating the importance of model configuration.

Indicator variables and concealed variables are examples of reflecting variables rather than indicator ones. In addition, no two-tiered structures of higher order were examined in the study. The conceptual frameworks discovered by studying internal models have also been classified as first-order constructs. Therefore, the study's seven exogenous latent variables are related to the constructs in a certain order. The study also includes five independent variables. Mediating the relationship between employee creativity and training participation in this research are endogenous factors.

4.10.1 The Measurement Model

PLS analysis begins with an assessment of the measurement model. It investigates how well indicators (items) conceptually load and are linked to relevant conceptions through component measurement. Examining the router model verifies the survey

items' reliability and validity by confirming that they accurately calculate the factors they were designed to measure.

An effective assessment of a measurement model is characterized by obtaining favorable results across various statistical measures. These measures include positive outer loading values, indicating the strength of the relationships between observed indicators and their underlying constructs. Additionally, it involves achieving satisfactory values for Cronbach's Alpha, which reflects the internal consistency of the items within each construct, and Composite Reliability, which measures the overall reliability of the construct. Furthermore, a successful evaluation includes obtaining an acceptable level of Average Variance Extracted, which indicates the amount of variance captured by the construct relative to measurement error. Finally, it entails demonstrating Discriminant Validity, ensuring that the constructs are distinct from one another and not highly correlated (Henseler, Ringle, & Sinkovics, 2009; Hair, Ringle, & Sarstedt, 2013) Figure 4.6 thus represents the measurement model.

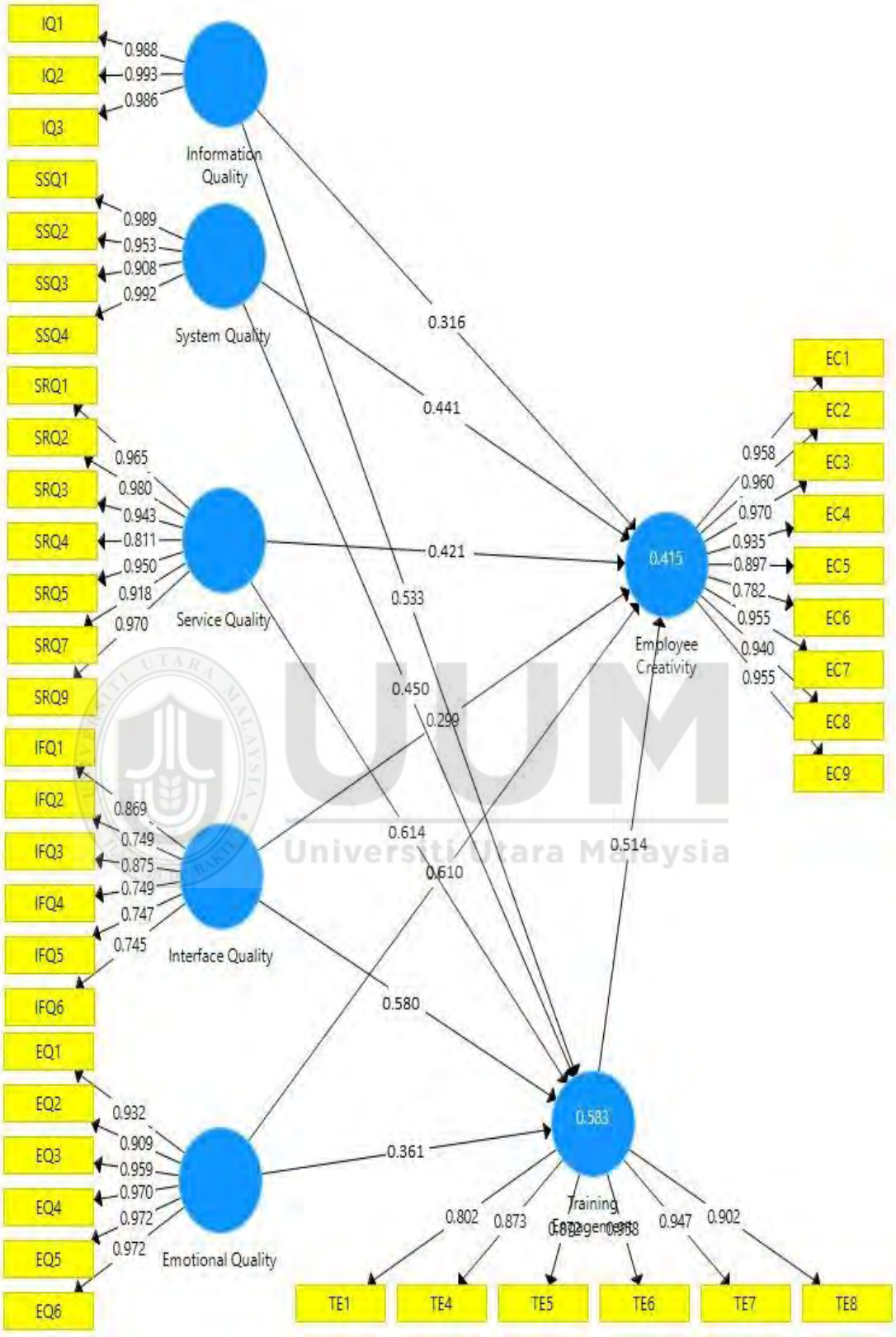

Figure 4. 6 The Measurement Model

4.10.1.1 Outer Loading

First, in order to find any problems with particular items and to establish convergence validity, the study looks at the individual item loadings. Table 4.10 in this study displays the outer loadings of the indicators. According to table 4.10, the outer loadings for each indication range from a minimum value of 0.745 to a maximum value of 0.993.

Table 4. 10
Outer Loadings

Items	Emotional Quality	Employee Creativity	Information Quality	Interface Quality	Service Quality	System Quality	Training Engagement
EC1		0.958					
EC2		0.960					
EC3		0.970					
EC4		0.935					
EC5		0.897					
EC6		0.782					
EC7		0.955					
EC8		0.940					
EC9		0.955					
EQ1	0.932						
EQ2	0.909						
EQ3	0.959						
EQ4	0.970						
EQ5	0.972						
EQ6	0.972						
IFQ1				0.869			
IFQ2				0.749			
IFQ3				0.875			
IFQ4				0.749			
IFQ5				0.747			
IFQ6				0.745			
IQ1			0.988				
IQ2			0.993				

IQ3	0.986			
SRQ1		0.965		
SRQ2		0.980		
SRQ3		0.943		
SRQ4		0.811		
SRQ5		0.950		
SRQ7		0.918		
SRQ9		0.970		
SSQ1			0.989	
SSQ2			0.953	
SSQ3			0.908	
SSQ4			0.992	
TE1				0.802
TE4				0.873
TE5				0.872
TE6				0.958
TE7				0.947
TE8				0.902

It may be inferred from the results shown in table 4.10 that all of the model's items have item loadings higher than 0.7. This shows that the objects are appropriate for the model's inclusion. Furthermore, just a small percentage of the items—less than 10%—were eliminated from the model because their item loadings were too low. There are still enough items in the model despite these being excluded. It is noteworthy to highlight that the dependability of the scale is not dramatically affected by the removal of less than 10% of items, maintaining its utility. Therefore, the general validity of the scale in this study would not be compromised if less than 10% of the items from the instrument used to investigate the variables were removed.

4.10.1.2 Cronbach's Alpha

Using Cronbach's alpha, the reliability of a number of constructs was evaluated in this study. Information quality, system quality, service quality, interface quality, emotional quality, training engagement, and staff creativity are among the constructs that are examined. The dependability and homogeneity of items within each construct are indicated by Cronbach's alpha, a measure of internal consistency. The study sought to determine the degree to which the items within each construct consistently measure the underlying notion by calculating Cronbach's alpha for these constructs. The results are shown in Table 4.11.

Table 4. 11
Cronbach's Alpha

Variables	**Cronbach's Alpha**
Information Quality	0.989
System Quality	0.972
Service Quality	0.976
Interface Quality	0.881
Emotional Quality	0.979
Training Engagement	0.949
Employee Creativity	0.980

In the end, Cronbach's alpha results in Table 4.11 demonstrated the importance of the seven variables. Additionally, Cronbach's alpha values range from 0.881 to 0.989. The results indicate that the Cronbach's alpha values for all variables in the study surpass the threshold of 0.7, as recommended by (Henseler, Ringle, & Sarstedt, 2015).

4.10.1.3 Composite Reliability

This measurement, in the opinion of Hair, Ringle, and Sarstedt (2013), guarantees that the targeted items evaluating the construct yield equivalent results. As a result, the composite reliability has been used in this work to evaluate the internal consistency reliability.

Hair, Ringle, and Sarstedt (2013) asserted that the advantage of composite reliability is that it does not presuppose an equal loading of indicators for variables. The range of composite reliability values is 0 to 1, and it is typically advised that the threshold value not drop below 0.60 (Henseler, Ringle, & Sinkovics, 2009), however, values from 0.70 and higher is more appropriate (Hair, Ringle, & Sarstedt, 2013). Similar to this, internal consistency is average when the composite reliability rating is between 0.6 and 0.7. Table 4.12 shows the composite reliability values with respect to the variables.

Table 4. 12
Composite Reliability

Variables	Composite Reliability
Information Quality	0.992
System Quality	0.980
Service Quality	0.980
Interface Quality	0.909
Emotional Quality	0.983
Training Engagement	0.960
Employee Creativity	0.983

All of the estimated values for the study's constructs were found to be higher than the cutoff point of 0.70. The value ranges for composite reliability are 0.909 to 0.992 which shows very good composite and perfect for the structural models.

4.10.1.4 Average Variance Extracted

Using AVE convergent validity according to the individual variables was assesed. Hair, Ringle, and Sarstedt (2013) demonstrated the link between the measurement of the same concept and the use of AVE (Henseler, Ringle, & Sinkovics, 2009; Hair, Ringle, & Sarstedt, 2013).

AVE value of 0.50 implies sufficient convergent validity. Furthermore, convergent validity has been evaluated by analysing the AVE values. As a result, the AVE values of all the variables has been examined in 4.13 below.

Table 4. 13
Average Variance Extracted

Variables	Average Variance Extracted (AVE)
Information Quality	0.978
System Quality	0.924
Service Quality	0.875
Interface Quality	0.626
Emotional Quality	0.907
Training Engagement	0.799
Employee Creativity	0.864

After all, the threshold level of 0.50 in table 4.13 is increased for the analysis of Average Variance Extracted for all constructions. The findings reveal that AVE values range from 0.626 to 0.978.

4.10.1.5 Discriminant Validity

This study has looked at the discriminant validity, which is concerned with how distinct one construct is from another construct. Another way to put it is that theoretically independent constructions' metrics are unconnected to one another (Hair,

Ringle, & Sarstedt, 2013). The Fornell-Larcker criterion is also frequently used as the main approach for assessing discriminant validity in investigations (Hair, Ringle, & Sarstedt, 2013). The cross-loading evaluation strategy, which is expected to be more permissive because it is probably going to have more discriminant validity constructs, is another.

The square root of the average variance extracted (AVE) for each construct must also be greater than the construct's strongest connection with any other latent variable in order to show discriminant validity. With minimal overlap or repetition with other constructs, this criterion helps to establish that each construct expresses a distinct and distinctive part of the underlying concept. The study can evaluate how distinct the constructs are from one another experimentally by comparing the square root of AVE with the maximum correlation between each construct and any other latent variable (Henseler, Ringle, & Sinkovics, 2009; Hair, Ringle, & Sarstedt, 2013).

In this study, the same method was employed to assess discriminant validity. The results reveal that discriminant validity is valid by comparing the square root of the Average Variance Extracted (AVE) for each construct to the correlation values displayed in the correlation matrix. In Table 4.14, the square root of the constructions is used to evaluate the Fornell-Larcker criterion. The strongest correlation with any other construct, it can be shown, is higher than the square root of the AVE. As a result, it may be inferred from the computations in Table 4.14 that the constructs exhibit discriminant validity.

Table 4. 14
Discriminant Validity

Variables	Emotional Quality	Employee Creativity	Information Quality	Interface Quality	Service Quality	System Quality	Training Engagement
Emotional Quality	0.953						
Employee Creativity	0.493	0.930					
Information Quality	0.676	0.547	0.989				
Interface Quality	0.569	0.528	0.528	0.791			
Service Quality	0.711	0.535	0.723	0.467	0.935		
System Quality	0.624	0.368	0.517	0.516	0.523	0.961	
Training Engagement	0.617	0.516	0.741	0.481	0.625	0.427	0.894

Table 4.14 demonstrates that all constructs' assessments are valid, statistically-implied measures of their respective constructs, including all the variables.

4.11 Assesment of Direct Relationships

In this study hypotheses 1 through 16 are evaluated in depth through a methodical model analysis of the structural model. An internal model analysis is the first step in the process. The Smart PLS 3.0 PLS-SEM bootstrapping method was used to determine the importance of the correlations and to measure the size of the route coefficients using PLS-SEM methodologies. Even though 5000 samples were utilised for bootstrapping, the total number of instances was computed using the initial number of cases (Henseler, Ringle, & Sinkovics, 2009; Hair, Ringle, & Sarstedt, 2013).

Research into investigating relationships between employee creativity (H1–H5) and the independent variables of information quality, system quality, service quality, and emotional quality of the e-learning system was another primary focus of the first model. The relationships between the independent variables (information quality, system quality, service quality, interface quality, and emotional quality) and the mediator variable (training engagement) have also been examined (H6 to H10). The following model incorporates a mediator variable, training engagement, and uses.

H11 to examine the correlations between the mediator and the dependent variable

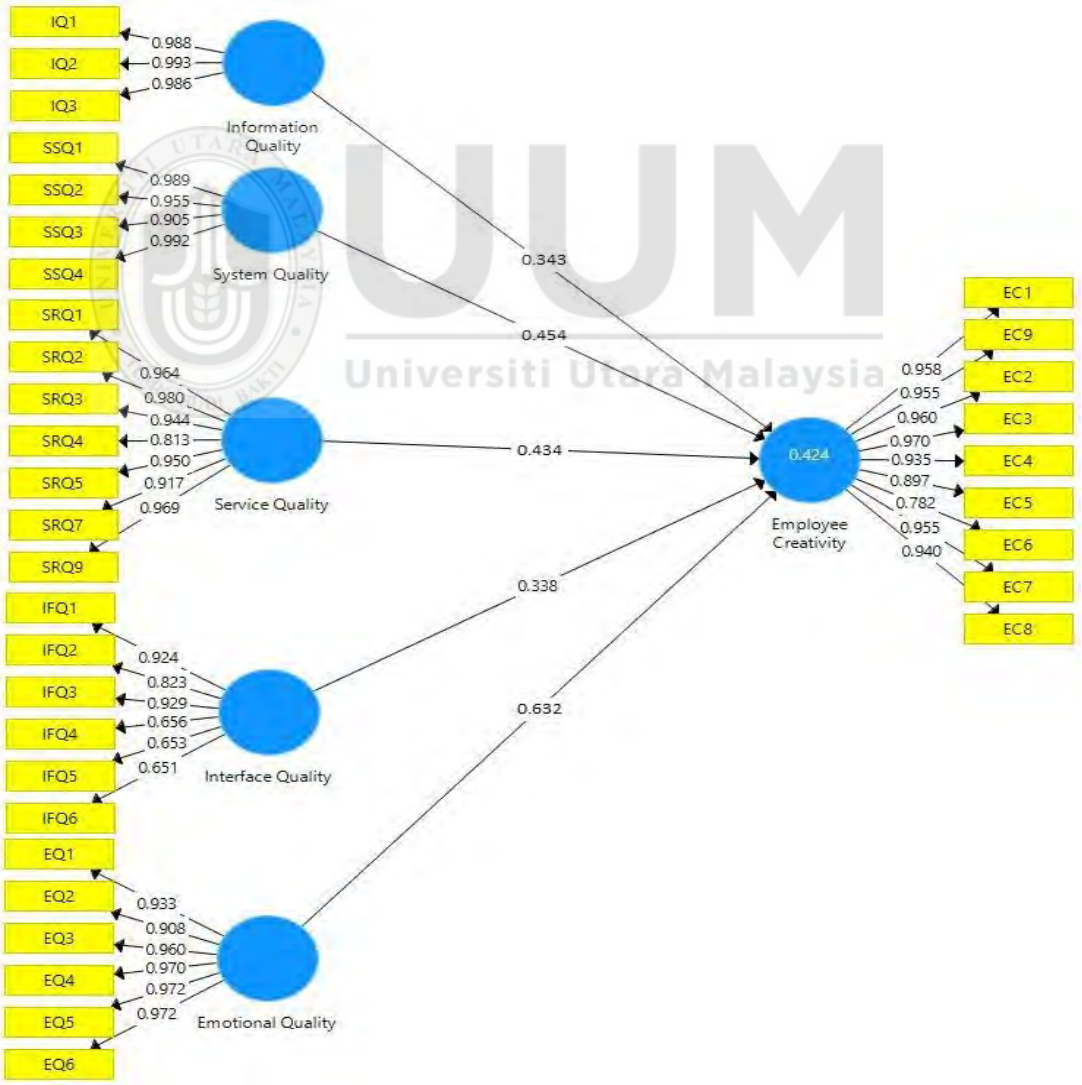

Figure 4. 7 PLS Direct Effects AlgorithMS

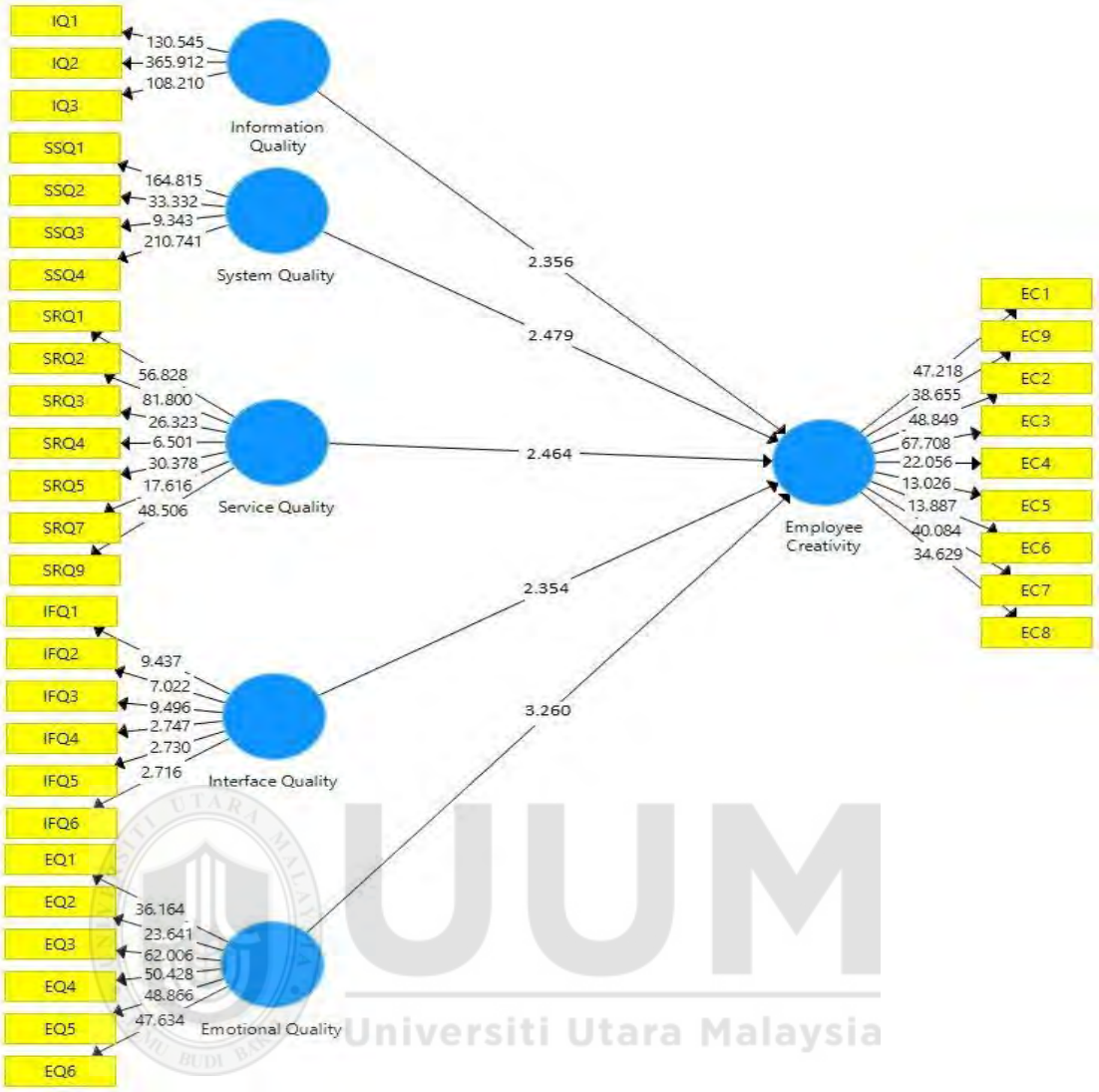

Figure 4. 8 PLS Direct Effects Bootstrapping

The path coefficients have been determined using the PLS-SEM algorithMS and the bootstrapping techniques. All of the exogenous factors were shown to have direct, substantial correlations with the structural equation modeling's endogenous variables. Results from a bootstrapping study (Sarstedt, M. Ringle, Smith, ReaMS, & F.HairJr, 2014) with 400 cases and 5000 sub-samples show that the association is significant, and that the impact of independent variables is substantial, positive, and direct on the dependent variables. Since the computed value of p is less than 0.05, we may conclude that there is a considerable direct positive relationship between information quality,

system quality, service quality, interface quality, and emotional quality and employee creativity.

Further, the results of H1 show that the quality of the information has a direct and beneficial effect on the inventiveness of workers (=.34; t = 2.356; p = 0.02). The results confirm H2 in that there is a positive direct relationship between system quality and employee creativity (=.454; t = 0.479; p = 0.03). This lends credence to the H3 that indicates that high-quality customer service has a direct, positive effect on workers' propensity to innovate (=.434; t = 2.464; p = 0.01). Furthermore, the results demonstrate that H4 is supported, since the quality of the interface has a direct and positive effect on the creativity of employees (=.338; t = 2.354; p = 0.02). Results from H5 are consistent with H4 (=.632; t = 3.260; p = 0.00). Table 4.15 presents the outcomes of the path coefficient analysis.

Table 4. 15
Path Coefficient Direct Effects

	Original Sample (O)	**Sample Mean(M)**	**Standard Deviation STDEV)**	**T Statistics (O/STDEV)**	**P Value**
Information Quality-> Employee Creativity	0.343	0.338	0.145	2.356	0.002
System Quality-> Employee Creativity	0.454	0.448	0.947	0.479	0.003
Service Quality-> Employee Creativity	0.434	0.429	0.1761	2.464	0.001

Interface Quality-> Employee Creativity	0.338	0.331	0.143	2.354	0.002
Emotional Quality-> Employee Creativity	0.632	0.527	0.194	3.260	0.000

Initially, our investigation focused on the impact of information quality, system quality, service quality, interface quality, and emotional quality on employees' inventiveness. Our findings revealed a positive correlation between these variables in all cases. Subsequently, we introduced a mediating variable and proceeded to analyze the direct relationships between information quality, system quality, service quality, interface quality, emotional quality, and training engagement, as well as the associations between training engagement and employee creativity. Therefore, our examination involved investigating the direct connections between the independent and mediating factors, as well as the mediating and dependent factors, before calculating the indirect relationships between the independent and dependent variables.

We also examined the correlation between employee creativity and training participation, as well as the relationship between training participation and the independent variables of information quality, system quality, service quality, interface quality, and emotional quality. Our hypotheses were as follows:

H6: The quality of information has a significant direct positive effect on training participation (coefficient = 0.533; t-value = 4.929; p-value = 0.000).

H7: The quality of a system has a significant direct positive effect on training participation (coefficient = 0.450; t-value = 2.610; p-value = 0.002).

H8: The quality of a service has a significant direct positive effect on training participation (coefficient = 0.614; t-value = 2.900; p-value = 0.001).

H9: The quality of the interface has a significant direct positive effect on training participation (coefficient and statistical details not provided).

The results of these hypotheses are displayed in Table 4.16.

Table 4. 16
Path Coefficients Mediating Direct Effects

	Original Sample(O)	**Sample Mean(M)**	**Standard Deviation (STDEV)**	**T Statistics (O/ STDEV)**	**P Values**
Information Quality-> Training Engagement	0.533	0.529	0.108	4.929	0.000
System Quality-> Training Engagement	0.450	0.446	0.172	2.610	0.002
Service Quality-> Training Engagement	0.614	0.610	0.211	2.900	0.001
Interface Quality->Training Engagement	0.580	0.576	0.157	3.683	0.000
Emotional Quality->Training Engagement	0.361	0.357	0.108	3.321	0.000

Training Engagement->Employee Creativity	0.514	0.509	0.103	4.945	0.000

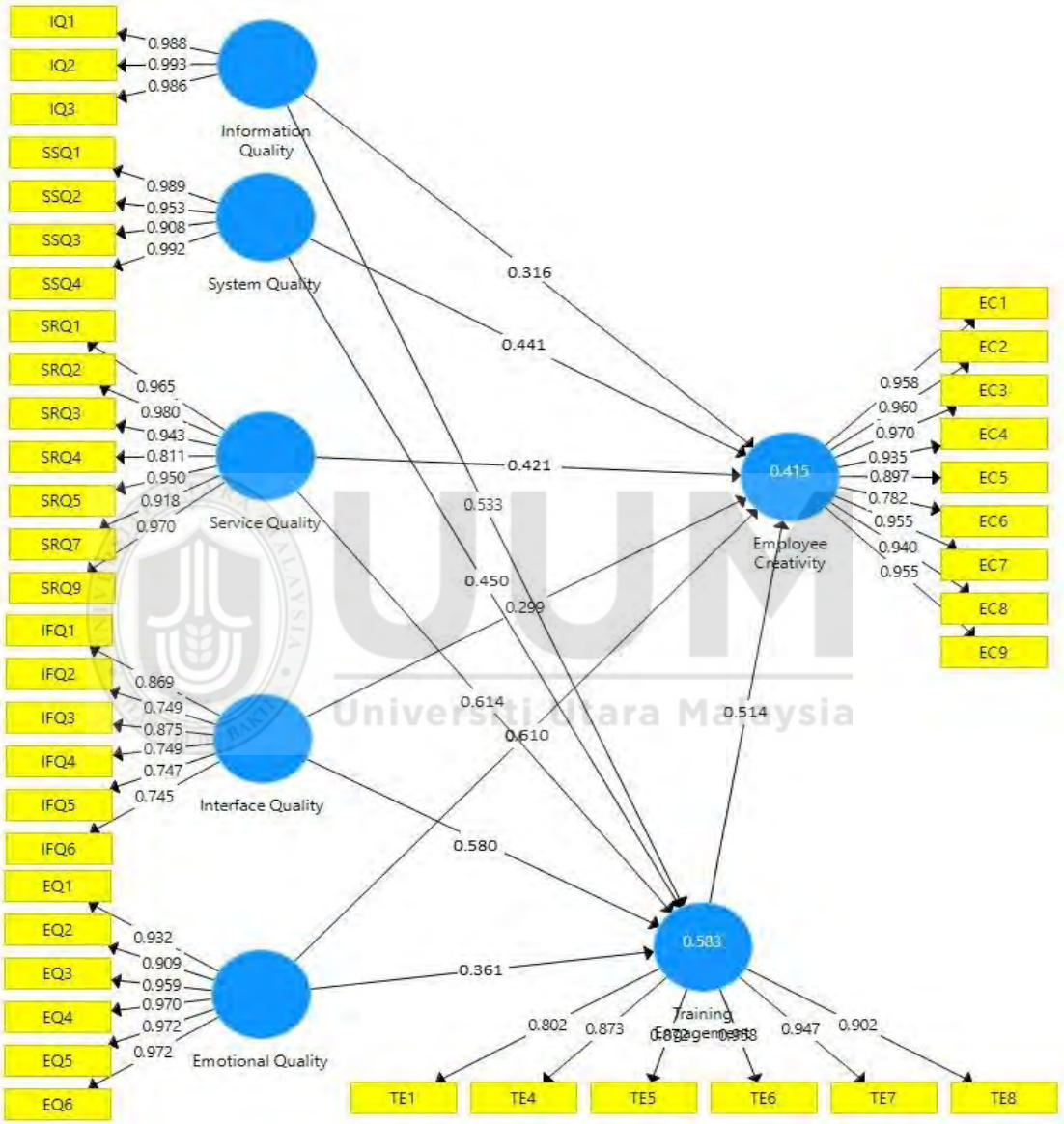

Figure 4.9 PLS Mediation AlgorithMS

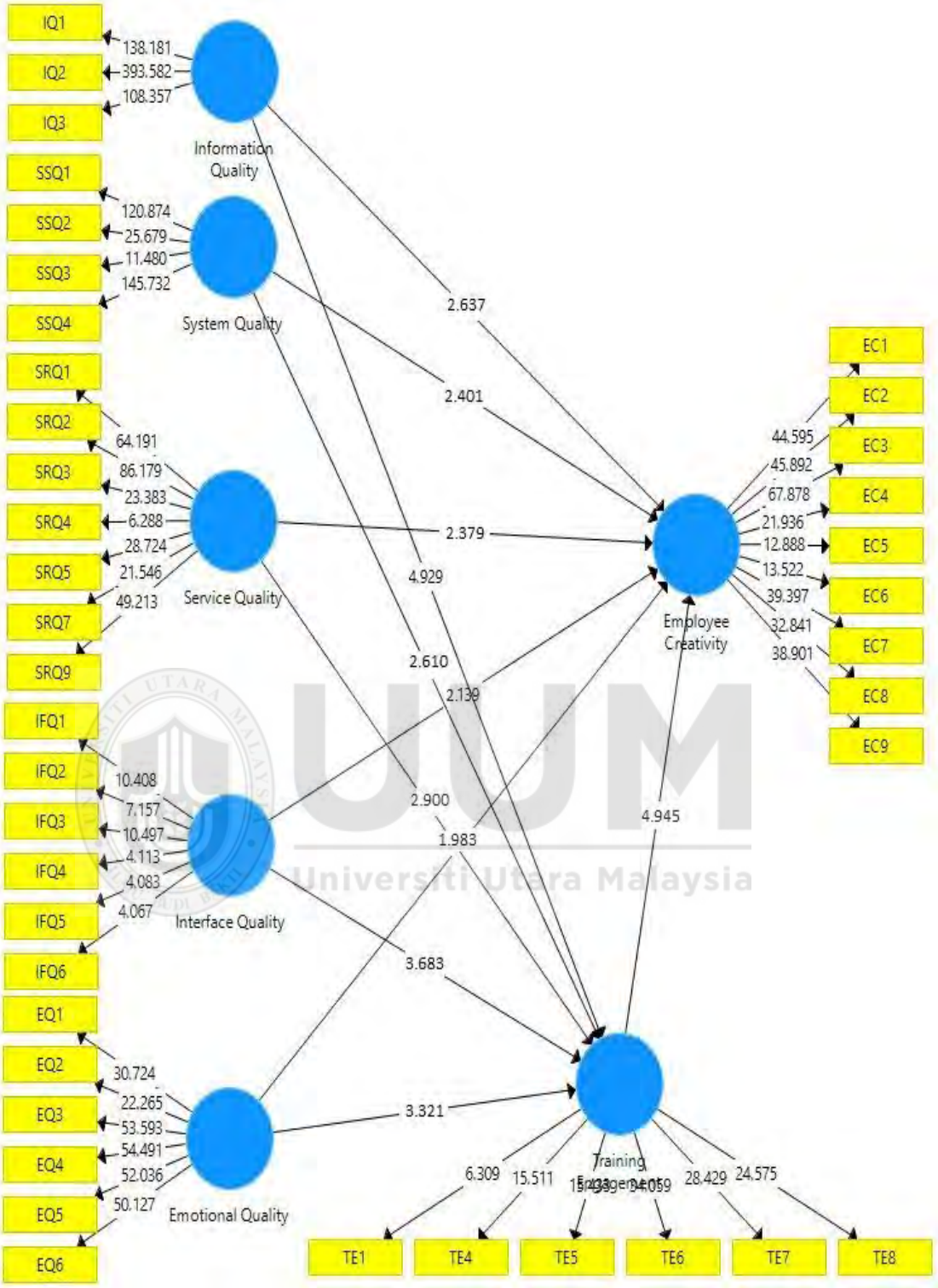

Figure 4.10 PLS Mediation Bootstrapping

4.12 Assessment of Mediation Test

The mediation analysis probes how the independent variable indirectly influences the dependent variable. In 2008, Preacher and Hayes (Hoyle & Robinson, 2004) advocated many methods for assessing mediation's efficacy; these methods include the Casual Steps Approach and the Serial Strategy, and they serve as illustrative examples of the four situations described by Baron Kenny (Baron & Kenny, 1986). Sobel's (1982) product of coefficient model, the product method of distribution (MacKinnon, Fritz, WilliaMS, & Lockwood, 2007), and Preacher and Hayes's (2008) bootstrapping method are three further methods for mediation analysis. However, the most up-to-date technique to mediation analysis is the bootstrapping method (Preacher & Hayes, 2008), which creates an empirical representation of the indirect effect sample distribution. However, the cumulative effect need not always be noteworthy. Without it, mediation analysis may be conducted because of the potential for major indirect effects (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher & Hayes, 2008; Zhao, John G. Lynch, & Chen, 2010). A mediator variable serves as an intermediate in the relationship between independent factors and the dependent variable, according to Preacher and Hayes' (2008) research. The mediator variable influences the dependent variables (a and b), just as the independent variable influences the mediator variable. It shows that the mediator variable may not mediate the relationship between the independent variable and the dependent variable if the indirect effect of the mediator variable on the dependent variable is not statistically significant (Preacher & Hayes, 2008). The mediator variable (c2) must also be present, and the independent components' direct effects on the dependent variable should be

either negligible or positive. In their 2011 article, Rucker, Preacher, Tormala, and Petty emphasised the significance of assessment.

Hair, Ringle, and Sarstedt (2013) state that path models use PLS-SEM and bootstrapping approaches to examine route coefficients and t-values.

In the subsequent model, we incorporated a mediator variable to evaluate the path model. This allowed us to examine the significance of the independent variable, the relationships among the mediators, and the associations between the mediators and the dependent variable. We examined the links between the mediators and the independent variable's significance as well as its influence. Additionally, we looked at the connections between the mediators and the dependent variable, paying close attention to their effects. We sought to get a thorough grasp of the dynamics and relevance of the independent variable, the mediators, and their impact on the dependent variable by closely examining these features of the path model.

The mediation effect cannot be determined without this, but it is not particularly important. The product of the two significant route coefficients is then divided by its standard error to ascertain the importance of the indirect effect. Through the use of Smart PLS 3.0 (Hair, Ringle, & Sarstedt, 2013) and bootstrapping procedures with 400 cases and 5000 suBSamples, we investigated the role of training engagement as a mediator of the significant positive influence of E-Learning System Qualities (information quality, system quality, service quality, interface quality, and emotional quality) on employee creativity. The PLS-SEM approaches with training engagement

as mediator are depicted in Figure 4.9, and the PLS-SEM bootstrapping with training engagement integration is depicted in Figure 4.10.

Both routes a and b have been multiplied by the 5000-sample bootstrapping findings after the mediator variable training engagement was added to model 2. The standard error was deducted from the product of the two significant positive routes (axb/Sab), which gave us the t-value. A statistical indicator that shows the importance of a certain link or impact within the model is the t-value. We can evaluate the strength and statistical significance of the link between the variables included in the analysis by computing the t-value.

Table 4.17 shows that there are mediation positive relationships between service quality and employee creativity (r = 0.316; t = 13.34; p = 0.000), between system quality and employee creativity (= 0.231; t = 12.90; p = 0.001), and between system quality and information quality (= 0.274; t = 24.37; p = 0.000), all of which are mediated by training engagement. In table 4.17, we can see the results of the mediated discussion.

Table 4. 17
Mediation Effects

	Original Sample (O)	Sample Mean(M)	Standard Deviation	T Statistics (O/ STDEV)	P Values
Information Quality -> Training Engagement-> Employee Creativity	0.274	0.268	0.011	24.37	0.000

System Quality-> Training Engagement-> Employee Creativity	0.231	0.225	0.017	12.90	0.001
Service Quality-> Training Engagement-> Employee Creativity	0.316	0.305	0.023	13.34	0.000
Interface Quality-> Training Engagement-> Employee Creativity	0.298	0.291	0.016	18.21	0.000
Emotional Quality -> Training Engagement->Employee Creativity Quality	0.186	0.181	0.011	16.42	0.000

The variation accounted for value (VAF) was calculated to evaluate how much employee creativity is indirectly explained by service quality, system quality and information quality via training engagement in order to estimate the extent of the indirect effect. The study did this by using the variance-accounted-for value formula (VAF) proposed as follows by (Hair Jr et al., 2014):

$$VAF = a*b / a*b+c$$

When: VAF 20% (no mediation), VAF => 20% and =80% (partial mediation), and VAF >80% (full mediation), according to the criteria of Hair et al. (2014, p. 225. The VAF findings is 53% which means partial mediation,

4.13 Coefficients of Determination (R^2)

Coefficients of determination (R2) of endogenous latent constructs are the most often used standards for assessing structural models (Hair, Ringle, & Sarstedt, 2013). R2 values of 0.27, 0.13, and 0.2 are regarded as significant, moderate, and weak, respectively, by Cohen (1988). Employee creativity has a value of 0.415, and training engagement has a value of 0.583, according to the data in Figure 4.9. These two values are both only statistically significant. In order to provide a thorough study or interpretation of the five external elements, we require more details or clarification regarding their precise values or measurements. The variables are included in the model, which explains 53% of the variance in the mediating variable training engagement, according to the R2 value.

4.14 Assessment of Effect Size (f^2)

Seven exogenous variables are all simultaneously combined in the model, as shown by the holistic R2 value, which shows a 41% variance in the endogenous variable (employee creativity). The model was found to have significant predictive validity based on evaluations of the R2 variable.

Then evaluation of effect size(f2) was conducted as shown by after finding the endogenous constructs' coefficient of determination (training engagement and employee creativity) (Hair, Ringle, & Sarstedt, 2013). To calculate the effect size for

the exogenous construct shown below a formula was constructed, where, respectively, 0.02, 0.15, and 0.35 were predicted to have minor, moderate, and high effects (Cohen, 1988). Chin, Marcolin, and Newsted (2003) emphasised the need to take into account all f2 strengths because they have the potential to alter endogenous variables.

$$F^2 = R^2 \text{ Included } -R^2 \text{ excluded}/1 - R^2 \text{ Included}$$

The exogenous construct's effect size on the endogenous variable, which has been shown to have a statistically significant positive effect, is evaluated and reported in this study. The magnitude of the individual foreign construct's influence over the specific endogenous construct is shown in Table 4.18. The results show that most exogenous constructs only have a small impact on their specific endogenous constructs.

Table 4. 18
Effect Size

Variables	**Effect Size**	
Information Quality-> Employee Creativity	0.03	small
System Quality->Employee Creativity	0.15	moderate
Service Quality->Employee Creativity	0.03	small
Interface Quality->Employee Creativity	0.01	small
Emotional Quality->Employee Creativity	0.30	large
Information Quality -> Training Engagement	0.02	small
System Quality-> Training Engagement	0.20	moderate
Service Quality-> Training Engagement	0.04	small
Interface Quality-> Training Engagement	0.35	small
Emotional -> Training Engagement	0.22	moderate

4.15 Assessment of Predictive relevance (Q^2)

The Stone-Geisser criterion states that an inner model must have the ability to predict endogenous latent constructs in order for its predictive relevance to be assessed (Henseler, Ringle, & Sinkovics, 2009). In fact, it is possible to evaluate the predictive significance of an inner model by using the Stone-Geisser-proposed predictive relevance Q2 test. This measure, which assesses the model's capacity to predict endogenous latent components, can be calculated using methods like blindfolding. (Henseler, Ringle, & Sinkovics, 2009; Hair, Ringle, & Sarstedt, 2013). The cross-validated redundancy metric for endogenous latent components was obtained in this study by comparing the Q2 to blindfolding approaches using the Stone-Geisser test. (Hair, Ringle, & Sarstedt, 2013). Table 4.19 shows the following cross-validated redundancies for training engagement and employee innovation.

Table 4. 19
Cross Validated Redundance

	SSO	SSE	Q (= 1-SSE/SSO)
Employee Creativity	900.000	592.282	0.342
Training Engagement	600.000	331.059	0.448

The results in table 4.19 above demonstrate that the model has a significant predictive significance. The study's findings, which involved the hypothesis that was examined to meet the goals in table 4.20, have been drawn to a conclusion.

Table 4. 20
Summary of Results

Hypothesis	Description	Decision
H1	Information Quality has a significant positive direct effect on Employee Creativity	Supported

H2	System Quality has a significant positive direct effect on Employee Creativity	Supported
H3	Service Quality has a significant positive direct effect on Employee Creativity	Supported
H4	Interface Quality has a significant positive direct effect on Employee Creativity	Supported
H5	Emotional Quality has a significant positive direct effect on Employee Creativity	Supported
H6	Information Quality has a significant positive direct effect on Training Engagement	Supported
H7	System Quality has a significant positive direct effect on Training Engagement	Supported
H8	Service Quality has a significant positive direct effect on Training Engagement	Supported
H9	Interface Quality has a significant positive direct effect on Training Engagement	Supported
H10	Emotional Quality has a significant positive direct effect on Training Engagement	Supported
H11	Training Engagement has a significant relationship with Employee Creativity	Supported
H12	Training Engagement has a significant mediation effect in the relationship between Information Quality and Employee Creativity	Supported
H13	Training Engagement has a significant mediation effect in the relationship between System Quality and Employee Creativity	Supported
H14	Training Engagement has a significant mediation effect in the relationship between Service Quality and Employee Creativity	Supported
H15	Training Engagement has a significant mediation effect in the relationship between Interface Quality and Employee Creativity	Supported

H16	Training Engagement has a significant mediation effect in the relationship between Emotional Quality and Employee Creativity	Supported

4.16 Chapter Summary

First, the background of the thesis is discussed. Both the percentage of people who took the test and the percentage of people who did not take the test have been analyzed. How many responses have been returned, as well as how helpful those responses, are measured by the response rate. The percentage of early respondents and the percentage of late respondents—those who submit their comments after the given time—are the main subjects of the analysis in the non-response bias test. This analysis explicitly assesses if the traits and replies of early and late respondents differ considerably in order to determine whether there is a potential bias in the sample owing to non-response. Researchers can identify if there is any systematic difference in the responses dependent on the timing of the response by comparing the percentages of early and late respondents. This aids in assessing how non-response might affect the study's overall findings and generalizability. In addition, the age, gender, education, marital status, and occupation of the respondents have all been analyzed. After a thorough demographics investigation, it is determined that the commonly used bias test has been performed. The descriptive analysis of all variables includes calculating their means, standard deviations, ranges, and extreme values. After the normalcy has been determined, the examination of missing values that have been misplaced or encounter some other issue can proceed. In a similar vein, all the variables in a multicollinearity have been analyzed for their tolerance and VIF. The outer model, Cronbach's alpha, composite reliability, average variance extracted, and discriminant validity have all been determined for the measurement model, and PLS-SEM's assessment in the

structural model has also been determined. After analyzing all of the constructs with the PLS-SEM algorithm and PLS-SEM bootstrapping, we can evaluate their direct correlations. In addition, the coefficients of determination, effect size, and predictive relevance have all been analyzed, as has the mediation test, which evaluates the srong association of the dependent and independent variables.

CHAPTER FIVE

DISCUSSIONS, IMPLICATIONS, LIMITATIONS, RECOMMENDATIONS, AND CONCLUSIONS

5.1 Introduction

This research shows that the quality of information, systems, services, user interfaces, and emotions all play a role in whether or not government employees in Abu-Dhabi, United Arab Emirates, are successful in their attempts to change their behavior through the use of e-learning systems. Focusing on the variables as independent factors and employee creativity as a dependent variable, this study seeks to identify the role of training engagement as a mediator between these constructs. All hypothesized constructs were found to significantly enhance mediation and employee creativity.

The study has a total of five stated goals which are in line with the research questions. As a result of these alliances, the Abu Dhabi Ministry of Interior in the United Arab Emirates will function with greater innovation. The research is bolstered by the engagement theory, the investment theory of creativity, and the new we bite quality evaluation model and have an impact on workers' inventiveness in the workplace.

Moreover, e-learning is a very convenient and flexible source of learning, especially, it plays a very important role in this pandemic, but this e-learning also cause various difficulties towards the employees, or any learners whereas, the difficulties like some

employees unable to get complete information, some faces their issue in the system which has been developed, some faces service issue like a network issue, some are facing challenges unable to understand, and some are facing challenges unable to complete the course. That's why it's crucial for every institution to put in place educational facilities that are accessible to students of all backgrounds. In addition, trainers should have enough life experience to know what to do in any given sticky circuMStance, since this will inspire employees to think outside the box.

5.2 Recapitulation of Objectives of the Study

1) To investigate the impact of training system elements (information quality, system quality, service quality, interface quality, emotional quality) on training engagement among employees of Interior Ministry – Abu Dhabi.
2) To determine the impact of training system elements (information quality, system quality, service quality, interface quality, emotional quality) on employee creativity among employees of Interior Ministry – Abu Dhabi.
3) To examine the impact of training engagement on employee creativity among employees of Interior Ministry – Abu Dhabi.
4) To investigate the extent to which the mediating effect of training engagement on the relationship between online training system elements (information quality, system quality, service quality, interface quality, emotional quality) and employee creativity among employees of Interior Ministry – Abu Dhabi.

5.3 Discussion on Hypotheses

To target the objectives of the study and to address the research questions following hypothesis were developed.

- Hypothesis1: Information Quality has a significant positive direct effect on Employee Creativity
- Hypothesis2: System Quality has a significant positive direct effect on Employee Creativity
- Hypothesis3: Service Quality has a significant positive direct effect on Employee Creativity
- Hypothesis 4: Interface Quality has a significant positive direct effect on Employee Creativity
- Hypothesis5: Emotional Quality has a significant positive direct effect on Employee Creativity
- Hypothesis 6: Training Engagement has a significant relationship with Employee Creativity
- Hypothesis7: Information Quality has a significant positive direct effect on Training Engagement
- Hypothesis8: System Quality has a significant positive direct effect on Training Engagement
- Hypothesis9: Service Quality has a significant positive direct effect on Training Engagement
- Hypothesis 10: Interface Quality has a significant positive direct effect on Training Engagement
- Hypothesis11: Emotional Quality has a significant positive direct effect on Training Engagement

- Hypothesis 12: Training Engagement has a significant mediation effect in the relationship between Information Quality and Employee Creativity.
- Hypothesis 13: Training Engagement has a significant mediation effect in the relationship between System Quality and Employee Creativity.
- Hypothesis 14: Training Engagement has a significant mediation effect in the relationship between Service Quality and Employee Creativity.
- Hypothesis 15: Training Engagement has a significant mediation effect in the relationship between Interface Quality and Employee Creativity.
- Hypothesis 16: Training Engagement has a significant mediation effect in the relationship between Emotional Quality and Employee Creativity.

5.3.1 Information Quality and Employee Creativity

Research begins with the hypothesis that there is a strong positive direct relationship between employee creativity and the first factor of e-learning's information quality. The PLS direct effect found a highly significant positive correlation between employee creativity and information quality. The results of the study show that e-learning, when combined with excellent informational abilities, significantly contributes to the development of creative workers. It has also been noted that these e-learning efforts successfully address the difficulties the learning workforce faces in fostering innovation, both on an individual and team level. E-learning's contribution to the successful management of these difficulties and the promotion of an innovative learning environment is particularly notable when combined with information quality skills. They promote gratitude because it encourages their workers to grow from the reliable data, they have access to, which in turn drives creativity in service of the Interior Ministry's objectives.

E-learning system success may be traced back to two factors: the quality of the material used in the system and the key problems that arise when information is of poor quality and is used to support employees' pursuit of their own creative goals. Workers in Abu Dhabi, UAE, at the Interior Ministry benefit from increased strength and originality because to the high quality of the information they have access to.

A sample of 400 workers from the ministry of interior in Abu Dhabi, United Arab Emirates, lends credence to the concept by demonstrating that the quality of information available has a major impact on workers' ability to be creative. When workers realized the importance of the information they were sharing, their inventiveness soared. According to the study's findings, employee creativity is substantially influenced by the calibre of the instructional material offered by the e-learning system. This finding is consistent with earlier research, which has repeatedly demonstrated that the standard of resources provided by an e-learning system has a considerable impact on the level of innovation within a workforce. The importance of high-quality educational materials in promoting an innovative culture and developing employees' creative faculties is highlighted by these findings.

5.3.2 System Quality and Employee Creativity

The findings of this study corroborate the second hypothesis, which states that there is a strong positive relationship between system quality and employee creativity among those working for the Interior Ministry in Abu-Dhabi, United Arab Emirates. Using PLS direct effects, we found that higher system quality is significantly and positively related to higher levels of employee creativity. Employees of the Interior Ministry in Abu-Dhabi, United Arab Emirates, may find that the effectiveness of system quality for

employee creativity is a crucial factor in achieving system quality for employee creativity.

The findings of this study are supported by data from a survey administered to a representative sample of workers at the Ministry of Interior in Abu Dhabi, United Arab Emirates. E-learning, according to Shelley Xin Li (2018), depends on the quality of the system to inspire innovation from workers and satisfy business goals. It acknowledges the impact of system quality according to employees' opinion of creativity working for the Interior Ministry in Abu-Dhabi, UAE. Similarly, the results show that at the Interior Ministry of Abu-Dhabi, UAE. Therefore, it can be said and supported that high-quality e-learning systems have a considerable and favourable direct effect on employee creativity based on the findings and conclusions of this study. The validity and dependability of the conclusions gained are further strengthened by the fact that these results are consistent with earlier research in this field. The weight of the data points to high-quality e-learning systems as a viable investment and implementation option for fostering and encouraging employee creativity.

5.3.3 Service Quality and employee creativity

The third hypothesis tested in this study and the third dimension of the e-learning system is the idea that better service quality leads to more creative thinking on the part of workers. Using PLS direct effects, we discover that higher service quality is significantly associated with higher levels of employee inventiveness.

In addition, Hon, Chan, and Lu (2013) proposed that in order to boost the quality of their services, businesses should foster an environment where employees are

encouraged to think creatively and innovatively. The company's focus on service quality has boosted its staff's talents, which shows out in a variety of ways. Tseng (2019) found that industries whose workers are strongly incentivized to improve their service quality and problem-solving abilities have a higher rate of employee innovation. Employees can also benefit greatly from the IT department's provision of high-quality services in connection with the company's e-learning platform. The current research does, in fact, concur with and complement earlier studies that have demonstrated the beneficial effects of service quality in e-learning systems on employee creativity. Similar findings from earlier studies by Hon, Chan, and Lu (2013) and Tseng (2019) have furthered the validity and generalizability of these findings. The cumulative evidence from numerous studies supports the idea that e-learning system service quality significantly contributes to promoting and enhancing employee creativity.

5.3.4 Interface Quality and Employee Creativity

In this research, we tested the fourth hypothesis and discovered that it had a major impact on interface quality. It has led to the following conjecture: The level of employee imagination and the quality of the interface are highly associated. Experimental evidence supporting this idea was collected from a subset of employees at the Abu Dhabi Ministry of Interior in the United Arab Emirates.

Creative abilities conducted by frontline staff workers that effect employees or consumers due to interface quality were pointed to by Lui and Hon (2014). When norMS from the system quality learning dimension are taken into account, it may be concluded that interface quality has a highly beneficial effect on worker imagination. In addition, when workers are presented with oBStacles while carrying out their

responsibilities, they resort to inventive solutions thanks to the high quality of the interface that develops curiosity or inspires them to study. One of the most essential critical variables in determining the interest and motivation level of employees, which decreases motivation to promote creativity among workers, is a well-designed and user-friendly interface. The results of this study are consistent with those of previous studies (Lui & Hon, 2014), who have found that a high-quality e-learning system's interface has a direct, favorable impact on workers' inventiveness.

5.3.5 Emotional Quality and Employee Creativity

This research proves the fifth premise, that a high level of emotional quality has a strong positive correlation with employee creativity. Based on the results of PLS direct impacts, it is clear that employees' emotional well-being is significantly linked to their own inventiveness in the workplace. In addition, by "emotional quality," we meant the capacity of the e-learning system to create an emotional connection between the quality system and the creativity of the employees, who in turn learn to value both aspects. Employees' capacities to form an emotional connection with an e-learning system were cited by Barczak, Lassk, and Mulki (2010). Emotional qualities that link to interaction or that can be a relationship of emotional qualities and it reveals to the dangers have a significant favorable association with employee creativity. It has also been shown that in the setting of e-learning organizations, a favorable association exists between emotional quality and employee creativity (Barczak, Lassk, & Mulki, 2010).

5.3.6 Information Quality and Training Engagement

Sixth, the hypothesis that "Information quality has a significant positive relationship with training engagement. A group of participants from the United Arab Emirates'

Ministry of Interior in Abu-Dhabi confirms the hypothesis by showing a favorable correlation between information quality and participation in training.

According to Song, Qiao, and Law (2020), training engagement is directly tied to employee performance, and this performance in turn is influenced by the quality of the information provided to the employees. In addition, if workers put effort into training, they become more inventive. Similar to how employees are less likely to invest in training when they lack access to high-quality information. The purpose of this study was to provide empirical support for the hypothesis that trainees' interest and participation in training are positively correlated with the quality of material provided (Ogueyungbo, Chinonye, & Igbinoba, 2019). The model's learning was also tested using the path coefficients to look at how information quality affected how much effort was put into training.

5.3.7 System Quality and Training Engagement

The seventh hypothesis in this study, "System quality has a significant positive relationship with training engagement," has been tested. It deals with the significance of system quality in achieving training engagement. A sample of 400 respondents from the ministry of interior in Abu-Dhabi, United Arab Emirates, supported the hypothesis' findings by demonstrating that system quality has a significant positive relationship with training engagement.

Furthermore, the system quality offered by the e-learning system which is a crucial dimension in developing the interest of the employees towards training engagement. Guan and Frenkel (2018) suggested that engaging employees towards training,

enhances the quality of the work in the organization. Likewise, quality of system necessitates to become well liable and employees are capable to use the system easily for which they need to get involved in training. Similarly, everyone was linked or engages with the training in corporate sectors which discovered that training are the major factor to become successful and made good quality systems.

5.3.8 Service Quality and Training Engagement

The eighth hypothesis tests the significance of service quality in comparison to boosting training participation. There is a strong correlation between service quality and attendance at training sessions. The findings are supported by data from a sample of 400 respondents from the ministry of interior in Abu-Dhabi, United Arab Emirates.

Additionally, e-learning service quality is considered a major factor in boosting employee training engagement. The significance of service quality was recently disclosed by Islam, D.Hollebeek, Rahman, Khan, and Rasool (2019). Employees in service management should receive training for the same reason, so that they can provide the high-quality service that customers expect. Employees are more motivated to understand and maximize the service's benefits if they believe it will help them in their role of providing the service to customers.

5.3.9 Interface Quality and Training Engagement

The importance of the claim that "Interface quality has a significant positive relationship with training engagement" (H9: "Interface quality contributes significantly to increased training engagement") has been assessed. The results which used a sample of respondents from Abu-Dhabi, United Arab Emirates' Ministry of Interior. The results

of this study offer compelling evidence in favour of the idea that learner engagement is positively impacted by a high-quality interface. The findings of the study show that an e-learning system's user-friendly interface considerably increases trainees' engagement and active participation. This is consistent with the notion that a good user interface promotes a smooth and engaging learning experience, increasing student motivation and participation in the learning process. The solid data from this study supports the need to prioritise and invest in the creation of user-friendly e-learning system interfaces in order to maximise trainee engagement.

The provision of a high-quality interface by the e-learning system increases the likelihood of employee participation in training activities. The study findings indicate that when employees are presented with a well-designed and user-friendly interface, it positively influences their willingness and motivation to engage in training programs. The intuitive and appealing interface enhances the overall user experience, making the training materials more accessible, engaging, and enjoyable for employees. Consequently, employees are more likely to actively participate in training sessions when they are provided with a high-quality interface through the e-learning system. Employees will be more invested in training if they perceive the systems as becoming demanding but feasible and if they believe they will receive incentives for learning the system. According to Chirumalla, Oghazi, and Parida (2018), development is contingent on using appropriate IT tools and properly training staff. The results of the sample t-test and the path coefficients showed that the e-learning system's interface quality significantly and favorably affects trainee involvement in the training.

5.3.10 Emotional Quality and Training Engagement

The impact of emotional quality over obtaining employees' training participation is investigated in this study by testing the eleventh hypothesis, "Emotional quality has a significant positive relationship with training engagement." The study's findings show a strong positive relationship between training involvement and emotional quality. This suggests that employees are more likely to actively engage in and participate in training activities when the emotional quality of the training experience is high. The term "emotional quality" refers to the emotional experience and satisfaction that people have with their training, including positive emotions like motivation, curiosity, and enjoyment.

Employees' degree of interest and active participation are favourably impacted when the training programme successfully tackles emotional elements and generates a positive emotional experience for them. These results highlight how crucial it is to take into account and improve the emotional quality of training activities in order to increase employee engagement and involvement as shown by a sample of respondents from Abu-Dhabi, United Arab Emirates' Ministry of Interior, corroborating the conclusions of the hypothesis.

In addition, the e-learning platform's presentation of emotional quality is an important instrument for raising trainee engagement. The effects of emotional quality on service providers and the quality of service offered by trained employees were studied by Mina Beigi (2011), who found a substantial correlation between the two. Similarly, if a company invests in its employees through training, those workers will develop their emotional traits and perform better. An employee training program that takes into

account a wide variety of learning styles is essential (Pozo-Rico & Sandoval, 2020). Emotional quality, according to Reeve, Jang, Carrell, Jeon, and Barch (2004), has a substantial impact on trainee involvement in training. In a similar vein, the most successful e-learning training prograMS will have qualities that strike an emotional chord with the individual. By analyzing the route coefficients, we find that there is a robust and beneficial connection between positive emotions and physical activity. The sample t-test and path coefficients both indicated a significant and favourable correlation between emotional health and training involvement. These findings corroborate those of previous research that suggests that the emotional impact of e-learning affects trainee engagement (Reeve, Jang, Carrell, Jeon, & Barch, 2004; Pozo-Rico & Sandoval, 2020).

5.3.11 Training Engagement and Employee Creativity

"Training engagement has a significant relationship with employee creativity"—has been tested to determine the significance of training engagement on employee creativity. A sample of respondents from the ministry of interior in Abu-Dhabi, United Arab Emirates, has shown that taking part in training has a significant impact on employees' creativity, supporting the results of the hypothesis.

The current study also showed that employee creativity is significantly predicted by training involvement. Those organizations who make workshops for training of employees they will perform more creativity in their field as well as they are able to gain more goals and objectives. Zhang and Bartol, (2010) referred that training can enhance the creative process of training engagement, therefore, training engagement positively influences towards employee creativity. Similarly, if the employee less

engaged in training they will perform less creativity in their perspective field. It reveals that change in training engagement would be affected in employee creativity. Therefore, a failure or improvement in training would cause a significant decline or improvement in employee creativity. Chaubey, Sahoo, and Das (2021) argued that training enhances the knowledge and innovative skills of employees to perform their joBS creatively. According to Sendawula, Kimuli, Bananuka, and Muganga (2018), training equips workers with the skills necessary to handle complaints effectively. Because of this, the majority of earlier studies show a substantial correlation between employee creativity and training engagement. As a result, research shows that employee creativity and training engagement are significantly related.

5.3.12 Mediating Role of Training Engagement between Information Quality and Employee Creativity

The twelve hypotheses have been determined the significance of mediating role of Training engagement between information quality and employee creativity, for which the hypothesis "training engagement has a significant mediation effect in the relationship between information quality and employee creativity". The results of the hypothesis are supported by the participants.

Furthermore, the findings of this research revealed that the relationship between information quality and employee creativity has been positively confirmed. If the employees engage in training, employees will perform better because of creative information among them. Likewise, if the workers have more creative informationthey will perform better. Similarly, if the employees face a lack of creative information among employees, they must get training. Our study's conclusions showed that training participation significantly mediated the association between employee creativity and

information quality. This suggests that both the calibre of the material and the employees' active engagement in learning activities have an impact on the level of employee creativity. Participation in training acts as a mediating factor between the calibre of knowledge imparted and the ensuing effect on employee creativity.

5.3.13 Mediating Role of Training Engagement between System Quality and Employee Creativity

The purpose of our study's twelfth hypothesis was to investigate the impact of training engagement as a mediator between system quality and employee creativity. According to the hypothesis, "the relationship between system quality and employee creativity is significantly mediated by training engagement". The results of the hypothesis are supported by the participants.

Moreover, the findings reveal that training engagement will enhance creativity by implementing system quality. It is a valuable characteristic of an e-learning which affects the creativity among employees which requires engagement of employees towards training. System quality reveals the ability to modify the systems which rely on the creative capabilities of the employees which can be developed through training for which employees' engagement in training is mandatory. If the quality systems are developed with the involvement of training engagement, then it will enhance the creativity among employees. The smaller the adaptability of the system quality with the training engagement the lesser the individual's creativity. Training engagement has significant purpose of strengthening one's system quality capabilities and employees' creativity. Therefore, from the tested model and hypothesis in this study training engagement is confirmed to have a mediating role.

5.3.14 Mediating Role of Training Engagement between Service Quality and Employee Creativity

In this study, the fourteenth hypothesis has been determined to test the significance of mediating role of training engagement between service quality and employee creativity, "training engagement has a significant mediation effect in the relationship between Service quality and employee creativity". The results of the hypothesis are supported by a sample of participants who showed that training participation has a significant mediating influence in the relationship between service quality and employee creativity.

Furthermore, the findings revealed that training engagement will enhance the implementation of service quality for achieving employee creativity. If the organizations give quality services in training it will develop engagement in training which results in creativity among employees. As a result, it would be right to claim that training engagement has a significant mediating effect between service quality and employee creativity.

5.3.15 Mediating Role of Training Engagement between Interface Quality and Employee Creativity

The results of the hypothesis are supported by a sample of respondents from the ministry of interior in Abu-Dhabi UAE that has been shown that training engagement has a significant mediation effect in the relationship between interface quality and employee creativity.

The findings reveal that there was a significant relationship between interface quality and employee creativity. Interface quality along with which an employee may feel the need for training for developing creativity. Furthermore, those employees face challenges or other issues they get involved in training to be more creative. Because of

the quality of the interface, researchers demonstrated and suggested that the mediating role of training engagement has a favourable impact on employee creativity. Results showed that employee creativity and interface quality are significantly mediated by training involvement.

5.3.16 Mediating Role of Training Engagement between Emotional Quality and Employee Creativity

The results of the hypothesis are supported by the participants that has been shown that training engagement has a significant mediation effect in the relationship between emotional quality and employee creativity.

Moreover, the results suggest that training engagement has a significant mediating effect between emotional quality and employee creativity. One of the most important aspects of e-learning's quality, emotional quality has a significant impact on employees' creativity when training engagement is present. If the employees have emotions for the system, they will get engaged in training which will enhance the creativity. Whereas, if the emotions of employees are lacking towards the quality system their training engagement will be minimal which will affect creativity. Training engagement is the degree which employees shows their interest towards the training program which is because of the emotional qualities. Findings show that training involvement significantly mediates the relationship between emotional traits and employee creativity.

5.4 Implications of the Study

Researchers examine more aspects of the nature of e-learning system features (information qualities, system qualities, service qualities, interface qualities, and

emotional qualities and their effects on the participants training and employee creativity. The study has substantial ramifications based on the research conducted. The following sub-segments examine these implications.

5.4.1 Theoretical Implications

The theoretical connections that are hypothesised in the research framework are supported by this study's actual data. Particularly, the mediating effect of training engagement on the link between employee creativity in Abu-Dhabi, United Arab Emirates, and the features of the e-learning system (information qualities, system qualities, service qualities, interface qualities, and emotional qualities). This study's 16 assumptions are all supported by the information gathered from the staff members working in the Abu-Dhabi Interior Ministry.

In this study, the research results have been given the knowledge of training related to employee creativity. Furthermore, the combination of information qualities, system qualities, service qualities, interface qualities, and emotional qualities affecting the employee's creativity has also been given significant attention. Based on the foregoing, a single model is used to analyse the structural relationships between information qualities, system qualities, service qualities, interface qualities, and emotional qualities as relevant variables that positively affect creativity. The study also contributes to our understanding of the value of training participation in fostering employee creativity. The findings also provide further empirical assistance for the research framework. Hence, this study provides to the new website quality assessment model by giving empirical evidence to encourage the contents of the theory. Hence e-learning system qualities (information qualities, system qualities, service qualities, interface qualities

and emotional qualities) and training engagement are regarded as employees' creativity dependent based on investment theory of creativity.

Moreover, this study also influences by analysing the relationship among e-learning system qualities (information qualities, system qualities, service qualities, interface qualities, and emotional qualities) on the training engagement. Jayalath and Esichaikul, (2020) suggested that training engagement depends on the e-learning system quality which are adopted. Therefore, training engagement depends on how well the organizations are managing and learning their e-learning system qualities.

Moreover, previous research has been determined that e-learning system qualities influence employee creativity. However, literature has been revealed that previous researches have recognized that e-learning system quality influences employee creativity which indirectly over the mediating variables (Navimipour & BatoolZareie, 2015; Zhang, et al., 2017; Chen, Liu, Tang, & Hogan, 2021; Liu, et al., 2018). Likewise, other researchers have been studied mediating role of training engagement by taking the underpinning support go engagement theory in the e-learning system qualities (information qualities, system qualities, service qualities, interface qualities, and emotional qualities) and employee creativity relationships (Lui & Hon, 2014). Likewise, there is less or more attention was given to mediating role of training engagement in supporting how and why e-learning system qualities (information qualities, system qualities, service qualities, interface qualities, and emotional qualities) and employee creativity relationship exist. Thus enrich the engagement theory by adding the influence of e-learning system quality.

As a result, this study contributes theoretically by examining the function of training involvement in mediating the relationship between various e-learning system features (information qualities, system qualities, service qualities, interface qualities, and emotional qualities) and employee creativity. The findings indicate that training engagement mediates the relationship among e-learning system qualities (information qualities, system qualities, service qualities, interface qualities, and emotional qualities) and employee creativity. SuBSequently, this means that to enhance employee creativity by managing e-learning system qualities (information qualities, system qualities, service qualities, interface qualities, and emotional qualities) needs to enhance their training. The results further advance academics' understanding of the mediation function of training engagement on the capabilities of the e-learning system and employee creativity.

An examination of earlier research on creativity also indicates that Abu-Dhabi, United Arab Emirates, has been the site of the majority of these investigations. Similar to that, it is anticipated that this UAE study will improve Abu-Dhabi UAE's understanding of employee creativity. As a result, rather than studying the full population of creativity, the majority of studies on creativity have concentrated on one segment of Abu-Dhabi, United Arab Emirates. Therefore, this study between a few types of research that deeMS the entire ministry of interior especially in Abu-Dhabi UAE.

5.4.2 Managerial Implications

In the current study, the findings have numerous policies along with the practical implications for the public sector in UAE. This research may provide to a superior understanding of e-learning system qualities. Training engagement keeps on longer,

better performing, more work and get involved in employee's creativity. In the study, the current research seeks to highlight the significance of information qualities, system qualities, service qualities, interface qualities, and emotional qualities in the context of Abu Dhabi- UAE. As a result, the current study has not only confirmed the theoretical assessment but also has important practical ramifications for practitioners, policymakers, and employees who are able to address these key factors in a preventative manner and steer clear of problems associated with employee creativity.

Furthermore, in this study, the findings are expected to improve understandings about e-learning service quality and training engagement which are essential for the organization. The research framework offers guidelines to employees about what is required to improve their training engagement. When employees are well trained in their respective environments, they are capable to learn any e-learning system with the use of creativity.

Additionally, it has been established that training engagement mediates the relationship between the variables. Training engagement creates a motivated environment for learning in the organizations when employees establish a sense of accomplishment. The training environment is one that supports as well as encourages other employees to become learners which improves the creativity. The current study's findings showed that training engagement acts as a mediator between the variables.

Moreover, it may assist the representatives to follow such e-learning system qualities which enhance training engagement, the managers and trainers must pay sufficient attention towards the training engagement to gain employee creativity. Likewise, the

policymakers must concentrate on the qualities of e-learning system because it affects main changes in the attitudes of employees' learning and assist organizations to participate in the creativity. Therefore, such qualities of e-learning system have the prospective of persuasive and motivating their learners, employees' strengths and weakness and provide as well as guidelines for training benefits to enhance their tasks and lead their organizations towards creativity.

The results of the current study show that each theoretical framework construct significantly advances our understanding of employee creativity. As a result, by an employee the present study considering the existing situations appropriate e-learning system qualities may enhance the organizations to attain the creativity of employees.

5.4.3 Methodological Implications

It has methodological implications in addition to its practical and theoretical contributions. Initially, previous research on employee creativity have mainly applied SPSS, however, for better understanding the knowledge, in this research Smart PLS 3.0 (Sarstedt, M.Ringle, Smith, Reams, & F.HairJr, 2014) since it is regarded as the finest for developing theories, it has been employed to create superior results. To demonstrate the reliability and validity of the e-learning system, its quality must be replicated in a new setting.

Thus, by establishing the reliability and validity of the various measures in the Abu Dhabi, United Arab Emirates, context, and by offering a scale and a hypothesis testing method in a different context with the support of PLS-S. The current study indicates an additional contribution to the methodology and literature of employee creativity. Thus,

future studies must add the training innovation instruments for e-learning system evaluation which significantly affect the behaviour of trainers and learners which in turn impact of employee creativity. Hence, a survey instrument based on the employees of Interior Ministry perceptions was established and validated.

5.5 Limitations of the Study

The limitations include those items that could not be included in the research because of time restrictions or the researchers' incapacity to do so for a variety of reasons. Like any quantitative study, this one has some restrictions.

First, by using a cross-sectional study design, training engagement and employee creativity are particularly long-term processes, which could be checked by using the longitudinal research design. By using random sampling which also influences the conclusions that can be drawn. Despite, the fact that researchers has been able to present a comprehensive New Website Quality Assessment Model which is based on statistical analysis and relevant literature, the follow-up study might enhance the sampling method, and based on the effects of a situation that is examined more.

Secondly, based on current research findings information qualities, system qualities, service qualities, interface qualities, emotional qualities are the essential area for stakeholders. Information qualities, system qualities, service qualities, interface qualities, and emotional qualities have a significant impact on employee creativity (Wagner, Hassanein, & Head, 2008; Alsabawy, Cater-Steel, & Soar, 2016; Choudhury & Pattnaik, 2020; Ozkan & Koseler, 2009). However, despite the fact that

organisational culture influences training, this influence has gone unacknowledged, as has the role of cultural and environmental changes in training.

Thirdly, the results determined the type of e-learning system quality appropriate for development of creativity, however several other situations which might influence the development of creativity among employees, have not been catered. Additionally, information qualities, system qualities, service qualities, interface qualities, and emotional qualities of e-learning focused on the trainer to encourage learners through incentives and other methods to make the employees creative.

Finally, the research has been performed during the pandemic, hence generalizing the findings which are addressed in pandemic through the results of e-learning might would have caused a bit biased results because e-learning become mandatory during the current situations. Hence, it was the main essential limitation which has not been eliminated.

5.6 Future Directions

Several flaws in the current study have also been noted. As a result, the recommendations for the future are based on the current study's limitations. The current study has initially used a cross-sectional strategy, which does not allow for accidental interferences to be made by the population over a longer period of time, whereas training has a long-term impact. The e-learning quality system is a comprehensive and interdependent construct made up of numerous components, according to a 2009 study by Ozkan and Koseler. This shows that the many elements of the e-learning system are interrelated and have an impact on one another on the system's overall quality.

Aiming to analyse and explore the causal linkages among the proposed dimensions within the context of the e-learning quality system, future research initiatives should be based on this understanding. In order to gain a deeper understanding of the dynamics and long-term consequences of the e-learning system on different outcomes, it is crucial to perform research that evaluate these interactions over a long period of time. Researchers can learn more about how the various elements of the e-learning quality system interact and contribute to its overall success by doing research in this direction. This can guide the creation and development of e-learning platforms, resulting in more effective and worthwhile learning opportunities for those who pursue online education.

Future researchers need to use a technique that can lessen the variability caused by popular methods. Future studies may also concentrate on the development of additional tools based on the quality of e-learning systems applicable to other types of organisations that imitate the characteristics of the Interior Ministry, as well as training techniques applied in various contexts involving schools, colleges, universities, and businesses.

Furthermore, finally it is highly recommended to conduct a qualitative study over the development of employee creativity based on e-learning system quality. The main reason behind such a proposed study is that it would help the academicians and policy marker to understand any hidden or unrevealed issue which might would affect employee creativity. Such a study may come up with appropriate and more relevant issue which might would have a significant impact over employee creativity.

5.7 Conclusions

The goal of this study was to determine how training engagement mediated the relationship between employee creativity and the attributes of the e-learning system (information qualities, system qualities, service qualities, interface qualities, and emotional qualities). All of the research topics were satisfactorily addressed by the study's findings. Despite these restrictions, the research questions' findings were helpful in achieving the study's goals. An approved survey tool was used for this testing.

The instrument illustrated critical factors for e-learning system quality effectiveness. The instrument has been validated and all the five variables taken to represent e-learning system qualities of the evaluation model that were considered as essential for training engagement and employee creativity have proven to have a significant positive and direct effect. As a result, it is concluded that it measures grouped under five qualities of analysing e-learning quality system can further help employees in adopting innovative methods by engaging in e-learning training only if they seek training to better understand e-learning system.

Furthermore, the results emphasized an important relationship among the variables. SuBSequently, the mediating role of training engagement between information qualities, system qualities, service qualities, interface qualities, emotional qualities, and employee creativity has also proven as significant. Which confirms the significance of training engagement and e-learning system qualities for development of employee creativity. Similarly, as training engagement mediated the relationship between information qualities, system qualities, service qualities, interface qualities, emotional

qualities, and employee creativity all these constructs are supporting the engagement theory and the literature on employee creativity.

Additionally, the findings provide various essential practical implications to trainers and learners. Furthermore, in this study limitations for e-learners and trainers in the learning field as well as with the latest advancements in e-learning technologies have been identified.

However, the future directions in the current study, regardless of the fundamental issues, provides basics for understanding effectiveness e-learning, training engagement over employee creativity. This leads to the discovery that employee creativity is significantly impacted by training engagement in the presence of information characteristics, system qualities, service qualities, interface qualities, and emotional factors.

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APPENDICES

Ghazali Shafie Graduate School of Government

Universiti Utara Malaysia

A STUDY ON EMPLPYEE CREATIVITY

Dear Participant,

Thank you for agreeing to participate in this research.

I would appreciate it if you could answer the questions carefully as the information you provide will influence the accuracy and the success of this research. It will take no longer than 30 minutes to complete the questionnaire. All answers will be treated with strict confidence and will be used for the purpose of the study only.

If you have any questions regarding this research, you may address them to me at the contact details below.

Thank you for your cooperation and the time taken in answering this questionnaire

Yours sincerely,

Ahmed Salme Saleh Suliman Alkaabi

School of Gazali shafie Graduate School of Government

Universiti Utara Malaysia

Email: ahmed.salem@yahoo.fr

SECTION ONE

INSTRUCTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by circling the number in the range given.

	Strongly diagree	Disagree	Neutral	Agree	Strongly agree
EC1 - Demonstrated originality in his/her work.	1	2	3	4	5
EC2 - Took risks in terms of producing new ideas in doing job.	1	2	3	4	5
EC 3 Found new uses for existing methods or equipment.	1	2	3	4	5
EC4 - Solved problems that had caused others difficulty.	1	2	3	4	5
EC5 - Tried out new ideas and approaches to problems	1	2	3	4	5
EC - 6 Identified opportunities for new products/processes.	1	2	3	4	5
EC7 - Generated novel, but operable work-related ideas	1	2	3	4	5
EC 8 - Served as a good role model for creativity	1	2	3	4	5
EC 9 Generated ideas revolutionary to our field.	1	2	3	4	5

SECTION TWO

INSTRUCTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by circling the number in the range given.

	Strongly diagree	Disagree	Neutral	Agree	Strongly agree
TE1 The training given here are very useful to my job.	1	2	3	4	5
TE2 Trainings are relevant to my job description.	1	2	3	4	5
TE3 Training can really translate its benefits in my performance	1	2	3	4	5
TE4 Selection criteria for training is fair enough.	1	2	3	4	5
TE5 Training is quite beneficial to improve my performance at workplace.	1	2	3	4	5
TE6 I wish to join more training sessions.	1	2	3	4	5
TE7 After attending training sessions now I am more clear about my job	1	2	3	4	5
TE8 Training brought a positive impact on my job performance					

SECTION THREE

INSTRUCTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by circling the number in the range given.

	Strongly diagree	Disagree	Neutral	Agree	Strongly agree
IQ1 Accuracy of information received	1	2	3	4	5
IQ2 Completeness of information received	1	2	3	4	5
IQ3 Relevance of information received	1	2	3	4	5

SECTION FOUR

INSTRUCTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by circling the number in the range given.

	Strongly diagree	Disagree	Neutral	Agree	Strongly agree
SQ1 An online catalog that is easy to use	1	2	3	4	5
SQ2 An online catalog that is easy to learn	1	2	3	4	5
SQ3 An online catalog that you can interact with in a clear and understandable way	1	2	3	4	5
SQ4 An online catalog that is easy to become skillful at using	1	2	3	4	5

SECTION FIVE

INSTRUCTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by circling the number in the range given.

	Strongly diagree	Disagree	Neutral	Agree	Strongly agree
SEQ1 Dependability in handing users‟ problems	1	2	3	4	5
SEQ2 Willingness to help users	1	2	3	4	5
SEQ3 Readiness to respond to users‟ request	1	2	3	4	5
SEQ4 Courteous staff	1	2	3	4	5
SEQ5 Staff instill confidence in users	1	2	3	4	5
SEQ6 Staff have the knowledge to answer users‟ questions	1	2	3	4	5
SEQ7 Giving users individual attention	1	2	3	4	5
SEQ8 Staff have the users‟ best interests at heart	1	2	3	4	5
SEQ9 Staff deal with users in a caring fashion	1	2	3	4	5
SEQ10 Staff understand the needs of users	1	2	3	4	5
SEQ11 Good relations between staff and users	1	2	3	4	5
SEQ12 Good Communication between staff and users	1	2	3	4	5

SECTION SIX

INSTRUCTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by circling the number in the range given.

	Strongly diagree	Disagree	Neutral	Agree	Strongly agree
INQ1 The information service centre enables me to accomplish tasks faster.	1	2	3	4	5
INQ2 The information service centre improves my ability to do research.	1	2	3	4	5
INQ3 The information service centre enhances my effectiveness	1	2	3	4	5
INQ4 The information service centre enables me to be more productive.	1	2	3	4	5
INQ5 The information service centre males it easier to do research	1	2	3	4	5
INQ6 I find the information service centre at this organization useful.	1	2	3	4	5

SECTION SEVEN

INSTRUCTION: Please read each of the following items and indicate whether you agree or disagree with each of the statement. Please indicate your choice by circling the number in the range given.

	Strongly diagree	Disagree	Neutral	Agree	Strongly agree
EQ1 I am satisfied with the performance of e-learning system	1	2	3	4	5
EQ2 I enjoy using e-learning system	1	2	3	4	5
EQ3 e-learning system satisfies my needs	1	2	3	4	5
EQ4 Overall, I am pleased with the experience of using e-learning system	1	2	3	4	5
EQ5 e-learning system enables me to accomplish my tasks more quickly	1	2	3	4	5
EQ6 On average, I spend a long time on using e-learning system	1	2	3	4	5

PERSONAL INFORMATION

This part contains few demographic information pertaining to yourself. Please tick **(√) in the box or write your response in the space provided.**

1. My gender:

☐ Male ☐ Female

2. My age:

☐ Under 25 years
☐ 26-35 years
☐ Above 60 years
☐ 36-44 years
☐ 45-60 years

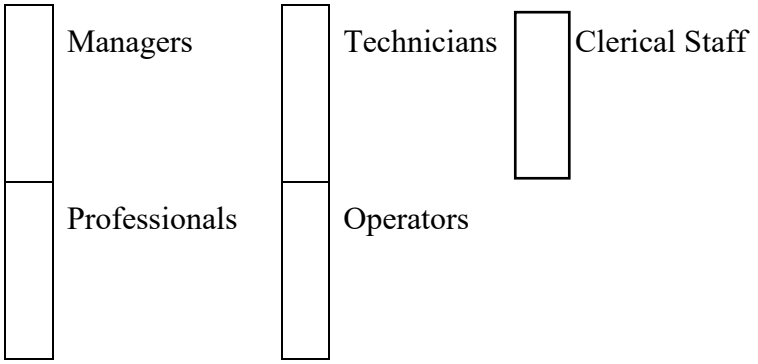
3. My marital status:

☐ Single ☐ Married ☐ Divorced / ☐ Widowed

4. My highest academic qualification:

☐ High School
☐ Certifications
☐ Bachelors
☐ Masters

My position:



--THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY--