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ACCESS

# MEDIATING ROLE OF TRAINING ENGAGEMENT BETWEEN SERVICE QUALITY, INTERFACE QUALITY, AND EMPLOYEE CREATIVITY IN WORKFORCE OF MINISTRY OF INTERIOR ABU DHABI, UAE

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ARTICLE INFO	ABSTRACT
Article history:	<b>Purpose:</b> Employee creativity is vital for the success of any organization. Organizations conduct trainings and engagement of employees in the trainings helps
Received 15 August 2023	organizations to get successful results.
Accepted 13 November 2023	<b>Theoretical framework:</b> Employee creativity is highly dependent on service quality and interface quality. Therefore, this study is tailored to identify the mediating role of
<b>Keywords:</b> Employee Creativity;	training engagement between service quality, interface quality and employee creativity. In order to test the framework developed on the basis of new website quality assessment model by the supporting role of engagement theory and investment theory of creativity.
Training Engagement; Service Quality; Interface Quality.	<b>Design/methodology/approach:</b> For testing the model, adopted questionnaires have been used and structural equation modeling has been applied. The findings revealed that training engagement significantly mediate the relationship between service quality, interface quality and employee creativity.
PREREGISTERED	<b>Findings:</b> The findings are significant for the policy makers to stress on engagement of employees in the training activities and by improving the service quality and interface quality to develop creativity among employees to get fruitful results.
OPEN DATA OPEN MATERIALS	<b>Research, Practical &amp; Social implications:</b> provides basics for understanding effectiveness e-learning, training engagement over employee creativity. As a result, it is revealed that training engagement in the presence of information qualities, system qualities, service qualities, interface qualities, and emotional qualities have a significant effect on employee creativity.
	<b>Originality/value:</b> the current research focuses on the importance of service quality and interface quality over training engagement and its interaction together over employee creativity.
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#### PAPEL MEDIADOR DO ENVOLVIMENTO NO TREINAMENTO ENTRE A QUALIDADE DO SERVIÇO, A QUALIDADE DA INTERFACE E A CRIATIVIDADE DOS FUNCIONÁRIOS NA FORÇA DE TRABALHO DO MINISTÉRIO DO INTERIOR DE ABU DHABI, EMIRADOS ÁRABES UNIDOS

#### RESUMO

**Objetivo:** A criatividade dos funcionários é vital para o sucesso de qualquer organização. As organizações realizam treinamentos e o envolvimento dos funcionários nos treinamentos ajuda as organizações a obter resultados bem-sucedidos.

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**Enquadramento teórico:** A criatividade dos funcionários é altamente dependente da qualidade do serviço e da qualidade da interface. Portanto, este estudo é adaptado para identificar o papel mediador do envolvimento do treinamento entre a qualidade do serviço, a qualidade da interface e a criatividade dos funcionários. A fim de testar a estrutura desenvolvida com base no novo modelo de avaliação da qualidade do site, apoiando o papel da teoria do engajamento e da teoria do investimento na criatividade.

**Desenho/Metodologia/Abordagem:** Para testar o modelo foram utilizados questionários adotados e aplicada modelagem de equações estruturais. Os resultados revelaram que o envolvimento na formação medeia significativamente a relação entre a qualidade do serviço, a qualidade da interface e a criatividade dos funcionários.

**Constatações:** As conclusões são significativas para os decisores políticos enfatizarem o envolvimento dos funcionários nas atividades de formação e na melhoria da qualidade do serviço e da interface para desenvolver a criatividade entre os funcionários e obter resultados frutíferos.

**Implicações de pesquisa, Práticas e Sociais:** fornece princípios básicos para a compreensão da eficácia do elearning, do envolvimento do treinamento sobre a criatividade dos funcionários. Como resultado, revela-se que o envolvimento na formação na presença de qualidades de informação, qualidades de sistema, qualidades de serviço, qualidades de interface e qualidades emocionais têm um efeito significativo na criatividade dos funcionários.

**Originalidade/Valor:** a investigação atual centra-se na importância da qualidade do serviço e da qualidade da interface sobre o envolvimento na formação e a sua interação conjunta sobre a criatividade dos funcionários.

**Palavras-chave:** Criatividade dos Funcionários, Engajamento em Treinamento, Qualidade de Serviço, Qualidade de Interface.

#### PAPEL MEDIADOR DEL COMPROMISO DE CAPACITACIÓN ENTRE LA CALIDAD DEL SERVICIO, LA CALIDAD DE LA INTERFAZ Y LA CREATIVIDAD DE LOS EMPLEADOS EN LA FUERZA LABORAL DEL MINISTERIO DEL INTERIOR ABU DHABI, EMIRATOS ÁRABES UNIDOS

#### RESUMEN

**Propósito:** La creatividad de los empleados es vital para el éxito de cualquier organización. Las organizaciones llevan a cabo capacitaciones y la participación de los empleados en las capacitaciones ayuda a las organizaciones a obtener resultados exitosos.

**Marco teórico:** la creatividad de los empleados depende en gran medida de la calidad del servicio y la calidad de la interfaz. Por lo tanto, este estudio está diseñado para identificar el papel mediador del compromiso de capacitación entre la calidad del servicio, la calidad de la interfaz y la creatividad de los empleados. Para probar el marco desarrollado sobre la base del nuevo modelo de evaluación de la calidad de un sitio web mediante el papel de apoyo de la teoría del compromiso y la teoría de la inversión de la creatividad.

**Diseño/Metodología/Enfoque:** Para probar el modelo se han utilizado cuestionarios adoptados y se ha aplicado el modelado de ecuaciones estructurales. Los hallazgos revelaron que el compromiso con la capacitación media significativamente en la relación entre la calidad del servicio, la calidad de la interfaz y la creatividad de los empleados.

**Hallazgos:** Los hallazgos son importantes para que los responsables de la formulación de políticas hagan hincapié en la participación de los empleados en las actividades de capacitación y en la mejora de la calidad del servicio y la calidad de la interfaz para desarrollar la creatividad entre los empleados y obtener resultados fructíferos.

**Implicaciones de investigación, Prácticas y Sociales:** proporciona conceptos básicos para comprender la efectividad del aprendizaje electrónico y el compromiso de la capacitación sobre la creatividad de los empleados. Como resultado, se revela que la participación en la formación en presencia de cualidades de información, cualidades del sistema, cualidades de servicio, cualidades de interfaz y cualidades emocionales tiene un efecto significativo en la creatividad de los empleados.

**Originalidad/Valor:** la investigación actual se centra en la importancia de la calidad del servicio y la calidad de la interfaz sobre el compromiso de la formación y su interacción sobre la creatividad de los empleados.

**Palabras clave:** Creatividad de los Empleados, Compromiso con la Formación, Calidad del Servicio, Calidad de la Interfaz.

#### **INTRODUCTION**

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 creativity involve understanding the imaginative procedure, the innovative product, the creative individual, the imaginative situation, and the method in which each of these components engages along with the others (N. K. 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; Majali, Alkaraki, Asad, Aladwan, & Aledeinat, 2022).

On the other hand, online learning which is also termed as e learning is education and learning or training that takes area over the web. On-line learning is described as the shipping of knowing web content to learners using e systems (Anderson, 2008). Training engagement has also been described as an extension of e-learning that occurs when the learner is not at a fixed, determined location, or learning that happens when the student takes benefit of the understanding opportunities given by mobile innovations" is valuable given that its inclusiveness does not prematurely deal with valuable understanding devices (Asad, Altaf, Israr, & Khan, 2020).

Furthermore, the training through possess numerous advantages over typical training consist of, Flexible and practical gain access to, Easy on the spending plan, Serves different learning types, Self-driven and self-paced, Measurable outcomes and coverage, Digital report maintaining and management, Aligned to 21st-century business, interactivity and gamification, accessible support from professionals, collaboration and area structure, immediate responses and acknowledgment, and widespread link and regimentation (Asad, Altaf, Israr, & Khan, 2020; Asad, et al., 2021).

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 creativity (Chaubey, Sahoo, & Das, 2021) (Ibrahim et al., 2023; Megdadi et al., 2023). By creating an environment where artistic thoughts are actually appreciated, association may draw in experts that are extra accomplished.

A similar impact develops along with present employees, who are most likely to remain on panel because of the imaginative environment (Asad, Haider, & Fatima, 2018). 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. (Alnawafleh et al., 2019)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 analyzing the fostering of online teaching and learning in 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 organizational 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 (Asad, Ahmad, Haider, & Salman, 2018; Asad, Altaf, Israr, & Khan, 2020). 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).

The recent Covid-19 pandemic enforces many changes in business and management matters, including the training and human development approaches (Asad & Kashif, 2021). The COVID-19 has resulted in training institutes shut all across the world beside the control movement (Kashif, et al., 2020). Globally, all scheduled traditional training and education sessions are shutdown. As a result, training and development has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms (Bozkurt et al., 2020; Crawford et al., 2020; Habes, Alghizzawi, et al., 2023) With this sudden shift away from the direct sessions in many parts of the globe, some are wondering whether the adoption of online learning will continue to persist post-pandemic, and how such a shift would affect the worldwide education market.

Moreover, the workforce performance is a critical issue in public sector, especially for Police department (Habes et al., 2022; Wang et al., 2022) The job description of an Police officer required to do some extraordinary tasks which would find exceptional for other peoples (Ban et al., 2021). Their job requires them to do work at the level of personal discomfort or

risk. Such exceptional demands are traditional or expected in this line of field. This personal discomfort and risk bring stress in employees which affects the 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).

One of the things to explore is the eLearning systems qualities that contribute to keep learners engaged and improve their creative behavior at workplace. In UAE, implementation and adoption of online training in the public sector have been taking 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 systems. (Al Olaimat et al., 2022)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 systems is important to adapt and improve the systems. Therefore, the current research focuses on the importance of service quality and interface quality over training engagement and its interaction together over employee creativity.

#### LITERATURE REVIEW

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).

Provided the essential task of employee creativity in the organization, analysts have actually become significantly fascinated in pinpointing the health conditions that anticipate creativity of private employees, featuring individual qualities and contextual factors (Li, Duverger, & Yu, 2018). It is needed to examine attributes of creativity and employees' creativity in companies (Liao & Chen, 2018). Numerous current studies of management have actually checked out the influence of innovators on staff members' artistic behaviors. Followers' creativity achievement is probably to become resolved mostly by their levels of emotional engagement in imaginative methods (Chen, Liu, Tang, & Hogan, 2020; Khan, Asad, Khan, Asif, & Aftab, 2021).

Sizable evidence indicates that employee creativity can effectively bring about advancement, effectiveness, and survival (S. Zhang, Ke, Frank Wang, & Liu, 2018). Many research studies have actually illustrated a favorable relationship between assistance from supervisors and employee creativity. Supportive oversight created a substantial payment to the lot of patent disclosures 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 (W. Jiang & Gu, 2017).

Much more specifically, developing reviews instils a learning/improvement alignment that is vital for creativity; interactional justice ensures that staffs will definitely have the knowledge and info they need to become imaginative and will be actually addressed with appreciation even when their ideas perform not work out; and depend on assures them that their tough job and risk taking are actually well worth the attempt because supervisors possess the proficiency and professionalism to go through on artistic concepts (Groen, Wouters, & Wilderom, 2017; Ribeiro, Gomes, & Kurian, 2018; Fadhel, Aljalahma, Almuhanadi, Asad, & Sheikh, 2022). For that reason, it is very important for all organizations to improve their staff members' creativity, therefore, managers must concentrate on identifying, knowing, and taking advantage of techniques and methods that advertise the creativity of their people (Groen et al., 2017; Irakoze & David, 2019; Saleh, 2018).

Based on the previous literature, 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 . the concept of training engagement is still fresh and new, according to (Costley 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.

In General, Employee engagement is a property of the connection between an organization and its staff members (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 (Zaitouni & Ouakouak, 2018).

This concept of service quality has its own origins in the expectancy-disconfirmation paradigm (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 (Phillips & Phillips, 2016; Devlin, Chang, Lee, & Toutanova, 2018). Instruction possesses details goals of enhancing one's capability, efficiency, performance and ability (Phillips & Phillips, 2016). And Training engagement is the level of how employees are attached to the assigned instruction (Sitzmann & Weinhardt, 2018; Bakker & Wingerden, 2021). And based on that the researcher is expecting significant positive direct effect of Service Quality on Training Engagement.

On the other hand, 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, that is actually, they possess a rich physical body of domain-relevant understanding and strong skill-sets; they discover their job fundamentally encouraging; they usually tend to be independent, unconventional, and greater danger takers; and they possess broad enthusiasms and a more significant openness to brand-new expertises (Tang et al., 2017; Tsygankova, 2019; Vila-Vázquez et al., 2020).

On the other hand Service quality can be determined as a contrast between clients' desire of the solution that they will certainly obtain from a business or even functionality that the organization delivers them with (de Oña, de Oña, Eboli, & Mazzulla, 2016). Wilson, Keni, and Tan (2019) also defined service quality as a measurement of the service given by a business in phrases of whether the actual premium of the solution supplied or even presented through a provider is actually a lot less than, matches, or even goes beyond a consumer's true expectations pertaining to that organization (Blut, 2016).

On the other hand, service quality could also be defined as a comparison between customer's perceptions about the service that an organization will provide and their own expectation regarding the actual service that they get (Jiang & Zhang, 2016). In terms of service quality, if a customer's experience of the service provided by the organization is better than the expectation that he or she had, it can be said that the service quality of that organization is considered to be excellent (Priporas et al., 2017).

In the past decade, the importance of the concept of service quality in the field of marketing around the world has increased and many marketers and companies are trying hard to be able to provide excellent service quality to all of their customers at all times (M. S. Farooq et al., 2018). However, in the current era, an organization's highest priority is to fully understand the impact that service quality has on its profits and other financial outcomes which it can benefit from ((de Oña et al., 2016; M. S. Farooq et al., 2018; Izogo, 2017). This is the reason of why, nowadays, many companies are trying hard to serve and provide their customers with the best service quality that they can give (Arcand et al., 2017).

Moreover, organizations that can provide and deliver a service that is perceived as "High Quality" are normally those which have a greater market share, higher return on investment, and higher asset turnover compared to other companies whose services are perceived as a "Low Quality" by people and customers (Budianto, 2019). Moreover, in terms of conducting business in the current era, in which technology is rapidly evolving and has changed the way people are conducting business, (Russo et al., 2017). service quality has become an even more critical factor for an organization in retaining and attracting its customers and preventing them from shifting to their competitors (Zuama et al., 2017).

Particularly, lots of research 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; Asif, Asad, Kashif, & Haq, 2021), 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).

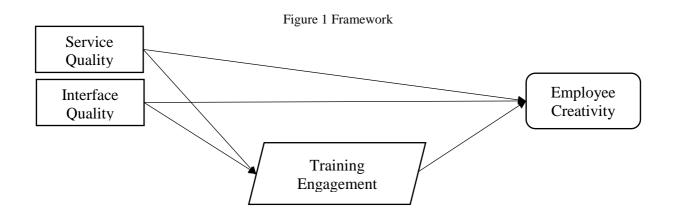
User interface consists of such problems as navigation, site association, looking ease, user-controlled navigating, hyperlinks, cross-platform style, composing type, and multimedia functionalities (Chimeni et al., 2016; Y. Peng, Mao, & Liu, 2018; Narayanaswamy et al., 2019; Bhaduri et al., 2019; Asif, Asad, Bhutta, & Khan, 2021). 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 of organization is actually baffled, no great navigating help could possibly aid it (Dalapati et al., 2017).

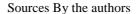
Quality measurements along with which a user may experience concerning user interfaces and interactivity, featuring closeness, compatibility, format, appearance, and

navigation. and there has been considerable conversation about the results of consumer interface quality on customer habits (Asad, Shabbir, Salman, Haider, & Ahmad, 2018). Consumer interface quality, seen surveillance, and client loyalty are actually important factors for results of a shopping site (Allison & Stanton, 2020). 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; Allam, Asad, Ali, & Malik, 2022). On the other hand, Creativity has been specified as an opinion of the uniqueness and convenience (or worth) of one thing (Randel & Jaussi, 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 (Carnevale, Huang, Crede, Harms, & Uhl-Bien, 2017).

Base on the above discussion taking the underpinning support of New Web Site Quality Assessment Model this study develops the framework. The study enriched the literature by adding the mediating role of employee training engagement with the help of engagement theory for gaining employee creativity. The proposed model based on the reviewed literature and three theories is mentioned in figure 1.





### METHODOLOGY

The purpose of the study is to identify the mediating role of training engagement between service quality, interface quality and employee creativity.(Habes et al., 2021; Habes, Ali, et al., 2023; Habes, Pasha, et al., 2023) Therefore, structural equation modeling has been

applied over the data collected from 400 employees working in ministry of interior Abu Dhabi, EAU. The data has been collected through simple random sampling applied over the list of employees. The study adopted survey technique to reach a relatively specific-target sample of employees of interior ministry in Abu Dhabi. The instruments used for collection of the data were applied from prior studies. The items for service quality, interface quality, training engagement and employee creativity have been adapted from Ramayah, Ahmad, and Lo (2010), Haider, Asad, Fatima, and Abidin (2017), and Tang, Yu, Cooke, and Chen (2017) respectively. Before running structural equation modeling reliability and validity of the instrument has ben ensured.

### ANALYSIS AND DISCUSSIONS

This study initially analyzes the descriptive analysis of all variables which includes the mediating role of training engagement has a significant direct positive relationship between service quality, interface quality and employee creativity. All variables (employee creativity, service quality, interface quality and training engagement) have been calculated mean, standard deviation, minimum and maximum. The findings of the descriptive analysis are shown in table 1.

Table 1 Descriptive Analysis of Variables							
Variable	Mean	SD	Minimum	Maximum			
Employee Creativity	3.70	0.94	1	5			
Service Quality	3.49	0.90	1	5			
Interface Quality	3.97	0.95	1	5			
Training Engagement	3.88	0.91	1	5			

Sources: results of data analysis

After ensuring that descriptive analysis of all variables is significantly positive relationship then the multicollinearity has been tested. In multicollinearity test in which the service quality, interface quality and training engagement have been examined the VIF and tolerance values. The findings of the calculated values are shown in table 2.

Table 2 Multicollinearity Test					
Variables	VIF	Tolerance			
Service Quality	2.18	0.62			
Interface Quality	1.23	0.58			
Training Engagement	1.21	0.69			
	Sources: results of data analysis				

Sources: results of data analysis

After analyzing the multicollinearity then item loadings have been illustrated. This study aims to recognize the mediating role of training engagement between service quality, interface quality and employee creativity. The item loadings have been illustrated to ensure that all items taken in the model holds significant direct positive loadings. Items with loading values more than 0.7 have been preserved in the model and items with lower loading values have been removed. The results of item loadings are shown in table 3.

Table 3 Item Loadings						
Items	Employee Creativity	Interface Quality	Service 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					
IFQ1		0.869				
IFQ2		0.749				
IFQ3		0.875				
IFQ4		0.749				
IFQ5		0.747				
IFQ6		0.745				
SRQ1			0.965			
SRQ2			0.980			
SRQ3			0.943			
SRQ4			0.811			
SRQ5			0.950			
SRQ7			0.918			
SRQ9			0.970			
TE1				0.802		
TE4				0.873		
TE5				0.872		
TE6				0.958		
TE7				0.947		
TE8				0.902		

Sources: results of data analysis

After confirming that items kept in the model having significant positive item loadings then the reliability and validity of the model is ensured by using Cronbach's Alpha, Composite Reliability and Average Variance Extracted (AVE) have been analyzed. Moreover,

discriminant validity has also been determined. The findings of the calculated values of (service quality, interface quality, training engagement and employee creativity) are shown in table 4.

Table 4 Reliability and Validity						
Variables Cronbach's Alpha Composite Reliability						
0.976	0.980	0.875				
0.881	0.909	0.626				
0.949	0.960	0.799				
0.980	0.983	0.864				
	Cronbach's Alpha 0.976 0.881 0.949	Cronbach's Alpha     Composite Reliability       0.976     0.980       0.881     0.909       0.949     0.960				

Sources: results of data analysis

Table 5 Discriminant Validity							
Variables Employee Creativity Interface Quality Service Quality Training Engagemen							
Employee Creativity	0.930						
Interface Quality	0.528	0.791					
Service Quality	0.535	0.467	0.935				
Training Engagement	0.516	0.481	0.625	0.894			

Sources: results of data analysis

After ensuring the reliability, validity and discriminant validity of the data, structural equation modeling has been applied. The results are mentioned in table 6.

Table 6 Path Coefficients Direct Effects						
Original Sample Standard T Statistics					Р	
	Sample	Mean	Deviation	(O/STDEV)	Value	
	(0)	(M)				
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	
Samaan manifes of data analysis						

Sources: results of data analysis

Based on the findings of PLS direct effects the results illustrate that service quality has a significant direct positive relationship with employee creativity ( $\beta = 0.434$ , t = 2.464, P = 0.001). in line with the findings, Hon, Chan, and Lu (2013) suggested that employee creativity as well as innovation in an organization that specifically for employees who are continuously trained to enhance their skills to improve the service quality. Service quality enhanced their employees creativity that is reflected in numerous ways and also supports to improve the creative service quality of employees. Tseng (2019) revealed that those industries that are significantly encouraged to enhance their service quality as well as problem-solving skills results in creativity among employees. In this study findings are in line with the previous studies (Hon, Chan, & Lu, 2013; Tseng, 2019).

Secondly, interface quality has also shown a significant positive direct effect on employee creativity ( $\beta = 0.338$ , t = 2.354, P = 0.002). Lui and Hon (2014) referred that creative

ability which are undertaken by those staff workers who are in frontline that affect the employees or customers because of interface quality. A well-designed, as well as user-friendly interface which becomes one of the important critical factors in determine the interest along with the motivation level of the employees which decrerases motivation to develop creativity among employees. As a result, this study the findings are in line with the previous researchers (Lui & Hon, 2014).

After ensuring the significant direct impact, the mediating variable has been introduced in the model. The findings over the direct impact of mediating variable are mentioned in table 7 below.

Table 7 Path Coefficients Mediating Variable Direct Effects						
	Original	Sample	Standard	T Statistics (O/	Р	
	Sample	Mean	Deviation	STDEV)	Values	
	(O)	(M)	(STDEV)			
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	
Training Engagement-> Employee Creativity	0.514	0.509	0.103	4.945	0.000	
Sourcess recents of data analysis						

Sources: results of data analysis

The findings revealed that service quality has a significant positive relationship with training engagement ( $\beta = 0.614$ , t = 2.900, P = 0.001). Islam, Hollebeek, Rahman, Khan, and Rasool (2019) revealed that the significance of service quality. In this study, the findings are in line with the previous researchers (Islam, D.Hollebeek, Rahman, Khan, & Rasool, 2019). Likewise, the findings over the second direct effect revealed that interface quality has a significant positive relationship with training engagement ( $\beta = 0.580 \text{ t} = 3.683, P = 0.000$ ). Chirumalla, Oghazi, and Parida (2018) suggested that the development depends upon choosing the right IT tools as well as training of employees. The findings are in line with the previous researchers (Chirumalla, Oghazi, & Parida, 2018). Finally, the third direct effect revealed that training engagement has a significant relationship with employee creativity ( $\beta = 0.514$ , t = 4.945, P = 0.000). Zhang and Bartol, (2010) referred that training can enhance the creative process of training engagement, therefore, training engagement positively influences towards 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. Sendawula, Kimuli, Bananuka, and Muganga (2018) believed that training enables employees to deal with an effective manner and respond to the complaints in a creative manner. Therefore, most of the previous studies provide evidence that there is a strong positive relationship between training engagement and employee creativity.

After ensuring the significance of the direct effects mediation testing has been conducted using Preacher and Hays method. The findings are revealed in table 8.

Table 8 Path Coefficients Indirect Effects					
	Original Sample	Sample Mean	Standard Deviation	T Statistics (O/ STDEV)	P Values
	(0)	(M)			
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

Sources: results of data analysis

The findings of mediation analysis revealed that training engagement has a significant mediation effect in the relationship between Service quality and employee creativity ( $\beta = 0.316$ , t = 13.34, P = 0.000). 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. Similarly, the results confirmed that training engagement has a significant mediation effect in the relationship between interface quality and employee creativity ( $\beta = 0.186$ , t = 16.42, P = 0.000). Those employees face challenges or other issues they get involved in training to become more creative. Researchers showed and indicated that the mediating role of training engagement has a positive impact on employee creativity because of interface quality.

## CONCLUSIONS

This study has been conducted to identify the mediating role of training engagement between service qualities, interface qualities, and employee creativity. The findings of this research have successfully ensured the framework developed. In this research, all the constructs are empirically tested that were proposed in the framework developed on the basis of theories and reviewed literature. The testing was done through an adopted survey instrument. The instrument illustrated the two most critical factors for e-learning system quality effectiveness. The instrument has been validated that was 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.

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. As a result, it is revealed that training engagement in the presence of information qualities, system qualities, service qualities, interface qualities, and emotional qualities have a significant effect on employee creativity.

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